HERBAL MEDICINE FOR WOMEN

FOUNDATIONS IN BOTANICAL MEDICINE

UNIT I

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Unit 1: The Roots of Healing

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HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 1

The Women's Herbal Path

Learning Objectives

By the end of this lesson you will be able to:

1. Describe the historical context of women's botanical medicine
2. Name the basic principles of evidence-based medicine
3. Describe the evidence base for botanical medicines
4. Discuss Women's Ways of Knowing
5. Practice The Healer's Heart

Unit 1 Lesson 1 The Women's Herbal Path

Required Reading

Botanical Medicine for Women's Health (Romm)

- Chapter 1: Botanical Medicines, CAM, and Integrative Medicine
- Chapter 2: History of Herbal Medicines for Women
- Chapter 3: read from "The Evidence Base for Botanical Medicine" through "Is There Adequate Evidence for Botanical Medicines?" (pp. 24-30)

Principles and Practice of Phytotherapy (Mills and Bone)

- Chapter 4: Validating Herbal Therapeutics

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

- Evidence-based medicine
- Women's Ways of Knowing

Our Botanical History

Women have always used herbs for food, medicine, clothing, and shelter. Historically, they were a fact of life - the only medicine available came from fields, woods, beside streams, in gardens, and through trade with other women.

Today, women use herbal medicines for complex and diverse reasons:

- As part of a traditional culture, or as a return to more traditional ways
- As a tool for self-empowerment
- As a more personalized alternative to what may be seen as depersonalized medical care
- Because a natural approach is more resonant with personal, philosophic, and ecological world-views
- Out of a desire for a more "feminine" voice in health care which weaves the personal and intuitive into the healing realm, and which connects us to the Earth as a source of nourishment and healing.
- Due to significant – and legitimate – concerns over the safety of many of the medical treatments specifically prescribed for women's health; for example, the frequency of unnecessary cesarean sections, hysterectomies, and labor inductions, to name just a few. Women are thus turning to herbs as a method

of self-protection. Also, drugs which may be safe for men, and which have not necessarily been tested specifically for use by women, may be metabolized differently or have more harmful effects in us. (Statin drugs, used to lower cholesterol, are a prime example – they have now been shown to cause diabetes at much higher rates in women users.)

The required reading for this lesson helps you to understand herbal medicine and women's health in the context of both ancient and modern use. As you read, perhaps you will start to see yourself and your studies in not just a personal context, but as part of a historical movement that runs through women's health like a thread through a millennia old tapestry. You are part of the fabric of women's health. This is important to realize, because, as we understand that conventional medicine has historically not placed the interests of women first and is a profit-driven industry, it reinforces the importance of providing alternatives to women seeking them. That's where we come in.

Most medical professionals know very little about herbal medicines and how to meaningfully apply them. Perhaps some conventional practitioners know a few alternatives to medications, typically using herbs as a substitute medication, but without a whole woman philosophy that considers the multifactorial aspects of her condition or concern. Thus St. John's Wort becomes "green allopathy" – an herbal substitute for Prozac or another SSRI, and indeed, it is likely to be safer and equally effective in a woman with mild to moderate depression than the pharmaceutical, but to give it this way misses the point of herbal medicine, which is to take a look at not just the disease, but the person, which you will learn how to do throughout this course.

While it is important for medical professionals to begin to develop knowledge of the world of natural therapies, it is challenging for even the most interested to keep up with the rapidly changing information in their own fields, let alone find the time to thoroughly study botanical medicine. Thus there is a need for herbal health educators who can provide honest and realistic information to women in a respectful, supportive, woman-centered way. Women need reliable sources to whom they can turn as they sort through the unprecedented volumes of information and misinformation that are now available in the media, health food stores, and even in the offices of medical professionals. It is also important for women to have the tools to take care of themselves day to day.

Enter women's herbal educators.

Long before the existence of the National Center for Complementary and Alternative Medicine (NCCAM), and prior to the interest in herbal medicine we now see in mainstream culture, herbal medicine was being rediscovered and revitalized by small groups of individuals – mostly women – around the US. Herbal medicine was a natural extension of the philosophies and practices of 'back-to-the-landers', hippies, and those interested in self-sufficiency and an "organic" lifestyle.

Many women in the late 1960s through the 1970s, including pregnant women and mothers, saw herbal medicine as an alternative to what was a heavily male-dominated, intervention-oriented approach to health, pregnancy and birth, and pediatric care. Through a great deal of personal experimentation, community clinical experience, and reading whatever was available on herbal medicine (and often conventional medicine) at the time, a small but powerful community of herbalists and midwives arose in the United States.

It was largely through the work of these individuals, many of them still in practice today, that the modern herbal and midwifery movements were reborn. It is also through the work of these individuals, and many who followed in their footsteps in the 1980s and early 1990s, that herbal medicine and midwifery were reintroduced into

mainstream health care.

In most of the world, herbal medicine, for economic, philosophical, and cultural reasons, remains the primary form of medicine available. In many nations, traditional medicine is not only alive and well, it is often completely integrated into the modern medical systems of many countries including China, Japan, and India. In many European countries, Germany being a prime example, herbal medicine has remained a part of the health care system.

The reading requirement in my textbook will take you deeper into the history of women's herbal medicine. You will also be introduced to the Wise Woman Tradition later in the course. Enjoy!

Women's Ways of Knowing – More than Just "Facts"

"Women's ways of knowing" describes not only the traditional healing skills that women have used since time immemorial, but also the high value placed by women on the quality of personal connections. These connections lead to increased perceptiveness in interpersonal relationships, intuition, and thus potentially, clinical awareness and communication skills with clients. For generations, women have relied on intuitive, compassionate, and empathic methods of understanding health and disease, as well as on practical physical methods of health care. And indeed, the primary reason that women seek the care of alternative practitioners is a desire for a meaningful relationship with a care provider.

Women's ways of knowing come from listening to the stories that women tell us about their lives - with our ears, our hearts, and our full sensory capacities, including intuition, and bringing what we can learn from these stories into assisting them in their healing process. Women's ways of knowing give us permission to bring all of our senses into the clinical setting, rather than fragmenting parts of ourselves for the sake of objectivity, science, or reductionism.

Women's ways of healing embrace the awareness that change and restoration of harmony must occur in the person's life, not just in the body, and that physical healing often does not occur until the underlying factors of illness and discomfort are addressed. These factors may be as simple as helping a client find more time to nurture herself or as complex as eradicating poverty, racism, sexism, violence, and "lookism" (the tendency in our society to judge women based on appearance, and for women to change themselves to meet this appearance, regardless of how this affects our health).

Women's ways of knowing encompass subjective knowledge based on feelings and personal experience, insights, even dreams and physical sensations. Gut feelings, for example, feeling something viscerally while in the consulting room with a client – can be meaningful. While not our only sources of information, these are all seen as legitimate informants in our assessment processes.

Historically, modes of intuitive awareness have been attributed to women, largely due to women's obvious close relationship to the mysterious aspects of life due to our connections with pregnancy, birth, and menstruation.

Women have long recognized the deep psychic connections between a mother and child, knowing, for example, even from thousands of miles away when a child is well or in danger. Breastfeeding mothers are all too

familiar with the experience of having their breasts begin to leak milk while they are at work, only to find out later that their baby had awoken from a nap at the same time and was crying for her. This kind of intuitive awareness is too common to be dismissed as merely coincidental, and it is too valuable for us to dismiss. Learning to trust and recognize our intuition and internal wisdom is particularly valuable for the clinical educator and practitioner.

Although many cultures have revered women's capacity for intuitive awareness, with some cultures even relying upon the dreams of menstruating women to foretell important events for a whole community, our modern culture has discredited this innate awareness, considering it unreliable, a symptom of mental illness, or even imagined.

Connecting with the plant world provides a special opportunity for becoming centered in the rhythms of your body, which as women, is a reflection of the very rhythms our earth – and the plants – are also experiencing.

Dreams, Wholeness, and Appropriate Technology

Many herbalists have reported that they dream about herbs and that they learn from herbs in many non-intellectual and non-reductionist ways, hearing a language that is useful in the clinic. Opening yourself up to this possibility as you study plants can begin a lifelong journey of intuitive exploration that can be highly informative in your clinical work.

In 1998 I had a dream. I was the midwife at a labor. In the dream the laboring woman was a client from real waking life. Amy. It was one of those dreams that makes you think, "Toto, we're not in Kansas anymore." You know, full living color. The kind you remember in vivid detail when you wake. The kind that lingers for days.

In the dream, Amy's baby was born and she immediately began to hemorrhage. Profoundly. I knew that the hemorrhage was beyond the level that herbs would help. In the dream my doctor husband (my husband in waking life is not a doctor) left the room to go get some Pitocin, a medication injected to stop uterine bleeding, to give to Amy. While he was out of the room Amy died.

I mulled over this dream for days - naturally more than a little disturbed by it. What did it mean?

Amy was a few weeks away from due. I knew this was an important dream, but what was the lesson? Then one day, sitting in my car at a red light, my own green light lit up. Eureka! I understood. I had been mentally splitting myself. I was a midwife, the hardcore herbal chic who wanted to rely only on herbs, nature, and tradition. I disassociated myself from the part perceived as male and as medical – as "the doctor" in my dream (this was nearly 10 years before I became one), the part I sent out of the room. The part that held an important key to Amy's safety.

You see, though I had begun to carry Pitocin and methergine - antihemorrhagic medications that can be administered intramuscularly - with me to births years prior, for many years I felt terrible pressure from the more radical, anti-medical members of the midwifery community not to do so, as if doing so meant one had "sold out" to fear of birth. This was a long time ago, when midwifery in the US was first reclaiming its place, and there was a lot of confusion about what it meant to be "natural." There was a lot of judgment in midwifery in those days. So though I carried pitocin with me to births, I felt inner conflict between my earthier self and any identification with something "medical."

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I had just had an apprentice, S.D., move all the way from the West Coast to study with me in the East. She wanted to study with a truly natural midwife skilled in herbal methods of caring for childbearing women. Amy's was to be one of our first births together.

Once I understood the dream, I took Sara aside after a day of prenatal visits and told her the dream. I told her that I didn't want to disappoint her in my expectations of me, but that I fully planned to have Pitocin and methergine drawn up in syringes and ready to go at the birth. If there was bleeding, I was going right to them – not even going to try herbs first. To my surprise, and I chuckle even now as I recall this – Sara thought it was "cool" that I would rely on a dream to guide my actions at a birth.

Sure enough, Amy's labor began on a bizarrely stormy day with winds up to 80 miles an hour. Amy was a young, beautiful hippie girl with a soft voice. She labored easily and naturally, a calm contrast to the raging storm that actually brought a tree down in the front yard during the labor! As her baby's head emerged, I noticed more than the usual trickle of blood. Suddenly I was back in my dream. Baby's head, blood, blood, and more blood. I had to reach my arm into her uterus to extract a partially separated placenta, and then, Pitocin and methergine - and the bleeding stopped.

Safe and healthy momma and baby. Amazed apprentice. At some point, I had to merge heart and head - and find my own style. I have never regretted it. That is the model I bring to you as a teacher. I like to think of it as "appropriate technology" (a term coined by economist Ernst Schumacher) as applied to women's health care.

What I hope for you to take from this story is that there are many ways to receive information. Dreams and intuition are valid sources. I've had many that have provided insights into client care. Major decisions and discoveries by scientists and inventors, for example, have been made in dreamtime. That's how the shape of the benzene ring was discovered. Life-saving acts have occurred and misfortunes avoided based on "hunches." Our "gut" and even untapped aspects of brain processing (remember, Einstein said we only use 10% of our brains) can provide us with valuable information.

There is a separation of mind, body, emotions, and spirit common to the Western way of knowing the world. Women seeking alternative health care models do so largely because this is an unnatural separation for us - we intrinsically seek wholeness and connection, we intuitively know that these relationships influence our health.

Body Speak

Your body is your personal inner guidance system.

Your physical feelings - and your emotions - give you immediate feedback on your environment.

Learning to understand your body's language can transform your experience into one of health, happiness, and inner peace.

Body awareness alerts us to the messages coming from our inner and outer environments. Our feelings and intuition help us to decide how to respond. Teaching these skills to our clients can provide them with a valuable healing tool. Learning to hone these messages yourself is a lifelong skill, but one worth cultivating as it will make you a keener herbalist, educator, business woman, or practitioner.

Each of us receives nearly constant information from our body, informing us when, what, and how much to eat, when to sleep, when to exercise our muscles, when to have a bowel movement, etc. Your body is quick to detect when you are nourishing yourself and when you are harming yourself. This is true of not only foods and substances that you ingest, but also of situations into which you put yourself or find yourself in, and of the thoughts and feelings you have. Sometimes our bodies register a "vibe" or feeling that just doesn't resonate in a comfortable way, warning us to steer clear or adjust our relationship to a situation, person, or choice we are making. At other times we might experience actual physical symptoms.

The concept of being body-centered is not meant to imply separation of the body, mind, and emotions. In fact, all of these faculties are interwoven in the fabric of the organism we call a human. On a literal and biological level one cannot say that the mind begins here and ends there, as if the mind were only the brain, and the body everything below the brain. Actually, nerve pathways, hormones, and genetic messages course throughout the body, connecting the messages of the brain throughout, and vice versa, from the entire body to the brain - the brain is part of the whole body. Feelings occur when internal, physiological processes trigger various emotional responses, as well as when external situations trigger biological and emotional reactions.

All women would benefit by listening to our bodies' messages. Learning to listen to your body and your intuition, like learning any language, takes time, commitment, and practice. Perhaps the most practical way to begin listening to your body is to pay attention to the most common messages you receive daily: hunger, thirst, fatigue, and elimination. Try to notice when you begin to feel the sensations that alert you to eat, drink, rest, or go to the bathroom. What are these sensations? When do you notice them? And most important, how do you respond to them?

For example:

- Do you eat when you're hungry, or do you think about whether you should eat, and then skip a meal, afraid that if you eat too much you might "get fat"?
- Do you urinate when you feel the urge to, or as so many women, do you put it off until a more convenient time or until you just can't wait any longer? Many women do the latter, not realizing that this can cause urinary tract infections, which women are especially susceptible to during pregnancy.

- Do you allow yourself to rest or sleep when you feel fatigued, or do you keep pushing yourself to do more until you collapse at the end of the day? Or do you push your body further with the help of coffee, cigarettes, chocolate, or sugar? Do you get down on yourself for being tired, thinking that you should be "getting more done"?
- Do you recognize that you may be feeling weepy, irritable, nauseous, faint, cold and clammy, or that you have a headache because your blood sugar is too low and you need to eat a solid meal?
- Did you know that particular food cravings are your body's way of calling out for specific nutrients? For example, you may be craving sweets because you need more energy, but your body really needs more protein which provides you with a much more lasting type of energy than does sugar?

If you are like so many women you may realize that you are not listening to your body. Just by deciding to be more alert to your own needs, you'll find yourself recognizing and responding to your body's signals more readily, and feeling better for doing so. Keeping a journal can be a useful method for charting specific urges or sensations, as well as your responses and reactions. Remember that it takes time and patience to learn any language, but that you and your clients both deserve optimal care and loving attention. As a practitioner and educator, your words become more authentic and authoritative if you walk your talk!

The Body Reveals the Truth: Body Speak in Action

Nearly two decades ago I was teaching a class on herbal medicine for women's health to a small group of women gathered in my home. We were sitting comfortably in a circle on the living room floor, pillows supporting a few babies sleeping next to their moms, all of us with cups of tea in hand's reach, notebooks and pens open expectantly, and information flowing like water.

An intimate feeling had developed over the course of the day. During a short late afternoon break, I was taking general questions. One participant, a young, well-put together mother of 3 in her early 30s, raised her hand. "Aviva, I wonder if you can make any recommendations for treating eczema. I keep having this flare and it's really uncomfortable. I have no idea what to do to treat it naturally."

I asked her to tell me more. The words that fell out of her mouth landed like an elephant dropping into the room. "I only get it under my wedding ring."

Now the logical next question would have been to ask her about the metal in her wedding ring and whether she had any allergies to gold, platinum, silver, or other metals. As a doctor, those would be the first questions I was trained to ask. "Why look for zebras when there are usually horses?" so the expression about diagnosis goes. It's a medical aphorism meaning, "common things are common." Likely this was simply a metal allergy.

But her response was an elephant, not a horse or a zebra. And because I know that the human body has its own logic, I knew that this isolated, localized symptom was likely more than simply an allergy to a metal in her ring. As **the famed Harvard neurologist Martin Samuels**, with whom I once had the privilege of spending an hour learning from, said to me in response to a question, **"Now, I know you are smart enough to know that there is no separation between mind and body!"**

My student's answer was pregnant and her voice so quavering that I knew there was more to the story than could be explained by a reaction to the metal in her wedding ring. So I gently asked her if she'd prefer to wait until the class was over to chat privately, fully anticipating what she might need to share to give me more background on the symptom.

"No," she said, "I'm comfortable discussing it here."

Even more gently, and with all the care in my heart, I asked, "How is your marriage?"

The group seemed surprised by my singular and very personal question. I think they were just expecting me to offer her an herbal skin salve recipe. They had no experience with medical elephants.

As soon as the question escaped my lips, the floodgates opened. Her mouth quavered for a second, then tears flowed. Soon she was sobbing freely. The group, now starting to understand my question, responded intuitively and with care, moving in a little closer to support her. There was concern on the faces of this newly formed little community gathered for a day of learning. The woman to her right placed her hand gently on the sobbing student's shoulder.

"About 6 months ago, shortly after our 3rd baby was born, I found out my husband had been having an affair." Her words began pouring out like water from a dam where the levee had just broken. "For over a year. That's about when the eczema started - when I seriously started suspecting something. I've never had a skin problem before this. It's taken me 6 months to get up the courage to leave him. The kids and I are moving back to my parents' house next week. It's over a thousand miles from here. I am leaving behind all my friends and support network, but I don't know what else to do…I'm devastated. I just haven't been able to admit that it's over so I keep wearing this ring." She was too gentle to say "this damned ring," but I think that's what she wanted to say.

While medical science might dismiss the notion that my student's symptom was caused by her marital stress, Western medicine does acknowledge one very specific stress-related condition. It's called "broken heart syndrome."

Takotsubo cardiomyopathy, also referred to as transient apical ballooning syndrome because of the appearance of the heart on echocardiogram, or stress-induced cardiomyopathy, is a sudden temporary weakening of muscles in the heart that can be triggered by emotional stress, including the death of a loved one, a relationship break-up, or even chronic anxiety. It can eventually lead to serious heart disease including congestive heart failure and ventricular rupture, though most commonly it is transient, as the name indicates. The word Takotsubo means an octopus trap in Japanese, and is named such because the heart, in this condition, resembles the shape of one of these traps.

I had the rare experience of a first-hand encounter with a patient with Takostubo syndrome. I was on an emergency room shift in medical school when a 55-year old Italian-American woman was brought into Yale New Haven Hospital by her son and daughter-in-law. They were in the car on their way home from my patient's husband's funeral after his sudden and unexpected death from a heart attack several days prior when she began having chest pain, massive sweating, and hyperventilation, after which she passed out. They immediately brought her to the closest hospital.

Upon her arrival we initially thought it was a psychosomatic stress response. And in the truest sense, it was. Her psycho-emotional state was causing her physical symptoms. And they were very real. Real enough for us to run the tests we use to confirm or rule out a heart attack. So real, in fact, that we saw evidence of her broken heart on her EKG and on her echocardiogram. She truly had a broken heart. Fortunately, as with most cases of this condition, she recovered – at least physically – after a few days of hospital care. Broken hearts can heal. Make sure to look deeply at all of the factors that contribute to health and health disruption in your clients (more on this in Lesson 2).

Seasoned integrative practitioners know that the body can create some amazingly specific symptoms in response to personal stress. As one of my mentors, the late **Jeannine Parvati Baker**, a midwife and psychologist, once told me, **"The wound reveals the cure."**

Eczema is an inflammatory condition, often triggered by an allergen. The source of inflammation in my student's life was her marriage – and it manifested under her wedding ring which had become the focus of her stress. She was experiencing a different form of broken heart syndrome. Less dramatic perhaps. Not apparent on an EKG. But one that no herbal salve – or even steroid cream – could have healed. She had prescribed her own cure for her broken heart: a divorce.

Being an integrative physician, I don't just offer pills and capsules; I seek to understand my patient's life. I listen to the whole story of what is influencing her health. I pay close attention to the language a patient uses to describe her health - because **in the story, sometimes in the very words a patient uses, can be powerful clues that guide me to both a diagnosis and a prescription.**

In retelling the story to the patient, a technique I use to confirm my understanding of her concerns and situation before I offer my assessment, remarkable insights can arise as my patient reflects on what she may have just said to me.

Some time ago I was taking care of a patient who came to see me for a number of health concerns, most notably, an autoimmune condition that was developing after a long period of out-of-control weight gain, sleep problems, stress, chronic anxiety, and a persistent skin rash. As part of my routine intake, I asked my patient about many aspects of her life from her diet and bowel habits, to her exercise and relaxation practices. Because all of these aspects of how we live can influence our inflammatory and immune responses.

Upon my asking about her happiness and relationships she burst into tears and said, "My husband is a huge source of inflammation for me. I'm miserable." This particular patient had a BMI of nearly 35, making her especially high risk for diabetes and heart disease. Her blood pressure on exam, and repeat exam, was exceptionally high.

I wondered: Was her marriage contributing to very real heart disease for her? Was her autoimmune condition – an inflammatory state – a reflection of the inflammation she described in her marriage? She wanted to leave the marriage, reclaim her joy, and feel empowered and excited about life again. Now in her early 50s, with two children still in their teens and at home, she felt stuck. I'm all about seeing long-term marriages work out whenever possible. I suggested counseling, marriage therapy, and all the possible options I could think of to help her work it through to heal her marriage. But she clearly stated that she knew in her heart that she did not want to be with her husband anymore. She felt her marriage had run its course. Sometimes a divorce is a part of the prescription. For this particular woman it may be part of preventing heart disease. Quite literally, a potential lifesaver.

How you, as a health educator, care provider, or even business owner feel in your body when interacting with a customer, client or patient, is important information. This is actually taught as part of traditional psychiatry training in medical education – changes in our breathing, heart rate, and thought patterns experienced with patients and customers can be a result of "energy" we are picking up from someone with whom we are interacting.

This is not "woo woo." It is a literal fact. Cardiologist Mimi Guerneri, director of integrative medicine at Scripps, explains that individual cardiac rhythms can be picked up by EKGs as far as 15 feet from a human body. What we are perceiving and what is affecting our own rhythm, may literally be, in part, the actual electrical energy emitted by our patient or client. By understanding this we can begin to pick up on anxiety, anger, grief, or any number of emotions our clients are experiencing, and we can use our own responses to help them ease and modulate theirs. We'll discuss this more in the lesson on client interactions.

As part of this course, I want you to start to pay attention to "Body speak" as part of your women's ways of knowing. Make a study of the feelings you get in different situations and how these provide you with information about your health, your mental or emotional state, or your comfort in your surroundings. Learn to pay attention to these feelings and use them as part of the your overall information gathering. Learn to listen to and trust your "body speak."

Smart Women are Cool: Owning Our Intellectual Knowing

Did you know that studies have shown that women in bikinis score significantly lower on arithmetic exams than women in plain clothes? Did you know that by middle school, girls' grades in science and mathematics begin to fall behind those of boys?

Did you know women often dumb themselves down intellectually in the presence of men so as not to be threatening? This also happens when women are patients – we dumb or quiet ourselves down in the presence of an authority figure – worse so with a male authority figure (i.e., doctors).

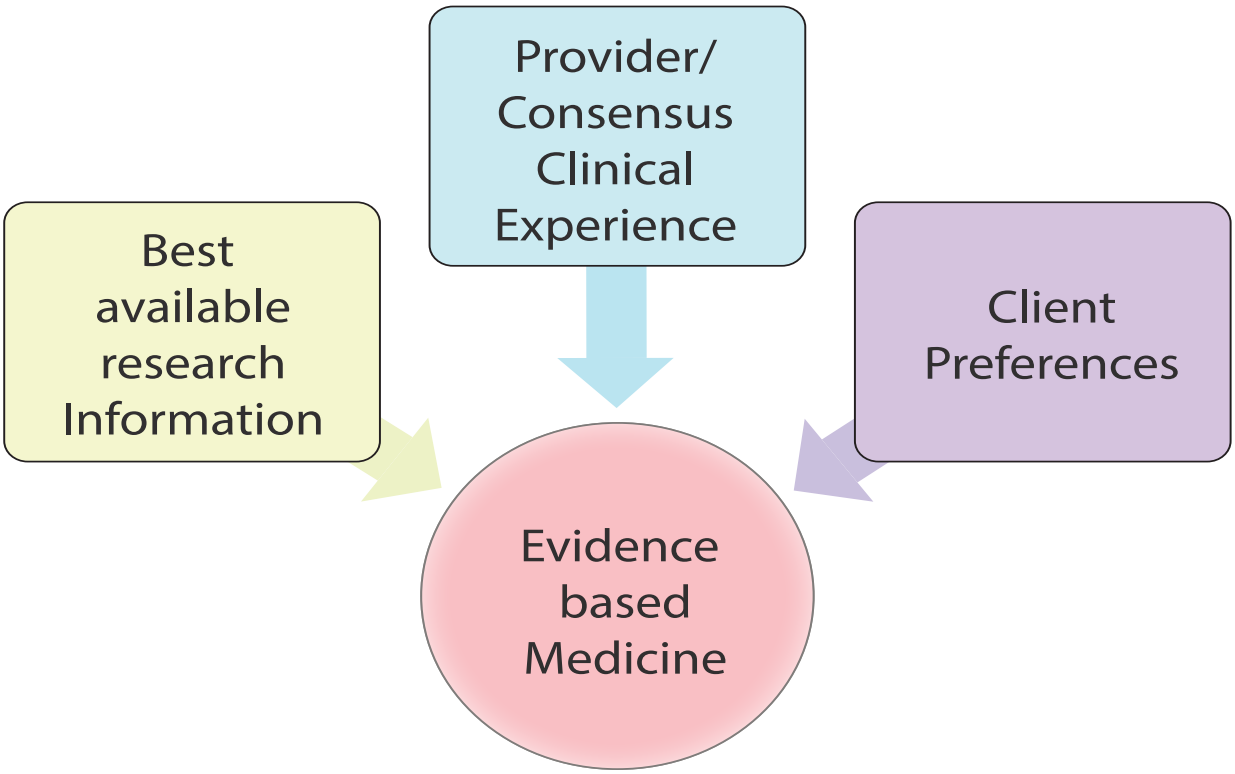
As part of the reclamation of a more feminine, back to nature, and back to spirituality way of embracing life, many women have shunned intellectual pursuits as part of a disdain for authority. But knowledge is power. I encourage you, if you've rejected it for any reason, please dust off your thinking cap and put it back on! The world needs women who think hard! And yes, this course will make you think. It will require you to be thorough and to learn your facts. Again, knowledge is power. To support anyone else in her empowerment we have to first own our own – and this includes embracing knowledge.

Using women's ways of knowing does not negate the use of your intellect – in fact, quite the contrary. It is essential to be a critical thinker and to develop your knowledge of science, and the use of your mind is a central part of your skill set. Women's knowing is a complex synthesis of physical knowing, intellectual knowing, and instinctive knowing. However, it is possible for your mind to override your intuition. Using women's ways of knowing means unlearning the process of subverting your body, while still using your intelligence. You are learning to override and transform the culturally imposed and inauthentic voices that tell you how you should think and how you should be, so that you can know and accept who and how you truly are.

Basic Principles of Evidence-Based Medicine

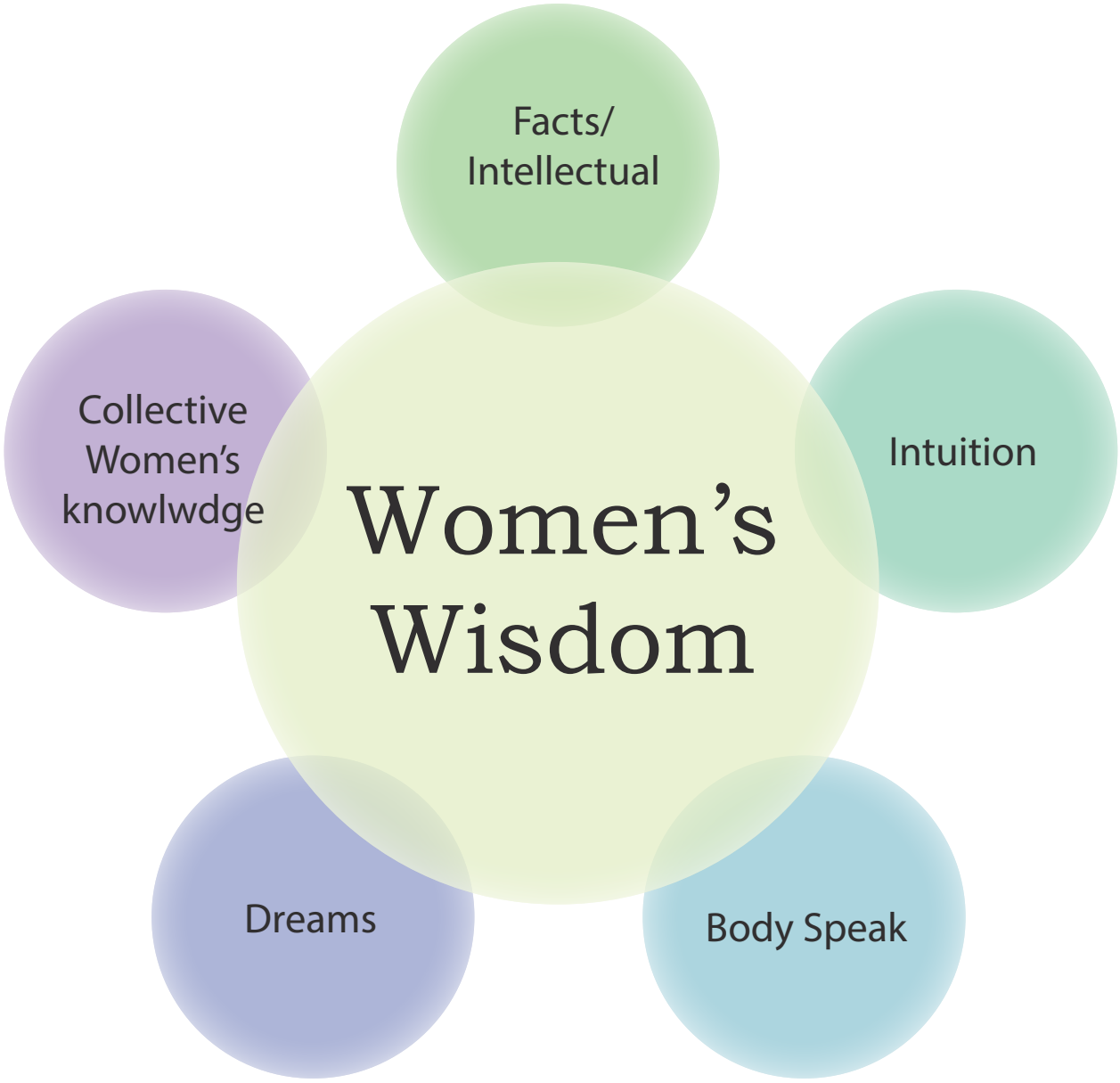
In its simplest definition, Evidence-based medicine (EBM) is a method of gathering and applying the best available information for the benefit of the client. EBM seeks to assess the strength of the evidence of risks and benefits of treatments (including lack of treatment) and diagnostic tests to help clinicians predict whether a treatment will do more good than harm.

Many herbalists and other natural practitioners eschew EBM. However, this is because of the misconception that it is simply a reductionist methodology for accepting or dismissing evidence, limited to randomized controlled trials. Western conventional medicine has narrowly equated EBM with radomized clinical trials as the gold standard for evidence. In fact, however, EBM, in its truest form, is much broader than this in its definition and inclusion of evidence. Over the years I have come to value the literal definition of EBM, which encourages us to use the highest quality information we have, including the experience of seasoned colleagues, combined with client preferences for her own health care - to determine the optimal plan for the individual. In clinical practice, and in large systems such as hospitals, use of EBM can actually protect clients and patients from the narrow opinions and limited range of evidence used by individual physicians and systems, and allows for the client's values to be weighed as equally important evidence in clinical decision making.



Evidence-based medicine provides a basis for honest reflection, through evaluation of available studies and discussion amongst peers as to what really does work, what doesn't, and whether adverse events have been observed. It allows us to make an appraisal of our craft in the best interest of the client seeking herbal therapies rather than simply assign treatments based on romantic versions of botanical medicine and random heresay about efficacy.

Please thoroughly read the discussion of Evidence-Based Medicine in Chapter 3 of *Botanical Medicine for Women's Health*. An understandable review of various evidence rating scales is available on Wikipedia: http://en.wikipedia.org/wiki/Evidence-based_medicine



Cultivating a Healer's Heart

Create from the heart. Proceed with intelligence. ~ Danielle Laporte

To write prescriptions is easy, but to come to an understanding of people is hard. ~ Franz Kafka

The heart and spirit of this course is women's transformation – yours, mine, our clients'.

In order to facilitate transformation we must be aware of our own inner world as practitioners, because we bring this to the table every time we encounter a client. We bring our beliefs, judgments, knowledge, attitudes, opinions, and our own stressors and personal experiences.

We must also be aware that every client also brings this same mix of human complexity to each encounter, each interface with a protocol, plan, or product we recommend, and in addition, they bring concerns about their health - which is why they have sought us out in the first place. Fears about health and disease can add tremendous emotional content to all of our encounters.

Cultivating mindfulness as practitioners is essential not only to be able to teach these skills to our clients, but for enhancing our own healing presence. Practical mindfulness for practitioners will be also discussed further in *Lesson 11: The Client Encounter*.

Thirty years of clinical practice has taught me that while, sure, it's quick and easy to resolve a one-time urinary tract infection, headache, or menstrual cramps that happen once in a blue moon with herbs and lifestyle changes, profound healing – especially of chronic issues – rarely happens just at the physical level or overnight; it requires transformation on a whole life, whole woman level.

This means embracing the ability to make change: to change internally, to change our lives. A blend of receptivity and empowerment are needed to recognize where change is needed and to take action to make the changes happen – whether quitting a sugar habit, stepping out of a self-damaging job, releasing an unhealthy relationship, or learning to meditate. It means helping our clients to identify and overcome obstacles - being coach, cheerleader, support person. And it also means knowing when to "let be."

As practitioners, we must learn to artfully and skillfully identify where our clients are in their readiness and ability to make change - to honor this and hold that space for them – while encouraging transformation. And we must be ready with skills that facilitate transformation – skills that we have learned to use ourselves, and that we can present with conviction and kindness to our clients so that they can then also learn to use them to make lasting changes in their lives. In this lesson I share concepts and techniques I not only use with my clients and patients, but to guide my own life, work, prosperity, health, service, and practice. This lesson is about making shi(f)t happen! :)

Women seek integrative and alternative care providers not simply because they don't want unnecessary medical interventions, but because women desire, expect, and are seeking participation and partnership in the healing process - qualities most of us generally find missing in typically hurried encounters with medical professionals who

have been taught to keep their emotions in check and "be objective." We want fulfilling encounters that leave us feeling empowered and hopeful - feeling better walking out of the care providers office than when we walked in - not encounters that leave us feeling anxious, depleted, or even abused as so many women experience leaving the doctor's office.

Whether you run an herbal products company, a clinical practice, or a training program, or whether you write or teach at conferences, your goal is always to be a healing presence. For most women, that means you have established true relationship - that you *really* care. Women develop practitioner, brand and product loyalty in the same spirit: relationship.

What do women really want in a healthy relationship with a health coach, educator, or provider?

Connection/Continuity

Warmth/Kindness

Safe Space

Compassion/Understanding

Nurturing/Comfort

Partnership

Encouragement/Support

Hope

Women also want safe, effective care, products, and information upon which they can rely.

Developing and maintaining relationships can be demanding work, sometimes even downright exhausting. More or less so depending on your own personality and the personalities of different clients. It requires us to give a lot of ourselves. And as you know, not all relationships are easy. We all bring our baggage with us wherever we go. And when a woman is coming to you with a health concern – well, she is probably not feeling her best. Worry, anxiety, spending money on health care, pain - all of these things can affect our personalities and how we interact and communicate, sometimes confounding relationship building. She's also got her own baggage, her history of experiences with previous providers, for example, and this may get projected on to you. Yet for the most part, relationship with our clients is the most rewarding and satisfying aspect of our work!

We will revisit what women really want in Lesson 11: The Client Encounter. For now we will focus on the art of transformation and cultivating the Healer's Heart.

To cultivate a Healer's Heart it is important to first start with yourself. To truly be a healing presence requires that we cultivate our inner life, that our primary goal be service, with the intention of making the world a better place, and helping to ease the burdens in our clients' lives by helping them to improve their health. It also requires us to have inner peace and quiet so we can hear what is being said, an intentional life so that we can demonstrate this to our clients via our own lived truth, and it necessitates keeping our own cup full – if we are depleted we have less to give and when we are tired or unhappy, we are not giving our best, or from our best place.

Here are some of the most important qualities to cultivate in order to provide women with what they really want in a health consultant.

Unit 1 Lesson 1 The Women's Herbal Path

Partnership

Partnership means a relationship based on mutual respect and mutual engagement and this is discussed with the client, because many clients may come to you with expectations based on outdated models. Relationships between health care providers and patients traditionally have been built on a hierarchical, patriarchal model. Relationships between teachers and students are often hierarchical.

As a most basic example, most of us grew up calling our physicians "Dr. SoandSo," and our teachers - even well into college - "Mr. or Mrs." or "Professor SoandSo" rather than being on a first-name basis, as equals would naturally do. This hierarchy is so inculturated into medicine and education that I have actually played the "Dr."

card when I deliberately wanted to create a sense of power or authority in a relationship with a patient, for example, a potentially dangerous psychiatric patient or a patient with an addiction problem trying to get restricted medications from me off of their schedule or under false pretenses.

Awareness of the potential for hierarchical behaviors to evolve (or devolve as the case may be) in the context of the herbal consultation relationship is important on two levels:

1. We need to be mindful of adopting a "power over" authoritative role out of old habit or as a way to enlarge our own sense of self or power, and stay with "power to"; i.e. the client's power to make change, our power to help them.

2. We need to be mindful of clients slipping into a "patient" role, learned helplessness, victim, or any other role that diminishes their full empowerment, engagement and equality in the partnership.

As herbal educators and women's health care practitioners, our goal is to work as equals with our clients to establish a mutual goal of our client's wellness. We are not the fixer, rescuer, shaman, healer, or anything other than a resource for information that we are happy to share in the agreed-upon context of the encounter. The midwifery model of care, as I elucidated in my now ancient book *Pocket Guide to Midwifery Care*, is perhaps the model closest to which we want to strive in our women's health consultations. I have adapted the section on the Midwifery Model of Care from my 1998 book for our purposes, replacing the Midwifery Model of Care with the Woman-Centered Model of Care.

Woman-Centered Model of Care	Medical Model
The woman maintains power and authority over herself.	Power and authority are handed over to the institution.
Responsibility is in the hands of the woman, shared with her consultant.	Responsibility is assumed by the physician.
The goal is to assist the woman toward self care (and self knowledge) as a healthy person in a state of normalcy.	The woman is encouraged to be dependent and is treated as potentially in an abnormal state.
The woman's body is a well-functioning complex organism with needs and workings best known by the woman.	The woman's body is a mechanical organism that needs fixing, with needs and workings best known by the physician.
The practitioner guides the woman.	The physician manages the care of the woman.
The best health care is compassionate, caring.	The best health care is objective, scientific.
Health is ensured through physical and emotional lifestyle approaches.	Health is ensured through drugs, tests, and procedures.
The consultant supports and assists.	The doctor controls.

The language we use, as will be discussed more fully in Lesson 11, also plays a role in how our relationships develop with our clients, and what they expect of themselves in the relationship in terms of responsibility-taking. For example, in an effort to sound medically knowledgeable, rather than seeking a new paradigm, many herbalists have adopted the term "compliance" to describe whether clients are following a protocol. Folks who are not are typically described as "non-compliant." Yet compliance refers to the extent to which patients follow doctors' recommendations.

An alternative term, concordance, refers to the extent to which clients are successfully supported both in decision-making partnerships about their health recommendations. This terminology is more than semantics since better concordance can be achieved through healthier communication and through incorporating the beliefs and preferences of the client in the decision-making process. It is a shared power dynamic, rather than a "power over" dynamic.

Compassion

Being human is hard work. Being sick makes it even harder. To have compassion means to bring your heart into the consultation. To hear and feel with softness and kindness, with true caring about the human experience of the person sitting across from or next to you. It means taking the time to understand not only the hard facts, but the impact of whatever is going on for your client, in her life, and expressing your heartfelt sympathy. Sympathy, however, is different than empathy. Sympathy is a feeling of care and understanding for the suffering of others. Empathy is the ability to mutually *experience* the thoughts, emotions, and direct experience of others. While empathy is an incredibly valuable skill that operates at the level of intuition and body-knowing, over-empathizing with a client can lead us to become distracted by our own experience, and even to over-personalize our experience to the extent that we become less effective as educators.

Kindness

Conventional medical offices overall do not leave us feeling that we were treated kindly. It is too often an experience of hurry up, wait, hurry up. People rush to get to their appointments on time, often having to take off from work or make childcare arrangements, only to sit in a waiting room where people generally try to ignore each other for the sake or privacy and not feeling well, or in the exam room – too often disrobed and waiting on an exam table – sometimes for over an hour, just to then be rushed through an almost always harried doctor encounter.

Kindness is general warmth, friendliness, pleasantness, a smile, an effort to connect and relate, to put someone at ease. It is being charitable, patient, and caring. We can always be kind. It is refreshing in this world. It will be refreshing to your clients. Kind people are happier and live longer, too!

Kindness and "niceness" are not necessarily one in the same. It's interesting to note that doctors who are "too nice" are more apt to miss diagnoses because they "like" their patients too much to put them through uncomfortable procedures, for example. Being kind doesn't mean avoiding the tough stuff - in fact candor can be part of kindness.

Respect / Non-judgment

It is very common for those invested in natural health to hold beliefs about what makes one sick, and how to get well. We may unintentionally or inadvertently lead clients to believe, or reinforce their belief, that their situation is their "fault." Fault and responsibility are different. Fault usually involves shame and blame. Responsibility is more about problem-solving. It is necessary to check and re-check ourselves when we are carrying strict ideas. In the alternative health world, these are most likely to happen around strict or narrow ideas about diet. As educators and practitioners, our role is to hold space, inform and guide, but not judge, to work with our clients to solve problems without blame or shame. You'll read more about Meeting Clients Where They Are below.

Presence and Listening – to others and yourself

"When someone maintains loving presence with another, it has a powerful effect. Possibly without even noticing it, the other feels safer, cared for and even understood. When this happens in a therapeutic relationship, healing has already begun."
~ Ron Kurtz

We are not the experts on our clients' health – they are. Our job is to help them to own their inner power, their expertise on themselves (who knows you better than you?), to tune in and learn to listen to what their physical sensations, emotions, and many senses are telling them.

Herbalist and midwife JP Baker, with whom I apprenticed in the 1980s, said that healers ought to always be mindful that we have two ears and one mouth for a reason! It is all too easy for us to feel it is our job to deliver information, explanations, plans, and formulas - and in fact, this is part of our role. But in order to refine what it is we share with our clients, we need a deep understanding of who they are, what they are ready for, their gifts and limitations, their worries, and importantly, their own knowledge base, what they think is going on, and what they would be interested in trying if they've already done some research.

In listening, we have to quiet our inner chatter so that we are truly taking in what is being shared - not just verbally, but in body language, tone of voice, expression in the eyes, pauses, etc., and we cannot do this if we are mentally formulating our next clever response or suggestion. There is time for that - and perhaps thoughts and ideas will arise in the listening process that we jot down, but in listening we bring our full presence to the one sharing.

Over the years, many students have shared with me that they struggle with how much of their own story to share with a client when the client's story triggers a resonant memory or past experience of their own. There is no one simple answer to this, but I would say that if you are sharing the story because it in some way imparts a bit of wisdom to your client from your own experience, then this can be valuable. With some clients, it can create relationship. For example, if they have had a set of symptoms, for example, anxiety and sleep problems, that you have struggled with, and you were able to overcome them with certain techniques, for example, meditation and progressive relaxation, this can be very helpful. But all too often we share our stories out of our own need to bond with our client, to be relatable, or to be center stage, and in doing so, run the risk of weakening the relationship and taking the focus away from the client. So to know when it's appropriate, check in with yourself honestly and often, consider your intentions before sharing and whether what you will say is necessary to benefit

the client, and of course, all of this requires thinking before speaking.

Listening to *ourselves* is another aspect of listening that we often override but can make all the difference in our experience as educators and practitioners. When we are with others, whether in a client consultation, at a party, on a date, in a crowd, we get what I call "hits" – physical or emotional sensations that affect how we feel (or think). This is a transpersonal experience and is a very real phenomenon, most likely due to a set of behaviors such as facial expression, voice tone, body language, and perhaps even bioelectrical rhythm (i.e. heart rate) that we are experiencing on subtle, almost instinctive levels that trigger us. Now some of these triggers may be based on past associations that actually have nothing to do with what we are perceiving, but in general, when something triggers your alarm bells, it's worth listening.

In my psychiatry training at Yale, I was taught that it is incredibly important to trust our thoughts and feelings when we are with patients, because we might actually just be picking up on their emotional and mental imbalances if we start to feel anxious, worried, paranoid, irritable, depressed, or any number of feelings that might manifest in our thoughts or our physical experience (i.e. racing heart, nauseated, knot in our stomach, headache). These feelings can give us insight into a client's emotional and mental status, and can also protect us from those who might do us harm.

I once had a midwifery client whose presence led me to feeling quite paranoid. She was an exemplary client even if very uptight and a "control freak – she had a perfect diet, exercised regularly, owned a gorgeous home, was always on time for appointments, dressed meticulously. Yet whenever I was around her my mind would drift to thoughts of her suing me. And her behaviors were odd. For example, she once phoned my office line, which also rang in my home, at 8 pm one evening. I was just stepping into the shower so my 10-year old daughter grabbed it for me. Upon hearing that I was in the shower and would call her back promptly, she told my daughter, who immediately conveyed her response to me, that it wasn't urgent and I could call back the next day. I took her for her word and didn't call back that night. The next morning my line rang before even 7 am and she was yelling at me for not calling her back sooner! (And it was absolutely not an emergency). Well, low and behold, about 8 months into her pregnancy, she not only revealed that she had just won a lawsuit against a former employer, but in fact, this was the second one - the other against a previous employer - and she wanted copies of all of her prenatal forms "just in case" she ever needed them "for anything." Ding ding ding! My alarm bells, which had been going off all throughout her pregnancy, were screaming out 4-Alarm Fire!

But why hadn't I listened to my inner voice and feelings earlier, telling me that she was not a good fit for ME? Well, ladies, back then (this was a good 15 years ago) I was still quite an enabler. What I missed in my feeling bad for her, because she seemed so uptight and controlling, and didn't have many friends, was that she had mental health issues and she did ultimately try to sue me when I transferred her care to her OB backup, which was her stated preference when I broached increasing trust issues on my part and bizarre behaviors on hers. The case went nowhere, and it was an incredibly stressful way to learn not to be an enabler, but that's a lesson one doesn't have to learn twice! If you ever feel unsafe, uncertain, unclear, and don't want to be in that relationship - trust your gut! It doesn't mean you need to get out of the relationship, but it does mean a conversation needs to happen!

Service/Giving

Keep service your first goal. Yes, it feels great to give a formula or dietary recommendation that changes someone's life, to offer a word of kindness, wisdom, or insight that leads to a fantastic life-altering decision for a client, or to get kudos for working in a clinic or birthing center in a poor community or foreign country. And we absolutely deserve to acknowledge ourselves and be acknowledged for jobs well done. It inspires us to know we are making a difference and keeps us going forward.

It is also easy to start to miss the goal of service for the goal of kudos, to wrap our self-worth up with success, and to swing to the other end of the spectrum – self-doubt when clients aren't improving or we aren't invited to teach at this or that conference or our article is not accepted for a magazine. Never let praise become the goal. Accept people's thanks with gratitude, graciousness, and appreciation. Revel in the successes. Make note of what went well so perhaps you can use those techniques, herbs, words with someone down the road and again make a difference. Also take note of what didn't go well, who didn't return for a follow-up appointment and why, and always be on the lookout for how you can improve your services. Know that you are wonderful even without praise and gratitude or external measures of success!

Humility – "I don't know…"

Many of us think we have to know everything in our area of expertise to be strong clinicians and educators. This is far from the truth - and far from possible. The research on botanical medicine is evolving daily, as is the information available to us on hormones, health and the environment, and just about any topic I could name. There is no shame in not knowing; the only problem is if we pretend to know when we don't! The most important words to keep in your repertoire are " I don't know," sometimes supplemented by "But I will look that up and get back to you." You can even engage your client in the research process if you have access to the Internet and books in your office! It's also important to recognize when something is out of your sphere of experience and expertise, to be willing to work in partnerships, to consult, and to refer out.

Professionalism

Yes, women seek out alternative practitioners because they want a softer touch and a more personal experience, but that does not mean they do not also want professionalism. What is professionalism? It is holding up the highest standard we can for our professional group. This means that we are committed to excellence, continually developing our expertise (done by remaining curious life-long learners), being on time, dressing appropriately, maintaining integrity, being thorough, having readable notes, providing a tidy space for consults, maintaining client confidentiality and privacy, treating our colleagues and other professionals with respect, and delivering what we offer.

Self-Awareness/Reflection

Self-audit – taking time for honest self-reflection about what is, and what isn't going well in our work – is an important and often ignored tool that we can use for personal growth and improving our skills. Many of the experienced senior herbalists in the herbal world, at various gatherings, have discussed the fact that there is a lot of bias in herbal clinical practice toward remembering what works, or what our clients told us worked, with a lack of long-term follow-ups of outcomes, and selectively forgetting about what didn't work.

There is also a lot of misinformation circulating in the form of books by folks who have actually never practiced clinically, and indeed, some level of misrepresentation of experience, which I know about first-hand from having run the largest herbal organization in the United States for nearly two decades! Additionally, clients will commonly tell us what they think we want to hear and then drift out of our practice rather than having the confidence to admit that our protocols aren't working – which is a disservice to us and our future clients. So mining for what isn't working can yield truly enlightening information that will allow us to become more effective.

Scheduling a self-audit to be done annually or semi-annually in a very deliberate way, where you review charts and even consider sending a customer service survey to your clients, can be informative. Yes, there will always be a few folks who are critical, but even in that you might find small nuggets that help you to improve the quality of your work significantly. If you are in an office with others where you share clients, schedule several meetings a year to review how things are going, what's not going well, and how to make improvements. Be sure to schedule in some team building to keep things positive, but really listen and learn.

To be truly effective we need to know what doesn't work as well as what does – this is the only way we can make meaningful adjustments in what we do and believe, and the only way we can honestly assess the overall effectiveness of the herbs and adjunct therapies that we are using, teaching about, writing about, or selling as products.

Cultivating our Healer's Heart becomes the foundation for how we relate not just to clients and customers, but also to ourselves and to the world. It's how we respond to someone honking at us in traffic, to a rude sales clerk, or a snarky nurse in a doctor's office. It is how we claim our own power and authenticity as women - our ability to be kind and truthful. It means we check in on the baggage we are carrying - and deal with it (ideally, putting it down so we have a lighter load!).

How do we sustain these qualities? How do they become not just what we do with clients, patients, and customers – *but who we are* – to the point that we can hold our center in them even when someone writes an unkind review of our practice, products or blog? When a client projects her lifetime of abuse on you in the form of a hateful letter after she's been late for four appointments in a row – and you've seen her anyway?

It's not always easy. And of course we are all human.

Reflection Exercise

Take 15 minutes to reflect deeply and honestly on how you show your Healer's Heart toward yourself and how you might cultivate these qualities more in your life.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 2

The Roots of Wellness and Health Dysfunction

Learning Objectives

By the end of this lesson you will be able to:

1. Describe the unique factors that contribute to health and health dysfunction in women
2. Describe the Four Dynamic Wellness Qualities
3. Discuss the Eight Foundations of Health
4. Apply the 3 key questions for creating health changes
5. Name the Seven Core Physiologic Systems of Imbalance
6. Identify the Five Key Causes of Illness
7. Describe and apply the 4R program for gut health

Unit 1 Lesson 2 The Roots of Wellness

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Detoxification

Epigenetics

Inflammation

Intestinal hyperpermeability

Leaky gut

Modifiable factors

Phytonutrients

Resilience

The Roots of Wellness and Health Dysfunction

If we water a root, it will grow and branches will sprout; these are the laws of nature. The experienced physician, therefore, will always consider the source. - Li Zhongzi, Chinese physician, 1637

Did you know that one of the most significant predictors of health and disease is one's perceived level of autonomy in life? That one's zip code is the greatest social determinant of health and longevity? That one's level of childhood trauma, measured by something called the ACE (Adverse Childhood Experiences) Score, and particularly sexual trauma, which 1 in 4 women experience, is associated with higher levels of adult health challenges and even serious disease, including chronic pain, for example Irritable Bowel Syndrome (IBS), Chronic Fatigue Syndrome (CFIDS), anxiety, pain with endometriosis, risk of severe depression and heart disease? That marital stress slightly lowers life expectancy for women? That women still get paid less for all jobs compared to men in the same professional role? That women are highly susceptible to the hormonal effects of environmental toxins and that this can contribute to diabetes, endometriosis, Polycystic Ovary Syndrome (PCOS), and infertility? That stress is considered an environmental toxin? That experiencing racism is a chronic stress? And that 85% of all modern chronic are considered to be preventable with healthy diet and lifestyle?

While herbs almost always make some difference in a woman's health, all the herbs in the world can't fix a woman's relationship with her body, her mother, husband, food, or money, if any of these are out of order (and for most women, at least one of these is almost always an issue if not more!) many of the other underlying psychoemotional and spiritual factors that ultimately contribute to her sense of – and actual – well-being.

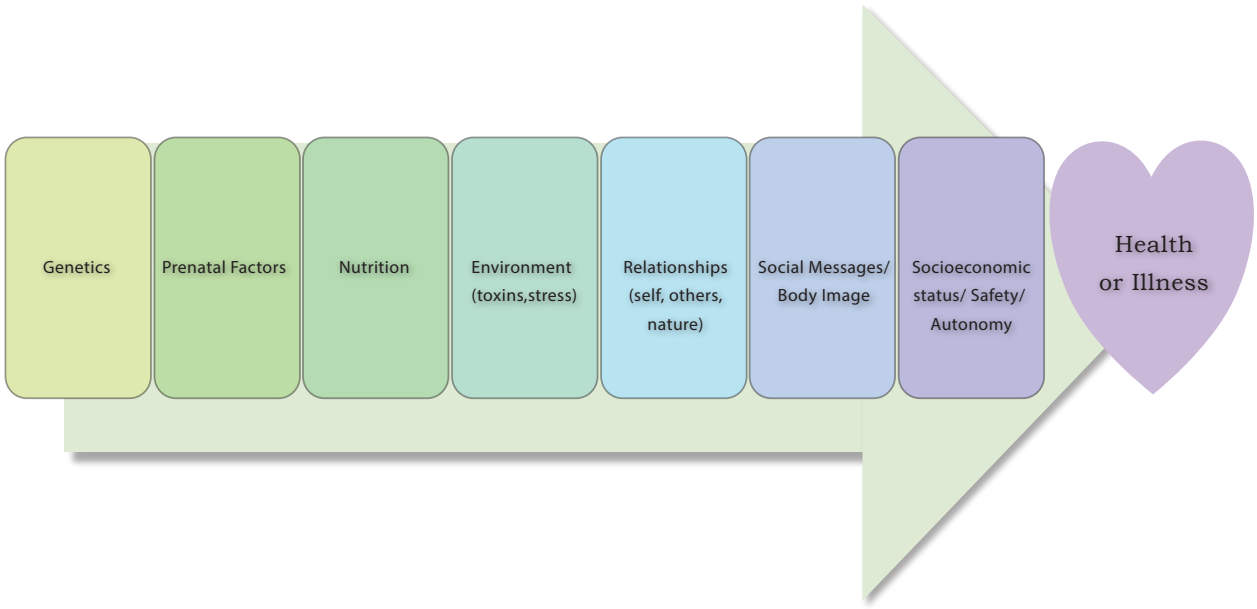
In this lesson we will explore various factors that contribute to health and health disruption (= illness, disease). In Lesson 3 we will look at how we can engage our clients in making inner and outer life change, in Lesson 4 the healthy eating and specific therapeutic diets, and in Lesson 11 I will provide you with frameworks that will allow you to take your findings from a client's lifestyle and health concerns, and apply these to creating a meaningful story that will eventually form the basis for a plan of action for your client, including lifestyle, nutritional, mind-body, and individualized herbal recipes all based on addressing root causes. The accompanying required

reading is essential. There is no textbook assignment for this lesson.

Wellness is Complex and Multifactorial

The factors that contribute to a woman's health, her sense of well-being, the development of disease, or even a sense of disorder in her life are complex and numerous, and begin before she was born – some aspects before she was even conceived. Her own ova, which may potentially become fertilized and become her own children, were formed early in her mother's gestation with her. A woman's core hormonal milieu, including the level of stress hormones she is biologically calibrated to experience, began while she was in her mother's womb. If her mother experienced constant stress, this will impact the template of her own stress level; she may even spend her life recapitulating unnecessary stress just to recreate what is familiar, even if the familiar is unhealthy.

Similarly, her own mother's weight and blood sugar balance while she was still in the womb will affect her weight and possibly even the development of diabetes later in life. So too do her mother's environmental chemical exposures. The following illustration incorporates the major physical and emotional contributors to health.



Ample evidence exists in various fields of health and medicine supporting the contributions of our prenatal and childhood environments on adult health.

- Children who grow up in challenging socioeconomic settings may experience reduced emotional resilience because of many factors, including overproduction of stress hormones and a belief that they cannot effect change in their lives. They are also more likely to have had poor nutrition, all of which can contribute to higher levels of mental and physical health problems as adults ranging from allergies and asthma to depression and anxiety.
- Babies who were born by cesarean or who received antibiotics before the age of two for ear infections or other infections are more likely to develop Inflammatory Bowel Disease (ulcerative colitis or Crohn's disease), diabetes, and obesity due to alterations in gut flora.
- A recent study demonstrated that children who were exposed to frequent parental arguing are more likely to grow up anxious.

The list goes on.

Modifiable factors are those aspects of a client's life that, when changed, can change their health and disease risks. An estimated 85% of disease is modifiable rather than purely genetically inherited or predetermined. In fact, current research demonstrates that much of our genetics is not fixed - it is influenced by our environments - physical and emotional.

As you can see from the wellness arrow above, many aspects of life – some of which are beyond our direct control – determine our health. Throughout this course you will learn how to optimize and modify these to achieve optimal wellness and even reverse factors that may on the surface seem to be beyond our control but which we can influence through lifestyle and intention.

What is Wellness?

My definition of wellness consists of four core dynamic qualities: vitality, harmony, flexibility/adaptability, and resilience. Wellness exists both personally and interpersonally - that is, our social wellness and our community affect our health. If we can help our clients to achieve these four capacities, we will help them to insure lifelong health.

Vitality: This is core inner fire, joie de vive, qi, vital force, vigor, energy, curiosity, youthfulness at any age. It is the quality that distinguishes the living from the non-living.

Harmony: This is harmony of the body in relationship to itself, for example, healthy hormonal rhythms, normal cortisol rhythms, as well as in relationship to nature and community (family, friends, lovers, colleagues, teachers). It is overall wholeness in oneself and a sense of life being in balance, being in the flow of the stream rather than battling against it. Harmony is attuning our rhythms to those of the natural world, to finding our own intrinsic rhythms and staying in tune with those, and whenever possible, spending our time with people and in settings in which we feel emotionally harmonious. Yes, these are music metaphors. Harmony is musical.

Flexibility/Adaptability: The ability to change and adapt, for example to stress, is a key reflection of health. On a very simple physical level, the ability of the cell membranes, for example, or blood pH levels to be flexible and adapt to the needs of the organism is essential to physical survival. Physical flexibility, for example, in our joints and muscles, can help us keep our balance - quite literally! In fact, older women who remain flexible, through practices such as tai chi and yoga, are less likely to fall and have a serious fracture due to osteoporosis.

Life is also about change – in fact change may be the only constant! The ability to "go with the flow," to reset the course, start over, respond to the environment, are all aspects of mental and emotional flexibility and adaptability. Responsiveness is essential to health and requires our physical, mental, emotional, and spiritual radar systems to be alert and able to adjust. Providing the key elements of physical, emotional, and spiritual health help us to stay nimble on many levels.

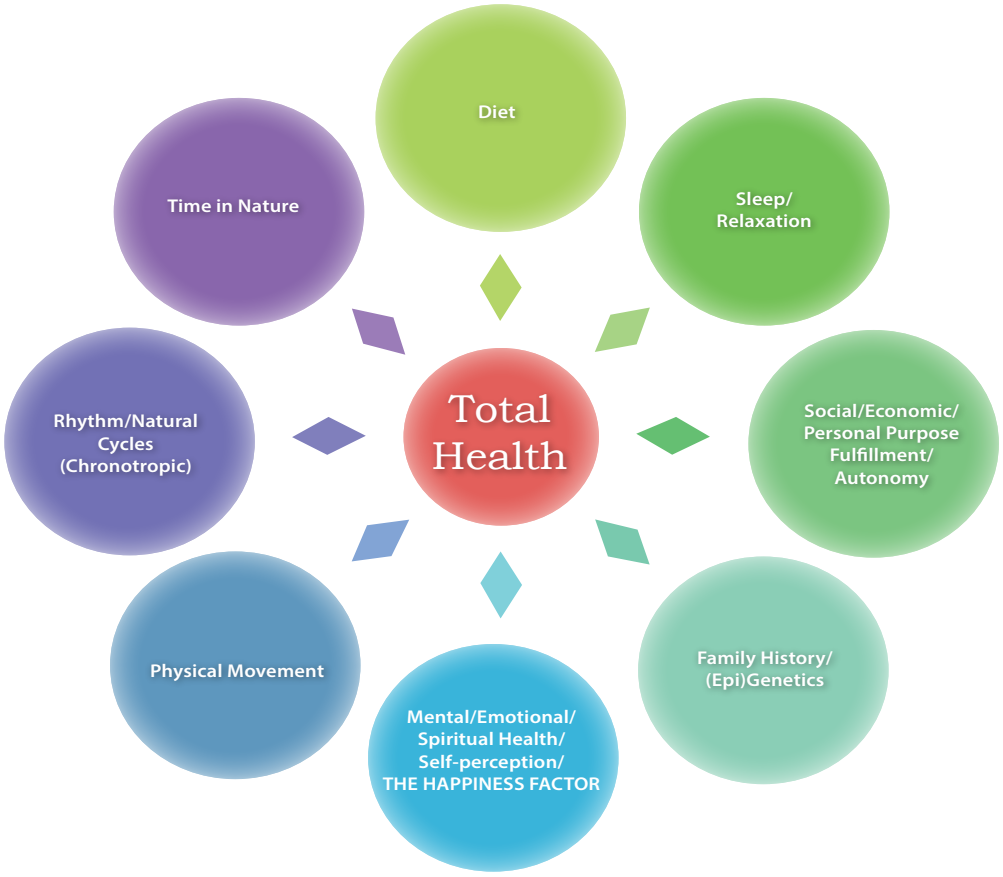
Resilience: This is the ability to recover, heal, and bounce back. It requires physical and emotional resources and skills, from the presence of fundamental nutritional substrates for example, to heal the gut so it is resilient, to herbs, for example the adaptogens, to recover from stress, and mental and emotional competence to know how to recover from life's events and challenges.

Eight Ingredients for Total Health

To be healthy, that is, not just free of disease, but vital, radiant, and thriving, requires a confluence of ingredients that make life rich, as well as an inner life that reflects the Four Dynamic Health Qualities. Of course not every aspect of a woman's life is going to be totally copasetic all the time – we all go through ups and downs and experience the realities of life that are beyond our control and that affect our sense of wellness – for example, political events, random acts of violence we are exposed to, temporary challenges with money, etc. But if the Four Dynamic Qualities of Life are intact, and most of the Eight Essential Ingredients (see below) are available – even if we're short on one or another at any given moment - life is delicious. And that is our goal – to help women feel that life is delicious.

So what are the Eight Essential Ingredients for a Thriving Life?

Each client encounter, as you will see in Lesson 11, should assess these various aspects of a woman's life, and plans to restore health and harmony should include support for each area – or resources where women can get support.



- Good Food (and a Healthy Relationship with Food)

These are the cornerstone of health; more to come in Lesson 4.

- Good quality sleep - and enough of it

Poor sleep quality that does not lead to a feeling of being rested upon awaking can both be a sign of, and lead to, health problems. Inability to fall asleep ("tired but wired") can mean adrenal, hormone, or thyroid problems, or anxiety. Waking in the night can be due to sleep apnea, bladder problems, or menopausal issues, and the need to urinate during the night can even be a sign of gluten intolerance! Lack of restful sleep contributes to pain, depression, fatigue, caffeine dependence, decreased immunity, and poor concentration. Sleep problems should be addressed at the start of any nutritional and botanical treatment protocol.

- Autonomy, Social and Economic Health, Purpose

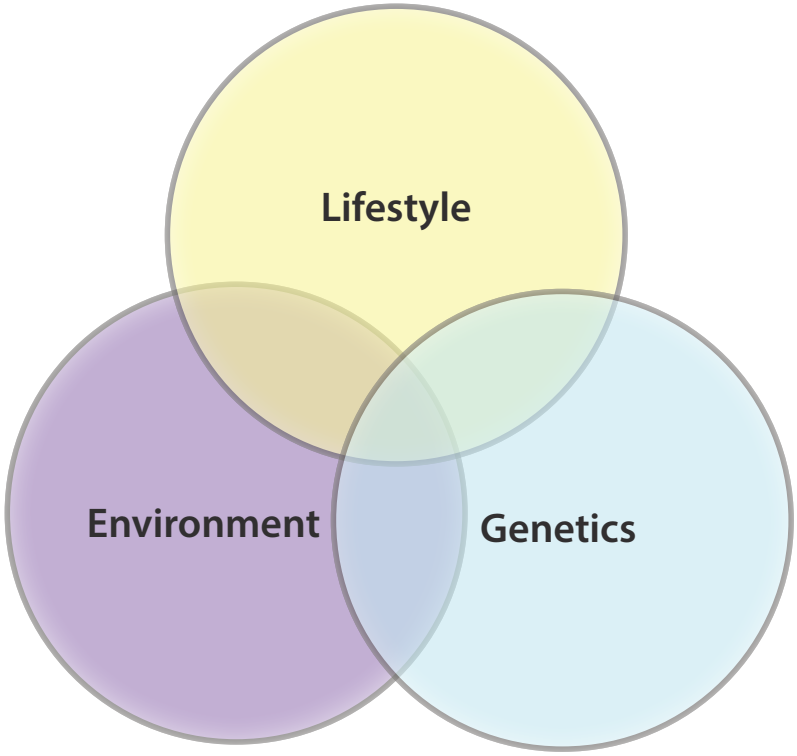
Social, economic, marital, and professional stressors can profoundly affect a woman's health and therefore must also be addressed as part of any plan to restore health. If a woman is in a miserable job she has two choices – reframe her mindset to accept it and make lemonade outta' lemons, or get out of it. A third option, I suppose, and one that women choose all too often, is to remain miserable, which can have a detrimental effect on mental and physical well-being. Depression, for example, leads women to make less than optimal or even unhealthy food choices, decreases motivation for exercise, and increases use of alcohol, drugs, and cigarettes. Learning the skills to counsel women about complex life decisions and making change, or establishing referrals to others in the community who can help them to make positive changes in their lives, is a necessary part of the herbal consulting practice.

- Family History and Genetics

While we can't change our family history and our genes, we are not doomed by them either. Many of what we consider inherited traits are really just inherited habits – how we eat, how we think about and experience the world, whether we exercise, etc. Most of the diseases that we consider ourselves doomed to experience because they are in our family history are actually a matter of lifestyle because these choices determine which of our genes are activated, to what extent, and how. Areas surrounding genes that determine our genetic tendencies, called epigenetics, can be activated or inhibited by diet, lifestyle, even our state of stress versus relaxation.

So just because your grandmother, mother, and aunt had diabetes, breast cancer, or endometriosis, doesn't mean you inevitably will. It does mean you might have these tendencies so you might need to modify the foods, herbs, and supplements you take to prevent them from manifesting.

As you learn about different conditions through this course, you will also learn about ways to work with epigenetics to help clients mitigate and modify genetic disease tendencies. One example would be for women with a history of breast cancer to improve their ability to clear estrogen through the use of supplements, herbs, and foods that help the body to detoxify and eliminate estrogen.



- Mental, Emotional Health; Healthy Self-Perception

Psychosomatic doesn't mean "all in your head" – it means that emotional and mental health is influencing either actual or perceived physical symptoms. How we think affects how we feel.

How we feel also affects how we think. Health is therefore psychosomatic and "somatopsychic". Tapping into a woman's belief system about her health is essential in order to help her tap into her ability to heal – even her fundamental desire to. Does she believe she "deserves" to feel unwell? Is she carrying an emotional burden about something that prevents her from taking the steps to take care of herself? Does being ill fill a role in her life; for example, being sick kept her parents from fighting when she was a girl and a sick role has now followed her into her adult life? Do certain symptoms keep her from taking risks to make change; for example, she's got chronic fatigue syndrome so is too tired to change her job, can't work at a job, care for her kids, or leave her marriage? Health is a complicated matter, the result of a lifetime of habits, patterns, beliefs, and experiences that manifest in the primary means we have of self-expression whether we like it or not - our bodies! And bodies don't lie. As Martha Graham, the great dancer said, "The body says what words cannot."

The challenge for us is to learn to address this complexity of symptom and disease with clients in a meaningful, respectful way that does not lay blame and that is not facile. Of course not all disease is a result of how we think or our emotional lives – some people, like Sandra Steingraber the author of *Living Downstream*, happened to grow up near a cancer-causing factory. She got bladder cancer. So did her whole family (and she is adopted so it wasn't genetic!) Shit happens in life. But often, the wound does reveal the cure, and we can unpeel layers

of the onion to get to the core of health beliefs and patterns as part of what is contributing to or perpetuating a health problem or unhealthy life pattern.

- Physical Movement

Lack of regular physical movement has recently been recognized to be as dangerous for our health as cigarette smoking! Yet most of us live more sedentary lives than women ever have in history, largely because so much work now happens at a desk or computer.

Movement keeps our bodies supple, our lymph glands clearing out toxins effectively, improves blood sugar utilization and balance, relieves anxiety, prevents and treats depression, improves sleep, and prevents falls and fractures associated with osteoporosis as we age. Identifying types of movement that a woman loves to do, and encouraging her to get aerobic exercise three times per week and weight-bearing exercise several times per week can make her life and health so much better.

Conversely, a smaller group of women over-exercise due to body image or control issues, or just to release tension, and may need help finding a relaxing form of exercise such as yoga to stay fit but not over-tax the body. These women, particularly long-distance runners, often present "tired but wired" and have adrenal dysfunction. Finding more balance in their exercise routine, and making sure they are getting enough calories and nutrition to support their ability to restore and heal their muscles is important. Some of these women may be resistant to hearing that they are over-exercising, exercising for the wrong reasons, or are doing exercise that is harming their bodies; an understanding, non-judgmental approach is the most effective.

- Rhythms

Our biological, or "chronotropic" rhythms have evolved over millennia in harmony with daily, lunar, and seasonal rhythms. Circadian rhythms are physical, mental, and behavioral changes that follow a roughly 24-hour cycle, responding primarily to light and darkness in an organism's environment. They are found in most living things, including animals, plants and even many microbes. Interestingly, the severity of many diseases varies across the 24-hour period, with specific disease incidence more commonly corresponding with certain times of day. For example, heart attacks occur most frequently in the morning a few hours after waking, temporal lobe epileptic seizures typically occur in the late afternoon or early evening, and asthma is generally worse at night. Obesity is also influenced by chronobiology, explaining increased obesity, for example, in nurses who work more night shifts.

Most women spend most of their time indoors leading lives that are entirely devoid of attention to the daily, lunar, and seasonal rhythms of nature. When our biological rhythms are disordered, so too are our sleep, digestion, and hormones. Encouraging clients to listen to their inner clocks and rhythms of hunger, of sleep, for quiet and personal time around the premenstrual time if needed, etc., can help them to restore harmony, as can spending more time in nature…

- Time in Nature

Did you know that hospital patients with a view of nature heal faster than those whose windows face brick walls? Neurobiologist Esther Sternberg's groundbreaking work on the science of healing space clearly demonstrates that what we see, smell, and experience in beautiful places can have an enormous impact on our mental and physical health, releasing actual chemical mediators in our brains that are similar to getting high! Human separation from nature in our culture has become so pervasive that the term "nature deficit disorder" has been coined to describe this phenomenon, particularly in kids suffering from attention deficit disorder and other behavioral problems.

Nature has a particularly healing and soothing influence. Spending time in a garden, by a creek, with the wind in your hair at the ocean – all of these can have curative effects. Who hasn't slept better after a day spent hiking or at the beach? In Norway, *Friluftsliv* is a lifestyle loosely translated as "open air life." Embracing nature and enjoying the outdoors is considered an important way of life and is believed to be personally restorative, as well as part of restoring balance among living things. Part of the philosophy of herbal medicine is that the health of people and the health of the Earth are interdependent. This is also important in the ecofeminist world-view.

Our own health is linked with that of our planet. As we are restoring our own health, we are doing so in a way that is respectful of nature, and that also respects our place in nature. Natural medicines, particularly botanicals, have co-evolved with us in the natural world since our beginnings on this planet. In using eco-sensitively harvested botanicals we are bringing ourselves closer to nature, and are preferentially choosing medicines that, unlike pharmaceuticals, do not wreak havoc on our planet with a trail of hormonal and other chemical pollution.

For many clients, it is not terribly difficult to find some way to spend more time in nature – even if just in a park or green space within the city – as long as they are willing to carve out the time to do it. For low-income clients in the inner city, this can be more challenging due to lack of green space and lack of safe outdoor space. Inner city community gardens are an important positive step that many communities have taken to create more connection to nature.

There is little more precious to me as an herbalist than taking a client into my garden to show her the medicines she will be taking while they are in their element. I had one client many years ago whose very new baby died. She came to me to help her dry up her breast milk. We sat in my garden picking sage leaves for her tea, as sage is an anhidrotic (it dries up sweat and breast milk) and talked quietly. I tended that sage plant for years, even moving it with me to a garden in another state. Years later, another move finally separated me from that sage, by then a bush, but it remains part of one of my most powerful herbal memories.

A Special Word About The Happiness Factor and Health

Happiness is underrated and critically important to health. Seriously.

This doesn't mean we're jumping up and down with glee all the time - though a bit of jumping and skipping now and then is awesome. It does mean intentionally cultivating a general state of peace and contentment punctuated by a healthy amount of laughter and silliness.

Some people are just happy people. But here's the thing, I cultivate this trait because I know that my health

depends on it! Research shows that happiness is an indispensible aspect of our health and longevity – people who express gratitude live longer, being kind to others improves our own health, and folks with a healthy social life live longer and also recover from illness faster (including even major heart surgery).

While many of our clients are not happy – in fact many are coming in with depression – it is our job to keep happiness as one of our goals for their health and recovery. Many women feel they don't deserve happiness. A lot of women feel that they can deserve to be happy when they give and give and give to others (I have to admit, I have some issues with Shel Silverstein's *The Giving Tree* because I feel that this is an unhealthy model if giving destroys the giver) and leave themselves out of the receiving end. This can lead women to indefinitely defer their happiness and their health care!

It is our job to help our clients to see that happiness can, and should be, theirs! Of course, getting healthier will make them happier because they'll just plain old be feeling better. But it also goes the other way - working on getting happier facilitates feeling better!

Introduce the idea of "The Happiness Factor" to your clients as if it were an herb or vitamin supplement you are expecting them to take! Some folks have gotten used to being cranky, prickly people out of life habits or they may even find comfort in a familiar feeling of unhappiness because this is what they grew up knowing, and many people just have no idea how to be happy.

This parable from Chapter 1 of Regina Tomashauser's book *Mama Gena's School of Womanly Arts* (she's a women's happiness and pleasure motivator, author, speaker) so clearly illustrates the value of planning for happiness, pleasure, and nurturing rather than taking a seemingly more efficient but actually harmful approach to life that lacks nurturing and fun:

Example A. Picture this:

You are on a long road trip, in a car, by yourself. You're kind of hungry, kind of cranky, but too impatient to get where you're going to stop at a rest area. You keep pushing yourself, ignoring your discomfort, so you can cover more distance.

Example B. Picture this:

You are on a long road trip, in a car, with a couple of girlfriends. Each of you packed a basket of delicious goodies to snack on, and you are currently passing around some crudités with guacamole. Aretha is blasting on the radio, and some of you are singing along. You have a stack of CDs… You have a destination, but you keep stopping at all the interesting sites along the way - shopping malls, and places called Lost River Caverns and The World's Only Anchovy Museum.

Which trip would you rather be on, A or B?

B? Good choice. Know why?

B gets there first. Know why?

Since A began to ignore how she was feeling about a hundred miles ago, she failed to notice the engine light on the dashboard, so the car overheated, and now she's sitting by the side of the road, cursing and waiting for AAA to come rescue her.

We have two options: a life without pleasure and a life that embraces pleasure.

Two Essential Questions

There are two key questions that can quickly help you and your client get to the essence of her health concerns. These should be explored with all clients when searching for the roots of illness. They are:

1. Is there something contributing to your health problem that needs to be removed (i.e, from your diet, life, environment) to promote or restore health?

2. Is there something missing (i.e., from the Eight Ingredients) that you need to restore or promote your health?

These can be explored through a variety of routes including health history, conversation to help you understand your client's perspectives on her health and life circumstances, through the physical exam, and a review of labs and relevant medical evaluation, which, depending on your level of professional training, skill, and credentialing, the latter three may be done by you, or by a licensed health care provider, with you reading the results.

These are two excellent questions to also ask ourselves on a regular basis – as a health check-in and to teach our clients to reflect on. These questions can be a part of health maintenance or a response to illness. Refer back to the *Eight Ingredients for Total Health* as a reminder of what might need adding or subtracting from the recipe for a healthy life.

Seven Essential Wellness Systems and Root Causes

Rather than reducing the body to individual, separate organs or systems, a whole person, or "network" approach looks at how the body's various physiologic processes work to maintain health, and how they are interconnected. Thinking of the body as a spider web is a useful metaphor. A spider web's tensile strength is greater than steel. But touch any one part and the whole web reverberates with movement. We are strong. And all of our parts are really one connected web.

These seven essential wellness systems, illustrated and described below, are the core, dynamic physiologic processes that must work effectively and in harmony for us to maintain optimal health. Each influences the other and each should receive attention when we are developing botanical plans with our clients. The application of these systems to botanical medicines will be further explained and elucidated in Lesson 11 and in the individual condition lessons. For now it's just enough to be familiar with the general concepts of each system.

1. Mind-Body/Body-Mind

There is no illness of the body apart from the mind. ~ Socrates

Numerous people go to the doctor every day with all kinds of symptoms and no discernible pathology (disease, medical diagnosis) is found. Now sometimes doctors just aren't all that intuitive or skilled in making a diagnosis.

But more often than not, the patient truly does have symptoms but no formal disease can be identified. Quite on the flip side of this scenario is the patient who has been diagnosed with a terminal illness, for example, an incurable late stage cancer, who decides that she is not ready to die and experiences a spontaneous remission!

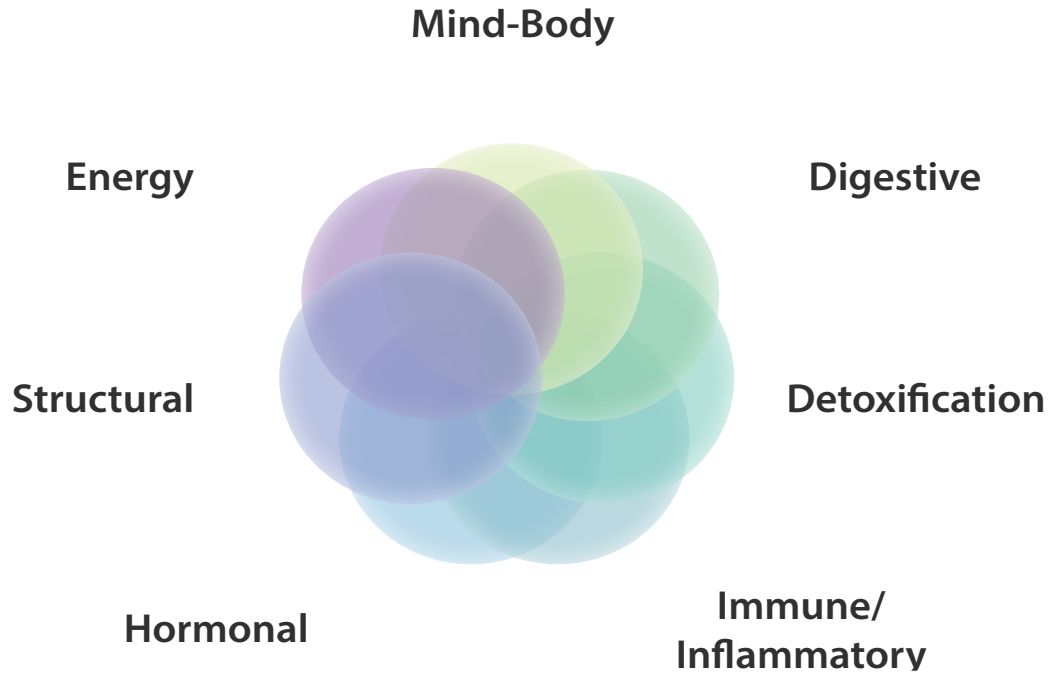
What does all of this tell us? The mind and the body are one. There is no separation. And there is great power in using our intention and focus to create change and healing. What happens above happens below, and vice versa, in mirror image. Mental and emotional stress creates physical symptoms; physical symptoms and physical imbalance create mental and emotional stress.

Attention to the body's ability to heal at all levels is essential, and can include instruction on mind-body and body-mind awareness for clients, use of biofeedback tools such as learning to use breath and thought to calm the heart and respiration, reducing the stress response, creative visualization, journaling, and a host of other techniques. Also, learning about how our communication influences clients on a mind-body level is instrumental in conveying

meaningful and effective insights and plans to them. More on this in *Lesson 3: Transformational Healing*.

Rest and relaxation are often overlooked as part of our treatment plans but are so important. Most of us have become "humans doing" rather than human beings. Yet both rest and sleep are necessary for repair, healing, and also for information integration. More than one great discovery has occurred in dreams or "Eureka" moments when we let go of pushing to solve a problem and just let be. In that relaxation, our brains literally shift gears and synthesize information differently, processing in a way that leads to a solution, seemingly effortlessly.

If you're worried that relaxing will get in the way of being productive, take heart! It has been demonstrated that employees that take more time to rest or relax are actually much more highly productive. Including time to rest, enjoy art, dance, play, have sex, journal, walk in the grass barefoot – turning off the constantly running machine of "have to do, have to do, have to do" is an important part of the therapeutic plan. Lesson 3 presents specific strategies for enhancing and applying mind-body awareness. Just plain old having fun and down time is also important.



2. Digestion/ Gut Health

Millions of people all over the world have digestive problems. It's one of the most common reasons for visits to the doctor's office all over the world - and for the use of laxatives, pain medications, and reflux pills.

The health of our gut is grossly underestimated. It is, in fact, one of our most important natural resources! Our gut health insures that we are able to extract and absorb nutrition from our food and turn it into energy and tissues. It functions as a major part of our immune function, and our gut flora contributes to mental and emotional health! When we say we know something in our gut, this is not merely a metaphor. Researchers now recognize that our gut is our second brain, providing us with a wealth of information via a massive neural network. Our gut health may be a missing key in unlocking many mood and mental health issues, too! Additionally, stress can have a very negative impact on the gut, delaying the release of important stomach acids, slowing down motility, and disrupting elimination.

One of the major jobs of your digestive system is to provide an interface between the external world (foods, allergens, bacteria, etc.) and your bloodstream. It does this in the stomach by using natural digestive acids to break down potentially allergenic proteins and in the intestines via a layer of barrier cells that prevents these proteins from getting into your blood stream. Medications for reflux (for example a PPI such as Prilosec) take out the first line of defense – the stomach acid.

When the gut barrier gets weakened from chronic exposure to foods that irritate the gut, or when the good bacteria get out of balance from antibiotics, we can develop gut hyper-permeability, or leaky gut syndrome. Foreign proteins get into the general circulation system and place the body on red alert to react to many triggers in the environment. We also have a whole host of special bacteria in our gut, as well as immune cells, whose job it is to break down and get rid of proteins and other molecules before this can happen.

The health of the gut determines the health of the body's microbiome, the composite of gut flora colonies that reside in our digestive systems, and the microbiome is critical to our overall health. It is an important part of estrogen metabolism and excretion.

In my practice I use a 3-phase plan for gut health consisting of

- The Elimination Diet
- The 4R approach
- Mindful Eating

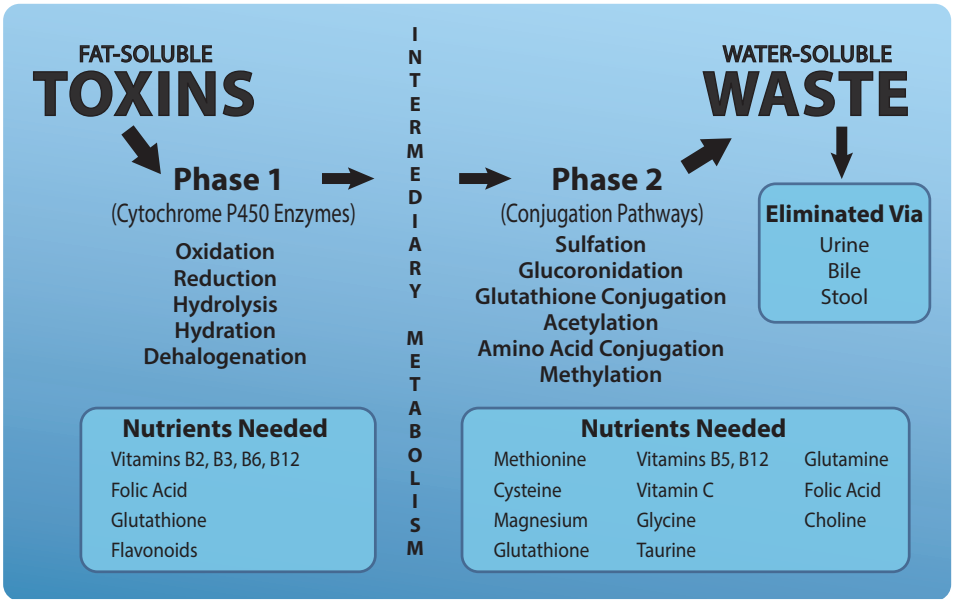
These approaches are quite simple to learn and apply, and can be transformative for your client's health.

3. Detoxification

What do you think of when you hear the word detox? Diets, juice fasts and cleanses? Likely so. But this is not actually what I mean by detox – though sometimes a brief fast can be useful for therapeutic reasons. When I say "detox" what I am referring to are the body's natural mechanisms for breaking down and eliminating a whole range of chemicals that come from our food, our hormones, our metabolic processes, and also environmental exposures (toxins, medications, etc).

Our bodies are beautifully designed to make sure that we break down, package, and eliminate chemicals and chemical by-products that can cause us harm were they to linger in our bodies. Most of our detox happens in our liver, though there are multiple sites where these processes can occur. In the liver we have a 2-phase process of detoxification. The simplified diagram below illustrates some of the main nutrients required for each of these phases to proceed properly, and also illustrates the avenues through which wastes are eliminated.

Phase 1 and 2 Liver Detoxification and Necessary Nutrients



Unfortunately, several things can happen that interfere with effective detoxification, leading some of these harmful chemicals to either get stored in our bodies, or to linger, recirculate, and cause havoc in the form of damaging free radicals and other harmful substances. The most significant of these factors is that we have tens of thousands of "new to nature" chemicals in our environments – molecules that we did not evolve with and which our bodies have no idea how to recognize and process – ranging from hydrogenated fats to organochlorides. These chemicals overburden our intrinsic detox systems and damage our cells.

Another factor is poor diet. It takes the right type and quality of amino acids, B vitamins, and antioxidants such as Vitamin C and E to make detoxification chemicals, and to break down, bind and excrete chemicals properly. Finally, age, stress, and illness can weaken our detox processes.

How do you know if a client's detox pathways need help? Here are just a few clues:

- Acne
- Hormonal imbalances; irregular menstrual cycles
- Chronic fatigue, fibromyalgia
- Constipation
- Sensitivity to coffee, alcohol, or medications
- Chemical sensitivity
- Possibly headaches
- Possibly a family history of breast cancer

Laboratory testing can confirm compromised detoxification pathways.

In addition to the nutrients noted in the detox image above, phytonutrients in vegetables, fruits, and botanicals can also be used to support the natural liver detoxification processes. Phytonutrients in the *Brassicacae* family are especially important for supporting detoxification and they also contain fiber that assist elimination. These include broccoli, kale, collards, Brussels sprouts, and cabbages.

Breaking a sweat on a regular basis, whether through exercise or saunas, can augment detox pathways. Hydration is important.

4. Immunity/Inflammation

Inflammation is a necessary response that our immune system creates to fight infection locally and systemically. Without the inflammatory response, heralded by heat, swelling, redness, and pain, even the smallest cut or splinter could cause a life-threatening infection. Inflammation is meant to be an "as needed" response, not a chronic state.

Unfortunately, modern lifestyles have led many of us to be in a state of chronic inflammation, and this is an underlying source of many chronic diseases from menstrual pain to endometriosis, from acne to heart disease and stroke! Stress, poor diet, lack of exercise, obesity, exposure to allergens (i.e. gluten, dairy) and chronic exposure to environmental toxins are the most common causes of chronic inflammation. In Lesson 4 we will thoroughly explore dietary strategies to prevent and reduce inflammation, and throughout the course you will learn how to apply botanicals to reduce inflammation in those conditions in which it is an underlying or contributing factor.

5. Hormonal (Endocrine)

Hormonal imbalance isn't just about irregular periods. Cortisol and insulin are also hormones, and are as important as estrogen, progesterone, and testosterone in determining our health – including gynecologic health. When they are out of whack, they can cause many of the symptoms for which women commonly seek advice,

including:

- Fatigue
- Weight problems
- Sugar cravings
- Fertility problems
- Acne
- Depression
- Sleep problems

In fact, insulin resistance and adrenal dysfunction are often the underlying causes of many gynecologic problems as well, including PMS, fibroids, fertility problems, and polycystic ovarian syndrome (PCOS). In Lesson 4 we will discuss insulin resistance in detail, including how to prevent and treat it, and later in the course you will learn about the adrenal stress system, and how to support and nourish it with lifestyle and the botanicals category known as *adaptogens*.

6. Energy

Nope, not talking about energy medicine here, I'm talking about literal energy - in the form of ATP, which is a molecule known in science as the "energy currency of the cells." This form of energy is the spark plug that makes metabolism happen and it is formed in the mitochondria. You might remember from biology class that these were called "the powerhouse of the cell." Mitochondria are the millions of tiny factories in our cells that turn food and oxygen into energy. Active organs and tissues, for example the muscles, heart and brain, have more mitochondria than other cells, but all cells, except red blood cells, have thousands or even millions. When our mitochondria are working improperly, our metabolism slows down, we feel more fatigued, have muscle aches and pains, problems with memory and cognition, and we age more quickly.

How do our mitochondria get damaged? You've probably heard of free radicals and oxidative stress (if not, think about rust damaging your cells and their internal structures and functions) – well, this is where that happens. Processed foods, poor quality fats, inadequate nutrition, and exposure to environmental toxins are just a few of the numerous causes of oxidative stress.

How can we prevent this? Eat high quality, nutrient dense foods, high quality fats, make sure to get adequate micronutrients, especially antioxidants, and eat fresh foods with a wide variety of bright colors - red, yellow, orange, green, and purple. Increase omega 3 fats in order to strengthen the mitochondrial cell membranes. Supplement with protective acetyl-L-carnitine, alpha lipoic acid, coenzyme Q10, n-acetyl-cysteine, NADH, D-ribose, and resveratrol, and get adequate B-complex vitamins, all of which are necessary for optimal mitochondrial functioning. Reduce inflammation, and reduce exposure to (and sometimes detoxify from) environmental pollutants. Exercise regularly, particularly interval training, which increases the efficiency and function of the mitochondria. Remember, the heart is a major muscle – long term and optimal cardiac function highly depends on highly functional mitochondria!

7. Structure

Past injuries and traumas can cause "physical memory" – in addition to the mental and emotional resistances that may naturally arise around the circumstances with which we associate the trauma. I can recall one particular client who had been sexually abused by her father from the age of 9 years old until she ran away from home at age 15. When she went into labor with her first baby, the physical sensations in her pelvis and vagina triggered physical, mental, and emotional memories of abuse, and she was unable to cope with labor. Getting an epidural was a profound expression of her power to say "NO!" to the pain.

Other physical traumas, for example, from injuries and accidents, can cause subtle but significant changes in the body that lead to physical compensation that we might not even realize is happening. For example, pain in one leg or adhesions that cause subtle physical changes in how we use a leg can cause us to compromise our posture in ways that might affect the positioning of the pelvic organs, the spine, even our neck, and may cause pain and dysfunction anywhere in the body.

Myofascial release, osteopathic manipulation, and Mayan abdominal massage are all techniques that can alter and improve physiologic functioning that is otherwise out of kilter due to prior trauma. Having a referral network for therapies you do not offer in your practice is an important part of the comprehensive model of integrative herbal consulting. Visualization techniques can also be useful and are easy to learn and share with your clients.

A Third Question to Explore with Clients

While few of us *intentionally* create a sick role in order to gain something, for many women illness evolves out of an inability to get one's needs met directly. Many women have shared with me that PMS symptoms or migraines are the only way they can get a day off from work or household responsibilities.

While this question must be asked with skill, the answers can be informative to you and the question itself often provides insight for the client. In a gentle, respectful way, I might ask my client, "How does this imbalance or illness serve? And whom does it serve?" If a direct or indirect benefit is established, explore alternate ways a woman can address the underlying issues without having to experience illness or unpleasant symptoms.

Spiritual Influences

Clients come with their own sets of spiritual beliefs. These can exert a powerful influence over their perceptions about their conditions as well as their ability to heal. While I am not part of any faith or religion, I have genuinely and respectfully engaged this principle on many levels. For example, when in Haiti, where faith is central to the life of every Haitian, I often told a patient, when faced with bad news, "It is in God's hands." This is a local saying and in difficult times this is deeply comforting to the patient; it lets them know I respect and honor their belief system.

One very illustrative story is about a client I cared for in the US. She was pregnant for the 3rd time, Catholic, and had two prior abortions. She had a recurrent nightmare for weeks that she took a pill and the baby in the current pregnancy died, and then she could see all three babies dead. I had her come over to the office and

helped her into a deep progressive relaxation during which I asked her to express her fears. She felt afraid that she was going to be punished for her previous abortions with the loss of this baby. I asked her if she believed in Jesus' forgiveness and she said she did. I asked her to visualize Jesus forgiving and blessing her and she did. The nightmares left.

I also have a few stories that are very hard to explain, but suggest that sometimes even phenomena that lack an obvious explanation are worth paying attention to. [Keep in mind that occasionally, clients with fantastical thinking and strange ideas – i.e., TV's talking to them, visitors from other planets, etc. – might actually have serious mental health problems that require medical assessment and possibly medical treatment.]

Shortly after his sister died of cancer, my colleague went to Nepal and India on a personal pilgrimage and to do medical service work. Each night after his long mountain treks he had intense and vivid dreams of his sister coming to visit him. She was happy and the dreams themselves were not disturbing, but they were disturbing his ability to rest. He spoke with a Buddhist spiritual leader who offered to perform a traditional ritual to help his sister's spirit find rest. The ritual was performed and the dreams stopped, while my colleague was left with a sense of completion and peace.

A couple of decades ago I was part of a group that got together weekly to explore the Anthroposophical Medical and Spiritual teachings of Rudolf Steiner. While I am not a Waldorf person, per se, by extension of being a mom, herbalist, and midwife of natural ilk, many of the families in that community naturally sought my services, and I was invited to participate and I thought it would be interesting. One night, a psychologist conveyed a story that has stuck with me in the greater than 25 years since I heard it. He had a young patient, a woman in her mid-20s, who suffered terribly from depression. The depression had worsened in the months since her grandmother died, as her grandmother had raised her and was her primary support person. The psychologist's grandmother had also just recently passed away. On the night of a day he had seen this patient, as he was falling asleep, he found himself imaginally talking to his grandmother. He asked her, if she was really out there in the spiritual realm, could she go and talk with the young girl's grandmother and tell her that the girl needs her help.

The psychologist drifted off to sleep imagining this. The next day the most astonishing thing happened. The young woman called his office and told him she'd had the most extraordinary dream the night before. Her grandmother appeared to her as real as life, told her that she was with her, that everything was going to be ok, and reminded her that she had the strength to get through. When the young woman awoke she felt as though the entire cloud she'd felt for months – and longer – had been lifted and she felt renewed and light.

There are more stories that I could share, mostly told to me by clients/patients who have shared profound experiences surrounding births and deaths of family members. I don't know what to make of these stories. All I can do is leave it to you to decide what you think and believe, and how you might want to integrate these matters into your practice.

The Impact of Illness on a Woman's Life

The impact of illness on the life of any individual should not be underestimated. In fact, illness worldwide, including in the United States, is the primary factor that tips people over into poverty (socialized medicine has prevented this in many countries). This is due to a combination of the inability to work due to need for medical care or a disability and the overwhelming cost of medical expenses. Illness can take an enormous time to manage, between doing research, visiting various practitioners, and managing sometimes complex protocol – whether medical, naturopathic, or botanical. It can also place tremendous stress on family systems. A woman with a partner and children may be particularly vulnerable to guilt and depression if unable to maintain what she considers to be her responsibilities as a "wife and mother."

In addition, illness affects peoples' moods and behaviors, increasing fatigue, depression, irritability, sadness, and impatience because they feel unwell and are also frustrated or worried by their illness or mood. Additionally specific moods may be associated with certain conditions: depression can be a symptom of cancer, new fatigue a symptom of heart disease or even a heart attack, and irritability or depression a sign of dementia.

Lesson 3 will explore the ways in which we can engage the whole woman on her path to healing, change, and recovery. This is not always a simple process. Helping the woman to reframe illness as a chance to make change, hit the pause and the re-set buttons, is a start. Being understanding and compassionate about the emotional, mental, and real life burden of illness is also important in how we engage with our clients and in the plans we help them to establish in order to achieve wellness.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 3

Transformational Healing

In this lesson soul meets science! Through an understanding of the role of mind-body medicine we can facilitate our clients' and our own success in making personal change, reducing the physiologic stress responses that can create illness, and enhancing the body's intrinsic capacity for healing and resilience. You will learn an assortment of skills to help your clients make shift happen in their lives. There are numerous tools in the mind-body tool kit; this lesson offers a sampling of some my favorites ways to use the conscious mind to affect unconscious beliefs, nervous system patterns, organ function, and ultimately, health.

You will also be introduced to the role of the hypothalamic pituitary adrenal (HPA) axis in health and disease. In fact, I suggest starting with the HPA Axis Video (first video in the series) to get familiar with psychoneuroimmunology. You'll also dive into your first big category of herbs - adaptogens - which I've been teaching about since the 1990s (in other words, before they were cool) – which are used to help modulate the stress response, amplify resilience, and improve well-being.

Unit 1 Lesson 3 Transformational Healing

Learning Objectives

By the end of this lesson you will be able to:

1. Understand the importance of "Readiness for change"
2. "Sell Health" to your clients
3. Describe mind-body medicine
4. Practice and teach "the quickie" meditation
5. Describe the HPA axis
6. Understand the role and use of adaptogens

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Adaptogen

Compassion

HPA Axis

Mind-Body Medicine

Placebo

Psychoneuroendocrinology

Psychoneuroimmunology

Relaxation Response

Resilience

Trauma

Key Botanicals

Students should be familiar with the botanical name, common name, actions, common uses, forms of use, general dosage ranges, side effects, and contraindications of the herbs on this list. Ideally you will also be familiar with taste. This information can generally be found in the course and accompanying required reading materials.

Asparagus racemosa

Cordyceps sinensis

Eleutherococcus senticosus

Ganoderma lucidum

Glycyrrhiza glabra

Panax ginseng

Panax quinquefolium

Rhodiola rosea

Schizandra chinensis

Withania somnifera

Instructions for this Lesson

1. Watch the video on the HPA Axis.
2. Read the chapter Stress, Adaptation, the Hypothalamic-Pituitary-Adrenal-Axis (HPA) Women's Health in *Botanical Medicine for Women's Health*
3. Read workbook lesson (this pdf) or listen to the recording (which is a bit expanded on from this PDF).
4. Watch the rest of the webinar series.
5. Complete the Reflections….practicing at least one of the self-care practices in the lesson or accompanying Transformational Healing Toolkit.
6. Take the E-quiz.

In any moment, no matter how lost we feel, we can take refuge in presence and love. We need only pause, breathe, and open to the experience of aliveness within us. In that wakeful openness, we come home to the peace and freedom of our natural awareness. ~ Tara Brach

The power of our beliefs over our health is profound, as is the power of our history - personally, inter-generationally, and culturally. Only in the past couple of decades have science and medicine begun to appreciate the power of the mind-body connection in health and disease, but this is something that has always been a part of traditional medicine and healing around the world, and remains an important teaching in indigenous medicine, from various shamanic practices to meditation and yoga.

Mind-body healing can significantly decrease our susceptibility to disease, and improve our adrenal stress response, thus reducing our likelihood of diabetes, hormonal dysregulation, heart disease, depression, anxiety, insomnia, and numerous other health problems that accompany stress.

In fact, we all have innate self-repair mechanisms. Our bodies know how to heal. Our cells know exactly what to do to eliminate toxins, produce energy, and regenerate tissue. Sometimes just reducing stress and believing in our body's ability to heal is all that is needed to mobilize our innate wellness potential. Reducing stress also nurtures our desire and commitment to engage in positive habits that restore and support our health.

Skills to help our clients identify and transform their beliefs are integral to our effectiveness as clinicians and herbal educators. These can be learned and practiced by us for our own well-being and self-awareness, and taught to our clients in the context of a consultation. These skills, which range from stress reduction techniques to art to visualization, all incorporate focused attention on creating new ways of thinking, feeling, responding, and acting.

There are numerous mind-body medicine techniques, however, they all share 3 common characteristics:

1. Focused attention, i.e., on a word, thought, prayer, feeling, body part, or the breath
2. An attempt to override or transform thoughts and feelings that are intrusive, counterproductive to health goals, or destructive, and replace these with positive, healthy new patterns

3. An attempt to achieve a state of inner peace, which is mirrored by the physiologic parameters of a relaxed state, i.e., relaxed heart and respiratory rates, normal blood pressure

This third component is a result of quieting the sympathetic nervous system - the system that is activated in stress (the HPA axis, or our "fight or flight" response), and breaking "the worry cycle" by cultivating and amplifying "the relaxation response."

While some of the techniques in this lesson may seem like "woo woo," please rest assured, I am as hard core a skeptic as the next scientist, and I have a high aversion to "woo." There is, in fact, firm scientific grounding in the benefits of activating the relaxation response and also in achieving what has been described as "flow" - a fully immersed state of energized focus, full involvement, and enjoyment in the process of an activity, which can be achieved with some of the creative activities in this lesson. Further, as you will discover in the latter section of this lesson, botanicals can be elegantly woven into achieving a reduced stressed state by supporting the physiologic stress response system called the HPA axis.

Breaking the Worry Cycle

And the day came when the risk to remain tight in a bud was more painful than the risk it took to blossom. ~ Anais Nin

A major goal of mind-body practices is to release us from the "worry cycle" – the endless "monkey mind" that chatters on about this worry and that problem. Breaking this cycle relieves our bodies of the sympathetic nervous system's overdrive that leads to adrenal burnout, chronic fatigue, frequent colds, irritability, and a host of other common medical problems which can escalate to more serious diseases, including obesity, diabetes and heart disease.

The physiologic response that happens as a result of breaking this worry cycle is commonly referred to as "the relaxation response." These concepts, while ancient, were introduced into modern medical parlance by Harvard physician Herbert Benson who coined the term, and are now widely practiced by a variety of health care practitioners, yoga teachers, and coaches. Mind-body techniques build resilience that can reduce stress and its harmful effects, and influence gene expression and disease vulnerability.

Extensive research in the field of psychoneuroimmunology demonstrates that these practices can reduce heart rate, improve immunity, relieve stress-related illness, alleviate pain, and have numerous benefits for health outcomes and quality of life for children through to the elderly.

Understanding Readiness for Change

Before we can facilitate change, we must understand our client's readiness for change. Within our Healer's Heart awareness is our ability to meet clients "where they are" in their readiness to change and to pace our plans with them accordingly. If someone has come to you for education or health care help, she is already expressing the desire to make change.

However, each woman's readiness will vary and may not mesh with your enthusiasm or ideas about how fast she might make change. I had a potential client who, upon calling for an appointment, asked how I might go about addressing her very significant Irritable Bowel Syndrome symptoms. When I began to talk about working with her diet, she said, "You mean I have to do work to get better?" She did not schedule an appointment.

Habits that come naturally to you may be entirely new or overwhelming to clients. For example, the idea of shopping at a natural foods grocery store, preparing foods differently or preparing different foods, or changing routines is often not easy due to time constraints, economic barriers, lack of knowledge, emotional attachment to old habits, or simply fear of something new and different. Just recently, a patient of mine who had a traumatic childhood that included an alcoholic father and 22 moves to different homes by the time she was18 said, "I want to make changes, but because of all the changes in my childhood, I don't do well with them; I never even rearrange the furniture in my house."

Often we need to temper our enthusiasm and wait for our clients to achieve readiness incrementally. Even just learning to cook kale and whole grains, and to make chamomile tea might seem daunting to some clients. And though you might have been eating them for years, not everyone knows what miso (a traditional fermented soy paste) or tahini (a thin sesame seed butter) are, let alone how to cook millet or quinoa!

Honoring individual readiness to change in our clients requires a high level of personal maturity and attention to others – it requires patience, compassion, listening, reflecting back, and non-judgment.

When you do meet resistance to change, it is helpful to have a strategy for working with your clients. The download, **Making Shift Happen,** that accompanies this lesson, can be very helpful to have clients do on their own; it can also be helpful to go over it with them either as they do it, or after, to help them identify and transform their inner barriers to change. This can be a powerful tool for helping you get to know your clients better, as they are getting better to know themselves.

Understanding where clients are in their readiness to change can help us facilitate their sucess by helping them to set appropriate goals.

Setting Clients Up for Success: Realistic Goals

Establishing realistic goals is one of the keys to success in changing a habit or following a plan. Sending a woman home with a list of major dietary changes and 10 new supplements and botanicals to take daily is likely not realistic for most. Therefore, really checking in on what is reasonable for any given woman is important if she is to succeed. Having this conversation in a respectful way also keeps the dialogue open to identifying obstacles should you discover, at follow-up appointments, that she has not been able to follow the plan. It lets her know you are on her team, that you want her to speak with you honestly about what is – and isn't – working for her and why, so that you can help her to make appropriate adjustments.

When someone starts a new health program, they often contend with their own issues of success and failure. So often women, when changing their diets, describe relapses into unhealthier eating patterns in words such as "cheating," "I was bad," or "I was weak." I always remind them that this is not about success or failure, not about good or bad, and there is no shame, punishment, or judgment – it is simply about making choices and

this is something within their power to do. When it comes to food addictions, such as to sugar and carbs, or to substances such as coffee, alcohol, etc, I also let them know that they are not struggling because of weakness, but because something has caused their brain rewiring to change – and this is really hard to change but can absolutely be done. And I give them ideas on how to move forward. (More on food addictions in Lesson 4.)

The first step in change is always self-awareness: 1) recognizing the pattern, and then 2) the "why" behind it. For example, if a client is struggling with her weight and finds herself eating when she's not hungry, particularly "feel good" foods like sweets, fatty foods, or salty foods (or in the case of certain ice cream flavors that are available, all of these in one!), have her try to understand what's driving the reach for it. Is it fatigue and her body is craving energy? Is it sadness and she's craving the boost she gets from the chocolate and the sugar? Is it loneliness and she's filling a different kind of emptiness?

In the process of facilitating change we want to help our clients to identify and promote new, positive outcome expectations, encourage them to take small steps, enhance their ability to deal with obstacles that might arise, plan for support and encouragement if they are struggling (i.e. a follow-up phone call or brief appointment), and have strategies for coping with relapses into old behaviors or an inability to follow the plan by understanding obstacles and triggers for relapse (often stress, anxiety, or depression), and re-strategize ways to overcome these.

Changing Habits: How Does it Happen?

Changing habits is rarely simple or easy. Habits evolve over time and are rooted in beliefs, needs, behaviors, are triggered by cues in our environment, and reinforced by some form of reward – depending on whether it is a healthy or harmful habit, typically a feeling of stress relief, satisfaction, a desired outcome, or praise. If a healthy habit, such as exercise or eating well, the stress relief may be due to a cascade of beneficial hormones and chemicals that are released into the blood, the desired outcome might be fitting into your old fave pair of jeans, and the praise may be your own self-admiration or your BFF telling you those jeans look fab on you. If an unhealthy habit, the rewards are likely short lived - the immediate release of chemicals that make you feel calm after eating that pint of Ben & Jerry's in front of the open freezer, only to be followed by feelings of shame, disappointment, and a sugar crash, not to mention the muffin top that reminds you of how weak-willed you are!

Actually, most unhealthy (and even many healthy habits) have nothing to do with will-power - they have to do with addictions that arise from patterns that trigger the release of chemicals from our brain's reward center - chemicals like dopamine and epinephrine. You will learn a great deal more about this in the accompanying webinars on *Stress, the HPA Axis,* and *Adaptogens*.

The important parts here are:

1. To remind women that their habits are not their fault
2. That their habits are within their ability to change
3. And that there are 3 steps to changing habits

The 3 steps are:

1. Identify and become mindful of the habit
2. Change the cues that trigger the habit
3. Build in new rewards

Let's talk about food addictions, for example, to sugar and fats. This is a super common one. Who hasn't craved a giant chocolate bar or downed some ice cream at some point in their lives out of fatigue, anxiety, or depression. As you will learn in the accompanying webinar, there are physiologic reasons we crave these foods when stressed (and a highly developed junk food market that knows exactly how to cater to these cravings and even perpetuate them!). But how about using the 3 steps to intercept the craving at the pass?

First, we have to identify the habit and get real with our clients about it. Use the handout accompanying this lesson to do exactly this. What is the habit? What triggers it? And how can this be shifted. Second, we have to change the cues. If you don't have the trigger (i.e., the pint of ice cream or candy bar or chips) in your fridge or pantry, you can't eat 'em. If your client always has a pastry with her afternoon coffee, try green juice or hummus instead - who wants a pastry with green juice (ew!)? You get the drift - you just have to get creative with your clients. Finally, change the reward. This can be as simple as checking in with the powerful healthy feeling you get after making a positive choice and reveling in this, or as complex as setting simple goals and literally rewarding yourself for them. Finding the right reward for your client may take some experimenting - but it's fun to explore!

Remind your client that it takes 30 days to form a new habit. If your client "falls off the wagon" that doesn't mean she's "failed." There's no failure in this model. It's just about continually readjusting until the recipe for success is found.

"Selling Health and Happiness" to Your Client: The Power of Placebo and How to Use It!

I'm huge on selling hope and health to my clients. I boldly tell them, "I believe in you!" "You CAN do this!" "YES, this works!" You can lose that weight (or gain it, as the case may be), you can push this baby out, changing your diet will absolutely help you to get rid of those abdominal symptoms… and so on.

I am always entirely truthful, realistic, and never say it if I don't believe it. And that's the important point: What YOU believe as a practitioner is what you are going to "sell" your client on! So you've gotta darn well believe in what you're telling them (i.e., that herbs work) and you've got to help your clients believe in themselves. Clients are stealth at sniffing out your doubts. If they have struggled with ill health, hormone imbalance, depression, periods from hell - whatever it is - for years, and have seen everyone on the beat and are losing hope, they are going to sabotage their wellness potential by finding that seed of doubt in you that resonates with their own.

You just might need to rekindle a pilot light of hope for your client that went out long ago. Giving hope through your own belief in what you are offering or teaching sparks up the innate healing capacity that accompanies

belief. And this is a powerful catalyst for change. It is likely what leads to the placebo effect - the phenomenon that occurs when a patient's symptoms improve from simply *believing* they are getting an effective medication or treatment, even if it is actually a sham procedure or inert substance. The neurobiology of belief remains undefined, but it is nonetheless real.

The opposite of the placebo effect is called *nocebo*. While the placebo effect immerses a client in the positive outcome possibility, the nocebo effect is the negative effect. It's just the flip side of the placebo operational belief system. So whereas I might make eye contact with a woman and tell her she can push that baby out, and she gets it and does, someone else could just as easily look her in the eye, say you cannot do this, your baby is too big, and you need a cesarean – and pow! Labor stops and this becomes a self-fulfilling prophecy even though she goes on to have a 6 lb. 8 oz. baby (3084 g for everyone outside the US)! Of course, we have to be honest – if she's been pushing for 6 hours and the baby feels huge we wouldn't lie! But whenever it is within our power to inspire hope, this can become a catalyst for health.

Change the Story – Helping Women Reinvent Themselves

We all have personal stories. Often these stories – some that we tell ourselves, some that others have told us and we have internalized – are not conducive to our optimal well-being and may even keep us stuck in unhealthy patterns, habits, and relationships. Here are some of the many titles of women's stories:

- I'm Not Lovable
- I'm Not Smart
- I'm Not _____ (Fill in the Blank) Enough (tall, pretty, skinny, oh there's lovable again)
- I Don't Know Enough
- I'm Unwell
- This Problem/Condition/Situation is Permanent
- I Can't Give Birth Normally Because None of the Women in My Family Did
- I Don't Deserve to Be Happy
- He Doesn't Love Me Because I'm Not ….
- I Have to Take Care of Everyone Else First
- I am Stuck in this (job, marriage, town, etc).
- I Can't Take Time to Relax
- My Mom Had (diabetes, heart disease, you name it) So I Do, Too
- I Have to Do This (or That) to Prove Myself

- Life is Hard; Life is a Struggle

The list goes on.

So how do we change the stories? Take out the tapes? Quiet the monkey mind chatter of negative self-talk that leads to stress and reinforces habits that interfere with health for our clients? (And for ourselves as the starting point?)

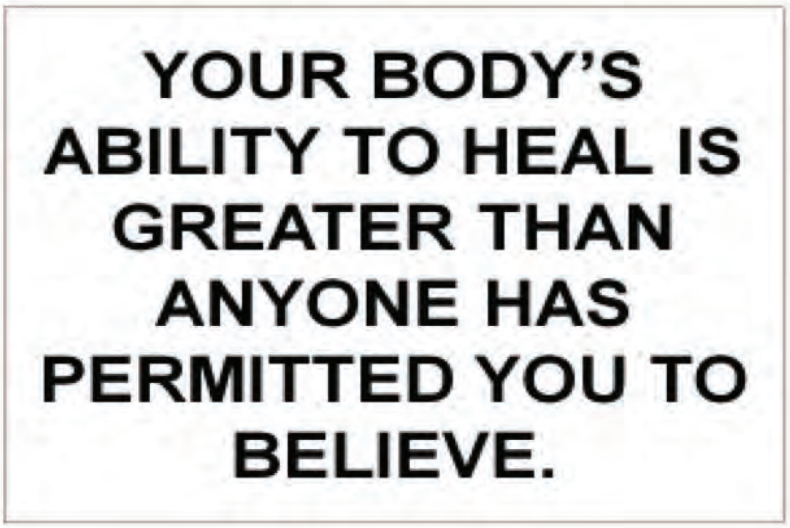
We can:

- Encourage self-reflection and self-exploration
- Look at how current behaviors reinforce the story-line
- Decide the old story is boring – you've read it so many times you know it by heart
- Rewrite the tale
- Learn to be in the present

Rewriting your own history is a powerful act. One way to go about it is to do a review of your life, chronologically, dividing it into epochs: Childhood, The Teen Years, College, Those Early Relationships, etc., up to the present. Focus on the life lessons, skills, and triumphs you had in each period. Trace where you came from, where you've been, what you've learned (and are learning) and who you've become, acknowledging mistakes you've made, and looking at your strengths. Write it in any style you want. Make yourself the heroine of your tale! Music, mediation, nice scents, and a cup of relaxing tea can set the mood.

This exercise is a real gift to clients who are down on themselves, have had hard struggles in their lives and see the deficits and damage, not the strength. Encourage 'phoenix rising out of the ashes kinds of thoughts while they write…

What if we all grew up hearing this story? What if we all believed this?

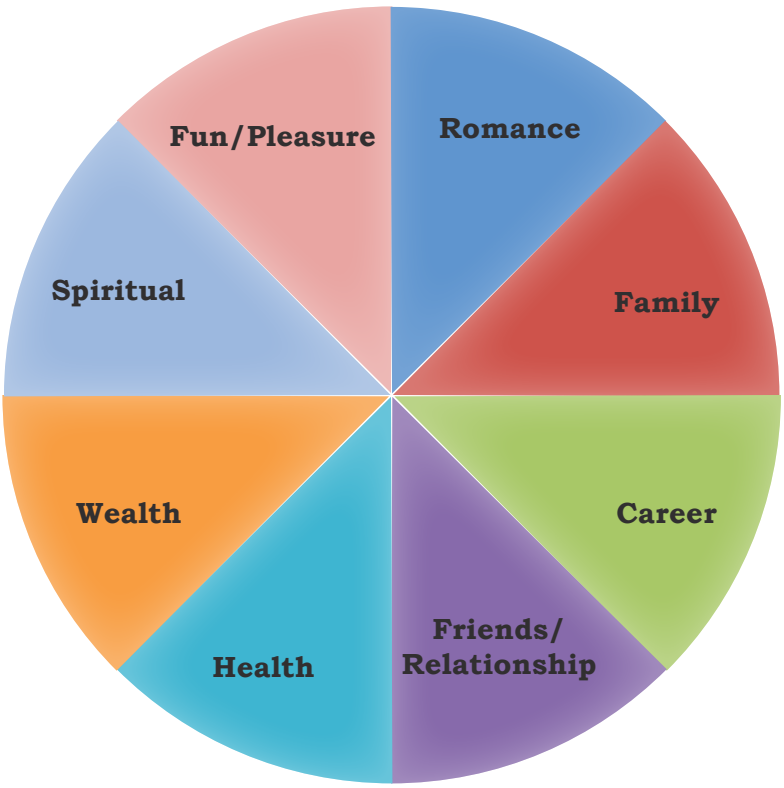


Transforming Limiting Beliefs, Creating Intention

Part of rewriting our story is transforming our limiting beliefs into productive beliefs. I have found that a powerful first step in this is to help clients identify how they actually *want to feel*. It is about helping them to define themselves on their own terms. Do they *want* to feel healthy? Energetic? Joyous? Loved? Abundant? Well rested? Successful? We need to help our clients reinforce for themselves that they *are* worthy of health, happiness, love, rest, respect, healthy work hours, a night out with the girls, saying no to over-commitments and invitations or jobs that just don't feel right – you name it. Once your client knows what she wants, she can move onto the creating intention exercises below.

Life Inventory/Health Mapping

About once a year I take inventory. Not of which tinctures I'm short on in the apothecary. Not of what supplies I need in the office. It's a life inventory. I take stock – a time to check in and literally map out how things are going in each of the important areas that make up a healthy life. I use the *Eight Ingredients for Total Health* diagram from Lesson 2 as a Life Inventory Map for my framework. I draw it out on large paper and then refine it on a smaller scale in my journal so I can easily refer back to it over the year. I create space to do this activity, light a candle, make a cup of tea (a glass of wine could be nice instead and might suit some women as it is relaxing and luxurious), play some quiet inspirational music, and have colored pencils aplenty on hand. A simplified version for clients might look like this:



In each section, which is substantially larger than those in the image below, I jot down what is going well, what is missing that I want to add, and get very specific on what I'd like to create. A segment might look something like this:

Sometimes women just don't realize where things are out of balance or undernourished in their lives; sometimes they do know but can't really face it until they see it in front of them loud and clear. If you – or your client – feel that health issues are being exacerbated by life issues, then using this tool can help as part of the total intake and is an important exercise for clients to sit with and use to find some life clarity. If there are big sore spots, i.e., career or relationship, that are not so easy to change, then working with a woman to develop positive skills for making lemonade out of lemons will be important for her overall well-being, rather than just living with insidious stress and unhappiness – which does influence health and disease.

Body Wisdom, Body Speak – The Next Step

As discussed earlier in the course, Body Speak is a powerful language! Teaching women to hear and use Body Speak is a powerful clinical tool.

Body Speak awareness can enhance your client's health in many ways. Being more aware of her body can:

- Help her to identify how she feels when she eats, or excludes various foods, or has environmental exposure
- Help her to identify emotions associated with unhealthy and healthy habits and adapt her behaviors
- Help her to identify how she feels in various relationships and social or professional settings
- Help her to identify where she holds stress – both acutely and related to past experience and trauma

I sometimes teach my patients this very simple activity:

I have them sit upright in a chair or lay on the ground and ask them to close their eyes, breathing naturally at first, then gradually more slowly and deeply. Then I ask them to simply feel either their feet on the ground, or the parts of the body touching the ground. Just to feel that contact, that grounding with the earth. Then deepen the breath. Now let the breath wander throughout the body to any areas that feel tight, blocked, or stuck. Use the breath to imagine massaging out that tension or releasing the blockage. Linger on how you can use your breath and attention to identify areas in your body that feel tense or blocked. Write down any insights.

Body Mapping

Women can hold a great deal of tension in various parts or regions of the body, often the lower back, belly and pelvis, but also in the shoulders, buttocks and neck. This may cause pain, affect sleep, or even affect sex or ease of bowel movements. Further, women may experience parts of their identity through negative body image – for example, a woman might say that she identifies her mother's anger in her belly pain, she may hold past negative sexual experiences in her pelvis, inadequacy or shame in her breasts, etc.

Body mapping is an activity that takes the above awareness exercise a step further. It is done with the client sitting upright. She does the guided meditation above, or can just deeply relax and get body-centered. When she opens her eyes, she tries to maintain some of the meditative state and on large paper, using colored pens, draws a rough outline of her body, head to toes, and then on the various body parts she writes out the related thoughts or emotions – positive or negative. She can write out how she thinks of, relates to, or the positive or negative words she identifies with her various body parts. Assure her that this is not an "art exercise" – many women are intimidated about drawing. Playing some music and creating a relaxed mood might help her settle into the activity and she might find it super fun! This is also a great exercise to use in women's groups, and opens a deeper connection for women, allowing them to release shame and embarrassment as they realize their body image and identity issues are not unique to them – that many women hold powerful and also negative body images.

Journaling

The sorrow that hath no vent in tears, may make other organs weep. ~ unknown

Journaling is a powerful practice for expressing experiences, thoughts, and feelings that we might otherwise hold inside, and as alluded to in the above quote, unexpressed grief may become a source of imbalance - disease. There are numerous ways to journal. Here are just a few:

- Daily chronicle of experiences as well as related feelings
- An art or collage journal
- Gratitude journal

- A place for venting (my least favorite unless you find some golden nugget because otherwise you may just end up feeling negative)
- Power in trauma journal
- Letters to yourself – i.e., instead of 'Dear Diary' my journal would say 'Dear Aviva'; yours would say 'Dear (you)'.

The last is my favorite form of journaling, maybe because I also like talking to myself. Seriously. I talk to myself in the mirror and in my car, too. I've adopted this type of journaling in the past few years and find it incredibly supportive because I write to myself as if I were giving my best girlfriend advice. I also glue images and sayings into my journals, write out inspirational quotes, make notes of things I want to remember or do, and I sketch in them, too. I don't journal often these days – more catch as catch can, but I do love the process. I set up a peaceful, nurturing environment when I journal at home, but I also love to journal in cafés and weirdly, I get the most journaling done on airplanes on the way to and from teaching at conferences.

A quick visit online will bring up no shortage of quality books on how to journal, and books in which to journal.

There is no right or wrong way to journal – it's really about whatever is effective and meaningful for any individual woman, and how much she wants to put into it and what medium she prefers. Some women will enjoy lined journals, others blank, some large books, some small. There is no shortage of types of journals, from ones with prompts and ideas, to others with quotes, and my favorite kind, blank paper.

Here are instructions for therapeutic journaling about a tough experience or feelings, from the University of Wisconsin Center for Integrative Medicine:

Using pen, pencil, or computer, write about an upsetting or troubling experience in your life, something that has affected you deeply and that you have not discussed at length with others.

- First describe the event in detail. Write about the situation, surroundings, and sensations that you remember.
- Then describe your deepest feelings regarding the event. Let go and allow the emotions to run freely in your writing. Describe how you felt about the event then and now.
- Write continuously. Do not worry about grammar, spelling, or sentence structure. If you come to a block, simply repeat what you have already written.
- Before finishing, write about what you may have learned or how you may have grown from the event.
- Write for 20 minutes daily for at least 4 days. You can write about different events or reflect on the same one each day.
- Consider keeping a regular journal if the process proves helpful.

Art and the Vision Board

For clients who loved kindergarten and want a little collage-making reminiscence, or for clients who enjoy creative expression, this is a great activity. I use it myself when I want to manifest something new – including change in my life – or when I want to emphasize, reinforce, or remind myself of something I am reaching for. It's super simple. All you need is old magazines and catalogs, scissors, paper, and glue. Sometimes instead of paper it can be fun to do the vision board in a shoebox, 3-D diorama-style, or in a scrapbook.

To create a vision board, set the mood with music and an environment that is conducive to focus and to spreading out papers, clippings, and any other desired craft materials. Create an intention, for example, something you hope to achieve or manifest, and then flip through magazines and catalogues, cutting out images and words that resonate. Allow for the unexpected to happen in the process – for example, you think the intention is one thing, but really you keep finding yourself drawn to something completely different. Our subconscious can speak to us in powerful ways if we stay open to possibility. I recommend spending about an hour just gathering images and words. This is the part where flow and creativity can really arise. Once a stockpile of images has been created, the next step is to arrange them on paper or whatever medium has been selected. Next simply trim as needed and glue them into place until the field is covered as desired. The finished product, when dry, can then be put somewhere that it serves as a visual focus and reminder for the artist of the desired intention.

We needed to make a complicated move to a very expensive area, out of our perceived price range for a home, and to rent since buying a home at that moment wasn't an option. But the area is almost a zero rental market except in the summer when houses are $10-$20K per month! Yes, you read that right. I told you, a pricey area. I had already accepted a job without realizing the complexities of the market I was moving into. I created a verbal vision board – just words – of what I needed to manifest – and then I sent it to a realtor. See how specific I am? Being specific can help you narrow down your goals and vision. Here's what I wrote:

- I'd like to be within 25 minutes of the clinic
- 4 bedrooms 2 baths. 3 BR might be ok if it is spacious and with an extra room (i.e. office)...enough space for all the kids to be home for holidays, is the point
- Open, light, airy, windows, sun
- Can be an old home - in fact, love love love old farmhouses... but renovated and fresh. Fresh is a good word.
- Space. This is important. We want to stretch out after two years of apartment living and medical residency.
- Land is nice, but town is ok if there's a feeling of space. And great views and privacy and a place for a reasonable garden.
- Wood floors
- Interiors without wallpaper!
- Great kitchen. We cook.
- No subdivision or prefab anything. No furnished rentals. Gotta make a space feel my own.

- If it's a rent to own that's an interesting prospect. Then some land becomes more important.
- Good heat so we're not bleeding out $ in the winter months.
- (Price points were given)

Literally the next day I got an email with the subject line "This is your dream house." It met every criteria except it's 30 minutes from work – but over gorgeous country roads. It was even a rent to own option! Seriously!

I've used this technique multiple times and it's amazing what can happen when we send our intentions out there. It's not 100%, but helping our clients set a course in the direction of their health, and whatever they envision that supports it, through intention, can be an important proactive tool for shift-making.

The Impact of Society on Our Health

The body says what words cannot. ~ Martha Graham

If there's anything the #metoo movement has shown us it's just how many women have experienced trauma in their lives. The stress of being a woman in our culture, and add to that the addition stress and trauma of being a BIWxOC in this world, in the form of dealing with harassment, oppression, rasicm, agism, heteroism, ableism, etc. - the millions of overt and microaggressions we experience that affect our self-perceptions, body image, and sense of safety, can activate our HPA Axis at a constant, triggering low level, and impact our hormonal health; sexual trauma has been associated with increased risk of chronic pelvic pain, painful sex, vaginismus, chronic vaginitis, and gastrointestinal disorders like IBS or chronic constipation, depression and anxiety. After all, where do we store our trauma and life's pain, but in our bodies? What harms our psyches - our souls - reverberates through our whole being.

Women who have experienced racism, sexual harassment, and sexual assault may have a higher prevalence of symptoms of HPA axis disruption: poor sleep, anxiety, depression, and all manner pf physical symptoms; sexual assault is associated with a higher prevalence of depressed mood, anxiety and poor sleep. Intimate partner violence has been linked to a wide range of chronic conditions: asthma, diabetes, cardiovascular disorders, chronic pain, autoimmune conditions, depression, anxiety, PTSD, eating disorders, alcohol and other substance use disorders, pelvic pain, menstrual disorders, headaches, difficulty sleeping, palpitations, gastrointestinal symptoms, and fibromyalgia. Trauma abuse may alter neuroendocrine immune processes leading to a higher risk for endometriosis, and one study found that women in abusive relationships were more likely to have a higher level of pain with endometriosis. Experiencing racism has been associated with all of these symptoms, as well as a significant impact on maternal health and mortality.

High levels of childhood stress, hardship, or trauma can lead to higher rates of all chronic disease, Including gynecologic and mental health challenges, and lower resilience to stress.

The impact of chronic fear as women on our hormones is an intangible - but given the impact of stress and the fact that we've so deeply internalized fear, I consider this an almost inescapable chronic social injustice that

there's no easy solution to healing the impact of trauma in our lives, as we work together to restore resilience to your stress response system and create new loving relationship with your body through this book, my hope that this program will become a supportive part of your healing journey.

Examples of hidden stressors include:

- Experiencing racism or other ~ism
- Being bullied, experiencing gaslighting
- Sexual harassment, Sexual assault
- Spousal (or relationship) physical or emotional abuse
- Grief, loss
- Social isolation, loneliness
- Economic stress

All of these can trigger our survival responses, which we're sometimes so accustomed to living with that we take as normal.

This Doesn't Mean It's All in Your Head!

I want to be very clear about something here: We're talking about the impact of stress on health and hormones. That does not mean it is all in your head. Ascribing psychological originals to women's symptoms as a way to keep women 'in our place' has persisted into modern day medicine. When we talking about stress, we're talking about stress physiology and the cascade of changes that happen in the ovaries, adrenals, and thyroid - and how those impact women's health.

That said, cultural influences can have a major negative impact on our core experience of being women, and as a result can manifest in numerous health symptoms - including hormone imbalances and gynecologic conditions. Anthropological research has shown that our attitudes and beliefs about menstruation, birth, and menopause are culturally shaped and influence how we experience these aspects of being women.

Healing Trauma

Maya Angelou said, "There is no greater agony than bearing an untold story inside you." Both for our own health and for our clients and patients healing, we need to be able to recognize the impact of trauma on wellness, and when trauma may even be the deepest root. That doesn't mean we need to be the ones to do trauma healing work – in fact- if this is not your area of knowledge/training, it's important to be able to refer your client to those who can facilitate healing. In this way, you are honoring that healing trauma is part of the healing journey, but helping your client find the safest way to do so, in her time and pace, with the right support for her.

Ritual, Ceremony, Celebration

Weddings, birthday parties, quinceaneras, communions, bat mitzvahs, graduations - these are all common celebrations that have predictable rituals and ceremony - making sure there is an extra candle on a birthday cake to send a wish into the universe for another healthy year for the birthday girl, exchanges of rings and vows witnessed by friends and loved ones who will all share in the common intention of a long and happy marriage, events which mark accomplishments, milestones, completion of challenges, triumphs. These events, made meaningful by their familiarity, shared beliefs in their importance and power, by the connection and shared intention or well-wishing created in a community, also create memories and meaning carried into the future, that can be called upon mentally and emotionally as a reminder of strength.

Creating ritual and ceremony around women's important life cycles, milestones, and passages can be an important part of creating and reinforcing intention, building a foundation of resilience, putting savings in the emotional bank account to spend on a rainy day, and can link physical and mental expression through art, music, dance, sharing tea, or any number of forms.

Rituals empower people emotionally, mentally, and spiritually. Healing rituals can activate innate inner belief, similar to that activated in utilizing placebo. Symbolism can be a powerful part of ritual.

My focus in ritual is:

1. Helping a woman to find strength in her own healing abilities or inner power
2. Centering a woman in the support and strength of her community
3. Connecting to nature

A ritual typically has a beginning, middle, and end, with intentional words and symbolic gestures throughout that reinforce a healthy belief for one(s) being celebrated. The beginning typically includes an invocation to whatever spiritual guides you might typically call on, for example, particular saints, goddesses, or nature spirits as your beliefs encourage, or this can be non-denominational and just be a time to clearly and specifically speak an intention, for example, "We are here to help so and so heal her so and so, and we ask that all gathered focus their deepest intention and belief on this."

During this time candles may be lit, incense burned, a prayer offered, or any combination of these or other practices. The middle, or body of the ritual, typically involves each participant individually or collectively engaging in activities that reinforce the intention of the ritual. For example, if you are gathered to support a woman in her pregnancy and share collective strength and empowerment toward the birth, each participant might offer an inspirational story, or poem with the pregnant woman, might participate in massaging her feet during this part of the ceremony, brushing her hair, or in some way imparting positive beliefs. The closing of the ritual usually involves sharing a personal gift to represent the intentions being created, and often serves to "bind" the intention of the group in some way. Tying a string around each participant's wrist and leaving this on until it falls off is a common practice. There are many excellent books on creating ritual and ceremony, many of which are non-denominational and can be used or adapted comfortably for almost any cultural group.

much like our socioeconomic status, has an insidious and under-acknowledged impact on our hormones. While

The Healing Altar

While creating an elaborate ritual is not always possible, it is always easy to create a small healing altar or place for meditation and focus in your home or garden. Think of it as a sacred place where you can sit quietly for five minutes each day to reflect on gratitude, your intentions, and cultivation of an inner life. I have shared the practice of creating altars with numerous women over the years and all have found it a comforting and helpful practice. An example is for a woman who has struggled with fertility to create an alter that contains images, objects, or mementos that remind her of fertility, her creative power as a woman, her bond with her partner, or whatever will help her to reframe her attitudes and beliefs around her fertility struggle toward one that is more inspired and productive. While not necessarily for everyone, many women find this practice centering and relaxing, reminding them to focus on what is productive rather than worries and fears, and an important part of an overall healing protocol, can bring the power of intention and feminine spirituality into the picture.

Radical Self Care

How many of your grandmas actually never sat down at the table to eat a meal until it was almost over, serving everyone else first, only to get up and start doing the dishes before the meal was over? Somehow us girls grow up with the idea that we have to take care of everybody else, and only if there's something left after that, do we get some. This is an outdated idea. Yes, of course, we aim to love our families abundantly, having our partner and children feel that they come first, but in truth, a lot of women spend a lot of time feeling unfulfilled and resentful - and this does not help anyone in the short or long run. Radical self-care is not about prioritizing you; it is about prioritizing your wellness so you can live the best life possible and that serves everyone in your world, improves your work quality and productivity, and leads you to make the best possible choices and contributions in the world.

Many of our clients do not take care of themselves because they are giving to others all day and night. I've worked with clients who were nursing 3-year olds until they felt their eyeballs were being sucked out of their heads, and they were dreading their kid, and were exhausted - but didn't feel they could stop nursing out of guilt or fear. Ok, not good for anyone. I know a lot of us who have breastfed have been there. I've worked with clients who have said yes to everything becoming so overcommitted that they were forgetting to go to the restroom and became constipated as a result, and were living on coffee out of exhaustion and because it was what helped them have a bowel movement! Not good for anyone. And I've known women who have put off their dreams, their basic self-care, and pleasure in life to take care of others. While there is also beauty in this, if women are having symptoms that they are somaticizing because of stress, then it is no longer healthy.

Radical self-care is the courageous act of making your quality of life of primary importance. It is the recognition that your life and health are of central importance to you and to those around you.

Many of our clients will need our permission to practice radical self-care. I once was asked by a pregnant client who was exhausted from tending the older kids, but couldn't get adequate support from her partner, to write her a prescription for two hours of bed rest every afternoon. And I did! Radical self-care honors your need for sleep,

exercise, time alone, time with friends, for a massage, spa day, a glass of wine on the porch or in a candlelit bath with no noise but our own breathing or quiet music. It honors the contribution of YOU to this world, and this means taking care of YOU to keep that contribution alive and well.

You see, when our basic needs are not met, we are not honoring ourselves, and we tend to find ways to fill those spaces with behaviors that are less healthy for us (think back to that sweet, salty, fatty ice cream from before). We also run the risk of becoming more emotionally brittle with ourselves and those around us. In closing this important lesson, I ask you to reflect on your own ability to care for yourself, and how you will plan to do so. The authenticity of what we share with our clients will shine through when we walk our talk; this adds to the healing potential of the guidance and protocols we share with them. In identifying our own obstacles to personal transformation, we can better understand those that bear on our clients' lives. And in pushing through to transformation, we have more ownership of those skills that we used, and thus more power in our ability to impart belief to those who seek our help.

Reinventing Self

The ability to make change rests on the belief that we can reinvent ourselves – which depends on a fundamental belief in our agency, something that can be strongly harmed by the types of experiences that lead to high ACE scores, poverty, and racism - but can also be learned through experiences and people that reinforce our agency.

Biologically, we are in a constant state of change and cellular turnover. Our bodies are quite literally constantly in the process of reinvention. Too often, however, psychologically and emotionally, we become entrenched by the belief that we are stuck in our current mode – that we cannot possibly change our eating habits, health conditions, emotional patterns, exercise habits, etc., let alone overhaul our lives, relationships, professions, where we live, economic status, or the other "big" things.

I would like us as women, to help our clients challenge the belief that we cannot re-invent ourselves, and in fact, to see reinvention as the keynote to all of the other health changes they will make.

As women, our lives are about cycles – childhood, puberty and adolescence, reproductive (or professionally productive if no kids are in the picture) years, and wisdom years. Within these cycles are smaller cycles – hormonal cycles, for example, which influence our moods and energy. As women who cycle we are the mistresses of shedding the old and recreating afresh.

Many years ago I could no longer shake off the desire to become a physician. This inspiration had been with me since grade school and I'd even gone to college at age 15 to manifest this dream. However, my life took some interesting twists and turns, and I first became a midwife, herbalist, and mother of four beautiful children whom I had no intention of leaving for 120 hours a week to study medicine. As time passed the drive to return to school became stronger. I began to feel restlessness and sometimes even irritable. I wondered how I could possibly reinvent my life so that I could remain a devoted mom and become a physician. And with the passing of time I got older and wondered if I could even get into medical school. Then I started to wonder whether I was simply crazy for having this big dream and why I would give up my comfortable life in my late 30s to pursue something that would take 7-10 years of my life to accomplish! I wanted this inspiration and dream to go away. I wanted to run away from it! But it nagged me relentlessly.

Around this time I met the father of a close herbalist fiend. When he was in his early 60s he considered going to school to become an herbalist himself, but convinced himself otherwise because he thought he was too old to start something new. Now in his early 80s, he told me in reflection, he realized had he done it, he'd already have had 20 years of doing something he'd dreamed of for years. He urged me to go to school – that we are never too old to start something new. It was one of the best pieces of advice I ever received, and though the road wasn't always easy, I am grateful for the decision I made.

Making big decisions and changes is not easy. It puts us out of our comfort zone, and most of us prefer comfort. I certainly do. But the reality is, too often our clients have gotten comfortable with habits, lifestyles, and symptoms that actually aren't comfortable at all. We confuse familiar with comfortable. In fact, what is perceived to be comfortable may actually be causing significant personal suffering – a paycheck is really a job with an abusive boss, a steady relationship is with a boyfriend who is verbally (or physically) abusive, a healthy weight is actually 15 pounds underweight – but we keep at the same old story because we are afraid to change – we won't get another job, we won't have another love, we won't be in control or attractive if we gain weight…

But as I tell my patients over and over, the pain in your foot won't go away if you don't take the stone out of your shoe! We can only ignore it for so long before the pain gets worse, we start to limp, or even develop an infection from the rub! In other words, the body will eventually manifest symptoms when there is an impediment to living our optimal life.

A HUGE LIFE QUESTION TO HAVE CLIENTS ON WHICH CLIENTS CAN REFLECT IS HOW DO YOU WANT TO FEEL? This becomes a North Star to use as a point of reference, navigation, and path adjustment. When we feel off course we just reconnect with how we want to feel and recalibrate. This can be done anywhere, anytime. It can be done in the middle of an argument with a partner – hey, I don't want to feel this awful, agitated, angry feeling – I am going to adjust course, because I want to feel happy, at peace, in love, kind. Hey, I don't like the fact that I am saying yes right this second when my brain is screaming out NO - I want to feel authentic, so I am really sorry, but actually, I won't be able to (walk your dog this weekend, work overtime, come to that party when I scheduled time alone to read or just chill)… And so on…

This is where as educators and practitioners we also sometimes become sideline coaches or the cockpit crew cheering, advising, helping women to figure out their best course around the track. We can do a tremendous amount to help our clients facilitate change in their lives. As a word of caution, I just want to share that while change always involves some risk, the outcome is usually liberating if well-orchestrated. However, for women in physically abusive relationships, the stakes are a different – in fact, when leaving an abusive relationship, the woman is at the highest physical risk. If you are working with a woman in a physically abusive relationship, unless you are trained and experienced in counseling in this situation, please refer her for appropriate counseling so that she can emerge safely. This is a critical point.

Stress, The HPA Axis, and Adaptogens

Ready for some science? Stress physiology has a strong scientific basis – and it all starts in the highly conserved stress response system – the hypothalamic-pituitary-adrenal axis – the parts of our body that connect our ancient stress response system – our "lizard brain" or primitive fear response drives to our stress hormones. Learning about

the HPA axis will start to connect the dots for you between soul (what we learned above) and science.

The HPA Axis is the communication signaling loop between your hypothalamus, pituitary, and adrenal glands. Lack of sleep, history of trauma, chronic stress, and chronic inflammation, for example, activate this loop sending off signaling that impacts your entire being. That's where the terms psychoneuroimmunology and psychoneuroendocrcinology come in - these, in simple terms, mean 'it's all connected!'

The HPA axis is elegantly orchestrated to modulate most of the biological functions needed to help us avoid, and should we be unable to avoid, survive a life-threatening emergency: blood sugar, energy storage and utilization, immune system response, and blood pressure.

The accompanying required reading and webinars, which weave stress and disease into an understandable model, will give you greater insight into the importance of preventing and managing stress for health promotion and healing, and will soliidy for you the value of incorporating some of the practices previously described in this lesson (or some of your own favorites) into your work. It is also the gateway to understanding one of our more important classes of botanical medicines, the adaptogens.

The adaptogens are an important therapeutic category of herbs that can reduce not only stress-related symptoms, but prevent or mitigate the long-term effects of stress on the body. They are used to promote a sense of well-being, improve energy and stamina, reduce fatigue, improve immunity, and enhance mental concentration, and promote hormonal balance due to their regulating effects on HPA axis.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 4

Food as Medicine, Food As Revolution

Learning Objectives

By the end of this lesson you will be able to:

1. Discuss the importance of nutrition in health maintenance and disease prevention
2. Distinguish between different types of therapeutic diets
3. Summarize the key components of a blood sugar balancing diet
4. Summarize the key components of an anti-inflammatory diet
5. Discuss core issues in women's relationship with food
6. Obtain and appraise a 3-day food journal

Unit 1 Lesson 4 Food as Medicine, Food As Revolution

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Anti-inflammatory diet

Chronic disease

Food addiction

Insulin resistance

Low glycemic diet

Mediterranean diet

Metabolic syndrome

Organic

Orthorexia

Xenobiotic

Let food be thy medicine and medicine be thy food ~ Hippocrates

Long ago I saw a PBS special about Traditional Chinese Medicine. Patients were followed through consultations at the clinic of a major hospital in Shanghai. After having their appointment and receiving their herbal and dietary prescriptions, patients would enjoy lunch at the hospital cafeteria where an individualized meal based specifically on their diagnosis was prepared for them. Food is medicine. Good food, and a healthy relationship with it, are among the pillars of the *8 Essential Ingredients of a Thriving Life*. Nutrition is the cornerstone of health.

Nutrition is the constellation of macro- and micronutrients required for normal physiological functioning. Diet refers to the patterns, habits, and sources of one's nutrition. Nutrition is what you get from what you eat; diet is what you eat, how, when and how much, etc.

Good nutrition and healthy diet can prevent most imbalances and diseases. Appropriately tailored to a client, they can also restore health in many if not most cases, as long as the disease process has not progressed beyond the body's ability to repair itself.

The very fact that food can prevent and treat disease is exactly what makes healthy eating revolutionary. It allows us to truly take our health care back into our own hands, with the potential to free us from dependence on the medical system. Good food also liberates us from contributing to other industries – for example, BIG CHEM, BIG AGRA, and BIG PHARMA – that impact our health.

In our country – in fact, in most of the world – food – whether lack thereof, too much, or the wrong kinds – is making and keeping people sick. Yet food should be what sustains and nourishes us. Something has gone awry. While we often hear about the crisis in health care and how it can be healed with preventative medicine, the underlying goals of the health care industry are actually not about health care at all – they are about the business of disease.

Unit 1 Lesson 4 Food as Medicine, Food As Revolution

What masquerades as a health care system is actually a large industry that thrives fiscally on illness; there is no economic incentive within the medical industry itself to ensure health for the masses. Disease diagnosis and treatment are the *raison d'etre* – "the bread and butter "– of the current medical system. The industry as a whole has enormous financial incentive to dispense diagnoses and medications, fill hospital beds and keep them full – in short, to keep us sick.

This does not mean that all of the providers in it – the doctors, nurses, pharmacists, are corrupt. The system is much larger than the individual providers. There are many with pure intentions. Many doctors are frustrated and furious about a system which dictates how much time we can spend with a patient, how frequently we can see them for follow-ups, what types of medications we can give, how long they can stay in the hospital and have their insurance cover it, etc. The system also provides minimal reimbursement for talking with and educating patients about health, while rewarding handsomely based on the number of interventive procedures one delivers to a patient. That's why primary care doctors (family physicians, pediatricians, internists) get paid marginally for their work compared to radiologists, interventional cardiologists, and surgeons. Dominating the health care industry are hospital corporations, insurance companies, pharmaceutical companies, and governments. Remember, I am telling you this as someone on the inside of the medical system.

There are individuals committed to changing policy and practice to create a system that would deliver better medical care. However, there is also a tremendous misunderstanding about what preventative medicine truly means. Even doctors with good intentions and caring hearts are often misled by the medical system into believing that what has been packaged as preventative medicine is actually preventative. Most physicians have limited and misguided ideas of what health is and how to help people achieve it. Standard practice is usually in the form of an annual exam in which a stereotypical set of health questions are asked and a routine battery of tests are performed.

Yet there is nothing preventative about a mammogram, a pap smear, or diabetes screening. These just detect disease – hopefully early enough to prevent it from getting worse. But they don't prevent disease. Most doctors are clueless about what really prevents disease. It is just not discussed or taught in medical school or residency. As I see it, medical care and health care are very different – the former is still based in a sickness model; the latter based in optimizing wellness and prevention.

In my 7 years of medical education I received exactly 50 minutes of nutrition education. It was in my second year of medical school. An additional 50 minutes was actually scheduled but the professor, a television celebrity doctor, had to cancel that second class due to a conflict in his schedule – he had to do a television appearance instead. So 50 minutes was all we got (not that 100 minutes would have made much difference!).

The only other mention of nutrition through four years of medical school pertained to blood sugar control in diabetic patients by telling them to reduce their sugar intake, and telling women that if they couldn't stomach a prenatal vitamin during pregnancy, to take two Flintstones' children's vitamins instead. The lack of attention to nutrition is perhaps nowhere better illustrated than by what doctors in training themselves eat – suffice it to say that many medical school and residency conference tables have a bottle of Tums sitting in the middle!

If doctors aren't going to, or don't even know how to teach patients how to eat to prevent and treat disease, who's going to? That's why we have to learn to take our health care back into our hands. It is our job to do our best to prevent illness and nurture health. Right now, nobody else is going to do it for us!

Food and Nutrition as Part of the Herbal Consult

The herbal medicine consult takes into account all the aspects of a woman's life that influence her well-being. Food and nutrition are central to this. It is not your responsibility to be a nutritionist. But it is essential that you are able to provide general nutritional guidance based on what is known about various types of diets and their role in specific women's health conditions, that you be able to recognize dietary patterns that might be contributing to illness or imbalance, and that you be able to provide information on specific nutrients or dietary strategies when they play an important role in a condition you are being consulted about.

Additionally, many clients will come to you toting along a grocery bag filled with the supplements they have either self-prescribed based on their own research (which usually consists of product-promoting Internet websites) or that they were put on by a natural health consultant – an integrative physician, naturopath, TCM practitioner – even chiropractors recommend supplements these days! In fact as many as 70% of Americans use dietary supplements – and the statistics are high in most westernized nations. And most users are women. So taking ownership of some nutritional knowledge in order to understand what is affecting your client's physiology and what might interact with the herbs you suggest is essential. Also, you might be able to avoid giving herbs when really what is needed is a change in diet or a supplement. For example, if a client has tingling of her extremities she might need vitamin B12 and no herb is going to fix this.

This lesson will provide you with nutrition basics for use in your herbal consulting practice. Individual conditions will be accompanied by condition-specific information. Having nutrition books and cookbooks available to your clients, or at least directing them to resources for finding these, can greatly facilitate their ability to incorporate healthful foods into their diets.

Women and Food: A Fraught Relationship

Reviewing her food journal, I was perplexed as to how my patient had developed pre-diabetes in the past year. Her daily diet, as she initially described it to me, consisted of:

- Breakfast (9am): usually a choice of: cereal, nuts, almond milk; winter oatmeal with nuts; smoothie w/yogurt, rice powder, frozen fruit, flax seeds; occasionally eggs but often too busy
- Lunch (noonish): dinner leftovers; occasionally a sandwich; an Amy's pot pie
- Afternoon (3-4pm): a handful of nuts; occasionally a dark chocolate square; or nothing
- Dinner (6:30ish): vegetables (wide variety); fish (avoids high mercury fish); often turkey; rarely red meat
- Olive oil; takes fish oil; hemp oil (just started); occasionally eats avocado
- Beverage: water; coffee a few times/week without sweetener

Ok, this may not be nutritionally optimal, but this is certainly not the typical diabetogenic diet! Digging a little deeper, I asked Carolyn if she was eating anything else. "Weeellllll… After dinner most nights I'm having a brownie, an ice cream sundae, or a cookie. This was a childhood habit. My mom always made something

like this for us – all of the baked goods were homemade. She died almost a year ago." She began to cry softly and through her tears said, "I really miss her." I understood. Of note, her mom died of complications of Type 2 diabetes.

Food holds powerful emotional memories and connections for us. My own grandmother with whom I was very close, and who died about ten years ago, always had a pot of freshly cooked soup warm and waiting for me when I arrived at her house. It was usually vegetable, barley, or chicken noodle soup, or it might be a traditional Eastern European stew made with short ribs with marrow still inside, called flanken. I recall this from my earliest to my latest memories of her. Not only that, she had a table setting waiting for me. Soup remains one of my favorite comfort foods.

Not only does food bind us to positive associations, but negative ones, as well. One of my patients, in her 30s, was a little chubby as a kid, while both her mom and grandmother were quite slim. "They had eating disorders. Mom was always weighing herself and skimping on food. And Grandma would comment about her body a lot. When it came time for meals, because I was the only chubby kid in the family, I would get served different food than everyone else. Vegetable sticks, lean meat – I felt ostracized from the family meals and embarrassed. By the time I was 16 I was hospitalized for an eating disorder. I still struggle with food. It's just not pleasurable for me. Eating is just something I have to do, but I really fight with food in my head." I've heard hundreds of women share a similar story.

Eating disorders are rampant in young women. I rarely meet a woman whose relationship with food is not disordered in some way. It is very difficult for women to eat without stress, confusion, guilt, or self-judgment. Food choices are fraught with confusion for many – if not most – women. Working with mindfulness activities, such as the accompanying **Making Shift Happen Worksheet**, women can begin to identify and change unhappy food relationships. Women can learn to embrace food as an ally and a tool for creating optimal health, and through this an optimal life. Food can become a wonderful, pleasurable experience without guilt and confusion. For women with a history of an actual eating disorder, reframing their relationship with food is not a quick or easy road – it is a journey. Additional support (i.e., cognitive behavioral therapy, counseling) might be needed. It is, however, entirely possible to transform lifelong patterns when real, good food is part of every food encounter.

Important Questions to Ask Patients When Assessing Nutrition and Lifestyle

- What did you eat/drink yesterday? (ideally have patient bring a 3-day food journal to the appointment)
- Do you avoid any foods for personal, religious, health, or other reasons?
- Are you on any special diet (i.e., vegetarian, vegan, macrobiotic, Atkins, etc)?
- How often do you drink alcohol? How much? What do you drink?
- Do you take any supplements (herbal, vitamin, mineral, other)?

- Do you smoke cigarettes?
- Do you exercise? What kind? How often? For how long each time?
- Do you eat breakfast each day?
- How often do you skip other meals?
- How often do you eat out?
- Has your weight changed in the past 5 years? How?
- Are you currently or have you recently been trying to lose (or gain) weight? Why? How have you tried to do this?
- Do you get anxious about being weighed?
- How often do you weigh yourself? Why?
- Do you ever force yourself to vomit, or do you use laxatives or diuretics to lose weight? Why? How often? When did this start?
- Do you have difficulty planning or preparing meals for yourself or your family? If so, why?

Adapted from ACOG Educational Bulletin Number 229, October 1996

As if the emotional ties to food weren't enough to complicate matters, top those with a side of deep-fried, sugar-laced food addictions and sprinkle with a dash of salt!

Food Addiction

Most American are victims of food addictions. Food addictions are just as real as addictions to cigarettes, cocaine, and alcohol. They also similarly contribute to a host of medical problems. Nearly 1/3 of American adults are now obese.

Did I say victims? Yes. I used that term deliberately.

Almost daily in my clinical practice I hear a new patient say, "I am trying to control what I eat but I have no self-discipline," or "I try to eat well but then I just can't control myself when there's a bag of chips or M&M's in front of me." Many women struggle with loss of self-esteem due to perceived lack of self-control over the foods they are consuming; many women beat themselves up emotionally on a daily basis over food addiction battles. Yet food addiction is not simply – or even mostly – a matter of self-discipline. "Non-food junk" (I coined this term because junk food is not food at all!) is carefully and deliberately manufactured to manufacture addiction. Scientists and marketing teams work with multimillion-dollar budgets to provide exactly what our adrenally-stressed (the mechanisms for this were discussed in Lesson 3), exhausted, over-extended nervous systems are craving: sugar, salt, and fat.

BIG FOOD is no dummy. Entire research and development teams at major BIG FOOD companies thrive on creating non-food junk with just the right amount of sugar, salt, or fat (or all 3 rolled into one tasty package) to make us want more – and more – and more. Not only do these foods feed our biologically driven survival urges, they feed our brain's pleasure centers. This is the very same neurological wiring that is activated in addictions!

Let's take a closer look at this. Here are some of the medically defined characteristics of an addiction:

1. The person becomes obsessed with (constantly thinks of) the object, activity, or substance.
2. She will seek it out, or engage in the behavior even though it is causing harm (physical problems, poor work or study performance).
3. She will compulsively engage in the activity, that is, do the activity over and over even if she does not want to and finds it difficult to stop.
4. Upon cessation of the activity, withdrawal symptoms often occur. These can include irritability, craving, restlessness or depression.
5. She does not appear to have control as to when, how long, or how much she will continue the behavior (loss of control). (Ate 10 cookies when she only wanted one.)
6. She often denies problems resulting from her engagement in the behavior.
7. Depression is common in individuals with addictive behaviors. That is why it is important to make an appointment with a physician to find out what is going on.
8. Individuals with addictive behaviors often have low self-esteem, and feel anxious if they do not have control over their environment.

Women do not have to be slaves to food addictions. It is in our power and interest to break free. Here are some *solutions:*

- Mindfulness in food choices and eating help women break free from the grip of food addictions.
- Blood sugar balancing is a key to alleviating food cravings.
- Optimal nutrient intake will help with satiety, as our bodies will continue to crave more and more food until we receive the nutrients we are really craving.

Diet and Chronic Disease Prevention

Poor diet and inadequate nutrition are known factors in numerous diseases including heart disease, diabetes, osteoporosis, and some cancers, and also appears to play a role in the prevention of age-related disabilities that severely affect the quality of life and safety for the elderly.

The following is just a partial list of common conditions, preventable or modifiable with good nutrition, that affect women:

Anemia

Arthritis

Cancer (breast, colon, stomach, endometrial, etc.)

Cardiovascular disease

Depression

Eating disorders

Hyperlipidemia

Infertility

Insufficient breast milk

Insulin resistance

Neural tube defects of offspring in pregnancy

Obesity/ Overweight

Osteoporosis

Perimenopausal complaints

Polycystic Ovarian Syndrome

Premenstrual Syndrome

Type 2 Diabetes

There is no question about it: To take back our health we must first take back our eating habits and food choices. The power to make change is right there at the end of our forks!

What is a Healthy Diet?

As previously stated, there is no one "right diet." Dietary needs vary individually. There are, however, some strong foundational guidelines.

A diet rich in fresh vegetables and fruits – five to nine servings per day – is protective in numerous ways. For example, consuming a diet rich in the antioxidants found in fruits and vegetables protects the blood vessels, supports liver detoxification of endogenous and environmental chemicals, and helps age-related degeneration, largely through support of mitochondrial function. This is exactly why the Medtierranean style of eating is so healthful – and I discus it much more in the accompanying lesson videos.

Unfortunately, studies such as the NHANES (National Health and Nutrition Examination Survey) III trial found that at least 90% of women had inadequate intake of nutrients from food sources alone. According to the Centers for Disease Control only 32.6% of Americans get the recommended daily portions of fruits and vegetables, and the statistics are even worse in those from low socioeconomic backgrounds.

There's a tremendous amount of dogma coupled with emotional attachment around food ideas which can make the job of nutrition counseling tough. For example, in my experience, a thin, pale woman who gets sick every Monday and Wednesday, who has no energy, and has been vegan for 5 years – which is when her health problems began – may actually benefit from adding animal protein to her diet – but if she is a diehard vegan, it's no easy task convincing her otherwise. So grace, respect, and meeting patietns/clients where they are is incredibly important.

Can Eating Healthy Be Unhealthy?

While eating well is always optimal, for a subset of women, healthy eating can become an obsession. In fact, a new type of disordered eating, orthorexia, the preoccupation with healthy eating and avoiding foods believed to be unhealthful, has begun to emerge. It is accompanied by obsessive thinking and behaviors similar to other common eating disorders (i.e., anorexia nervosa, bulimia), and can be restrictive enough in calories and nutrients to become dangerous. If your client is cleansing compulsively, following highly restrictive diets without a reason (i.e., she doesn't have food sensitivities or a specific illness necessitating this), using diuretics or laxatives – even natural ones – and seems highly preoccupied with what she eats, please work with her to take a close look at her relationship to food. Even if the food choices seem healthy, she may have an eating disorder that needs attention.

Nutrigenomics

The study of genetics has led to the knowledge that food is information that turns certain genes on or off. Nutrients affect cellular messaging which in turns affects genetic signaling. Optimally we would consume foods that positively influence our genetic expression, and avoid those that might have a negative impact. Many of us have variations in our genes, called polymorphisms, that alter our ability to use certain nutrients. This is why some individuals are more susceptible to the pro-atherosclerotic effects of certain foods, or the diabetogenic effects of others.

A classic example of a genetic variation that is important for midwives and pregnant women to know about is the MTHFR polymorphism, which affects folate metabolism, leading to elevations in homocysteine which is associated with not only neural tube defects, but also miscarriage and pre-eclampsia. Pregnant woman are routinely prescribed folic acid as a preventive measure. The twist is that women with this gene cannot metabolise regular folic acid, and instead, need to receive active folate, also called methylfolate. Thirty percent of the population has one allele alteration in the MTHFR gene while 10% have two making them heterozygous or homozygous, respectively.

Thinking about food as information for our very genetic expression is interesting. Just ask yourself, and have your clients ask themselves: "What information do you want to have regulating your genes?" When you think of it in terms of a bag of potato chips or a handful of carrot sticks for a snack, the choice becomes more important.

Organic, Whole Foods

While it is not clear whether organic foods are inherently more nutritious than conventional foods, they unequivocally reduce our chemical exposure – and are healthier for the environment. Herbicides, pesticides, and growth hormones used in agriculture and the meat and dairy industries act as exogenous estrogens, capable of binding to receptors in the human body. As such they play a role in numerous hormonal problems, interfere with fertility, and contribute to the development of reproductive cancers. Mothers exposed to agricultural chemicals during pregnancy, even just through normal dietary intake, increase their babies' exposure to potentially toxic

chemicals and endocrine disruptors, with long-term consequences for the next generation ranging from birth defects and cancer, to diabetes and other hormonal problems.

While organic, whole foods are generally more expensive than conventional supermarket brands and inorganic meat, dairy, and produce, eating well is part of our lifelong health insurance policy, and must be made a priority in our own spending, and it should be a social priority to make such foods available affordably. Which foods should be eaten organic when finances are an issue? Whenever possible, dairy and meats should be organic, as environmental toxins accumulate in fat.

As for produce, this is more variation. The Environmental Working Group (EWG) posts lists on-line called **The Dirty Dozen** and **The Clean Fifteen** which identify which produce is more highly contaminated and thus recommended as organic, or less contaminated so that conventional is relatively safe, respectively. The EWG is an excellent resource for green living in general.

It is also not enough just to eat organic – organic junk food in plastic packaging is still junk food and is still contributing to plastic waste.

It may be tempting to avoid the organics discussion with low-income clients for whom you think organics would be cost prohibitive, but this contributes to the perpetuation of discrepancies in resource availability for your clients. Everyone should have access to good quality, real food. It is only by being aware of unfair resource distribution that people can start to demand fair access in their own communities.

The Big Nutrition Players

It's amazing to realize that the field of nutrition is just in its infancy as is our understanding of nutrients. The first vitamin, B1, wasn't even identified until the 20th century, and we've just begun to touch the tip of the iceberg. To date, 13 vitamins have been identified. They are divided into two categories – fat soluble vitamins (A, D, E, and K) and water soluble vitamins (C, and the B vitamins – niacin, riboflavin, thiamin, B12, folate, B6/ pyridoxine, biotin, and pantothenic acid). Likely there are hundreds of nutrients, cofactors, and elements that go into the physiologic processes that maintain health and prevent disease that have not yet been identified. New discoveries about the role and importance of various nutrients in health are being made all the time. This section is a brief overview of the functions and sources of the key macronutrients (carbohydrates, protein, and fat) and micronutrients (vitamins and minerals) that we need for health.

Keep in mind that there are many ways to think about nutrition, for example, energetics (i.e., in Traditional Chinese Medicine, it is believed that foods that have excess dampness or are cold in energy or literal temperature can be damaging to the digestion), and that thinking in terms of nutrients is the most reductionist. At the same time, insufficiency in key nutrients can lead to common symptoms and is easy to correct with diet and simple supplementation. Numbness and tingling of the extremities is often a sign of Vitamin B12 deficiency, frequent infections zinc deficiency, aches and pains low Vitamin D, PMS, muscle twitches and restless legs often due to magnesium insufficiency, fatigue and malaise due to iron deficiency anemia, and migraines to inadequate riboflavin (Vitamin B2) to name a few.

Sensible eating, a good food relationship, and a wide variety of only whole, natural foods eaten with gratitude

and mindfulness is my simplest recipe for a healthy diet!

Carbohydrates

Whole grains are an important source of slow burning energy as well as a source of B-vitamins and oils. Whole grains such as millet, brown rice, barley, quinoa, whole wheat, and others, are a delicious, easy to prepare, and versatile addition to the diet. Beans, legumes, and foods such as squashes and sweet potatoes, are also excellent sources of nutritious carbohydrates. While most Americans do not know how to prepare these, numerous natural foods are now available that contain these grains, and cookbooks and Internet sources provide many easy recipes for their use.

While whole grains are generally beneficial in small amounts and are an important alternative to denatured, processed grains (i.e., white rice, white flour products), a heavy emphasis on grains is not optimal as they are still relatively high glycemic foods, as are beans which deliver a substantial dose of carbohydrate along with protein.

Protein

Proteins are essential components of cellular membranes, musculature, and connective tissues, the hemoglobin which carries our oxygen, in the transport of electrons, for maintaining fluid homeostasis via albumin, in nucleotides, immunoglobins, in blood clotting, and in all of the enzymes that catalyze nearly every physiologic reaction. The body cannot build and repair tissue without adequate amounts of the proper proportions and types of proteins. There are 20 amino acids that the human body uses for these functions. Eight of these are considered "essential" to adults (10 are essential in infants), meaning that they must be derived from food sources as the body cannot produce them intrinsically.

How much protein any individual needs is determined by their energy expenditure, as well as by their nutritional and physiologic state. For example, pregnant women, patients healing from trauma or burns, and athletes have higher protein requirements. A 55 kg adult woman consuming an average American diet is calculated to require approximately 44 g/day of protein.

Not all protein sources have equal health value. For example, while red meat, chicken, and fish all provide substantial, high quality, easy assimilable protein, wild fish also provides high quality essential fatty acids, fish and chicken are low fat, and red meat, while high in iron, can stimulate a cascade of inflammatory mediators that can be part of the cause of a variety of health problems ranging from dysmenorrhea to heart disease. Therefore, not only is getting enough protein important, but so is getting the right amount of each protein (a ratio of fish and poultry to red meat of 4:1 is recommended for best health), and balancing protein intake with plentiful amounts of legumes, nuts, vegetables, and other foods.

Fats and Oils

Essential fatty acids (EFAs) are those fats that must be obtained from the diet as they cannot be produced endogenously in the amounts required for basic physiological functioning. They have numerous biological functions including growth, maintenance of skin and hair, regulation of cholesterol, and maintenance of cell membrane integrity. Polyunsaturated fatty acids (PUFAs) derived from EFAs play an important role in immunity, particularly against viral infection. Important sources of essential fatty acids, especially omega-3 and omega-6 fatty acids, include high quality olive oil, coconut oil, walnut oil, butter, flax and hemp seed oils, nuts, seeds, wild fish, and avocados.

Vitamins

Vitamins are organic compounds that serve as catalysts in biochemical reactions, helping to maintain normal metabolism, growth, and tissue repair. They are not directly used for energy, but function as co-enzymes during reactions with carbohydrates, fats, and proteins in the body, among other functions.

Some of the many crucial functions in which vitamins are involved include genetic transcription (Vitamin A), calcium absorption (Vitamin D), protection of cellular lipids from free-radical damage (Vitamin E), reduction of metals so that associated enzymes can act on molecular oxygen transport (Vitamin C), and co-enzyme components (the B vitamins and Vitamin K). Knowledge of what foods contain which nutrients can help a women to plan a diet that includes a variety of nutritious foods.

Vitamins are divided into two primary categories: water-soluble (B-complex, Vitamin C, biotin, and pantothenic acid) and fat-soluble (Vitamins A, D, E, and K). Because fat-soluble vitamins bind to ingested fats and are stored in the liver and fatty tissues, accumulation can lead to toxicity. This is much less likely to be the case for water-soluble vitamins which are excreted in the urine.

Selected Vitamins

Vitamin	Function	Rich food sources
Water soluble vitamins		
C (ascorbic acid)	Builds and maintains collagen (necessary for connective tissue), aids in wound healing, maintains healthy blood vessels, essential for cellular function, antioxidant, aids in iron absorption, protects vitamins A and E from oxidation. Severe deficiency results in scurvy.	broccoli, Brussels's sprouts, cantaloupe, collard greens, green and red peppers, kale, kiwi, lemons, oranges, papaya, potatoes, strawberries, tomatoes

B1 (thiamine)	Co-enzyme, critical role in energy production and carbohydrate metabolism. Severe deficiency results in beriberi.	pork, wheat germ, acorn squash, asparagus, avocados, black beans, Brazil nuts, brown rice, corn, lentils, mackerel, navy beans, pistachios, quinoa, salmon, sunflower seeds, tempeh, trout, yellowfin tuna, whole grains
B2 (riboflavin)	Part of a co-enzyme necessary for normal growth. Possible factor in adrenal synthesis of corticosteroids, RBC formation, glycogen synthesis, fatty acid metabolism, mitochondrial function, and thyroid hormone function.	almonds, avocados, clams, cottage cheese, eggs, feta cheese, green leafy vegetables, ham, herring, mackerel, milk, mushrooms, peas, pork, quinoa, ricotta, soy, sweet potatoes, wheat germ, wild salmon, yogurt
B3 (niacin)	Part of the enzymes NAD and NADP in mitochondrial function, necessary for the metabolism of macronutrients. Deficiency results in pellagra.	avocados, barley, brown rice, corn, eggs, fish, ground beef, lamb, mushrooms, peas, peanuts, quinoa, salmon, tempeh, tuna, turkey
B6 (Pyridoxine)	Co-enzyme for more than 60 different enzymes mostly related to macronutrient metabolism; facilitates liver and muscle glycogen release, aids in heme synthesis	avocados, bananas, chicken, Chinese cabbage, eggs, fish, green and red peppers, legumes, lentils, meat, salmon, soy, steak, sweet potatoes, tempeh, trout, wheat germ, yellowfin tuna, whole grain breads and cereals
B9 (Folic acid, Folacin, Folate)	Essential co-enzyme for DNA synthesis and normal RBC production, needed for antibody formation, normal growth and reproduction, and fetal growth and development.	black beans, chick peas, kidney beans, lentils, liver, navy beans, pinto beans, green leafy vegetables, beets, tempeh, tofu, wheat germ, green beans, oranges, papaya
B12 (Cyanocobalamin)	In its methyl cobalamine form it participates in folate conversion. As co-enzyme B12 it is necessary for fatty acid synthesis and the formation of myelin in the nervous system; also important in cell replication and RBC formation.	clams, crab, herring, liver, mackerel, mussels, oysters, salmon, trout, eggs, yogurt, dairy

Fat-soluble vitamins		
A (Retinoids from animal sources; beta-carotenes from vegetable sources)	Important for vision, reproduction, maintenance of healthy epithelium, bone development, and immunity, antioxidant and therefore possibly protective against cancer and cardiovascular disease	butter, butternut squash, cantaloupe, carrots, cheese, dandelion, egg yolk, greens, kale, liver, mangoes, pumpkin, red pepper, sweet potatoes, whole milk
D3	(Really a hormone and not a vitamin) With calcitonin and parathyroid hormone maintains bone and blood calcium and phosphorus hemostasis, role in immune functions	Sunlight is an important non-dietary source for Vitamin D. catfish, halibut, herring, mackerel, oysters, tuna, egg yolks, fish oil, fortified dairy products, shiitake mushrooms, Swiss cheese, milk
E	Component of lipid bilayer of cell membranes, acts as a free radical scavenger (antioxidant function), role in immunity, and may slow aging process due to protective effects on cells, possibly protective against breast cancer	wheat germ oil, sunflower seeds, almonds, avocados, butter, canola oil, egg yolk, green leafy vegetables, liver, soybeans, hazelnuts, whole grain products,
K	Involved in the cascade of factors that maintains proper blood clotting; may have a role in calcium bone deposition	broccoli, endive, kale, spinach, Swiss chard, watercress, avocados, liver, soybeans Also intrinsically produced in the GI system

Minerals

Minerals are components of many of our enzymes and hormones, and are essential for maintaining the osmotic pressure in the body, acid-base balance, normal hemoglobin levels, proper bone deposition, musculoskeletal development and function, and nervous system functioning. The macrominerals are calcium, chloride, magnesium, phosphorus, potassium, sodium, and sulfur, and the trace minerals include cobalt, copper, fluoride, iron, manganese, selenium, and zinc.

Selected Minerals

Mineral	Rich food sources
Calcium	amaranth, cheddar cheese, Chinese cabbage, egg yolk, green leafy vegetables, milk and milk products, ricotta, sesame seeds, shellfish, soy, Swiss cheese, tempeh, yogurt, tofu
Chloride	table salt
Copper	liver, oysters, Alaskan king crab, lobster, squid, tempeh, brazil nuts, cashews, chick peas, clams, hazel nuts, lentils, navy beans, soy
Iodine	
Iron	clams, oysters, kidney beans, lentils, mussels, oysters, pine nuts, pumpkin seeds, quinoa, steak, tempeh, tofu, wheat germ
Manganese	amaranth, mussels, pineapple, tempeh, wheat germ, blackberries, brown rice, pine nuts, raspberries, soy, tofu, walnuts
Magnesium	amaranth, almonds, artichokes, black beans, butternut squash, corn, mackerel, peas, tofu
Phosphorus	almonds, artichokes, corn, eggs, ham, lentils, navy beans, pumpkin seeds, quinoa, ricotta, salmon, sesame seeds, Swish cheese, swordfish, tempeh, tofu, trout, tuna, turkey, yogurt
Potassium	acorn squash, avocados, bananas, butternut squash, cantaloupe, Chinese cabbage, cod, dried apricots, grouper, halibut, herring, honey dew, lentils, lima beans, oranges, papaya, pinto beans, quinoa, soy, tomatoes, trout, wheat germ, yogurt
Selenium	Brazil nuts, couscous, liver, mackerel, shrimp, swordfish, tuna, wheat germ, barley, brown rice, eggs, eggs, ground beef, pork, ricotta, shiitake mushrooms, soy, sunflower seeds, tempeh, tofu, yogurt
Sodium	plentiful in numerous food sources, table salt, cheese, pickles, sauerkraut
Sulfur	meat, milk, eggs, legumes
Zinc	oysters, crab, black beans, chicken, chick peas, lamb, lentils, lobster, mussels, peanuts, peas, pork, pumpkin seeds, quinoa, sesame seeds, soy, steak, tempeh

Water—The Healthiest Beverage

Approximately 50% of the increased calories in the American diet, attributed to growing obesity problems, are coming from the consumption of high caloric, sweetened beverages. In 2006 a Beverage Guidance Panel proposed federal guidelines in the U.S. suggesting that the consumption of beverages with no or few calories should take precedence over the consumption of beverages with more calories. The proposed guidance focuses on obtaining as much of the daily fluid needs as possible from beverages that have lower calories and an improved nutrient profile. Water should be used to fulfill most of the fluid needs of healthy individuals.

Food or Supplements?

Leave your drugs in the chemist's pot if you can heal the patient with food. ~ Hippocrates

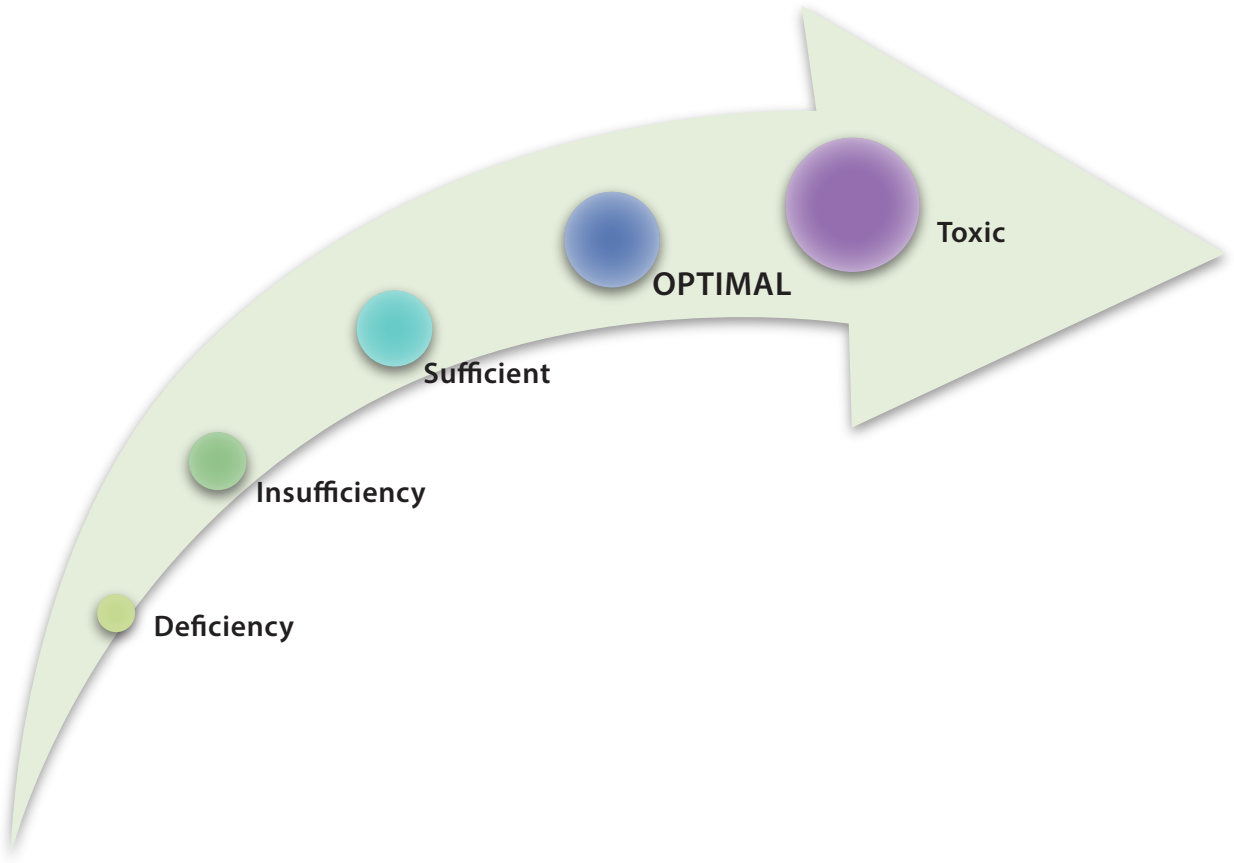
A good diet is always the best way to obtain nutrients. However, most women do not eat an optimal diet and most are surprisingly nutrient deficient, lying somewhere in the deficient to sufficient range on the nutrient arrow below, and largely in the insufficient range for important nutrients such as B vitamins, iron, iodine, magnesium, and essential fatty acids, to name just a few. Stress, chronic exposure to environmental pollutants, smoking, alcohol consumption, and life circumstances such as pregnancy, lactation, or low-income status, can interfere with obtaining adequate nutrition from food alone. Supplementation does not substitute for a healthy diet and lifestyle, but can be used therapeutically to replace missing nutrients and help restore the optimal functioning of enzymes and cell parts that are dependent on specific nutrients. Care should be taken with supplements, of course, not to push clients into the toxic range. This requires some basic knowledge of which supplements are toxic generally, and which are inappropriate for supplementation over specific ranges in pregnancy.

A bit of food terminology can be helpful in understanding supplements.

RDA: The Recommended Dietary Allowances (RDAs) were first established in the U.S. in 1941 by the Food and Nutrition Board of the National Research Council. The standards were intended as nutrition recommendations for the armed forces during WWII, for civilians, and for overseas populations who might need food relief. The allowances were meant to provide superior nutrition for civilians and military personnel, so they included a "margin of safety."

DRI: RDAs have evolved into the now-used Dietary Reference Intakes (DRIs), nutrient-based reference values that include recommendations for estimated average requirement (EAR), which is based on the needs of 50% of a given specific population. The DRI is the daily intake level of a nutrient that is considered to be sufficient to meet the requirements of 97–98% of healthy individuals in every demographic in the United States. The RDI is used to determine the Daily Value (DV) of foods, which is printed on nutrition fact labels in the United States and Canada.

UL: A tolerable upper level (UL) has been set for most micronutrients in order to establish a maximal safe level less than that which would prevent overconsumption and toxicity in most individuals when foods are fortified or supplements are used.



Special Needs throughout Women's Life Cycles

During the teenage years special attention needs to be placed on calcium, iron, Vitamin D, and protein to meet the demands of continued growth and development, as well as on teaching girls and young women the skills they need to make healthy dietary choices throughout their lifetime.

As women reach their childbearing years, attention needs to be placed on preconception health, particularly ensuring adequate folate/folic acid intake for at least three months prior to attempting to conceive. Pregnancy requires only slightly increased caloric intake, with ample protein, calcium, iron, and essential fatty acid intake. Protein and essential fatty acids are particularly important for proper brain and nervous system development. Lactation requires less protein than does pregnancy, however, caloric need is increased during lactation over pregnancy.

As women age and approach their perimenopausal years and elder years, caloric need is slightly less than in younger women, however, it is very important for women to consume adequate amounts of high quality fats and phytosterols to prevent heart disease and maintain adequate hormone levels, and it is also important to maintain adequate calcium and Vitamin D intake in order to prevent osteoporosis.

Elderly women are especially prone to serious nutritional deficiency, both of macro- and micronutrients, that can

impact appetite, bone health, immunity, and mental status. Social support networks or services can be engaged to encourage adequate nutrient intake.

There's More to Diet and Nutrition Than What We Eat: Get the Plastic Out

We get more than we pay for in our food – in addition to nutrients and calories, even if we eat organic, if it comes wrapped in soft plastic, if it's in certain plastic bottles, or if we store or heat our food in plastic containers, we are ingesting chemicals, such as BPA, which act as endocrine disruptors. These are chemicals, molecularly similar to our own hormones, which are capable of contributing to a wide range of hormonal imbalances including but not limited to endometriosis, uterine fibroids, and fertility problems.

When these chemicals mimic endogenous estrogen, they are called xenoestrogens. To limit their exposure, teach clients to use glass, ceramic, and stainless steel containers, buy cheese and meats wrapped in paper, use only glass water bottles (though BPA-free varieties are available, we don't yet know the effects of what the BPA has been replaced with), buy in bulk whenever possible, and wash plastic by hand (the more plastic is heated by washing in the dishwasher, the more harmful chemicals leach over time).

Probiotics

Our intestines are home to several trillion bacteria – about 3 times the total number of cells in our entire body! The role of the human microbiome in health, ranging from its impact on immunity all the way to mental health.

While a traditional diet replete with fermented foods such as kefir, yogurt with live active culture, sauerkraut, kim chee, or miso, for example, provides a wealth of organisms important for the healthy digestive function, nutrient assimilation, and even hormone metabolism and elimination, unfortunately our modern diets, combined with the fact that most of us were not breastfed and have been exposed to antibiotics multiple times since childhood, have too often left us at a microbial deficit.

Many women struggle with digestive symptoms such as gas and bloating, food allergies, chronic inflammatory conditions, and hormonal problems, all of which can be caused or influenced by imbalances in gut flora. The bane of many women, for example, chronic vaginal yeast infections can be a result of disordered gut flora – or what is called "dysbiosis."

Choosing a probiotic can be done generically by simply selecting a combination product that contains a wide variety of organisms (i.e,. VSL3). The most common organisms in probiotics are:

- *Bifidobacterium* species
- *Lactobacillus* (there are several species, most commonly *L. acidophilus* and *L. rhamnosus*)
- *Saccharomyces boulardii* (a yeast, not bacteria)

Mindfulness

Mindful eating means being both mindful of our food choices – that is, mindful before we eat, as well as mindfulness while we are eating. Mindfulness simply requires that we pay deliberate attention to the act – and art – of eating. Too often we are the victims of our hectic schedules which lead us to eat on the run, at our dashboards or keyboards, when we're already so over-hungry that we wolf down whatever we can get our hands on fast (and that's generally not a salad or fish and steamed vegetables, right ladies?!), and barely taste or chew our food. So often, we bring our worries, loneliness, stress, body image issues, and a whole load of baggage to the table with our meal.

A wonderful piece of advice from Zen master Thich Nhat Hahn is, "Don't put anything else into your mouth, like your projects, your worries, your fear, just put the carrot in." Encouraging clients to practice mindful eating comes along with building a healthy relationship with food.

Principles of Mindfulness:

- Mindfulness is deliberately paying attention, non-judgmentally.
- Mindfulness encompasses both internal processes and external environments.
- Mindfulness is being aware of what is present for you mentally, emotionally and physically in each moment.
- With practice, mindfulness cultivates the possibility of freeing yourself of reactive, habitual patterns of thinking, feeling and acting.
- Mindfulness promotes balance, choice, wisdom and acceptance of what is.

Mindful Eating is:

- Allowing yourself to become aware of the positive and nurturing opportunities that are available through food preparation and consumption by respecting your own inner wisdom.
- Choosing to eat food that is both pleasing to you and nourishing to your body by using all your senses to explore, savor and taste.
- Acknowledging responses to food (likes, neutral or dislikes) without judgment.
- Learning to be aware of physical hunger and satiety cues to guide your decision to begin eating and to stop eating.

Someone Who Eats Mindfully:

- Acknowledges that there is no right or wrong way to eat but varying degrees of awareness surrounding the experience of food.
- Accepts that his/her eating experiences are unique.

- Is an individual who by choice, directs his/her awareness to all aspects of food and eating on a moment-by-moment basis.
- Is an individual who looks at the immediate choices and direct experiences associated with food and eating: not to the distant health outcome of that choice.
- Is aware of and reflects on the effects caused by unmindful eating.
- Experiences insight about how he/she can act to achieve specific health goals as he/she becomes more attuned to the direct experience of eating and feelings of health.
- Becomes aware of the interconnection of earth, living beings, and cultural practices and the impact of his/her food choices has on those systems.

Hara hachi bu

Hari hachi bu is a Japanese term that means eat until 80% full and is an aspect of mindful eating that we can teach our clients. Being satisfied but not stuffed is an art. As kids we were taught to eat until we cleared our plates, regardless of satiety. Also, many of the foods in the Standard American Diet confuse our ability to tell when we are full – they were designed this way, actually, in labs, to increase our consumption of them. The idea of Hari hachi bu involves identifying the feeling of satiety that should precede feeling full and learning to stop eating there. This practice can help women who are struggling with their weight, eating disorders, and digestive symptoms. Hari hachi bu is associated with greater longevity.

Practicing mindfulness is transformative for women's relationship with food, body awareness, and even body image. It is a necessary component of any weight loss program or plan for making nutritional changes.

To teach it you must practice it.

Counseling about Food as Medicine

Simply telling a woman she needs to eat better is not an effective strategy for improving nutrition or making dietary changes. There is an art to helping clients make changes, and it usually requires helping them to do this over time, in small increments, particularly if their diet is unhealthy to begin with. Clients have to want to be healthy and eat well at a deep level in order to make changes, and they also need economic access to healthy food.

Stress is an important mediating factor in health-seeking behavior, and social and economic limitations can significantly limit access to health promoting choices. Practitioners must be sympathetic to these obstacles, and creative in finding solutions.

It is important that you tell the client that it is truly important for them to be fully honest and include everything – that you are not judging, just trying to provide the most accurate information possible, and that without their

complete disclosure of their diet information, this is impossible. You can tell them, for example, that if they smoke but do not tell you, you would not know to inform them that smokers have a much higher need for Vitamin C and other antioxidants than non-smokers, and that conversely, smokers who take high doses of Vitamin A are at increased risk for lung cancer.

The food journal is self explanatory. Three days is generally enough for a good perspective on their diet. Of course, a food journal over the days of someone's birthday or New Year's Eve may have more alcohol and sugar than normal, but it will still be revealing and relevant to their overall patterns and tendencies. You can always have them repeat it later on, which in my clinical practice I have often done to see how a client's diet has changed over time.

Another use for the food journal, with established clients, is to send them home with a blank form and have them create a 7-day meal plan for what they consider an optimal diet. If they tend to skip breakfast but do fine eating healthy foods at other meals, then you can have them focus on creating breakfasts. The same can be done just for lunches or dinners. If they are overweight and tend to eat at night, have them keep a record of this. Get the picture? There is a lot of creativity that can happen around using the food journal as an educational tool for the client herself. Sometimes just the act of keeping a food journal is like having one's own personal witness, and it encourages the client to eat better. The food journal can also be used prospectively as a meal and shopping planner for women who have trouble figuring out what to prepare and eat.

The client is asked to bring a copy to put in her files. Once you receive this, review it carefully within the set of skills you have for interpreting it. Make sure that the client is receiving foods in the proportions recommended on the food pyramid, as well as a variety of foods that encompass those listed for all the nutrients in both the vitamin and mineral charts, as well as complex carbohydrates, protein, quality oils, and vegetables at every meal, and at least five servings of fruits and vegetables daily. You can sit down with your client and compare the optimal diet recommendations with her food journal, and point out areas that might be deficient. If the diet seems significantly deficient, or if the client is in a special life cycle needs category (i.e., pregnancy, osteoporosis risk), you might want to refer your client to a nutritionist for counseling, unless you have adequate nutrition knowledge/ training.

3-Day Food Record (Food Journal)

Please fill out the following 3-day food record as honestly and accurately as you can. Carrying it along with you is easier than trying to recall your foods and beverages at the end of your day. There is absolutely no judgment in this! I just want to have an accurate idea of what you are eating, craving, and even binging on so I can help you achieve the healthiest eating habits possible!

Day 1

Time	Food/Beverage (include amount)	Stress/Emotion/Mood/Comments (note how you felt before/while/or after eating)

Day 2

Time	Food/Beverage (include amount)	Stress/Emotion/Mood/Comments (note how you felt before/while/or after eating)

Day 3

Time	Food/Beverage (include amount)	Stress/Emotion/Mood/Comments (note how you felt before/while/or after eating)

Therapeutic Diets

There are many different ideas of what "the best" diet is when in fact there really is no one best generic diet. The only diet that has been significantly validated by science for its health promoting and disease-reversing effects is the Mediterranean diet. Individuals have very different needs based on constitution, cultural heritage, genetics,

life stages, climate, and a host of health factors. While one woman might thrive as a vegan, a paleo diet is going to be the most beneficial for another. And best diet is rarely a fixed matter for anyone – our dietary needs almost always change over time.

The following diets represent the most common therapeutic diets I use in my practice, but do not represent the totality or complexity of dietary counseling and individual planning that optimizes health for individuals. For some women, a therapeutic diet might be a temporary way of eating while identifying food sensitivities that might be triggering symptoms, while for other women, a specific therapeutic diet might need to become a way of life, for example, remaining gluten free if she is gluten intolerant or has celiac disease, dairy free if she is sensitive or lactose intolerant, or low glycemic index if she tends toward insulin resistance.

A skilled nutritionist versed in whole foods eating is a great asset to have as a referral or in your practice.

The Elimination Diet

An elimination diet is an effective and accessible tool for identifying foods that might be triggering a client's symptoms. It has two distinct phases: elimination and reintroduction (also called a food challenge). The elimination phase can last from 1-3 weeks; reintroduction of foods occurs over a period of a couple of weeks.

Sometimes when foods are removed, troubling symptoms spontaneously resolve; sometimes symptoms become evident only when an offending food is reintroduced and a symptom recurs that had resolved during the elimination phase.

The foods that are most important to eliminate are:

1. Common foods that trigger sensitivities and allergies
2. Foods that the client tends to crave
3. Foods that the client already knows causes her symptoms
4. "Comfort foods"

Common food triggers include dairy products, gluten, peanuts, soy, sugar, eggs, caffeine containing foods and beverages, vinegars and fermented foods, yeasted products, alcohol, and fatty foods. For some clients, all starches might be a problem, so they might need to eliminate grains and beans if symptoms are significant.

Some clients notice that their symptoms worsen during the first 3-5 days of the elimination phase of the diet – particularly if they have a food addiction to sugar or caffeine. Plenty of water and encouragement can be helpful. After this, symptoms typically being to improve.

During the challenge phase, re-introduce a new food group every 2-3 days, observing for symptoms. Start by reintroducing the food slowly – a small portion initially, then larger portions with lunch and dinner. If a food doesn't cause symptoms, it is likely not a problem in the diet. If a sensitivity or intolerance is identified, that item should remain out of the diet either indefinitely or until it is again tolerated, which sometimes can happen after the 4R gut healing plan is completed. However, foods that cause a true allergic reaction (swelling, shortness of breath, etc.) should not be reintroduced and if there is an actual allergic reaction, medical attention should be

sought.

I do an elimination diet with most patients, particularly if they have digestive symptoms or inflammatory conditions.

Vegetarian Diet

A well-balanced vegetarian diet can have numerous health benefits including the prevention and treatment of heart disease, diabetes, and numerous inflammatory conditions. Higher plant fiber intake is associated with reductions in breast cancer and colon cancer, and can help in the treatment of many gynecologic conditions in which there is estrogen dominance. The inclusion of whole-grain or traditionally processed cereals and legumes in the diet has been associated with improved glycemic control in both diabetic and insulin-resistant individuals.

There are some potential downsides to vegetarianism. Inadequate protein intake can lead to a feeling of chronic hunger or lack of satiety, and the diet is commonly heavily loaded with carbohydrates. Beans, rich in protein, are also carbohydrate rich.

To obtain variety in protein choices, many vegetarians consume more dairy than may be optimal. Carbohydrate-rich diets can lead to a great deal of fermentation in the gut in the absence of optimal gut flora, causing some vegetarians to be plagued with gas, bloating, and digestive discomfort. As we age, most adults become increasingly intolerant of dairy, and may also start to experience digestive problems as a result.

The most important considerations with a vegetarian diet are obtaining adequate amounts of protein, avoiding excess reliance on carbohydrates to meet energy needs, avoiding over-emphasis on dairy products for protein needs, and obtaining adequate iron and Vitamin B12. I often find that clients, particularly those who have been vegetarian for many years and who are chronically tired or depleted, respond well to the inclusion of small amounts of organic meat in their diet.

Vegan Diet

The vegan diet has all of the same advantages of a vegetarian diet, lacks the problems associated with dairy, but because it is even more restrictive in protein sources (i.e., lacking dairy, eggs, and meat), vegans can potentially run into the same problems as vegetarians with over-reliance on carbohydrates. Thus working with vegans to ensure optimal nutrition is essential, and likewise, long-term vegans with symptoms of depletion often respond well to some eggs and meat in the diet.

Low Glycemic Diet

Insulin resistance and metabolic syndrome, precursors to diabetes, affect over 80 million Americans and have become a global problem. Diabetes can ultimately cost people their eyesight, their lower extremities due to poor circulation leading to infections and need for amputation, and their lives in the form of heart disease and kidney

failure. Further, Alzheimer's disease is now recognized as "Type 3 Diabetes."

For women, insulin resistance and glycemic dysregulation can lead to muffin tops, excess abdominal weight, hormonal problems, PCOS, infertility, and as we get older, memory problems and heart disease.

The increase in Type 2 Diabetes over the past decade, concomitant with the massive increase in obesity worldwide, are not some random genetic error. It is the simple result of excessive consumption of sugar and carbohydrates in the diet. Historically, humans consumed about 20 tsp of sugar annually; these days the annual average rate of sugar consumption is 150 pounds, or about ½ pound per day! Ain't that Sweet? Not so much!

Insulin is a hormone that is central to regulating carbohydrate and fat metabolism. It causes cells in the liver, skeletal muscles, and fat tissue to absorb glucose from the blood. In the liver and skeletal muscles, glucose is stored as glycogen, and in fat cells (adipocytes) it is stored as triglycerides. In other words, insulin is a fat storage hormone.

When the body is unable to produce insulin, which is required for remaining alive, this is Type 1 Diabetes. In Type 2 Diabetes, the body may not produce enough insulin to meet the demand, or the cells may be resistant to insulin, not allowing the body to use what is produced.

Our bodies produce and release insulin from the pancreas in response to food ingestion. Sugar and carbohydrates particularly stimulate insulin production. When cells become insulin resistant, the body initially produces more and more insulin in the hope that banging on the insulin receptor louder and louder will finally cause the door (receptor) to open. Excess insulin leads to increased fat storage, cholesterol problems (high LDL and low HDL), increases blood clotting risk (= more heart attacks and strokes), causes high blood pressure, and overall increased inflammation which may ultimately cause the oxidative stress in the brain associated with dementia.

Glycemic index provides a measure of how quickly blood sugar levels (i.e., levels of glucose in the blood) rise after eating a particular type of food. The glycemic index estimates how much each gram of available carbohydrate (total carbohydrate minus fiber) in a food raises a person's blood glucose level following consumption of the food, relative to consumption of pure glucose. A low glycemic diet is an important step in normalizing blood sugar and preventing problems related to blood sugar and insulin, as well as sugar and fat deposition and storage. Additional factors that affect insulin and blood sugar regulation, including stress and sleep patterns, need to be addressed concurrently.

A low glycemic diet eliminates:

- Flour and sugar products
- Processed foods/non-food junk (what I call junk food)
- All sugar-laden beverages (including soda, fruit juices, and sweetened coffee and tea)
- Hydrogenated fats

And emphasizes:

- Adequate protein at each meal
- A good quality fat at each meal
- Combining quality carbs with quality fats to improve the glycemic index of the carbs (the fat slows down the carb digestion reducing the blood glucose and insulin spike)
- High fiber from vegetable sources (more effective at improving glycemic levels than from fruit sources)
- Eating small frequent meals, high protein snacks, and avoiding hypoglyemica
- Exercise, which improves insulin utilization
- Avoiding caffeine which can affect blood sugar and increase stress

In addition to these dietary changes, a number of nutritional supplements and herbs can improve insulin resistance. These include chromium, vitamin D, magnesium, B-complex vitamins, ginseng (and the other adaptogens), fenugreek, cinnamon, green tea, and bitter melon, to name some of my favorites.

Anti-Inflammatory Diet

Inflammation is one of the body's natural ways of protecting itself. Chronic exposure to food allergies, nutritional deficiencies, sugar, stress, and environmental chemical triggers, can cause inflammation to become chronic, under which circumstances it can, over time, wreak havoc, leading to common symptoms such as menstrual pain, headaches, and joint inflammation, endometriosis, diabetes, autoimmune conditions, Alzheimer's disease, heart disease, and stroke, to name just a few chronic and more serious acute problems.

Improving the diet can significantly reduce inflammation. At least 4-6 weeks is needed to see the benefits of the anti-inflammatory diet. Many clients, particularly those with chronic inflammatory conditions, will benefit from making this diet their way of life. This diet will be referred to for specific conditions discussed later in the course. The Mediterranean diet is inherently anti-inflammatory. Augment it with the following recommendations:

Increase the following in the diet:

- Foods high in omega-3 fats
- Cold water fish (salmon, sardines, herring, mackerel)
- Ground flax seeds or flax oil
- Leafy green vegetables
- Walnuts
- Antioxidant rich foods
- Yellow, orange, and red vegetables
- Dark green leafy vegetables
- Citrus fruits
- Green tea
- Foods high in fiber
- Spices that contain anti-inflammatory compounds: ginger, rosemary, turmeric, and oregano, as well as fresh garlic and onions

Reduce the following:

- Foods high in trans- and omega-6 fats
- Red meats
- Dairy products
- Partially hydrogenated oils
- Corn, cottonseed, peanut, safflower, soy, and sunflower oils
- Foods high in simple carbohydrates
- White flour products
- Rice and corn cereals
- Wheat
- Eggs
- Artificial flavors and colors

Summary

Diet and nutrition are complex topics and their relationship to health and disease prevention are evolving fields. This lesson was only a taste of a vast menu of nutrition and dietary possibilities available for you to share with your clients. They are some of the ones I rely on most often in my clinical practice, and are the ones to which I will refer throughout this course.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 5

Our Bodies, Our Power

Learning Objectives

By the end of this lesson you will be able to:

1. Discuss the importance of women understanding their reproductive anatomy
2. Identify the major anatomical structures of women's reproductive anatomy
3. Describe the role of the major sex steroid hormones in women's reproductive health
4. List 5 signs of a suspicious breast lump and nipple discharge

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Estradiol

Estriol

Estrogen

Estrone

Hormone

Hormone receptior

Progesterone

Testosterone

Vulva

What's in a Name – Gender and Language in this Course

Our very concepts of gender are rapidly shifting and the language we have available to define ourselves, describe women's bodies, and our hormonal experiences is lagging behind. Even the word "woman" is rapidly shifting in definition.

This course focuses on the health concerns that affect people born with and still possessing 'women's tack.' The convention when I created this course was to use the words woman and women to describe this group. The updates to transform this language are beyond what is possible to do in the timeframe I have available to deliver this content to you - so I ask that you know that this course does not assume gender conformity, nor does it either assume a heterosexual norm. Out of the desire to have a common language, I use medically defined anatomic names for what have historically been considered 'lady parts,' though it's important to remember that these terms have a patriarchal origin; they're named after men, and for them vagina, for example, literally translates as a sheath (for a sword, that is).

Conventional terms such as reproductive and sexual organs might also not represent all people - not everyone chooses to either have sexual relationships nor to reproduce, and some people might not have all of those body parts (i.e., post-mastectomy, post-hysterectomy) and may still be highly sexual. In my personal life, I use the Sanskrit term 'yoni' above all others for our vulva because it connotes the sacred feminine, and sometimes I let that fly in the course.

My goal is to help illuminate a new approach to gynecologic health that is completely comfortable talking about vaginas, the uterus, discharge, sex, and everything we need to talk about to stay healthy and happy. I acknowledge that my language in this course is at times imperfect and I appreciate your understanding if the terms I use fall short of optimal. Becoming familiar and skilled in using gender neutral language takes time for many of us - myself included - and I make errors. I ask for your patience ahead of time even in new content I am creating and sharing. Here are examples of gender-neutral language you can begin to use. Keep in mind, cis women often prefer traditional, conventional language; whereas gender non-binary and trans patients/clients will likely prefer inclusive language. If in doubt, you can always respectfully ask and let your patients/clients know you are learning. On the course webpage you'll find resources to expand your understanding and inclusiveness.

Gender Inclusive Anatomy Language

Try	Instead of
Upper Body	Breast/Chest
Erogenous or erectile tissue/External genitals/Genitals	Penis
Erogenous or erectile tissue	Clitoris
External genital area	Vulva
Opening of the genitals	Introitus/ Opening of the vagina
Internal genitals/Genitals	Vagina
External gonads	Teste/Testicles
Internal gonads	Ovaries
Internal reproductive organs	Female reproductive organs

Gender Inclusive Language for Discussing Conditions and Symptoms

Try	Example	Instead of
Person with _____ People _____ Anyone with _____	If a **person with** *a prostate* has urinary symptoms, they should speak with their doctor.	man with ..... males with..... male-bodied people.....
Person who has _____ People who have _____ Anyone who has _____	We recommend that **ahyone who has** *a cervix* consider having a pap test according to the recommended guidelines.	woman who has ..... females who have..... female-bodied people.....
_____ may occur _____can begin You may experience _____	*Pregnancy* **may occur** without contraception. *Hair loss* **can begin** at any age after puberty. **You may experience** *cramps* as a side effect	women may become..... male-pattern balding..... women may experience.....

Additional gender inclusive terms

Try	Instead of
Assigned female / Assigned male	Biological female / Biological male
Cisgender	Not trans/Normal/Real
Phenotypical development	Natural/Normal development
Common	Regular/Correct/Right
Hair loss	Male pattern balding

Sexual health screening/Internal exam/Cervical screening	Pelvic exam / Well woman exam
Looks healthy	Looks normal
Thinning of the internal genitalia tissue	Vaginal atrophy
Monthly bleeding	Period / Menses
Physical arousal / Hardening or stiffening of erectile tissue	Erection
External condom / Insertive condom	Male condom / Female condom
Receptive IC / Insertive IC (IC = intercourse)	Vaginal sex
Pregnant person	Pregnant woman
Parenthood	Motherhood / Fatherhood
Chestfeeding (for non-binary & transmasculine people)	Breastfeeding

Body Knowing is Body Power

Our bodies, strong, powerful, and capable, have been shrouded in myth, mystery, magic, misunderstanding, and taboo throughout history and across cultures. Though many of the prohibitions and misconceptions surrounding women's sexual/reproductive organs and their functions are now better understood, the vast majority of adolescents and adults today, including most women – even many health professionals – do not adequately or accurately understand the female sexual/reproductive system.

Women's lack of body knowledge and awareness is problematic because it can lead women to ignore gynecological symptoms, avoid seeking care for gynecologic problems, and can lead to difficult communications between care providers and patients, including non-disclosure of gynecologic symptoms during a routine office visit because of embarrassment. One woman who became my midwifery client, went to her OB/GYN while pregnant to show her a concerning breast lump. The OB was too busy to hear the woman's concerns and never bothered to do a breast exam at the initial prenatal. A Stage-4 breast cancer lump was missed. Ultimately her labor was induced early so she could undergo a mastectomy. Being diagnosed months earlier wouldn't have changed this outcome – but the point is, the woman was too embarrassed to bring it up and the doc too busy to ask if the woman had any concerns.

An understanding of the connection between sexuality and health is also missing from contemporary medical discussions of female anatomy, yet such an understanding of the female genital system for women themselves, as well as their practitioners, can lead to improvements in sexual health, and consequently, improvements in general health and self-esteem. Many women find understanding and appreciating their bodies to be radically empowering.

Lack of understanding on the part of the medical community is also problematic, for example, misconceptions about the natural timing and course of labor has led to pandemic levels of labor induction and unnecessary cesarean sections, at the expense of the health and comfort of numerous mothers and babies.

A general understanding of anatomy and women's endocrine functions will facilitate your conceptual understanding of the materials in the remainder of the course, and will help you provide your clients with lifelong understanding of their bodies, which can dramatically impact their health and well-being.

The Language of Women's Anatomy

The medical nomenclature for female anatomical structures can be subtly disempowering to women: Many structures of women's sexual anatomy are named after male physicians or scientists, and some words, for example "vagina" which means a sheath for a sword, reflect an archaic, chauvinistic use of Latin.

Even as recently as the 20th century in the United States, hysterectomy was used as a treatment for women's psychoemotional problems because these were believed to stem directly from the uterus. In fact, the words uterus and hysteria are both derived from the Greek *hysterikos*, or uterus!

Worse yet, in many cultures the words used to describe women's sexual anatomy are negative, derogatory, and oppressive, reinforcing attitudes that potentially endanger the health (and safety) of women and girls. Many women who come to you as clients will have grown up internalizing negative beliefs and attitudes about their bodies in general, and sexual organs specifically.

The Hebrew terms for menopause translate to "age of wilting" or "being worn out."

An Arabic term means "years of despair."

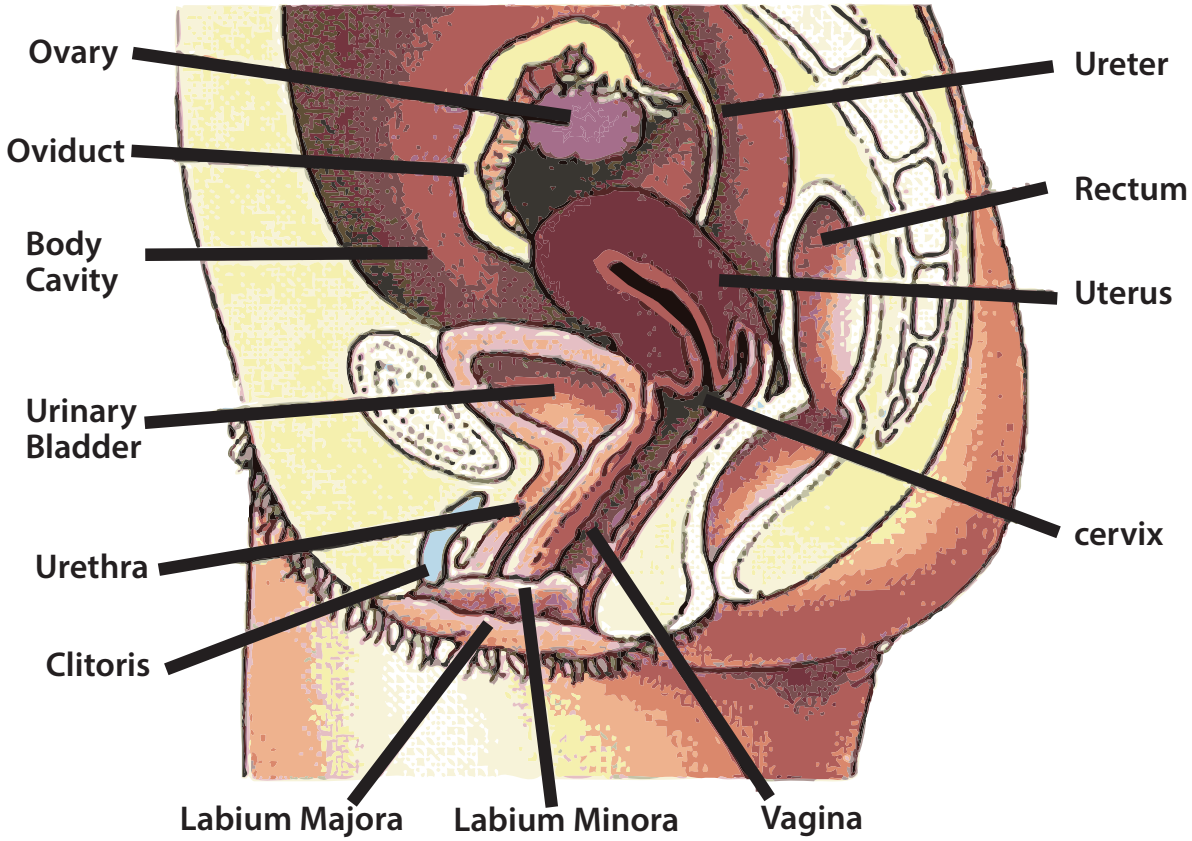
In Japanese, characters used for women's sexual parts conveyed "shame."

The "In Translation" sidebars in the 2011 edition of *Our Bodies, Ourselves* highlight the work of global partners who develop health resources based on *Our Bodies, Ourselves* for their own communities.

To avoid confusion, common scientific terms, unfortunate as some may be, are used throughout this course. It is important to recognize that slang words women use for their own sexual and reproductive anatomy may vary vastly from those used by health professionals, and some of these terms are also derogatory or may be uncomfortable to you. Communicating in various populations requires knowledge of, and comfort with, commonly used terms. Often just asking a woman what words she uses is all you need to do to communicate effectively with her.

Note that this course uses the terms "sexual/reproductive systems" simultaneously, recognizing that not all women will choose or be able to bear children, and that the sexual experience, for mothers and non-mothers alike, is not defined by nor limited to reproduction.

Women's Sexual/ Reproductive Organs



Complete Pelvic Anatomy

The female sexual/reproductive organs include:

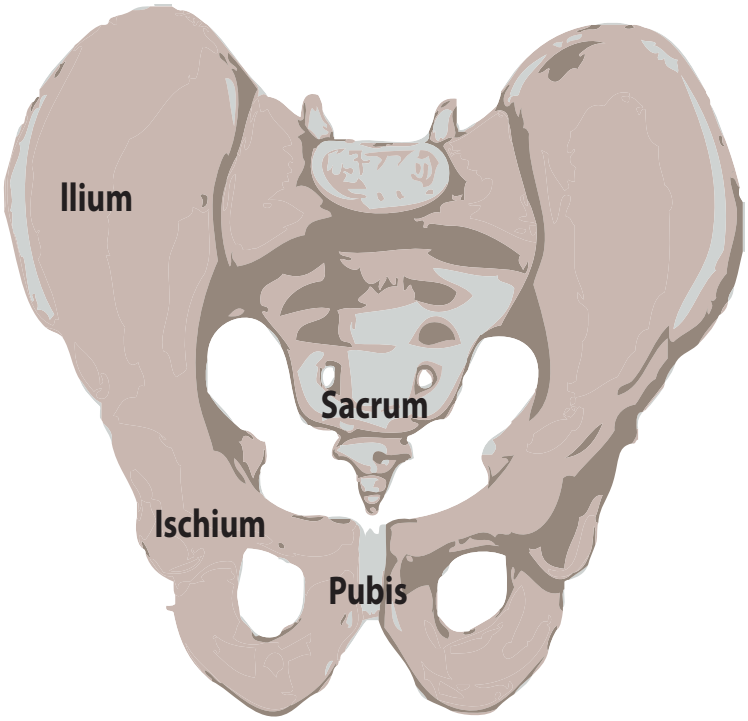
- the external genitalia
- the vagina
- the uterus
- the ovaries
- the fallopian tubes
- the breasts

Within the sexual/reproductive organs is a collection of glands, vasculature, erectile tissue, nerve tissue, muscles, and ligaments.

Down to the Bones

The pelvic bones form a solid though somewhat flexible cradle that provides the walls upon which the pelvic ligaments anchor the pelvic organs. The bony hips protect the pelvic and lower abdominal organs and provide ample room for the carriage of children in utero (barring a history of disease or malnutrition, i.e., rickets due to Vitamin D deficiency, that interfered with proper growth or development).

The pelvis has two corresponding halves, each containing 3 bones that are in mirror image to the other half. These bones are the ischium, ileum, and pubis. The pelvis also connects with the sacrum and coccyx, the bones that form to lower end of the spine.



Outer Parts

The Vulva

The vulva is the term describing the external female genitalia, the sexual/reproductive organs that are visible upon external visual inspection. This includes the Labia majora, the Labia minora, the clitoris, the introitus (vaginal opening), the urethral meatus (urethral opening), the perineum, and the greater vestibular glands. The vulva is bordered in the anterior aspect by the mons pubis ("mountain on the pubis", the fatty, hair covered triangle covering the pubic bone) and posteriorly by the anus. With the increasing number of women shaving their vulva, increasing numbers are also experiencing folliculitis and abscesses!

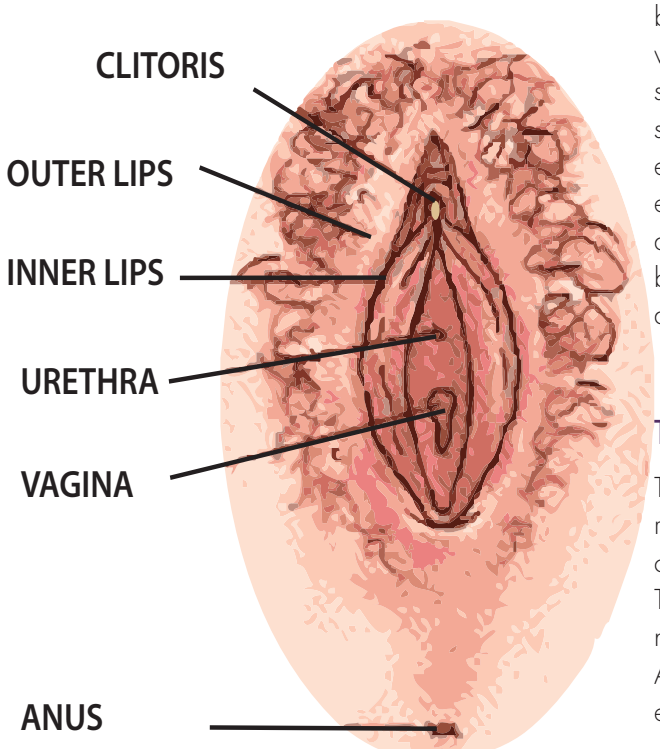
The Labia, Mons Pubis, Greater Vestibular Glands, and Labial Erectile Tissue

The Labia majora (large lips) are the large outer folds that enclose and protect the inner structures of the vulva, a region called the vestibule. Typically, 7-8 cm in length, 2-3 cm wide, and 1-1.5 cm thick, their surface is covered by skin on which grows the pubic hair after adolescence, while their interior aspect is covered by mucosa. Fatty tissue underlies the skin, and they are the sites in which the round ligaments terminate.

Anteriorly, the pair of Labia majora meet, forming the prepuce, or "hood" over the clitoris. The Labia minora (small lips) reside inside the outer labia. They are covered with mucus membrane, the soft, moist, pink or light-colored delicate tissue that covers the more internal aspects of the female genitalia. The mucosa lubricates during

arousal, and the inner labia contain many blood vessels that swell, changing to a darker color as they infuse with blood. A pair of mucus producing glands, the greater vestibular glands, flanks the vagina on each side. They lubricate the distal portion of the vagina during sexual arousal.

There are two specific types of erectile tissue: Corpus spongiosum (spongy bodies), compact masses of specialized capillaries and Corpus cavernosum (cavernous bodies), which contain relatively large vascular caverns. These specialized capillaries contain one-way valves that have the capacity to close with arousal, becoming engorged and increasingly sensitive. The vestibular bulbs make the vaginal opening flexible in size, and also allow the experience of pleasurable sensations. They are easily palpated when engorged. Women have as much of this specialized erogenous tissue as is contained in the male penis, a fact often overlooked, with the majority of medical books excluding over 75% of this tissue from descriptions and illustrations.



The Introitus and the Hymenal Ring

The introitus is the vaginal opening. The hymenal ring, or hymen is a circular band of elastic connective tissue located just inside the introitus. The virginal hymen is typically thicker than in the non-virginal woman, and rarely may be imperforate. After childbirth the hymen appears as skin tags on either side of the introitus.

In most girls and women, the hymen does not normally cover the entire vaginal opening, thus it is impossible to tell, by inspection of the hymen, whether a woman is a virgin. Sadly, in some cultures women are prevented from marrying, are shunned, or may experience far more severe abuse if their hymen is found not to cover the entire vaginal opening on what are routine inspections. The Swedish Association for Sexuality Education (RFSU), a sexual rights group, coined the term vaginal corona and notes, "The mythical status of the hymen has caused far too much harm for far too long," and the hymen has wrongly been "portrayed as the boundary between guilt and innocence."

The Clitoris

The clitoris ("hill"), an amazing organ and the key to many women's sexual pleasure, is located anterior to the vestibule. From the outside it appears as a small, protruding structure under a prepuce, or hood. It is a highly sensitive organ composed of erectile tissue, the surface size of which belies its actual extent and complexity, as well as its important role in women's sexual experience.

The clitoris is comprised of three major parts, the glans or head, the shaft, and the crurae, as well as the

prepuce, frenulum, and clitoral sponge (also called the bulb of the vestibule). The glans is a pea-sized, acorn-shaped structure that contains approximately 4000-8000 nerve endings, the highest concentration in the human body, male or female. The glans is nestled underneath the prepuce (hood), formed by the juncture of the labia majora. The hood is analogous to the foreskin of the male penis. The glans sits atop the tubular shaft (body or corpus), and together the glans and the shaft are shaped rather like a small penis in contour.

Underneath the hood the shaft of the clitoris can be moved slightly within the loose tube of fibrous connective tissue that surrounds it. At the base of the shaft, the clitoris bends and splits forming the crurae (legs; crura = singular) of the clitoris that extend like a wishbone with the branches following along the inner edge of the pubic arch. The clitoral sponge, the erectile tissue of the clitoris, becomes enlarged, firm and exquisitely sensitive with stimulation. The vestibular bulbs start just lateral to the vaginal orifice, proceed along the sides and extend and connect to the shaft of the clitoris; thus, stimulation of one part of the connected tissue leads to stimulation of the other. The frenulum is the junction of the labia minora formed just below the glans. More discussion of this organ follows in the lesson covering women's sexual function later in the course.

The Perineum

The perineum is the smooth, triangular shaped area of skin-covered tissue lying between the vaginal opening and the anus. It is roughly a 4 cm equilateral triangle, the anterior portion of which meets the introitus, and the posterior portion of which meets the anus. The perineum on all sides meets the musculature of the pelvic floor. It is tough and flexible, and because it has relatively few nerve endings, is not acutely sensitive.

The perineum is designed to adapt to the remarkable emergence of a baby's head during childbirth. Under the perineum lies another pad of erectile tissue that divides the vagina and the rectum. This erectile tissue is called the posterior or perineal sponge, and like other erectile tissue forms a snug and sensitive cuff around the vaginal opening. The perineal erectile tissue is usually 1/2 to 1 1/2 inches inside the vaginal opening and about 1/2 inch deep, towards the rectal wall. This depth tends to protect against trauma during childbirth; however, it may be severed by episiotomy.

The "Hinterlands"

While not considered part of the sexual/reproductive organs, the anus is an important anatomical landmark observable upon visualization of the external genitalia. The anus is a cone of muscle that forms a two-layered sphincter muscle, which acts as a drawstring-like muscular closure valve. One layer is more external, the other slightly more internal. It is lined with delicate mucosa that is full of highly sensitive nerve endings. The sphincter muscle of the anus is connected to the sphincter muscles of the vagina like a "Figure 8," with the connection laying under the perineum.

Many women find anal stimulation highly erogenous, so for some it does play a role in sexual activity; however, it is not a part of the reproductive system – rather it is part of the digestive system. Its proximity to the vagina and bladder can result in the spread of bacterial organisms to these other sites, and consequently, bladder or vaginal infection in cases of poor hygiene, disrupted vaginal flora, or susceptibility to urinary tract infection (UTI).

Inner Parts

The Vagina

The vagina is a collapsed, circular, muscular tube. The vaginal tissue is constructed of squamous epithelium (mucosa) underneath which lies a layer of connective tissue and a thin, two-layer muscular coat. The anterior wall of the vagina is typically 5 to 7.5 cm long; the anterior wall generally 7.5 to 10 cm long. The anterior wall is in contact with the posterior bladder wall. While the vagina is commonly thought of as an open tunnel, it is not; the walls touch. It is considered a duct, providing a pathway for menstrual blood, a passage for semen and an exit route for babies. The mucosal lining secretes vaginal lubrication. The lateral vaginal walls form longitudinal ridges, while the anterior and posterior walls form transverse ridges called rugae.

Internally, nerve pathways to another area of erectile tissue, an "internal clitoris", connect the clitoral structures, which is in the anterior or top wall of the vagina. Dubbed the G-spot for Dr. Grafenberg, who medically described it, it is inaccurately described as a "dime-sized spot"; whereas it is actually a cylindrical tubular structure. The upper third of the vagina, the portion into which the cervix protruded, is called the vault. The grooves on either side of the vagina where the wall and floor meet are referred to as the sulcus. The space created between the body of the cervix and the vaginal walls is the fornix. The ureters and uterine arteries flank the vagina on either side.

The Uterus & Cervix

The uterus is an amazingly strong organ composed of multiple muscle layers capable of expanding to accommodate a baby, and also capable of expelling it through rhythmic contractions; and a remarkable lining (endometrium) capable of the cyclic changes of the fertility cycle and supporting the growth of the placenta and a fetus. It is situated between the bladder and rectum, measuring approximately 7.5 cm in length, 5 cm in width, and 2.5 cm in thickness. Its shape is likened to an inverted pear, the size compared to that of a small fist.

The uterus is divided into three segments: the fundus is the dome-shaped upper portion; the body is the large central segment; and the cervix is a narrow interior portion shaped like the end of a balloon. The cervix protrudes into the upper third of the vagina and nestles into the back of the vaginal canal. The outer opening of the cervix into the vaginal canal is called the external os; the juncture between the upper aspect of the cervix and the body of the uterus is called the inner os. The portion of cervix between the two os is the isthmus. Inside the cervix are microscopic glandular crypts that secrete special slick mucus during a woman's fertile time of her cycle. These vaults assist and nourish sperm, facilitating their entry into the uterus and keeping the sperm alive for up to five days.

The three layers of the uterus are the serosa (or perimetrium), which forms the outer layer and is part of the peritoneum; the myometrium, the middle, muscular layer of the uterus; and the endometrium, the lining of the uterus composed of a bilayer of glands. Uterine arteries supply blood to the uterus.

The Fallopian Tubes and Ovaries

From either side of the lateral, top of the uterus (horn) extends a fallopian tube or oviduct. Each is comprised of a long passage culminating in a funnel-shaped, open distal end (infundibulum) from which extend fringed, finger-like projections called fimbriae. Each fallopian tube is approximately 10-12 cm long and is composed of 3 layers: an inner layer containing ciliated and non-ciliated cells; a middle layer of smooth muscle; and an outer layer of longitudinal muscle. These layers work in concert to assist the movement of the egg from the ovary toward the uterus, and potentially toward sperm waiting to fertilize the egg. Much like the uterine endometrium, but without shedding, the epithelial lining of the fallopian tubes undergoes cyclic changes. The stages are called the resting phase, the premenstrual phase, the menstrual phase, and the postmenstrual phase.

At the end of each tube rests an ovary, a small almond-sized organ that contain all of a woman's eggs from the time she is a six-month old fetus. The ovaries are gonads and as such are the primary organ of reproduction in the female. As is the uterus, the ovaries are maintained in their position by a series of ligaments. They are attached to the broad ligament of the uterus. The ovary undergoes what is referred to as an ovarian cycle, the series of changes that occur in concert with the menstrual cycle. Both the menstrual cycle and the ovarian cycle are described below.

The Urethra

The urethra is a tube that runs from the bladder internally to the vulva and allows the passage of urine externally. It is located below the glans of the clitoris and above the vaginal orifice. While not a sexual/reproductive organ, the location of the urethra in the pelvis, and its proximity to vagina and uterus, make it an organ that can be affected by gynecologic conditions, and can also affect gynecologic and obstetric problems. For example, urethral meatus irritation frequently accompanies vaginal chlamydial infections, and UTI can lead to vaginal bleeding, and during pregnancy, even premature labor. Therefore, it is mentioned in this discussion.

Nerve Supply, Blood Supply and Erectile Tissue

Bundles of nerves form sensitive connections that weave together the aforementioned areas and structures. The most significant nerve bundles, branches of the pudendal nerve, are on either side of the pelvis, at 3:00 and 9:00, near the ischial spines of the pelvis, and located in the far back wall of the vaginal vault behind the cervix. Interestingly, 'pudendum' comes from the Latin word for 'shame'; midwife-educator Sherri Winston suggests it be renamed the primary genital nerve. The entire vagina and pelvis are richly supplied with an elaborate network of blood vessels. All erectile tissue is thoroughly infused with capillary networks.

The Pelvic Muscles

The muscles of the pelvis are arranged much like a hammock, forming a strong sling called the pelvic floor. The muscles stretch from the bottom front edge of the pubic bone, back to the sacrum. Along the sides they attach to the inner and bottom edges of the pelvis. This muscle group is referred to as the pubococcygeus muscles, or PC muscles.

The urethra is surrounded by and passes through the pelvic floor muscles, as does the vagina and the rectum. The PC muscle sling is actually composed of a variety of separate muscles, but for our purposes we will divide them into 3 separate functional groups. The front group that helps prevent unwanted urination, the bottom group, and the back or rear group, which helps prevent unwanted defecation. These muscles surround and support the vagina and other structures within the pelvis and are controlled both voluntary and involuntarily.

Pelvic Floor Integrity

Keeping the pelvic floor muscles in good tone is important for pelvic integrity throughout a woman's lifetime – they maintain the proper location of the pelvic organs, ideally preventing organ prolapse and urinary incontinence as a woman ages. It is especially important after childbirth to restore tone to these muscles through deliberate pelvic floor exercise. The most effective non-surgical treatment for the most common types of urinary incontinence is pelvic floor exercise. Women can improve sexual response and satisfaction by learning to identify and use their pelvic floor muscles effectively during sex.

Ligaments

The position of the uterus is maintained through a pair of broad ligaments attaching to the uterus to either side of the pelvis through which also pass the uterine blood vessels and nerves. The cardinal ligaments extend from the bases of the broad ligaments between the pelvic wall, the cervix, and the vagina. The uterosacral ligaments attach the uterus to the sacrum on either side of the rectum. Ligaments are structural, inelastic connective tissues that connect muscle to bone. The round ligaments are unique in that they have a core of muscle fiber and can stretch. They extend from below the fallopian tubes and insert into the labia. They maintain the uterus in an antiflexed position and are involved in the upward contraction of the uterus during orgasm.

Glands

The Bartholin's glands, also called the vulvovaginal glands, are located at the bottom of the vaginal opening, at either side at 5:00 and 7:00. They secrete a very small amount of lubrication during arousal; this fluid may help protect the vagina from pathogenic microbes. The Skene's glands or paraurethral glands are composed of a multitude of tiny root-like projections that are enmeshed in the erectile tissue that surrounds and protects the urethra. There are approximately 30 multiple ductal apertures that open along the length of the urethra as well as the ducts that open at the urethral orifice, located at either side of the external urethral opening. Both sets of glands have immune functions that maintain a healthy vaginal environment.

Women's Sexual Response

Each of the structures of the female sexual/reproductive system is connected, forming an elegant network. During sexual arousal, the vaginal walls become moist with lubricating fluid from the mucus membranes as well as that secreted by the vestibular glands. Stimulation of the upper part of the vagina, which is sensitive to a stretching

motion, tactile stimulation of the labia minora and clitoris, and tactile stimulation of the breasts may combine to culminate in orgasm (climax).

During orgasm, autonomically mediated rhythmic contractions of the vaginal wall, and impulses that travel via the pudendal nerves to produce rhythmic contractions of the bulbocavernosus and ischiocavernosus muscles, lead to vaginal contractions that can assist the transport of spermatozoa in the fertilization process. However, conception is not dependent upon these contractions as it can occur in the absence of female orgasm. Sexual function and response will be explored in greater depth in the lesson on sexual health and dysfunction later in the course.

We'll talk much more about sexual response, libido, and the anatomy of pleasure in Unit 4, the perimenopause unit, however, please know that diminished sexual drive is not an inherent feature of peri/menopause, and it is actually very common amongst women in their 20s, 30s, and early 40s - all of which we'll discuss later in the course, including common causes and what you can do to support women.

The Breasts

Anatomy of the Breasts

The breasts of an adult woman are tear-shaped mammary glands, developmentally modified sweat glands with the potential for milk production. A layer of subcutaneous adipose tissue surrounds the glands and extends throughout the breast itself, comprising 80 to 85%of the normal breast. The breasts are supported by and attached to the pectoral muscles of the thorax by ligaments. Each breast contains 12 to 25 circularly arranged lobes radiating around the nipple. Each lobe is comprised of numerous lobules containing clusters of alveolar glands that produce milk in a lactating woman.

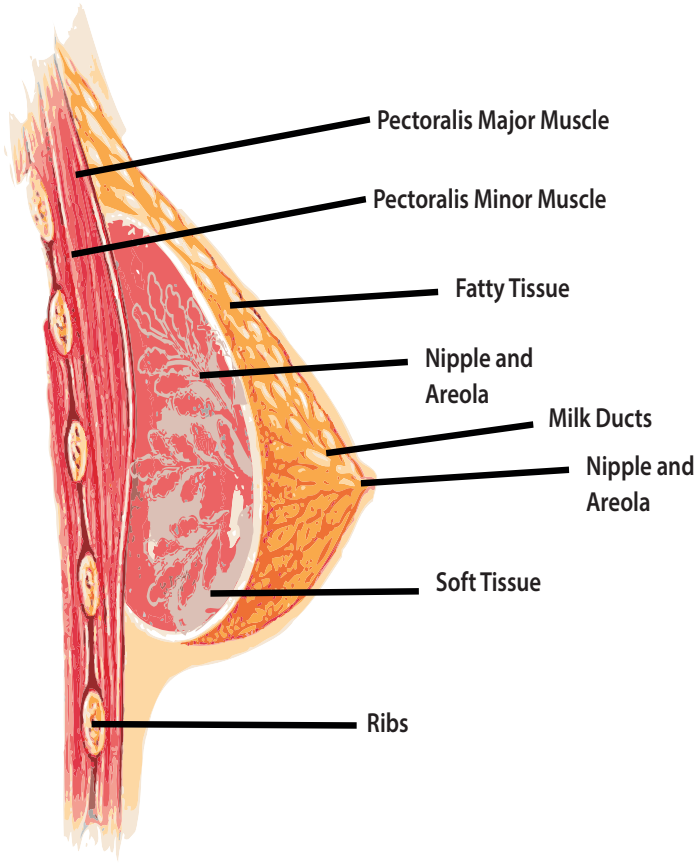
The alveolar glands transport the milk into lactiferous ducts that drain its respective lobe. Each lactiferous duct widens to form an ampulla, and then narrows prior to termination at openings in the nipple. A band of circular smooth muscle surrounds the base of the nipple while longitudinal smooth muscle fibers extend this ring, encircling the lactiferous ducts as they converge toward the nipple. The adipose tissue and the configuration of lobes determine the size and shape of the breast.

The darker-pigmented area around the nipple is called the areola. Its size and color vary from 2 to 6 cm in diameter and from pale pink to deep brown depending on age, parity, and skin pigmentation. The areola contains numerous small oil producing glands called Montgomery's tubercles which serve to lubricate the areola, and which become more pronounced during pregnancy.

The breasts possess arterial blood supply and venous return, as well as a lymphatic drainage system divided into 2 main categories: superficial (including cutaneous) drainage and deep parenchymatous drainage. The lymph system serves to filter infection and protect the body from disease. Additionally, the breast has a nerve supply; the nipple is highly innervated, and for many women, a highly sensitive, erogenous organ.

Women's breast shape, size, and "tone" are as highly variable as are women themselves. Yet because of a narrow range of acceptable breast appearance in western culture, many women are dissatisfied with their breasts. According to the American Society for Plastic Surgery, nearly 250,000 breast augmentation procedures are performed annually. Breast augmentation for teenagers accounted for 3,841 procedures in 2003. The number of breast augmentations increased seven percent from 2002 to 2003. When physicians were asked the

primary reason their patients offered for wanting a breast augmentation, sadly 91% of respondents said it was to improve the way they feel about themselves.



Cyclic Influences on Breast Tissue

The breast tissue is highly influenced by the hormonal changes of the menstrual cycle. The three major hormones affecting the breast are estrogen, progesterone, and prolactin. Estrogens cause proliferation of mammary ducts while progesterone causes growth of lobules and alveoli. Many women experience breast swelling, tenderness, and pain in the 10 days preceding menstruation, largely due to distention of the ducts, hyperemia, and edema of the interstitial tissue of the breasts. These changes regress, along with the symptoms, during menstruation and the postmenstrual phase.

During pregnancy, in response to progesterone, breast size and turgidity increase significantly, accompanied by deepening nipple and areolar pigmentation, nipple enlargement, areolar widening, and an increase in the number and size of Montgomery's tubercles. In response to hormonal signals, the alveoli enlarge and their lining cells, the acini cells, increase in number and size (hyperplasia and hypertrophy). The breast ductal system branches markedly. In late pregnancy, the fatty tissues of the breasts are almost completely replaced by cellular breast parenchyma. Secretion of colostrum may begin during pregnancy. After birth, the fully mature breasts secrete milk in response to prolactin.

During menopause, due to lack of hormonal stimulation, the breast undergoes a process of involution eventually regressing to an almost infantile state.

The Breast Exam

Breast cancer remains a leading cause of death for American women. Overall exposure to circulating and environmental estrogens, lifestyle factors, as well as genetic factors, predispose women to this serious problem.

New guidelines over the past decade have led physicians to steer women away from performing breast self-exams (BSE) because women were finding lumps on their own, going to the doctor for an exam, the doctor was

referring for biopsies that then turned out to be negative, leading women to have unnecessary biopsies. The problem, however, in my clinical experience, is not the fact that women doing breast self-exams were finding lump and having them evaluated – in fact, many times women are the first to find a cancerous lump either through BSE or inadvertently. The problem is that many primary care physicians lack confidence in their breast exam skills, thus pretty much whenever a lump is found, a woman is referred for more invasive investigation rather than simply reassured and followed if necessary.

I still recommend that women perform periodic and regular breast exams as part of their self-care. Women should be familiar with what's going on with their breasts. Additionally, I recommend a routine annual breast exam from a primary care doctor, nurse-midwife, or nurse practitioner confident and skilled in breast examinations. Ideally, the same person should do the exam year after year to be able to feel for and record changes consistently.

When to Perform a Breast Self-Exam

Hormonal changes associated with the menstrual cycle normally increase breast lumpiness and swelling. These changes are particularly noticeable just prior to the menstrual period. Therefore, it is advisable to perform a BSE a few days to a week after menstruation has ended. Women using oral contraceptives are advised to perform their BSE each month on the day they begin a new package of pills.

Unfortunately, too many women do not carry out this simple technique. Selecting one day each month is the easiest reminder – encourage clients to circle this date on their calendars or post a reminder to them. It is easier to remember once it becomes a routine part of a woman's life. Pregnant women should continue to perform BSE throughout the pregnancy. An exam should also be performed by the care provider at the onset of pregnancy, prior to the beginning of dramatic pregnancy-induced breast changes and repeated later in the pregnancy and again postnatally. Pregnancy does not preclude the development of breast cancer. The biggest problem with breast cancer during pregnancy is it going undetected due to lack of regular breast exams, therefore sometimes being allowed to progress further without treatment than had it been detected by early exam.

Breast Changes and Warning Signs

- A new lump or hard knot in the breast or armpit
- A lump or thickening that does not decrease in size after menstruation
- A change in the size, shape or symmetry of the breast
- Thickening or swelling of the breast
- Dimpling, puckering or indention in the breast
- Dimpling, skin irritation or other change in the breast skin or nipple
- Redness or scaliness of the nipple or breast skin
- Nipple discharge, other than breast milk in a lactating woman, especially if the discharge is bloody, clear and sticky, dark or occurs without squeezing your nipple
- Nipple tenderness or pain
- Nipple retraction
- Any breast change that appears to be cause for concern

In 80% of all cases breast lumps and changes do not signal breast cancer. However, women should report all unusual changes to their health care provider and seek a clinical evaluation. Many women put off telling their doctor out of fear - it can be reassuring for patients to know that at least 50% of all women will seek evaluation for a suspicious lump of breast change at some point in their life.

Differentiating Breast Lumps by Palpation

- Normal, non-cancerous lumps such as cysts are typically soft, smooth, and moveable. They tend to fluctuate in size with the menstrual cycle. Also, if a lump, knot, or other "difference" is found in one breast, the women should examine the other breast. If the lump or texture is symmetric between breasts, it is likely to be normal breast tissue.
- Questionable lumps are usually firm, irregular nodules that are fixed in place. They do not typically fluctuate in size with the menstrual cycle.

Warning: A physician should evaluate persistent lumps or abnormalities as soon as possible.

Nipple Discharge

Most suspicious nipple discharges are found to be caused by non-cancerous conditions. In approximately 10% of all cases, nipple discharge is due to cancer. In women less than 30 years of age, less than 10% of nipple discharge is due to cancer.

- Green or yellow discharge is usually normal.
- Bloody, dark, or clear and sticky discharge is considered abnormal.

Warning: A physician should evaluate persistent nipple discharge.

Our Hormones

Hormones are chemicals messengers that provide a means of intercellular communication, serving as chemical regulatory and signaling agents.

I think of our hormones as an orchestra. Hormonal health requires intricate coordination of numerous instruments creating a symphony. The brain, particularly the hypothalamus, is the conductor. In order to conduct a symphony, the conductor has to have the right sheet music, be able to read it, and deliver it correctly. The baton in the conductor's hand is like your pituitary gland - it takes the conductor's messages and communicates these as hormone signals to the key sections of the orchestra: your ovaries, thyroid, and adrenals. Within each of these are the musicians connecting those instructions into actions - your hormones: estrogen, progesterone, testosterone, cortisol, thyroid hormones, etc. If there's a missed beat, the orchestra can get away with it - but if the conductor isn't leading properly, if any instrument isn't tuned, if a musician is off tempo, or someone has the wrong sheet music altogether - it's chaos.

This section provides a brief overview of a complex topic: the primary hormones directly effecting the female reproductive system. It also introduces you to a few important adrenal hormones that affect our energy, sex drive, and mood. Thyroid and adrenal hormones are addressed in greater depth in other lessons, and insulin and insulin resistance are further discussed in required reading. All of these hormones are intimately interconnected and play an important roles in women's reproductive health and dysfunction. While this is a bit of a reductionist review of the physiologic functions of common hormones, this is really an elegant web of biological activity involving every major function of your body – and many that affect your mind and emotions! Let's take it from the top – the brain, that is!

A Perfect Fit

From the point of release in the gland in which they are produced, hormones travel through your bloodstream to the cells they are destined to bind to. Specific types of cells have specific receptors - sort of like "docking ports" - with a shape that matches a specific hormone. You have hormone receptors throughout your body - in your brain, your heart, your bones, and the more obvious places like your breasts, uterus, and ovaries. While all cells are exposed to hormones circulating in the bloodstream, not all cells react. Hormones and receptors have to have a compatible fit and only a hormone's "target" cells, which have receptors for that hormone, will respond to its signal. When the hormone binds to its receptor, it causes a biological response within the cell. These steps include forming proteins and enzymes, to turning specific genes on or off so specific functions happen.

Hormones have to be present in specific amounts to do their jobs properly - as in Goldilocks' case, there can't be too little or too much, the levels have to be juuuuust right.

Brain to Body and Back Again: Hormone Feedback Loops

Hormones work in feedback loops between your brain and the cells they're activating. Positive loops activate hormone production, negative loops hit the brakes on it. These loops work very much like a thermostat in your house. When the temperature reaches the point you've set it to, say 68°, the thermostat slows down heat production to keep your home at that temperature. When your bloodstream has reached a target level of the required hormone, a message gets back to the brain to slow down - or hit pause on - production until the "temperature cools down" again - when hormone levels get low, your brain gets the signal to kick back into higher gear. This is happening every second with each hormone being constantly calibrated.

Communication between the brain, ovaries, and uterus, as well as information being relayed from the thyroid and adrenal glands, and also the impact of insulin on our ovaries, that determine when we begin to menstruate, the length of our menstrual cycles our fertility, the timing of menopause, and much more in between.

Our sex hormone levels are determined by many factors: your body's needs based on age and stage in life (i.e., pregnancy levels and dominant types of estrogen are different than in menopause), the presence and levels of other hormones, particularly cortisol, thyroid hormones, and insulin, and also the presence of nervous system chemicals called neurotransmitters and neuropeptides – considered by some to be another part of the endocrine system, and therefore often referred to as the neuroendocrine system. As a result, your brain also adjusts your hormone levels in response to external stimuli – seeing someone you think is really sexy, hearing a baby cry if

you're a breastfeeding mom, getting really stressed out – and responds physiologically with hormone production – or blocking it. Thus, hormones also serve as the bridge between external stimuli and our inner world and are profoundly affected by our emotions and lives.

Pituitary Hormones

The pituitary gland lies in the brain beneath the hypothalamus. It is divided into two major sections: the anterior and posterior lobes. The anterior pituitary contains different cell types that secret six hormones: adrenocorticotropic hormone (ACTH), growth hormone, thyroid-stimulating hormone (TSH), the gonadotropins follicle-stimulating hormone (FSH) and luteinizing hormone (LH), and prolactin. The posterior pituitary hormones, oxytocin and vasopressin, are secreted by neurons directly into the systemic circulation. We'll focus on the gonadotropins (FSH and LH) and prolactinand learn about oxytocin because it makes us feel great and connected!

Gonadotropins: FSH and LH

Follicle-stimulating hormone (FSH) and luteinizing hormone (LH) are called gonadotropins because they stimulate the gonads – in females, the ovaries. Gonadotropins act only on the ovaries in females (and on the testes in males). They work together to regulate the cyclic secretion of the ovarian hormones. FSH and LH have central roles in the regulation of ovarian hormones, and thus, the ovarian and menstrual cycles. Gonadotropin-releasing hormone (GnRH) is the main regulator of LH and FSH secretion. It is synthesized in and secreted by the hypothalamus.

Follicle-Stimulating Hormone

FSH stimulates the maturation of ovarian follicles. FSH and LH together are responsible for final follicular maturation.

Luteinizing Hormone

Ovulation is induced by a large burst of LH secretion known as the preovulatory LH surge. LH stimulates the secretion of estrogen and progesterone from the corpus luteum. LH is required for continued development and function of the corpus luteum, hence the name luteinizing hormone.

Prolactin

Prolactin plays a significant role in reproduction, pregnancy, and lactation. It is secreted by the anterior pituitary and secreted by various immune cells, the brain, and the decidua of the pregnant uterus. Prolactin has been associated with several hundred biological activities, but especially for its actions on the mammary gland, stimulating mammary gland development and milk production.

Prolactin also seems to stimulate maternal behaviors, for example, nest building and retrieval of scattered young, in some animal species. Exercise, and surgical and psychological stresses cause prolactin levels to become

elevated. Levels also rise during sleep. Secretion is increased during pregnancy, reaching a peak at the time of parturition. Prolactin also appears to have indirect immune activity, playing a modulatory role in several aspects of immune response.

Oxytocin

Oxytocin has been called the "love hormone," a well-deserved reputation due to its role in social connection, mother-child bonding, breastfeeding, and possibly even orgasm, particularly in women. It enhances feelings of contentment, calm, and reduced anxiety and fear.

This powerful hormone is released in large amounts during labor, simulated by cervical dilatation, facilitating birth, bonding, and, after stimulation of the nipples, breastfeeding. Birth and breastfeeding create a positive feedback loop, enhancing activities such as uterine contractions, milk let-down, and maternal attachment. It may also play a role in romantic attraction.

Oxytocin appears to also play a role in cognitive function, enhancing memory and interestingly not only recognition of human faces, but happy human faces, suggesting a supporting role in positive social behaviors such as empathy, love, and connection.

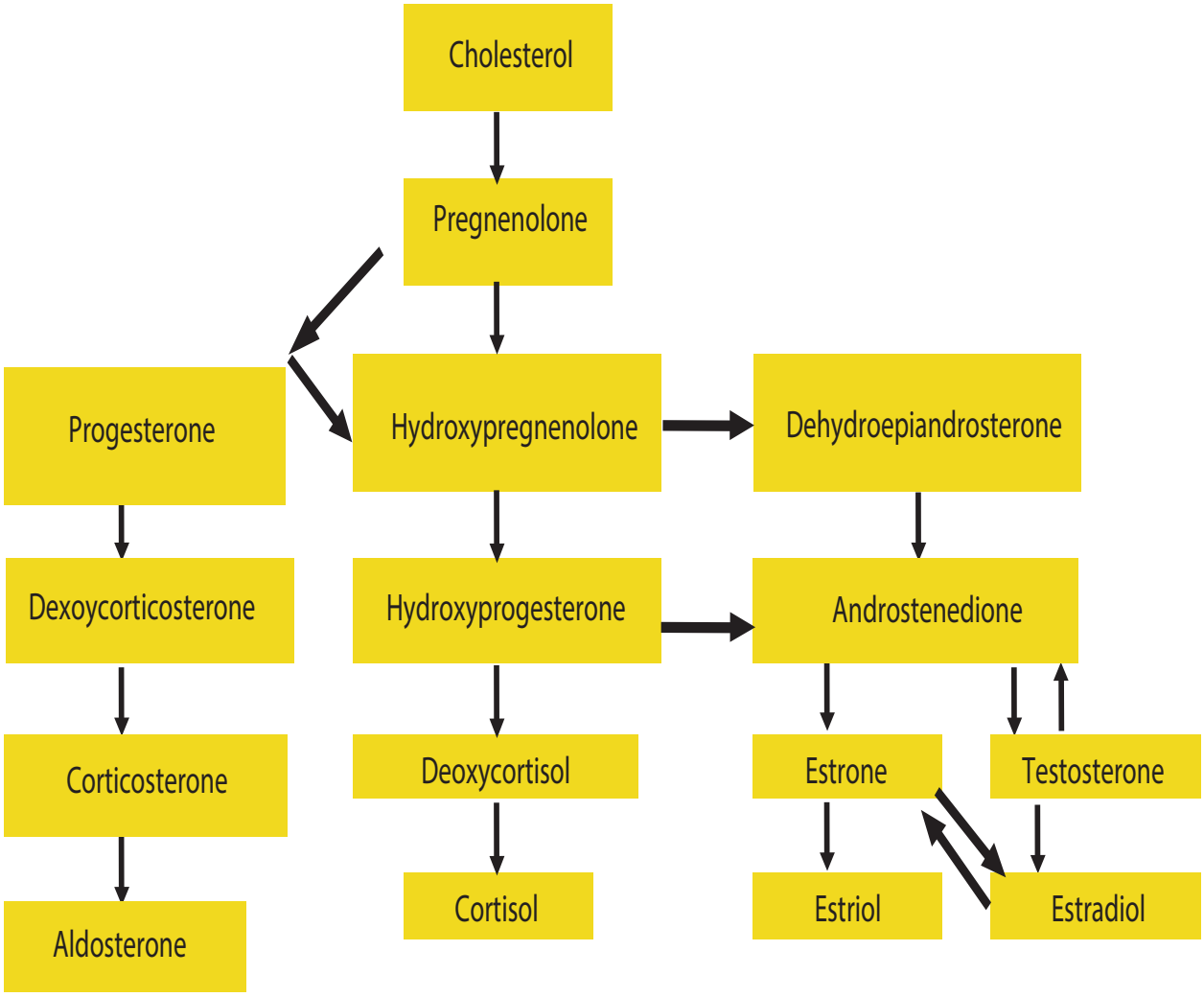
Hypothalamic Hormones

The hypothalamic hormones regulate the secretion of the anterior pituitary hormones. Control over secretion of FSH and LH is exerted by GnRH. GnRH stimulates both their secretion. A regulatory loop leads to pulsatile secretion of LH and FSH which varies in frequency depending upon the stage of the ovarian/menstrual cycle. The pulse frequency increases late in the follicular phase of the cycle, culminating in the LH surge, and decreases in the secretory phase due to the increased presence of progesterone. Close to menstruation, when both estrogen and progesterone are close to baseline, the cycle begins anew. As women age and ovarian function declines, the ovaries become less responsive to gonadotropins so secretion of FSH and LH is increased.

The Sex Steroids

The sex steroid hormones are estrogens (estriol, estrone, and estradiol), progesterone, and testosterone. They are divided into groups based on their number of carbon atoms. Cholesterol is the basic unit of steroid metabolism. The ovaries are capable of producing all three classes of sex steroids. Steroid formation also occurs in other organs, for example, the adrenal glands.

Steroid Hormone Production Cascade



Pregnenolone

Pregnenolone is the building-block for all other steroid hormones. It is converted directly into DHEA and/or progesterone. DHEA then converts to testosterone and estrogens. Additionally, progesterone converts to estrogens, cortisol, and aldosterone.

It is this succession of conversions that makes human life possible. Without pregnenolone, there can be no human steroid hormone production. Made from cholesterol, pregnenolone is a natural steroid hormone produced primarily in the adrenal glands, but in smaller amounts by many other organs and tissues of the human body, including the liver, brain, skin, gonads, and even the retina of the eye. Like many health-promoting hormones, levels of pregnenolone drop with age.

Progesterone

Cholesterol is the building block for progesterone production. Progesterone is a precursor to estrogen and testosterone. Progesterone is considered a secretory hormone. The principal target organs of progesterone are the uterus, the breasts, and the brain, all of which contain progesterone receptors. Progesterone is responsible for the progestational changes in the endometrium and the cyclic changes in the cervix and vagina, influencing the glands of the uterus so that they become capable of secreting glucose and stabilizing the blood vessels of the endometrium so that they are capable of supporting pregnancy. Progesterone has antiestrogenic effects on the myometrial cells, decreasing their excitability and their sensitivity to oxytocin.

Progesterone synthesis in non-pregnant women is the result of a combination of secretion from the ovaries and adrenals. The feedback effects of progesterone are controlled at both the hypothalamic and the pituitary level. After ovulation, the corpus luteum is responsible for a significant amount of progesterone synthesis.

During pregnancy, synthesis also occurs in the placenta. Large doses of progesterone inhibit LH secretion and potentiate the inhibitory effects of estrogens, preventing ovulation. Progesterone stimulates the development of lobules and alveoli of the breast and supports the secretory function of the breast during lactation.

There are two forms of progesterone receptors, progesterone receptor A (PRA) and progesterone receptor B (PRB). PRA is capable of inhibiting some of the actions of PRB, however, the physiologic significance of the existence of the two forms is undetermined.

Progesterone is thermogenic, responsible for the rise in basal body temperature at the time of ovulation.

Progesterone displays important activity in the regulation of blood sugar, inflammation, and stress mediators, acts as a diuretic, and stimulates respiration. It also has a mood elevating effect.

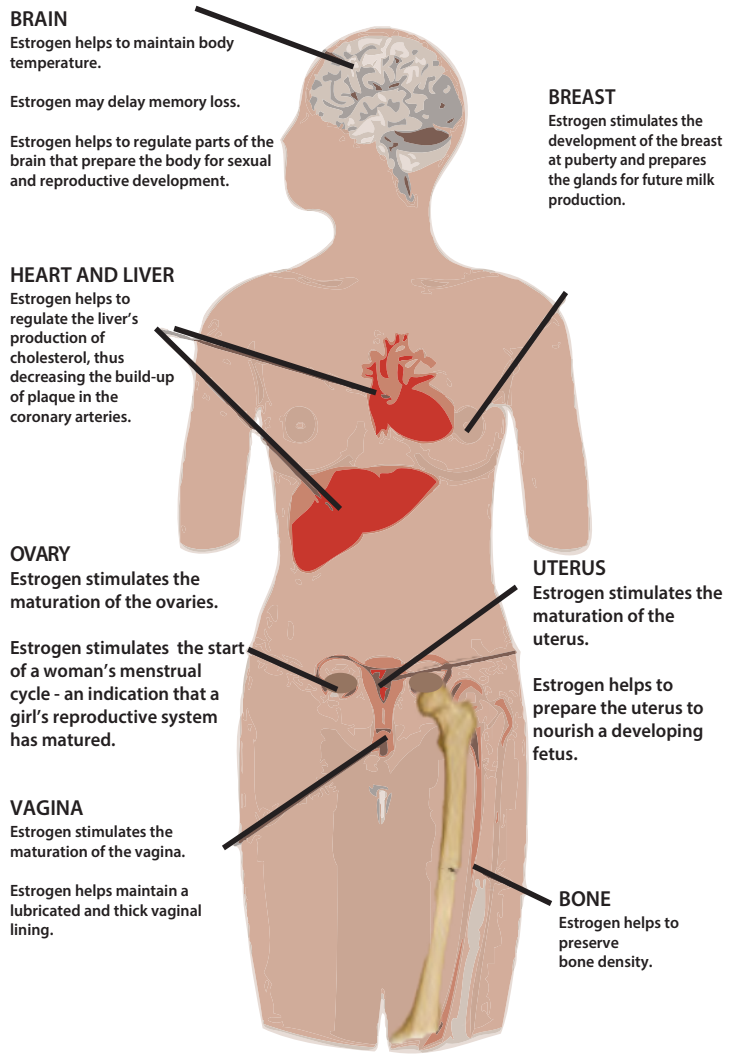
Testosterone

Testosterone is produced by the ovaries and adrenal glands. It enhances libido and sexual response, builds muscle and bone, strengthens ligaments, enhances cognitive function, and is associated with assertive behavior and a sense of well-being. Testosterone influences both stamina and restful sleep, and protects against cardiovascular disease. The adrenal gland secretes androstenedione diurnally in a circadian rhythm similar to that of cortisol. A peak also occurs during the luteal phase, due to secretion by the corpus luteum.

Estrogens

The term estrogen is typically used to collectively describe the sum of all of the circulating estrogens of which there are three primary types: 17β-estradiol, estrone, and estriol. Almost all estrogen comes from the ovary. Estradiol is the strongest of the three estrogens, and estriol the least potent. Androgens are the precursors of estrogens.

Peripheral conversion occurs primarily in adipose tissue, as well as in muscle, hair follicles, the skin, brain, bone, and bone marrow. Two percent of the circulating estradiol is free. The remainder is bound (conjugated) to protein. Estrogens are oxidized or converted to glucuronide and sulfate conjugates in the liver. Appreciable



amounts are secreted in the bile and reabsorbed in the bloodstream (enterohepatic circulation). Conjugated estrogens are also excreted into the intestine where they may either be excreted in the feces, or in the presence of beta-glucoronidase, an enzyme produced by intestinal bacteria, may be reconverted to an active estrogen form reabsorbed into the bloodstream.

Estrogen levels vary throughout the ovarian/menstrual cycle. Two peaks of secretion occur: one prior to ovulation and one during the mid-luteal phase. Approximately a week prior to ovulation estrogen levels begin to increase reaching a maximum level one day prior to the LH peak, after which levels decline dramatically and rapidly. About 5 to 7 days after ovulation, estradiol levels again peak, returning to baseline just before menstruation.

After menopause, estrogen secretion declines to low levels, and aromatization primarily occurs from androgens in adipose tissue and muscle. Very thin women may experience more pronounced symptoms during menopause and may be at greater risk for osteoporosis due to this important lack of an androgen source.

Estrogens are proliferative hormones. They are often referred to as "feminizing hormones," because the physical development that occurs in puberty, and again during pregnancy – changes in the breasts, uterus, and the vagina – are largely due to the presence of estrogen. Additionally, women's body shape and fat distribution is due to estrogen. Estrogens stimulate the growth of breast ducts and are responsible for the pigmentation of the areolas, which becomes more prominent during pregnancy.

Estrogens facilitate the growth of the ovarian follicles and increase the motility of the fallopian tubes. They are largely responsible for the cyclic changes in the endometrium, cervix, and vagina, increase uterine blood flow, and affect the smooth muscle of the uterus, increasing myometrial activity and excitability. Estrogens are responsible, in part along with aldosterone, for other cyclic changes of the menstrual cycle, for example, the water and salt retention that occurs before menstruation.

Estrogen also has numerous important effects outside of the reproductive system. It counterbalances the effects of testosterone on the sebaceous glands, which would otherwise lead to acne. It plays an important role in lowering plasma cholesterol and has been shown to prevent expression of factors important in the etiology of atherosclerosis. Estrogen levels decline dramatically with menopause, leading to hot flashes and other symptoms of menopause, and increasing the risk of development of osteoporosis and possibly heart disease.

Two estrogen receptors have been identified: estrogen receptor α (ER α) and estrogen receptor β (ER β). ER α expression is primarily found in the uterus, pituitary, kidney, and adrenal gland. ER β expression is high in the ovary, lung, bladder, brain, and bone. It has been suggested that the regulation of ovarian function by the pituitary-ovarian axis is primarily ER α-mediated, whereas estrogens secreted into the ovarian follicles act primarily via ER βs.

Other Ovarian Hormones

Relaxin

Relaxin is secreted by the corpus luteum. Its role in nonpregnant women is unknown. During pregnancy it inhibits uterine contractions, assisting in maintaining the pregnancy. Its primary function is the facilitation of childbirth through relaxation of the symphysis pubis and pelvic joints in late pregnancy, and softening and dilating of the cervix.

Inhibins and Activins

Inhibin and activin are ovarian hormones that respectively inhibit and stimulate pituitary FSH secretion.

Ovarian and Adrenal Hormones

Dehydroepiandrosterone (DHEA)

DHEA, the most abundant circulating hormone, provides protection against the effects of stress and inflammation. It is made primarily by the ovaries and adrenal gland, with smaller amounts produced in the skin and brain. DHEA can be converted into estrogen and testosterone in peripheral fat, muscles, bone and in the liver.

DHEA:

- Increases libido and sexual arousal
- Improves motivation
- Fosters well-being, decreases pain, and enhances immune system function
- Enhances sleep and memory
- Maintains cholesterol levels

Cortisol

Cortisol is the primary stress hormone and is made by the adrenal glands. It regulates the blood sugar, immune response, memory, and helps the body adapt to stress by increasing heart rate, respiration, and blood pressure. Without cortisol one cannot sustain life – in fact, when people have been taking steroird medications for a long time, they must always maintain a small supplemental dose as the medication tells the adrenal grland to stop producing cortisol and without the supplement, the person would die of hypotension, immune failure, and a host of organ system failures.

Cortisol levels follow a circadian rhythm, with a peak early in the morning which gives us the enegy to get our day going, and a gradual waning throughout the day until it reaches its nadir late in the evening, allowing us to wind down for bed, rest, and repair. If this rhythm is disordered due to stress as described in Lesson 3, women experience adrenal fatigue, or what is commonly called "burn out" or a feeling of being "tired but wired." Adaptogens and stress reduction techniques are used to restore health.

Sex Hormone Binding Globulin (SHBG)

Estrogens and androgens are either bound (conjugated) or unbound. When they are conjugated they are bound to either SHBG or to serum albumin. The unbound hormones are biologically active. Thus when hormone levels are checked, both free and total levels are often checked. SHGB synthesis occurs in the liver and is increased by estrogens and thyroid hormones, and decreased by the presence of testosterone.

Bringing it All Home

Endocrinology is an incredibly complex and emerging field of science and medicine. What do you need to know? Develop a geneal sense of the roles – the "flavor," if you will, of the primary sex hormones (estrogen, testosterone, and progesterone) as well as cortisol, the thyroid hormones, and insulin. But the important take home message from this lesson is that the endocrine system is a tightly interwoven network, much like in a spider web, in that if you touch one strand, the whole web moves. While we can think of our hormonal systems discretely, i.e., sex hormones, adrenal hormones, thyroid hormones, in reality, they are an interconnected, constantly communicating system of rapidly and fluidly adjusting chemical messengers, responding to and dictating our outer and inner worlds.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 6

Traditions and Principles in Herbal Medicine

Learning Objectives

By the end of this lesson you will be able to:

1. Recognize the important historical and living traditions that shape Western herbal medicine, and also thrive independently of Western herbal medicine.
2. Discuss the influences and theories that have shaped contemporary Western herbal medicine
3. Distinguish between heroic, scientific, and Wise Woman styles of herbal medicine
4. Describe the various broad categories of contemporary herbal practitioners
5. Summarize the 12 Core Philosophical Principles of Western Herbal Medicine

Unit 1 Lesson 6 Traditions and Principles in Herbal Medicine

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Community Herbalist

Curandera

Eclectics

Heroic

Materia medica

Physiomedicalists

Wise Woman Tradition

What is Herbal Medicine?

Herbal medicine is the therapeutic use of plants. Being an herbalist, however, may include much more than this, for example, growing and harvesting herbs, making herbal medicines, teaching and writing about herbs, research, etc. Thus one may be an herbalist without specifically practicing herbal medicine. I would venture to say that those dispensing pills and capsules of herbs without a deeper knowledge of herbal medicine, as is common in functional medicine, and even sometimes in allopathic medicine, for example, are neither practicing herbal medicine, nor are they herbalists.

The heart of herbal medicine is the use of plants for restoring health and balance, allowing the body to do its own work of relieving illness. Herbs are often used to "nudge" the body into its own therapeutic response, with the underlying belief that the body is intrinsically self-healing and that herbs can be used to support these underlying mechanisms. Sometimes this is simply a matter of relaxing the mind and soothing the spirit, thereby easing stress that is impeding healing. Sometimes herbal medicine involves the use of herbs to directly attack an illness, for example, the use of herbs as antivirals or antifungals. And it may involve the targeted use of herbs based on their actions and pharmacology to influence innate responses, like immunity, or hormone production, to correct an imbalance to treat a specific condition.

Herbal medicine is practiced along a wide continuum of approaches, from highly intuitive, earth-based, and folk practices to highly scientific and even more aggressively interventive. Nowhere on the continuum is any approach mutually exclusive of or superior to another. With the exception of the practice of modern "pharmacophytotherapy," one can even identify core principles that unite the various forms of practice of herbal medicine.

Let's dive into various ways that herbal medicine is approached, learned, shared, preserved, and practiced.

Western Herbal Medicine

Western herbal medicine describes the type of herbal medicine that is most widely practiced professionally today in the United States, Canada, Western Europe, New Zealand, and Australia.

Unit 1 Lesson 6 Traditions and Principles in Herbal Medicine

Traditional Chinese Medicine (TCM), Ayurveda, and other systems of herbal medicine (for example, those one might find in a remote Amazonian village) evolved as culturally distinct systems with largely unbroken traditions and practices spanning for thousands of years (in China, that changed with the Cultural Revolution).

Western is different than this in that it has been evolving for centuries, with many influences shaping what we today call Western herbalism. Western herbal medicine has its deepest roots in Greek tradition, and these were born in North African and the Arab world. It was heavily influenced by both folk medicine, especially the medicine of herbwyfs and midwyfs, as well as information exchange – whether friendly or by war/conquest. The history of the extermination of women, thought to be in the millions, with some towns losing almost or all of their female population to the 'witch hunts,' is a very dark time for women healers, the most hunted and exterminated group of those ages, and presaged the removal of women from the healing professions, heralded in the barber surgeons of Europe and early "America," which became the foundation of the American Medical Association and ongoing systemic discrediting and exclusion of women and Indigenous healers in the United States.

European herbalism, as now practiced in the US and in the countries I've mentioned, was also heavily influenced by the indigenous wisdom of peoples whose nations were occupied by Europeans. Many of the herbs we use were learned from the traditions of those people who were in what became known as the West Indies, South and Central America, and the occupied land we call the United States. Not only did the people of these lands inform and infuse current Western herbal practices, they deeply informed current Western medicine. Perhaps the best examples are quinine which comes from the Peruvian Cinchona bark, learned of by the Jesuits who were simultaneously trying to convert indigenous Peruvians, which was one of the first and most important drugs developed from a plant, used by settlers to treat the ague or malaria (mal = bad, aria = air) that was prevalent, and eventually as one of the most important drugs to be used in World War I for this disease.

From the knowledge of local plants and their uses, to theoretical practices, like warming the body, saunas, and fasting, for example, Western herbalists have learned from (or stolen or appropriated) herbal wisdom and plant knowledge from people around the world as lands were invaded and colonized, including from their neighbors and those they enslaved, and from women healers in each of the places. Additionally, there were also 'cooperative' sharing relationships, in which enslaved peoples and neighboring First Nations people traded information, and it is reported, including in books written about herbal medicine during slavery times, that it was common for the wife of a slaver and an enslaved woman to trade information for the benefit of either, though of course one must keep in mind that this wasn't a chosen relationship by the enslaved woman, and any benefit was to the slavers for the protection of their 'property.'

The herbal medicine I practice - and teach - is a blend of the Western herbal medicine traditions I've learned over many decades of study - from traditional women's herbals to pharmacopoeias to the Eclectics and Physiomedicalists, and classical European herbalism. I've also been deeply influenced by traditional energetic systems from Traditional Chinese Medicine and Ayurveda, and inspired and informed by connections I've personally had to indigenous healers and healing practices over my many years of travel and study. I respectfully keep the latter to myself, rather than capitalize on them, out of respect to cultures which are not my own, but when respectful and appropriate, share stories. This course, while emphasizing the teaching of Western herbal medicine principles, fully honors complex history of Western herbal medicine and women's healing, and does not venerate western science over traditional indigenous wisdom. It draws on both streams, based on an understanding of how **the truest form of evidence-based medicine includes community knowledge and expert**

consensus, based on the work of David Sackett, the 'grandfather' of evidence-based medicine.

Traditions in Herbal Medicine

Many influences have shaped what has evolved into modern herbal medicine. Each of these influences had their own set of principles, which have been retained in varying degrees in the practices of contemporary herbalists. The following is an abbreviated review of herbal traditions from which modern herbalism arises, and the types of herbal medicine currently being practiced. Understanding this history, foundation, and context will help you to understand what people mean when they say they are a "community herbalist," "wise woman herbalist," "clinical herbalist," or other related title, and how this might shape their (and your!) approach to botanical medicines, clients, and health and healing. Following this is an introduction to the energetic principles of various herbal traditions, and their role in western herbal medicine practice.

Then...

Indigenous Herbalism

There are practically as many indigenous healing traditions as there are tribes and communities that use herbal medicine; there are numerous shared similarities that one might find around the world, even, for example, the belief that heat is life and healing and that cold exposure is dangerous - we find this belief around the postpartum from cultures as disparate as TCM practice in remote China to Rastafarians in Jamaica. Similarly, we find herbs that grow around the world, and while living thousands of miles apart and having no contact at all, women have come to the same or similar uses for those plants - red raspberry leaf for women in pregnancy being one example, ginger root to warm the digestion being another.

Indigenous herbalism includes the typical use of herbs as medicines in the forms of remedies for common conditions and symptoms (i.e., a tea for stomach ache or to ease menstrual pain or labor), but also often goes beyond the use of herbs we're most familiar with into the realm of spiritual healing, with herbs used as baths, smudges and incense, and to heal the spirit, not just the body. Sometimes it is one type of practitioner who offers both types of healing; sometimes these roles were separated into the 'village herbalist' and a spiritual healer. Indigenous healers are usually deeply respected members of the community, often revered. They have even been feared for the power of their knowledge of herbs - which can sometimes also be poisons.

Sangoma, curandera, and shaman are just three of the numerous names for traditional healers - the doctors of their communities, while midwives are healers who knew the herbal medicines, specifically for women's needs. While each tradition is amazingly distinctive, there are threads that are commonly shared across traditional healing traditions globally:

- A belief in the power of nature to heal (and harm)
- A deep respect for and honoring of the land

- A deep respect for and honoring of the ancestors
- A belief in the spirit of, not just the material aspects of plants
- Ceremony and gratitude around the harvesting and use of plants, including in the medicine-making process
- The use of herbs internally, as well as in the form of foods, baths, steams, smokes and, other forms
- A belief in disease coming not just from physical causes, but from mental, emotional, and spiritual causes, including external spiritual influences (i.e., disrespecting the land, ancestors, or a conflict with another member of one's community)

Because traditional herbalism is so often romanticized by white herbalists, or appropriated by the wellness, modern psychedelic, or New Age movements (for example, the use of Ayahuasca in ceremonies), and because the traditions and practices are extensive and I couldn't even scratch the surface here, I am going to instead recommend that you make it part of your herbal training to learn about indigenous, traditional herbal practice, particularly those of Black and Brown Indigenous Peoples of Color from people, from those who can speak from personal historical origins or lived experiences.

The best way I can do this is to share resources - particularly books, of which I've read dozens over the past decades, and to encourage you to watch documentaries, and respectfully learn from indigenous healers who are willing to share. There are numerous links on the corresponding lesson page on the course website. I also hope that those of you who have herbal origin stories, from any background, will share those with the Herbal Medicine for Women community on Facebook as short videos that you might want to include in the program (email me if you do!), and during our live chats.

Just a few of the active traditional healing practices in the US currently:

- Curandera, a Mexican and Mexican American healer
- Lakota medicine: healing traditions of the Lakota First Nations
- Yoruba: a West African religious and healing tradition
- Santeria: an Afro-Cuban healer, Santeria incorporates Yoruba healing tradition
- Candomblé: the Brazilian cousin of Santeria

Traditional European Herbalism

European herbalism essentially had two main branches: folk herbalism and medical herbalism. Mostly peasants - typically, village women and midwives practiced folk herbalism. Physicians and apothecaries, who were part of the emerging professions of medicine and pharmacy, practiced medical herbalism. In fact, the word drug is derived from the Dutch "droog," meaning "to dry."

Prior to the advent of isolated pharmaceuticals, medical practice was largely based on the knowledge of both folk herbalism and Greek and Middle Eastern herbal knowledge, which included extensive catalogs of botanical

medical knowledge in vast materia medica, and teaching centers in places such as Salerno, Italy. The materia medica and other written tomes on herbal practices were themselves based on the traditional knowledge of plants both gleaned locally and upon the travels of many of the herbalists and physicians who recorded these works.

Monks and nuns living in monasteries and cloisters were also known to collect and maintain bodies of herbal medicine knowledge, Hildegard of Bingen being a classic example of a healer. "Monk's pepper," a common name for Vitex agnus castus is a vestige of the use of this herb in monasteries, ostensibly to confer decreased libido on monks, but also to flavor food with its peppery taste. The word "officinalis," a common species binomial, comes from the use of the Latin "officina" used to describe the apothecary storerooms in monasteries.

European folk herbalism was likely a blend of common knowledge, observation and experience over time, and superstition. The story of Dr. William Withering receiving a secret family recipe for dropsy from an English country woman (purportedly named Mrs. Hutton) famed for her cure. Revealing the use of the digitalis-containing foxglove is still taught in medical and pharmacology curriculum. Folk treatments probably often worked, sometimes they didn't, but in general the treatments were gentle and effective.

On the other hand, the medical profession, arising from the barber-surgeon tradition, was known for its invasive therapies, including purging and bleeding, surgeries and amputations, and extracts of highly toxic substances including mercury, arsenic, and opium, all of which led to the demise of the client as often as recovery. It was these traditions that came to the US with the earliest settlers, and which formed the basis of folk and medical practice well into the late nineteenth century.

Folk Herbalism in the US

European folk herbalism was brought to the US literally sewn into the fabrics of those who made the first Atlantic voyages. Seeds from European gardens were planted in new soil and provided some of the needs of those new to this land. Eventually gardens, kitchen rafters hung with dried herbs, and medicinal preparations came to include local remedies taught to the settlers by their indigenous neighbors in the best of circumstances, or learned from enslaved people, who brought their medicines also tucked into hems or pouches if at all possible before being captured, or remedies enslaved people learned from free or enslaved First Nations people, along with old familiars that were found growing in their new land.

Thus the Western materia medica grew to include many new genuses and new species of those plants already known. Eventually the old familiar plantain from Europe, known by indigenous people as "white man's foot" as it sprang up everywhere whites settled, as well as echinacea, blue and black cohosh, and numerous other plants native to "America," came to form the basis of the modern herbalists' pharmacy.

Folk herbal tradition in the early history of white settlement in the US was strong - it was all most people had to rely on, and while herbs didn't prevent massive deaths from major scourges, either to the whites or to the native people, it did take care of most daily health complaints and crises relatively effectively. Midwives and local herbalists continued to provide services when skills were required beyond those possessed by most "housewyfs." As in Europe, doctors in the emerging medical profession, called "regulars," continued to combine the use of herbs with increasingly disastrous and deadly use of invasive therapies. In addition, regulars charged high fees

for their treatments.

"Heroic" Herbalism

Samuel Thompson (or Thomson) (1769-1843), a poorly educated New Hampshire farmer, was deeply dissatisfied with what he saw as expensive, ineffective, and hazardous treatments by regular doctors. Through his studies with a local herb woman he learned a great deal about "Native American" herbal traditions, including the use of sweating as a therapeutic treatment, as well as about New England folk herbal remedies. While substantially less toxic than the orthodox medicines of his day, the methods he developed were quite heroic, relying on the extensive use of diaphoretics and purgatives to eliminate disease (interestingly, new studies are appearing on the efficacy of treating various viral infections, and cancer, by inducing high temperatures in the client). Thomson's primary theory was "heat is life, cold is death."

Thomson was also a man on a mission - driven and rigidly anti-intellectual, anti-medical, and anti-professional. He purchased a patent to become a botanic physician and began to teach his methods. His materia medica consisted primarily of stimulating diaphoretics, (*Capsicum*, *Achillea millefolium*, *Zanthoxylum americana*, *Zingiber officinalis*), astringents (*Myrica cerifera*, *Quercus* spp., *Commiphora molmol*), emetics (*Lobelia inflata, Eupatorium perfoliatum*), sedatives (*Scutellaria lateriflora, Cypripedium pubescens, Symplocarpus foetidus*) and bitters (*Chelone glabra, Populus tremuloides, Berberis vulgaris*). His treatments, while not necessarily pleasant, were considered successful, and hundreds of individuals in the US were trained in his techniques, now referred to as Thomsonian herbalism, which still influence herbal practice today.

The heroic approach is very much alive in the alternative health and new age movements where illness is seen as the effects of unclean living, imbalanced and negative thoughts and beliefs, and a host of 'blaming the victim' types of concepts and contracts. In today's heroic tradition, parasite cleanses and colonics are popular, but unfortunately, compared to the days of Samuel Thomson's robust patients, the results are often not only physically depleting, but lead to a constant battle with self-doubt, guilt, and restrictive living (fanatical and strict diets, cleansing programs, heavy exercise, etc.).

Thus while the effects may sometimes improve certain physical symptoms, a state of psychological and emotional unhappiness and stress persists, rather than an enjoyment and embracing of life. And too often, even the physical effects are not promising, and range from children and adults on restricted diets facing severe nutritional deficiencies to serious and advanced illnesses being treated with cleanses instead of appropriate health and medical care.

The Physiomedicalists and the Eclectics

Thomson's anti-academic attitudes were not appreciated by everyone, yet there were physicians who like Thomson, detested the practices of the "regulars." This led to the development of a sect of physician-herbalists led by Alva Curtis (1797-1881) which became known as the Physio-Medicalists. They founded their own schools to teach the use of non-toxic botanicals and established a complex theoretical foundation for practice, which included an energetic pattern of diagnosis based on the concepts of aesthenic (hypoactive, deficient) or sthenic (hyperactive, excess) constitutional types, with herbs prescribed according to pulse, tongue and other physical diagnostic methods. At the pinnacle of their popularity in the 1880s in the US they numbered approximately

1000 practitioners. Yet their popularity in the US never rivaled their success in England, where Physiomedicalism thrived and was still taught at the British School of Phytotherapy until as recently as the 1980s.

Around the same time (1820s) arose another sect of botanic physicians who were to eventually become known as the Eclectic physicians. They were the most successful, and most prolific sect of botanic physicians and are credited with popularizing many herbs which are now well-known and still widely used by botanical practitioners including echinacea (*E. angustifolia*), goldenseal (*Hydrastis canadensis*), black cohosh root then referred to as Macrotys (*Actaea racemosa* syn. *Cimicifuga racemosa*), cactus (*Selenicereus grandiflorus*), wild indigo (Baptisia), blue cohosh root (Caulophyllum thalictroides), cascara sagrada (*Rhamus purshiana*) and kava (*Piper methysticum*). They also incorporated practices from other medical traditions, including allopathic medicine, homeopathy, and hydrotherapy. Their popularity and presence began to decline with the advent of the Civil War, due to what appears to have been considered their craze in using concentrated resinoid preparations, however their standing was restored by a physician named JM Scudder. Scudder popularized the idea of using "specific medications," smaller doses of an herbal extract aimed at treating an individual patient's specific condition. This trend reinforced the concept of giving remedies specific to the patient, rather than generically for the disease.

Pulse, tongue, and other forms of physical assessment were essential to determining the proper remedy for the patient. Specific medication also recognized certain basic principles, some of which have strongly influenced the practice of modern herbal medicine, for example, that the life of the patient must be considered in treating illness, there are forces in plants that act upon the body, allowing it to resist disease and restore normal function and structure, and that the nature of the illness in the specific individual give information as to the specific indication for the remedy.

Though many herbal treatments used by the Eclectics would be anachronistic today, the Eclectics left numerous texts that continue to serve as reference material for contemporary herbalists, and many of their indications inform modern herbal prescribing. Several herbalists have gone through the trouble of scanning Eclectic texts, periodicals, and other documents and have made these available for downloading at no charge on their respective websites.

Now...

Schulz et al. in Rational Phytotherapy states: "Prior to 1800, when medicine entered the scientific age, traditional herbal medicine was the unquestioned foundation for all standard textbooks on pharmacology. It was not until the advent of modern chemistry and the development of modern pharmacotherapy and 'medical science' that phytotherapy was relegated to the status of an alternative modality.

"From the historical perspective, however, it is incorrect to classify phytotherapy as a special or alternative branch of medicine. When we consider that the history of classical herbal medicine spans more than 2500 years from antiquity to modern times, it is reasonable to assume that many of the medicinal herbs used during that period not only have specific actions but are also free of hazardous side effects. Otherwise they would not have been passed down so faithfully through so many epochs and cultures."

It is only since the mid-1990s that herbal medicine has begun to regain a serious foothold in the world of conventional medicine. Between the 1930s (or so) and the late 1980s, herbal medicine primarily survived in the

US on society's fringes, in its ghettos, and on farms, maintained by grandmothers and grandfathers who retained traditions from their native lands in their own communities in the US (as did my Hungarian great-grandmother in New York's Lower East Side who practiced cupping and was known in her community for her topical burn treatments and herbal remedies), indigenous peoples, consultants of traditional forms of medicine (i.e., TCM), and hippies and back-to-the-landers.

In the past decade, with an increasing awareness of the benefits - and perceived potential dangers - of herbs, new conversations have arisen amongst both medical professionals, naturopathic physicians, and even some herbalists over who should practice herbal medicine, and how. This course does not propose any answers to the "who should" part of the question. I personally believe that there is room for many types of herbalists and many forms of herbal education, and that herbal medicine is inherently a people's medicine. However, I also recognize the importance of the individual's right to safe and responsible information from well-educated herbal educators and practitioners.

Indigenous Herbalism

While many people think of indigenous herbalism as something that existed long ago, this is far from the truth. It is alive and well - all around the planet. It's estimated that globally, 70% of all health care is provided by traditional medicine. The World Health Organization (WHO) Traditional Medicine Fact Sheet states "countries in Africa, Asia and Latin America use traditional medicine to help meet some of their primary health care needs. In Africa, up to 80% of the population still relies on traditional medicine for primary health care." One of the most commonly used forms of traditional medicine worldwide is botanical medicine.

In the US, while the numbers of First Nations people in the US are small compared to the expansive nations that once lived, there are those who have preserved and still practice traditional herbalism. The same is true for Mexican herbalism. There's not only a long historical record of the practices of Black herbalists and healers, there are both older folks and next generations preserving information, reinvigorating traditional practices, and practicing and passing them on. Black and Latinx folk healing in the US is much like a lot of culture in the US, a blend of the old and the new, what was original and what has merged with what is learned from each other. I share a variety of books and resources to help you learn more, on the course website page for this lesson.

First Nations Herbalism: Its Own Healing System

First Nations healing, or "Native American (NA)" traditional healing is a distinct form of medicine and healing recognized by the National Institutes of Health/National Center for Complementary and Alternative Medicine (NCCAM). It is considered a whole medical system encompassing a range of therapies used by indigenous healers to promote health and wellbeing, and to treat acute and chronic medical problems.

While there unique tribal practices amongst different nations, shared beliefs and therapies include a bio-psycho-socio-spiritual approach. Stories and legends are used as teaching tools about positive behaviors and the consequences of being out of harmony with nature. Herbs, physical therapies, ceremonies, and prayer are used in various combinations to prevent and treat illness.

Unit 1 Lesson 6 Traditions and Principles in Herbal Medicine

The Wise Woman Tradition

Women have always been healers. They were the unlicensed doctors and anatomists. They were abortionists, nurses and counselorsThey were the pharmacists, cultivating healing herbs, and exchanging the secrets of their uses. They were midwives, traveling from home to home and village to village. For centuries women were doctors without degrees, barred from books and lectures, learning from each other, and passing on experience from neighbor to neighbor and mother to daughter. They were called "wise women" by the people, witches or charlatans by the authorities. Medicine is part of our heritage as women, our history, our birthright.

Barbara Ehrenreich, Witches, Midwives and Nurses: A History of Women Healers

By manipulating our fear of suffering and death, big pharmaceutical companies are able to keep us coming back for expensive medications. To know the history of science is to recognize the mortality of any claim to universal truth.

Evelyn Fox Keller, Reflections on Gender and Science

Each person carries his own doctor inside himself. They come to us not knowing that truth. We are at our best when we give the doctor who resides within each person a chance to go to work.

Albert Schweitzer

The Wise Woman tradition is both ancient and new. Though the term was coined as an herbal pathway by herbalist Susun Weed in the early 1980s, in a more expanded sense it is an ancient way that honors the feminine traditions of herbal medicine and healing which have stretched from ancient times across all histories and cultures, infused by local flavor and customs, but united by caring for the specific and unique needs of women throughout their life cycles. It is new in that it has had a thoroughly modern rebirth and popularity that has spread internationally, primarily in the US, Canada, and western European nations.

I have come to use the term WomanWise for a way of being that embodies women's wisdom in practice. Whatever we call it, women of all backgrounds embracing herbal medicine are also reclaiming the power of the feminine as part of our own powerful legacies, as a revolutionary response to the centuries of subjugation women have experienced around our bodies, reproductive/gynecologic health, and our basic freedom, and as an antidote to a modern medical system that disregards and is woefully unprepared to meet our needs, that overmedicalizes us at every turn, and a culture that threatens to strip us of basic health freedoms like access to contraception, abortion, and safe birth, all even more at risk for BIWOC and women who lack adequate economic resources to meet the high costs of accessing healthcare. A theory developed by Luce Irigaray - in *Divine Women* - proposes that women need a mythology of the divine feminine that includes complex females in order to create a whole self and to build a healthy society.

Many of "midwives" of modern herbalism are women whose own cultural history included grandmothers (or grandfathers) who carried remnants of their own Mediterranean, Eastern European, or Mexican, African, or First Nations herbal and healing traditions into the next generation, women who were trying to live closer to the land, aware of the negative social, political, and ecological impacts of many of modern society's practices, including medicine, and sometimes women who were themselves dissatisfied with medical experiences of their own. It was

inspired by hippie and feminist philosophies. These women turned to herbs and midwifery as a way to reclaim their bodies and power, and as a way to reconnect with an earth-centered way of life. Many of these women continue to teach herbal medicine today. Some, like myself, have also practiced midwifery.

The following are some of the core beliefs of the Wise Woman tradition:

- The Wise Woman tradition is an invisible thread stitched throughout our lives, connecting all who came before, all who are now, and all who are to come
- The Wise Woman tradition is a spiral, moving forward, following cycles, always returning to itself, but never in the same place
- The Wise Woman tradition is woman-centered and heart centered
- The Wise Woman tradition heals with nourishment
- The whole is more than the sum of its parts
- Health and wholeness are ever changing
- The Wise Woman tradition honors rough, honest, raw truth and is unattached to outcome
- The Wise Woman tradition practices self-forgiveness and "no-blame"
- The Wise Woman tradition insist upon uniqueness
- The Wise Woman tradition uses a root cause approach to healing, rather than the 'tame it and name it' approach of Western medicine
- Optimum nourishment and simplicity are central to the Wise Woman tradition

Perhaps the most important thing to me about the Wise Woman tradition, in addition to the beliefs listed above, is that it is non-exclusive. It recognizes the uniqueness of women and doesn't accept racism, genderism, sexism, ageism, or ableism, for example. Further, one can use nettles tea or surgery, and still be working within the tradition. It's less about what is used or done, and more about how and when. Appropriate use of tools is part of the Wise Woman tradition, and sometimes the needed tool may be simple tea, at other times more aggressive and interventive treatment may be required, but it can be administered/received within the heart and mind of being WomanWise. These are not just the principles that I personally work with clinically and as an herbal medicine teacher, but also by which I have lived my life and raised my children.

Finding Your Own Herbal Pathway

As you find and create your own individual herbal pathway, community, and career, there are a number of routes you can choose - and you do not have to pick just one; you can forge your own unique blend, as I have. It's part of what makes the world of herbalism endlessly fascinating - there are so many paths, and you can continue to grow and reinvent yours over your lifetime. While some countries do have a more tidy pathway to becoming an herbalist, with some form of national certification required to practice legally, or at least demonstratively, most countries with Western herbal practitioners have two distinct pathways - the community herbal pathway, whether

that be practicing folk, indigenous, or more traditional herbalism, with or without attending a formal school, or what is sometimes erroneously called professional or clinical herbalism, which connotes a more western scientific evidence-based approach, and possibly some formal schooling or certification. I say this distinction of profession or clinical is inaccurate because one can be a paid curandera with formal training from your auntie, seeing patients, and this is by definition, formal, trained, and professional, and one can call oneself a professional clinical herbalist but have attended only a few weekend conferences, have no training beyond having read some books, and hang out a shingle and call oneself a clinical professional herbalist.

Herein also lies the challenge for those seeking herbalists - it's a bit of a wild west, which we'll talk more about in an upcoming lesson. Hopefully this course transcends this dichotomy with a solid foundation in both forms of herbalism that prepare you for next steps on either pathway, or one that's more like mine: a blend of all of the best herbal evidence - historical, traditional, and when available, western scientific data. When one's a bit of a geek like me, and you hit that trifecta of data points in all three, well let's just say, that's its own form of herbalist ecstasy.

The Community Herbalist

A community herbalist is one who has gained knowledge of herbs through any number of pathways - self-study, apprenticeship, formal study - and who practices largely independently of an established institution, and often without any need or desire for a credential.

Historically the community herbalist was the individual in the community whose knowledge was so vast and dependable that community members turned toward that person for all manner of health concerns that exceeded the common knowledge of the "houswyf." Midwives often served the dual role of childbirth care provider and community herbalist. Today, the title community herbalist is generally self-designated, connoting a maverick political and philosophical orientation.

The community herbalist tradition has always existed and persisted. It is my own personal foundation as an herbalist. The modern community herbalist is generally oriented toward providing medicine "for the people," that is, affordability and accessibility to both herbal care and the herbal medicines themselves. Unfortunately, in some segments of the very diverse herbal community in the US at least, the community herbalist vibe can be so anti-organization or anti-western science that it becomes exclusive, based on cults of personality.

While the community herbalist may be highly educated, either formally or informally, the language of the community herbalist typically retains the traditional language of herbalism, rather than adopting a neo-modern scientific or medical approach to herbal medicine, the latter which may be considered overly "reductionist" by the community herbalist. Thus can be limiting, particularly for those wanting to transform the medical system or working in actual health care settings and systems, or with clients and patients with medical conditions who are also on pharmaceuticals, where a respect for science, medicine, and herb-drug interactions becomes essential. But many community herbalists also respect the need for this knowledge and provide a more balanced, blended approach and have a community herbalist attitude while incorporating western science and traditional herbalism. The traditional uses of herbs, herbal formulation, and medicine making are important and emphasized regardless of one's philosophical approach.

Unit 1 Lesson 6 Traditions and Principles in Herbal Medicine

The training of community herbalists is highly variable and there are no rules - some individuals have simply read a lot on the subject of herbs and have taken a few classes, and then decided that they were "called" to practice. Some actually shun book learning, preferring to rely on their senses and empiric knowledge alone or combine that with what they have learned experientially with other community or traditional herbalists or healers. Others have trained extensively through rigorous independent scholarship, through mentorship with other herbalists, by attending schools and numerous conferences, and some may be registered members of organizations such as the National Institute of Medical Herbalists (MNIMH), The New Zealand Association of Medical Herbalists (NHAMH), or the American Herbalists Guild (AHG). It is the responsibility of the individual herbalist to provide an informed disclosure of their training and experience, however, as this is not required by law except in a handful of states; it is up to clients to inquire and ascertain the consultant's training and experience.

Community herbalists may have a limited scope of practice based on their experience and training - for example, treating only simple and self-limiting conditions, or they may have more elaborate experience, even specializing in areas such as pediatric, obstetric, or onocologic herbal medicine. Again, it is up to the consumer to inquire and gain the information necessary to make an informed selection of a consultant as there is currently no regulatory model directing the education or practice of herbal medicine. The consumer has to determine what the qualifications are for the herbalist with whom they choose to consult - thus it is a situation of caveat emptor (which translates as 'Let the buyer beware!').

The Women's Herbal Educator, of course, can serve as a resource in her community, helping clients identify qualified practitioners.

There are significant advantages and disadvantages to being a community herbalist. The advantages are that there are no external standards to uphold, no membership fees in a professional organization, no examinations, continuing education requirements, or other responsibilities of maintaining a professional affiliation. Similarly, there is no limiting scope of practice, standards or care, codes of ethics, rules and regulations, etc., that also come with being a member of a professional credentialing organization.

However, the burden of explanation of competency falls to the consultant, who lacks the credential that provides some external form of validation for the potential client/client, or employer. This is a factor than can sometimes oddly, affect client's perceptions of care: our cultural conditioning is that MD/white coat = healing, a very powerful placebo effect that may be absent from a relationship with an herbalist, but one that can be overcome by the positive experience the client has.

Lack of a formal credential can be a limitation for community herbalists seeking to work in hospitals, medical clinics, and other formal institutions that require a professional credential for privileges. Currently in the US no category of herbalists has such privileges because of a credential, other than licensed naturopathic physicians and acupuncturists certified in herbal medicine. In many communities herbalists have, nonetheless, found their way into positions in medical offices, clinics, and hospitals with their personal abilities and reputations serving as credentials. On the other hand, freedom from external standards can allow for a tremendous amount of creative freedom and expression as an herbalist, and many of the community herbalists around the world have been the mothers (and fathers) of creative expression giving birth to the herbalism we see today.

The Modern Clinical Herbalist or Phytotherapist

Clinical herbalism, as it's often called, tends to emphasize some form of professional training, with an emphasis on the clinical uses of herbs for specific conditions, with a bent toward a slightly more reductionist approach emphasizing anatomy, phytochemistry, diseases and imbalances, clinical uses of herbs for supporting health and for healing.

Western 'professional herbalists' or 'phytotherapists' may try to distinguish themselves from folk and indigenous herbalism, which are even disparaged by some as more 'primitive,' less scientific, or less evidence-based (in fact, one major herbal textbook did exactly this). Traditional herbalism is more likely to be elevated by community, folk, and wise-women herbalists, distinctions you'll learn more about in this lesson.

David Hoffmann described phytotherapy "as a thriving medical modality that uses whole plants to treat whole people, facilitating the healing process within the framework of holistic medicine. It is both an art and a science. With its roots in the past, it is still relevant and meaningful to the present, offering great potential contributions to modern medicine." This is a clear description of the philosophy embraced by many contemporary herbalists, such as myself, who seek to create a synthesis of traditional herbal medicine and information gained from science.

However, not all contemporary herbalists embrace science and tradition to the same degree, and those that err on the side of tradition tend to simply describe themselves as herbalists, are not apt to use the term phytotherapist to describe themselves, and do not consider themselves as utilizing a "medical" modality. The traditional uses of herbs, herbal formulation, and medicine making, are also important and emphasized. To be a clinical herbalist, it's expected that one will go through not only formal herbal training, but will also seek mentorship to gain clinical experience, which is required to become a professional member of the American Herbalists Guild, of which I was the President for a decade. While there I worked with colleagues to develop training guidelines and clinical practitioner standards, as well as wrote a mentorship handbook to guide what traditionally are called apprenticeships.

How You Practice, Where You Live

The pathway you choose will partly depend on where you live and work. In Germany phytotherapy is an institutionalized part of the modern medical curriculum, with physicians prescribing herbs and pharmacies dispensing herbs, as part of standard medical practice. It is perhaps because of the reductionist model of herbal medicine practiced in Germany, and its association with the word phytotherapy, than many herbalists reject this term. Others, however, such as Hoffmann, use this term to connote a modernization of traditional herbal medicine described earlier, but without a reliance on a reductionist model.

In the UK, traditional and medical herbalism essentially co-evolved in the practices of recognized professionally practicing herbalists, due to widespread acceptance of the physiomedical model from the US, and an uninterrupted continuity of practice that has allowed herbal medicine to evolve alongside allopathic medicine. Herbalists in the UK meet high educational and clinical training standards, and have graduated from nationally accredited herbal programs in the UK.

In Canada, though there is no official regulating body for herbalists, there are generally three main ways to become a recognized professional herbalist in Canada (according to the Canadian Council of Herbal Associations):

- Formal study through an herbal school
- Ancestral traditional learning (First Nations or other)
- Apprenticeship under a practicing herbalist

In the US, there is no formal recognition for herbalists, other than the internally developed Registered Herbalist or RH(AHG) provided by the American Herbalists Guild, largely a designation familiar only to other herbalists. The pathways are generally broken down into Indigenous pathways, Community Herbalism, and Clinical Herbalism.

The Integrative Physician

More than ever we need women's health practitioners who understand women's needs and desires for, and the importance of alternatives to the "pill for every ill" model of Western conventional medicine. We need a NEW medicine for women that respects women's bodies, autonomy, and the healing power of gentler approaches, like herbal medicine, while also respecting their power as serious healing options.

Increasingly, training programs and conferences in herbal medicine are being offered for licensed health professionals wishing to integrate herbs, amongst other alternatives, into their practices. Unfortunately the level and scope of herbal information taught by/at these programs is typically limited to scientific evidence alone, and uses herbs in a manner more consistent with allopathic prescribing, relying on specific active ingredients and a single disease-single treatment approach. This narrows the possible range of information to only what has been studied and proven safe by extremely limited parameters (and often scientific biases to what has even been studied), which is a very limited number of herbs and applications.

Additionally many integrative licensed health professionals don't specialize in herbal medicine; rather they learn a smorgasbord of therapies more superficially. In fact, studies show that many see herbs as more dangerous than other integrative therapies, because unlike massage, aromatherapy, and homeopathy, the use of herbs requires the ingestion of overtly active pharmacologic substances. Therefore, few licensed health professionals possess the depth and breadth of knowledge of well-trained and experienced herbalists.

Being in regular contact with many licensed health professionals, I often ask about this issue, and am told by most that they don't have the time to learn herbal medicine at the level they would like to because they have so much continuing medical education and information already to keep up with, and that their preference would be to have access to reliable herbal professionals to whom they can refer patients who they think would benefit from, or who are specifically seeking, herbal care as part of their treatment protocol. Many licensed health professionals know their patients are using these therapies, and they would like to be able to help guide them safely and intelligently; many also recognize the limitations of pharmaceutical drugs, and thus would like to offer a broader range of therapeutic possibilities to their patients.

We'll talk more about the legalities of herbal practice in an upcoming lesson. My hope is that you craft and

practice with a truly whole woman, whole herbalism approach that includes the wisdom and respect for the land and the plants woven into the fabric of indigenous herbalism, reclaim your place as a woman in a long tradition of women healers - as we're needed now more than ever for women's health and safety, that you embrace the maverick spirit of the community herbalist AND respect what western science has to show us about novel uses of plants for healing, herb-drug interactions, phytochemistry, physiology, and more. This is the path I walk and it's one of the most dynamic, exciting, and rewarding paths I can imagine.

Foundational Principles of Modern Herbal Medicine

Articulating a discrete set of principles upon which western herbal medicine is based is difficult because unlike TCM, Ayurveda, and other traditional medical herbal systems, western herbal medicine has not experienced an unbroken lineage and transmission of information, nor ongoing and consistent development and evolution. Some exception can be made for herbal medicine in the UK, where until about 25 years ago physiomedicalist teachings persisted in the herbal curriculum, and where the popular acceptance of herbal medicine as a legitimate healing modality by the mainstream has allowed a relatively unhindered development of the profession and the craft. Outside of this, one cannot easily identify "teachings" and "guidelines" from the practices of traditional, community herbalists, which were largely based on the available local flora and a good bit of observation and common sense.

For modern herbalism to truly trace its methodological and systematic roots, we'd have to equally look to the foundations of modern allopathic medicine, whose techniques and methodologies, which included the systematic application of herbal medicines, stemmed from the Greek humoral system, providing an energetic assessment method as intrinsic to traditional herbal medicine as the concepts the concepts of yin and yang and pulse diagnosis are to TCM, and an energetic understanding of the herbs that allowed their being specifically matched to the needs of the individual. It is from this root that modern herbal medicine branched.

There are specific and appropriate applications for modern "phytopharmaceuticals," very concentrated or specific extracts of isolated plant constituents for the treatment of specific diseases, for example, artemisinin and other extracts from Artemisia annua for the treatment of malaria and certain cancers. However, this aspect of modern phytotherapy really resembles allopathic medicine rather than herbalism. It is the medical application of herbs as pharmaceuticals.

Twelve Core Philosophical Guidelines of Women's Herbal Healing

Regardless of how you choose to engage with herbal medicines professionally or personally, there are 12 Core Philosophical Guiding Principles that I hope all students/graduates of this course will incorporate into their ways of being with the plants, clients, and the planet. These principles are a lens through which to see health and healing, a compass that can be used to keep you on a healthy course with clients, and a way of engaging with clients that remains woman- and client-centered

1. The individual is an adaptive organism with inherent wisdom.

Herbalists recognize that there is an inherent healing power in all living beings, from the cellular to the organismal levels. Herbalists recognize that the goal of an herbal protocol is to support the body so that its natural state of dynamic balance can do the work of healing, and sometimes to nudge that healing process. Sometimes herbal treatments consist simply of removing noxious influences in the environment to improve the system, for example, improving the diet, relieving stress, improving overall sense of well-being and health. Herbs can be used nutritively or as tonics to support the body's underlying well-being and functioning in order to allow intrinsic healing to occur, and herbs can be used to assist certain functions, for example, encouraging sleep or elimination, to ease the burden on the body or relieve overtaxed systems so that healing and rejuvenation can occur.

2. The goal is to assist the individual toward self-care as a healthy person.

Herbalists seek to help individuals experience empowerment and responsibility for their own well-being rather than remaining in a dependent relationship with the practitioner. The herbalist seeks to assist clients in accessing resources of information, as well as in learning how to create a healthful lifestyle that enables the client to independently maintain a state of optimal well-being, and to have the knowledge to make minor modifications and adjustments as necessary to maintain a dynamic homeostasis through the normal changes and challenges that life presents that might affect health.

3. The client maintains power and authority over herself.

The herbal healing relationship is not based on a hierarchical model. Rather it is based on a partnership model that values equality between the practitioner and the one seeking care. The herbalist does not have authority over the client, nor is the herbalist ultimately responsible for the client. The client takes responsibility for her own care, and the herbalist serves as a resource, educator, and compassionate listener. The two embark together on a journey to understand the client's condition and needs, and to access the resources for improving the client's condition. Responsibility is in the hands of the client, and is shared with the herbalist. Needs are best known by the client herself. The herbalist guides and educates, supports, assists.

4. Take an integrative and holistic view first, rather than a primarily reductionist view.

The herbalist looks at the big picture of the client's life, taking a broad view of the multifactorial nature of health and illness. Thus, treatment protocol may be broadly based in the factors that can lead to illness rather than narrowly focused on the symptoms or illness or a single manifestation of disease. For example, if a client presents with chronic Herpes Simplex Virus 2 (HSV2), which is recognized to have stress triggers, treatment includes attention to stress reduction and may include the use of adaptogenic and nervine herbs (which will be discussed in-depth in future lessons) to reduce long-term and immediate stress, rather than simply focusing on the use of antiviral herbal medications. While details are important, the big picture is always considered in developing treatment protocol and plans for creative lifestyle changes.

5. The emphasis is on healing as an opportunity for physical/psychological/emotional growth.

While none of us would seek to become ill deliberately in order to experience the personal growth that sickness so often brings, herbalists see illness as an opportunity rather than a punishment, sign of "wrong-doing," lack of cleanliness, or any other blame-oriented approach. Illness provides each of us an opportunity to consider our place in the universe, in our families, and in relationship to our lives and ourselves. It provides a time for reflection and introspection, and an opportunity for change and re-invention of lifestyle habits, mental habits, and beliefs that might interfere with well-being. The herbalist provides compassion and understanding as the client seeks to find meaning and opportunity in time of illness, and does not use a language of blame in the context of care.

6. Normal physiologic symptoms associated with illness (i.e., fever) are seen as a natural and not always requiring aggressive treatment, if at all.

Many signs of illness, for example, fever or inflammation, are actually the body's normal attempt to repair, heal, or protect the body. For decades, the medical establishment promoted suppression of fever with aspirin, for example, but it is now recognized by the medical community that encouraging and allowing fever during infection can facilitate healing of the infection, and that suppression can be disadvantageous. Herbalists have long known this and have used herbs that support the body during fever, or even raise the temperature slightly.

Herbalists regard such symptoms as allies in the treatment of illness, and while protecting the body from excessive expression of these mechanisms that can lead to organismal damage, such as dangerously high temperatures or damaging inflammation, the herbalist facilitates and supports these mechanisms, suppressing them only when they become a threat to the organism itself.

7. The best care is empathetic, caring, and non-judgmental.

Herbalists recognize and honor the highest ideals in each individual client, knowing that we are all human, and each in our own way is trying to do our best. Therefore, the herbalist supports the highest ideals in each client and provides non-judgmental care. The herbalist does not approach life with a rigid set of rules, but looks at life as a dynamic equilibrium in which choice, freedom, and consequence are part of a natural order, not part of a cycle of guilt, blame, and punishment. The herbalist does not judge individuals on the basis of their choices, nor does the herbalist need to be complicit in care in which they are uncomfortable with the client's choices. For example, the herbalist does not pass judgment on a client for choosing to have an abortion in an unwanted pregnancy, but the herbalist does not have to assist the client in accessing herbal guidelines for exercising her right to abort. Discrimination and choice is different than judgment.

The herbalist encourages clients to take a non-judgmental and compassionate attitude toward their own health, growth, and patterns, recognizing areas where change is desired, setting realistic goals and plans, but maintaining flexibility, acceptance, and patience. The herbalist resists restrictive and rigid social, political, and religious attitudes that prevent health and healing in clients whether physically, emotionally, intellectually, socially, or spiritually. Additionally, the herbalist does not adopt attitudes of separateness from the client. Ultimately, a therapeutic relationship requires making connection. Thus the herbalist allows her/himself to be in relationship

with the client on the healing journey, within the appropriate boundaries of a therapeutic relationship, practicing attachment and caring, with a healthy dose of dispassion that allows clarity of thought and judgment.

8. One condition, many treatments.

Herbal medicine is not based on a reductionist worldview that sees individuals as homogeneous. Rather, the herbalist sees individuals as heterogeneous in their expression and manifestation of both health and illness. From this place the herbalist recognizes that every individual will require a unique approach to her health concerns, regardless of any similarity in medical diagnosis. Therefore, for example, one might have several clients in one's care that have chronic migraine headaches, however each individual may receive a different herbal prescription and protocol. This will be the case with most conditions, with the exception perhaps of acute infections, especially when there are seasonal outbreaks, for example, colds and influenza, where treatments may be more standardized. Patterns may emerge in similarity of treatments between clients sharing similar specific symptom manifestations and sharing similar constitutional characteristics.

9. Experiential and emotional knowledge are seen as equally important to technical knowledge.

Herbal medicine has historically been based on empirical knowing - that derived from observation and experience with plants and their interface with those using the plants for medicine. This was also the historic foundation of western medicine, but western medicine made a departure from this after the Renaissance in favor of a Baconian objectivity, which separated the observer from the experience, and a Cartesian linear approach, which is inherently reductionist. The herbalist values personal experience, as well as information gained from the experiences of others, for example, professional colleagues.

The herbalist also values personal impressions and intuition in the assessment and decision making processes, recognizing that information can be obtained in many ways, intellectually, instinctively, emotionally, and intuitively. While there may not be rational or easily understood explanations for intuitive understanding, the relative frequency of instances of intuitive response or understanding that yields accurate and important outcomes requires us to pay serious attention to this phenomenon and not ignore it when it arises. Ideally, intuitive knowing is corroborated with some form of academic understanding to form a multilevel basis of evidence for action. The herbalist strives to develop all of their senses and faculties to be receptive to various forms of knowing that create insight.

10. Treat the whole and the parts, the symptoms and the causes.

Unlike western medicine which generally focuses on a specific problem to the exclusion of the whole system, for example, by treating acne or eczema only with topical steroidal or non-steroidal anti-inflammatory drugs (NSAIDs), the herbal approach treats both the local and specific manifestations of illness or disorder, while identifying and addressing systemic imbalance that might be underlying the local problem. Similarly, the herbalist looks at the personal, social, emotional, economic, lifestyle, and other contexts in which the individual's illness is manifesting, and addresses these either directly or through appropriate referrals as part of an overall treatment

plan. Disease is always seen in the context of the individual's life rather than separate from it.

11. The body's condition is seen as a microcosm of nature, and the language used to describe internal imbalances reflects environmental conditions (i.e., dampness, heat, cold).

As you will see in a subsequent lesson, the traditional language of herbal medicine, both in western herbal medicine and in traditional systems such as TCM and Ayurveda, describes the landscape of the human constitution and states of imbalance with language that is used to describe external environmental conditions. For example, an individual might be described as hot and dry, or cold and damp in any of these systems, using the language of that system.

Many herbalists practicing today have found these descriptions invaluable, and along with the language of herbal actions, also to be discussed in a subsequent lesson, use these descriptions to form the basis of assessment and prescriptive methods. These concepts reflect a view of living organisms as an extension of rather than separate from nature, and subject to the same laws and patterns of nature that guide and govern the living world and its environment.

While the language used by traditional herbalists does not directly correlate to the language of western medicine, the concepts of western medicine are often easily translatable, and vice versa. For example, inflammation might be considered a hot and damp condition; a cold with a chill a cold and damp condition, etc. While the complexity is much greater with actual conditions in real people, this way of thinking allows the herbalist to identify herbs which have also been historically classified in this language and which correspond to the condition(s) of the individual to be treated. Unit 1 includes lessons that cover both the energetic classifications of illness and the energetic classifications of herbs.

12. The health of the individual and the health of the environment are interrelated.

Indigenous American culture teaches us that we must think ahead in our actions 7 generations; that is, what we do today may have an impact on our children. Much as the environment affects the health of the individual, the health of the environment is affected by the behaviors of the individual, creating either a natural cycle of health or a cycle of disease and disorder when this is ignored. What we do today to our environment may very literally affect our health tomorrow - this is easily seen in the vast number of cancers that are prevalent today as a result of known and unknown exposure to carcinogenic substances that are now ubiquitously distributed throughout most of the environment. What we do to nature we do to ourselves. Thus the herbalist keeps this in mind in her use of herbal medicines, ensuring whenever possible that the herbs being used are ecologically and environmentally grown, harvested, and prepared, and makes every effort to use and reuse packaging that is environmentally sound and sustainable. Further, whenever possible, the herbalist works to educate clients about environmental principles and possibilities for lifestyles that promote sustainability.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 7

Safety, Legal, & Ethical Issues in Herbal Medicine

Learning Objectives

By the end of this lesson you will be able to:

1. Relate the importance of botanical medicine safety
2. Recognize the potential for adverse reactions from botanical medicines
3. Describe the most common symptoms of a side effect or adverse reaction
4. List the most common categories of herbs and drugs associated with herb-drug interactions
5. Distinguish between a side effect and an allergic reaction
6. Recognize the major categories of potentially harmful herb-drug interactions

Unit 1 Lesson 7 Safety, Ethics, & Laws

Required Assignments

- Chapter 4, Guidelines in Herbal Medicine Use in Botanical Medicine for Women's Health, *2nd edition* (Romm)
- Watch the Legal and Ethical Issues in Using Botanicals in Practice webinar (website)
- Listen to GMPs and the Community Herbalist (website)
- Listen to Herbal Adulterations – The Good, the Bad, and the Ugly (website)

Key Terms

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Adulteration

Adverse drug reaction

Adverse event report

Allergic

Contamination

Cytochrome P450

Herb-Drug Interaction

Idiosyncratic

Nonmaleficence

Risk-Benefit analysis

The Importance of Understanding Botanical Medicine Safety

While herbal medicines have a remarkable record of safety that extends far back into history, the context in which herbal medicines are used has changed and some of the inherent safeguards that increased the likelihood of botanical safety have been lost. Thus safety issues in botanical medicine need to be considered in a new and contemporary light. However, before I go any further, as a take-home point I want to emphasize: **herbal medicines have a remarkable track record of safety**.

A systematic review of complementary and alternative (CAM) therapies by Edzard Ernst (2003) found that the most reported adverse effects were associated with herbal medicines versus other CAM products/practices. However, the author emphasizes that the bulk of evidence is anecdotal in nature, for example, individual case reports and limited case series. This makes it difficult to evaluate both an actual cause-and-effect relationship and the incidence of the true adverse effects.

Historically, when herbal medicines were a common part of the home medicine chest, most people had a working knowledge of the safety and effects of many common herbs. A few members of the community gained a more in-depth knowledge of herbal healing for more complex conditions through intensive apprenticeships and

hands-on working knowledge of the herbs from field to bedside.

The identification, harvesting, growing, and preparation of herbs was controlled locally and happened in individual gardens, local fields, or was in the hands of healers gathering plants for the patients in their community. The potential for such problems as misidentification of a toxic herb for a safe one, improper preparation, or misinformed use was significantly less than might occur in today's environment where individuals have generally indiscriminate access to a wide number of botanicals that have been mass harvested and mass produced, an almost endless stream of herbal advertising and information - not all of which is accurate - and exposure to practitioners who may have minimal training in herbal medicine, if any at all. This is an especially large problem during pregnancy, which is discussed in *Lesson 27: Specific Issues of Safety During Pregnancy and Lactation*, and also for patients who are combining conventional pharmaceuticals with herbs without an awareness of the potentially serious and harmful interactions that can occur.

A strong knowledge of botanical medicine safety can help practitioners maximize patient safety and treatment efficacy, and reduce the possibility of harm. This lesson provides a foundation of information on herbal medicine safety issues so that herbal educators can be familiar with the most important issues, have a working knowledge of the vocabulary associated with botanical medicine safety, and have familiarity with what questions to ask (and how to best respond!) in the consultation setting.

Know Your Limitations

Perhaps the most important requisite for herbal educators - and practitioners generally - is the ability to know their limitations. This means practicing within the context and scope of one's training, knowledge, and experience, and knowing when to say "I don't know." It also implies a level of humility and a willingness to at times enter fully into a partnership role with clients rather than a teaching or advising role.

So for example, let's say you have completed this course and have learned the basics of approaching a threatened miscarriage botanically, and a client in your herbal education practice contacts you in the first trimester of her pregnancy and tells you she is having regular contractions and some spotting. You have no midwifery training and have never before advised someone in this situation. What do you do? Do you open the course or accompanying textbook, look up the herbal treatments for preventing a miscarriage, and give her an authoritative list of things she can do or take?

Of course not.

While you will hopefully research the topic in the course books and textbook, you will have to honestly tell her that this is something you've never worked with before, and that your knowledge is only based on having taken a course. You will first want to make sure that she has a primary care provider (a midwife, OB, family practitioner, etc). You can then refer her to someone in your community who has more herbal knowledge and experience in this area (and you can even gently ask her permission to participate in that consultation so that you can learn more!). If there is nobody in your community to whom you can refer, you can ask her permission to work in conjunction with an herbalist outside the community, and draw on your now developing list of contacts to get in touch with an herbalist in another area who might be willing to help coach you through the new situation.

You can also enter into a partnership relationship in which you acknowledge your lack of experience and plainly tell her what you know from your studies, and let her decide if she is confident in trying what you have learned. Of course, this is not appropriate in emergency or critical health situations when clear and definite knowledge and experience is essential. And the partnership option should occur in the context of her having a primary care provider who can keep an eye on the medical progress of the situation.

These are good guiding principles for you as you get started in your consulting work, as new situations are always bound to arise with which you have no prior experience. This, in fact, will continue to occur throughout your career - the situations just become more advanced over time as you gain experience with the basics. That is why even the most seasoned, experienced practitioners continue to consult with colleagues on clients/patients and cases.

Another important aspect of knowing your limitations is being a master of the word "NO" and the phrase "I DON"T KNOW." Sometimes, especially in the beginning of our work, cases are just entirely beyond our range of knowledge, experience, and ability to meaningfully and safely assist. At these times it is important to simply say this to a client and refer them along. Ultimately, people in your practice and community will respect you more for knowing this, and when possible, making excellent referrals. Making huge mistakes is not an effective way to care for people, nor a way to build a practice or solid professional reputation, and bad press often flies faster than good results!

Develop Referral and Consulting Relationships with Colleagues

Having a referral and consulting network is important and invaluable. Collective knowing expands everyone's access to knowledge and experience and allows clients/patients to receive the broadest possible benefits of the knowledge available in a community of practitioners. Having a strong referral and consulting network also reduces the temptation to take on cases that are beyond your ken, allowing you to send clients to those most capable of assisting them, and allowing you to draw on the outside perspective of those with experience in your field.

Developing referral and consulting networks takes time and effort. Developing such relationships is also discussed in the *Bonus Lesson: Careers in Herbal Medicine*. Many experienced herbalists are happy to mentor budding herbalists, and many midwives and primary care physicians would be happy to work out mutually beneficial relationships for clients/patients; they might be happy to answer questions and see your clients in their practice in exchange for your being available to consult on herbal matters for their practice.

Have Botanical Safety References and Resources

The most reliable and informative botanical safety references include:

- American Herbal Products Association's *Botanical Safety Handbook*, Gardner, McGuffin, et al. (editors)
- *The Essential Guide to Herbal Safety*, Simon Mills & Kerry Bone
- *Herbal Contraindications and Drug Interactions: Plus Herbal Adjuncts With Medicines*, Francis Brinker

- *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*, Mitchell Stargrove, Jonathan Treasure & Dwight McKee

The advantage of these resources is that they are written by herbal researchers who are also clinical practitioners.

Two websites for safety information are Natural Standard (http://www.naturalstandard.com) and the Natural Medicines Comprehensive Database (http://naturaldatabase.therapeuticresearch.com). Both websites have limitations in what information is presented, how, and by whom – they both tend to err on the conservative side, perhaps overstating the risks and hazards of botanical medicines. A paid subscription is required for Natural Standard.

The Office of Dietary Supplements also provides a useful database. Though it is limited in the scope of its botanical medicine coverage, it also covers data on vitamin and mineral supplements, and is very accessible. http://ods.od.nih.gov/factsheets/BotanicalBackground-HealthProfessional/

Factors Affecting Botanical Medicine Safety and Risk

- Numerous and complex factors affect botanical medicine safety and risk including:
- The safety profile of individual plants
- Potential allergic or idiosyncratic reactions
- Potential or known interactions with other substances (i.e. herb-drug interactions)
- Product adulteration or contamination (i.e. heavy metals, pharmaceuticals, or other contaminants)
- Substitutions (the accidental or deliberate use of the wrong herb)
- Timing of use (i.e., prior to surgery or during pregnancy/lactation)
- Dosage
- Duration of use (i.e. potential for accumulate toxicity)
- Lack of appropriate therapy for a medical condition

Many of these are discussed in this lesson; others, such as timing of use, dosage, etc., are also found in the discussions of specific conditions and herbs.

What are Adverse Drug Reactions (ADRs)

Understanding terms is essential. An ADR is commonly defined as any response to a drug which is noxious and unintended, and which occurs at doses normally used for prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function. In a serious adverse event, there is life-threatening risk, hospitalization, disability, congenital anomaly, required intervention, or death. For conventional medications, an ADR might:

1. Require discontinuing the drug
2. Require changing the drug therapy
3. Require modifying the dose (except for minor dosage adjustments)
4. Necessitate admission to a hospital
5. Prolong stay in a health care facility
6. Necessitate supportive treatment
7. Significantly complicate diagnosis
8. Negatively affect prognosis
9. Result in temporary or permanent harm, disability, or death

Allergic and idiosyncratic reactions are also considered ADRs. An idiosyncratic reaction is one that is not expected in the general population, but which may occur in an individual due to a variety of causes specific to that individual, for example, unknown reasons, differences in metabolism, or other genetic variations.

What are Herbal Adverse Events Reports (AERs) and Adverse Events Reporting Systems?

Herbal adverse events reporting systems collect, catalog, and store individual adverse events reports. They are usually federally/nationally maintained, but may also be international information collection systems. After the thalidomide disaster of the 1950s, the World Health Organization (WHO) established an international adverse drug events reporting system – WHO International Drug Monitoring Program (IDMP). They collect pharmaceutical and botanical medicine information from at least 60 countries, and their International Drug Information System (INTDIS) database includes over 2.5 million reports, of which approximately 10,000 relate to herbal medicines.

Overall statistics on and relevance of AERs to understanding botanical medicine safety is presented in Chapter 4.1 of *Botanical Medicine for Women's Health*. The main AER systems in the United States are local and national poison control centers and the FDA's MedWatch program. Most of these are what are referred to as "passive reporting systems." Most have no criteria for submission, no verification of the authenticity of reports, and no effective methods for follow-up. The federal government is currently considering instituting AER requirements for botanical manufacturing companies which would require such companies to collect, maintain records of, and submit reports on AER's that are submitted for their products.

Herbs most commonly associated with adverse events

Acute adverse effects are generally easier to recognize. However, harm from chronic ingestion or exposure during pregnancy is less well known and history is not always a reliable source.

The herbs most commonly associated with adverse events reports include ephedra (also called ma huang)

(*Ephedra sinensis*), St. John's wort (*Hypericum perforatum*), guarana (*Paullinia cupana*), and ginseng (species not identified). In fact, ephedra was taken off the common market between the first and second versions of this course due to the frequency and severity of adverse events. Interestingly, however, none of these events was due to the proper use of the herb for lung problems; they were associated with the use of the herb as a weight loss or energy supplement.

The most commonly reported symptoms in AERs

The most commonly reported symptoms in adverse events reports include:

- drowsiness
- dizziness
- vomiting
- diarrhea
- abdominal pain
- nausea

Other symptoms reported less frequently include:

- agitation and irritability
- cardiac arrhythmias
- psychological disturbances
- facial flushing

Herb-drug interactions have led to reports of abnormal bleeding (in interactions of botanical and conventional anticoagulants) and elevations or decreases in serum drug concentrations affecting clearance times, efficacy, and toxicity (in interactions with herbs or drugs that rely on the Cytochrome P450 enzyme system for metabolism). Reports of liver abnormalities are most commonly associated with Chinese herbal medicines. Herbal medicines should not be given to patients on any of these medications unless the practitioner is highly qualified and working in conjunction with a medical care provider who can appropriately monitor drug levels and effects clinically.

Any clients reporting the above symptoms should be questioned about the possibility of an adverse event. The herbal product(s) should be discontinued until the situation is thoroughly evaluated and should only be resumed if it is clear that the herb is not causing symptoms or herb-drug interactions. In the case of serious adverse events, appropriate medical care should be sought if necessary.

Categories of Common Herbal Adverse Effects

Herbal educators must be aware of the potential for adverse herbal effects that can arise in any of the following categories:

- Allergic and idiosyncratic reactions
- Adverse reactions due to overdose
- Reactions due to specific herbs and toxic compounds in plants
- Reactions due to contamination and adulteration of herbs
- Traditional Chinese herbal medicines mixed with conventional pharmaceutical drugs
- Herb-Drug interactions

Heavy Metal Poisoning

Though not a significant problem with products manufactured in the United States, cases of heavy metal poisoning (e.g., mercury, lead and arsenic) from Chinese, Indian and Arabic traditional remedies have been reported. Sometimes the plants have accumulated high levels of metals from the soil; sometimes heavy metals are intentionally added to the herbal product as they are thought to offer therapeutic benefit in some medical systems. A 2004 study of seventy Ayurvedic herbal medicinal products from the Boston, MA area found that 14 (20%) contained lead, mercury and/or arsenic. If taken as recommended by the manufacturers, each of these 14 could result in heavy metal intakes above published regulatory standards. A literature review found that deliberate and accidental addition of heavy metals (including arsenic, cadmium, lead, mercury, and thallium) to traditional Chinese medicines was associated with more than 100 cases of heavy metal poisoning.

The Importance of Avoiding Herb-Drug Interactions

It is essential that herbal educators and practitioners be acutely aware of the potential for herb-drug interactions as these are the most prevalent source of reported adverse effects worldwide. Much as patients do not disclose herbal use to their medical practitioners, one must assume that herbal clients may not disclose conventional medicine use to their alternative care practitioners or consultants.

Health professionals and clinical consultants must be assertive in gathering information about both herb, pharmaceutical, and over-the-counter (OTC) drug use in order to be aware of potential or predictable interactions. Interactions themselves can have positive or negative results. They can be synergistic in that the herb and drug can work together to achieve a goal, additive (potentiating) or antagonistic.

The greatest risk in herb-drug interactions are additive effects in which the effects of the drug, or the circulating amount of the drug, are increased by changes in metabolic activity caused by the herb, or antagonistic effects where the drug effects are reduced or entirely inhibited by the presence of the drug, resulting in the patient not getting an adequate dose of a necessary medication. This effect was brought to public attention when it was discovered that St. John's wort, due to its effects on the CYP450 system, inhibited the effects of drugs such as cyclosporine which are critical to preventing organ transplant rejection.

Nonetheless, the numbers remain small. Researchers Izzo and Ernst conducted a systematic review of herb-drug interactions of seven of the most popularly used botanicals: garlic, ginkgo, St. John's wort, saw palmetto, kava kava, Asian ginseng, and echinacea. Clinical data were collected from standard databases, recent articles and books, and interviews with herbal product manufacturers (10), herbal experts (8), and organizations

related to medical herbalism (24). In a 21-year period (1979-2000), a total of 41 case reports or case series in 23 publications and 17 clinical trials were obtained. Of these, only 12 interactions could be considered life threatening (mostly associated with a dangerous reduction in blood plasma levels of cyclosporine in organ transplant patients using St. John's wort) due to a putative effect on cytochrome P450 systems.

According to David Rakel, a leading CAM practitioner and Director of the University of Wisconsin School of Medicine's Integrative Medicine Program, "Although it's important to be aware of drug-herb interactions, we need to be less concerned about them than about interactions between prescribed drugs. Drug-herb interactions are generally much less severe than drug-drug interactions. Samuel D. Benjamin, Director of the Center for Complementary and Alternative Medicine and Associate Professor of Pediatrics and Family Medicine at the State University of New York, Stony Brook stated that, "The overwhelming majority of interactions are not related to the use of herbals. Drug-herb interactions don't compare to drug-drug interactions. Herbals are less toxic than pharmaceuticals.

According to medical researcher Adriane Fugh-Berman, Assistant Clinical Professor of Health Care Sciences at George Washington University School of Medicine and Health Sciences, [Drug-drug] "interactions kills people every day. What I have been really trying to convey to people…is that drug interactions are much more common and severe than drug-herb interactions. As clinicians we should be alert to both types but take pains to keep drug-herb interactions in context."

Botanical Medicine for Women's Health provides a comprehensive discussion of possible herb-drug interactions. An even more extensive presentation can be found in *The Essential Guide to Herbal Safety* by Simon Mills and Kerry Bone.

Types of Potential Herb-Drug Interactions

Anticoagulants

A number of plants have been reported to interact with anticoagulant agents, most specifically with warfarin and aspirin. The most common interaction reported has been enhancement or potentiation of anticoagulant effects. However, inhibition of anticoagulant effects is also possible, through vitamin K pathways. While many of the allegations of interactions are made on a theoretical basis, caution is advised when using any medication with purported anticoagulation activity in conjunction with other anticoagulants, and prior to surgery, or in those with bleeding problems.

Anesthetics, Anticonvulsants, Barbiturates, Benzodiazepines, Opioids, Sedatives

Hundreds of plants have been used historically for their sedative, pain killing, and anticonvulsant activity. Used in combination with similarly acting medications, enhancement of activity resulting in loss of muscular coordination or a prolongation of anesthesia- or barbiturate-induced sleeping times has been observed.

Cardiovascular Medications

A number of botanicals directly or indirectly affect the cardiovascular system and may interact with cardiovascular medications. A variety of mechanisms of action may be included in these effects: direct antihypertensive activity through diuresis (juniper berry), vasodilatation (hawthorn leaf with flower), and muscular relaxation (cramp bark). A number of other botanicals can affect blood pressure indirectly through a number of functions including: cholesterol lowering effects (garlic, guggul), adaptogens (eleuthero), nervines (skullcap, zizyphus), and weight loss aids (guggul).

The most widely studied botanical in western herbal medicine for the treatment of cardiovascular disease is hawthorn (*Crataegus* spp.). It possesses a number of pharmacological activities that make it ideal for the treatment of Stage I and II cardiac insufficiency. Most importantly it primarily exhibits positive inotropic activity thereby slowing the heart and making for a stronger, more efficient heartbeat, much like beta-blockers. Because of this it can potentiate the effects of other positively inotropic agents such as digitalis. In Germany in the 1980s it was a relatively common practice for physicians to prescribe hawthorn alternately with digitalis preparations to reduce the prevalence of accumulated toxicity often associated with digoxin glycosides. However, taken together without modifying the dose of digitalis can result in additive and potentially dangerous effects.

Cholesterolemic drugs, such as the statins, inhibit cholesterol biosynthesis through an inhibition of HMG-Coenzyme reductase. Any botanical that has a cholesterol-lowering effect through the same pathway may result in potentiation. The primary botanicals used by American consumers for reducing cholesterol levels include red yeast (contains lovastatin which acts similarly to statin drugs), garlic (*Allium sativum*), and gum guggul resin (*Commiphora mukul*). While this potential interaction is not life threatening, it may require modifying the dose of conventional medications. Other classes of botanicals, such as laxatives, may indirectly negatively interact with cardiovascular medications by causing potassium loss. Anticoagulants should also be avoided or used with extreme caution with cardioactive medications.

Diuretics are generally to be avoided in conjunction with many cardiac medications.

Drugs Metabolized via Cytochrome P450 System

A number of herbs have been shown to effect the metabolization of numerous conventional medications through a modulation of the cytochrome P450 enzyme system. Approximately 80% of drugs are metabolized by this system and include calcium channel blockers, cyclosporine, loxapine, oral antihistamines, and oral penicillin, to name just a few.

Taking a botanical that affects this system can elicit an inhibitory or stimulatory activity, resulting in either too slow or too rapid drug clearance, with either negative or positive effects. Stimulation of this system can cause substances to be metabolized rapidly compromising the clinical efficacy of the drug if effective concentrations are not maintained. If this system is inhibited drugs can accumulate in the blood too fast or for extended periods of time, thus increasing their toxicity. No formal human investigations to date regarding the potentially positive interaction between botanical and conventional medications have been conducted.

Herbs that have demonstrated strong in vitro effect on CYP450 3A4 (CYP3A4) include St. John's wort (*Hypericum perforatum*), goldenseal (*Hydrastis canadensis*), cat's claw (*Uncaria tomentosa*), echinacea

(*Echinacea angustifolia*), chamomile (*Matricaria chamomilla*), and licorice (*Glycyrrhiza glabra*). However, *in vitro* data may not accurately reflect what occurs in humans.

Most cytochrome P450 effects that are reported are due to negative observations derived from case reports or from *in vitro* data which may have no clinical relevance. In a few of the most noted cases, St. John's wort was shown to inhibit CYP3A4 in vitro and stimulate it *in vivo*. According to case reports, two transplant patients were medicated with cyclosporine to prevent organ rejection. After self-medicating with St. John's wort, cyclosporine plasma levels were found to be 25%-50% lower than expected resulting in acute organ rejection in one of the subjects. Upon discontinuation of the botanical, drug plasma levels returned to expected levels. Other such case reports have been made suggesting strongly that St. John's wort and other botanicals that up-regulate the cytochrome P450 system must not be used in conjunction with immunosuppressant drugs in organ transplant patients. (See http://medicine.iupui.edu/flockhart/table.htm for a regularly updated resource on substances that interact with the cytochrome system.)

Hypoglycemic Agents

There is very little data regarding the effects of botanicals on insulin-dependent diabetes. Some botanicals are reported to have an effect directly on insulin production and islet cells, others modify glucose levels through decreased glucose absorption, and others may have an effect on insulin resistance. There is no definitive data on the appropriate use of antidiabetic botanicals in the treatment of diabetes.

Immune Suppressants and Immune Enhancing Therapies

Many botanicals possess immunomodulatory activity. Very little is known about the use of botanicals with immunosuppressive therapies. A limited amount of data suggests a positive, potentiating effect from combining herbal and conventional therapies. A number of botanicals, known to provide immune stimulation, are considered possibly contraindicated in conjunction with immunosuppressive therapies.

Diuretics

Care should be taken when using diuretics with patients on medications that have narrow therapeutic windows, or when potassium depletion may place the patient at risk.

Tannins and Iron Availability

Botanicals rich in tannins, a common constituent of many barks and leaves, can decrease the absorption of certain classes of drugs, most notably alkaloidal and mineral drugs such as colchicine, ephedrine, copper, iron, and zinc.

Additional Safety Issues: Timing of Herb Use

A number of botanicals should be avoided, or used with care, prior to or when undergoing surgery, largely due to theoretical or known risks of interactions with coagulation therapies or anesthesia. Patients must also be queried regarding their use of botanicals at this time. As noted, there are a number of botanicals with blood thinning potential, such as ginkgo, garlic, dang quai, and red clover, whose use is so common that patients might not report these in a standard medical history intake.

There are also botanicals that have been reported to interact with general anesthesia, most notably St. John's wort which may intensify or prolong the effects of anesthesia. The American Society of Anesthesiologists recommends that patients stop taking herbal supplements 2-3 weeks prior to surgery since they may affect anesthesia and bleeding times, and cause dangerous fluctuations in blood pressure. If there is not enough time prior to surgery to stop, patients are recommended to bring the products to the primary care physicians so an assessment of any danger can be made.

Use of Herbs in Pregnancy and Lactation

The special considerations of herb safety during pregnancy are extensively addressed in Unit 3: *Lesson 27: Pregnancy and Botanical Medicine Safety*.

Keeping It All in Perspective: A Few Facts: The Relative Safety of Conventional Drugs and Herbal Medicines

Lest you start to get the impression that herbs are dangerous, here are some facts to keep botanical safety in perspective. Herbs do, in fact, work, and thus they can cause adverse reactions, side-effects, and interfere with other medications. While most herbs are relatively much safer than most pharmaceutical drugs, they too deserve respect and awareness to maximize client safety.

- In 1990, the US General Accounting Office (GAO) reviewed 198 FDA-approved drugs and reported that of these, approximately 102 (51.5%) had serious post-approval side effects including anaphylaxis, cardiac failure, hepatic and renal failure, birth defects, blindness, and death. At the time of the report, all but two of the medications remained on the market.
- One study reported that among 1000 elderly patients admitted to the hospital from the emergency room, 538 were exposed to 1087 drug-drug interactions.
- In a review of hospital surveillance reports of adverse events associated with approved medications, Lazarou et al. reported that 2,216,000 patients experienced serious adverse effects resulting in 60,000 to 140,000 fatalities annually as a result of the correct use of conventional drugs. Not included in this figure were deaths due to misuse of medications (i.e., improper prescribing, dosing, combining), accounting for

another 200,000 patients annually.

- Adverse events associated with conventional drugs have been reported to be the number one cause of hospital admissions (at a cost of $116 million annually), and once in the hospital, approximately 35% of patients are likely to experience an additional adverse drug reaction. In total, this represents estimated extra health care costs of $77 billion annually. With this perspective in mind, it may be advantageous for practitioners to wisely counsel patients about the potential benefits of herbal medicines as a means of reducing the high propensity for adverse events due to conventional medications.

Legal and Ethical Issues in Herbal Consulting

Legality of Herbal Medicine Practice in the US

While we have students all over the world, the majority of students live in the US where this course is written, thus the legal issues discussed in the next brief section relate primarily to those practicing in the US but may be applied to others practicing under restrictive guidelines or laws.

With the exception of three states at the time of this writing – Rhode Island, California, and Minnesota – the practice of herbal medicine as an independent profession is not legally recognized. In those three states, freedom of health care acts allow any individual to practice a healing art that is not otherwise governed by the laws of that state (in other words, you cannot call yourself an acupuncturist or certified nurse midwife as those are designated professions, nor practice those crafts unless you are licensed in one of those disciplines). The practitioner is required to provide full disclosure of training and experience to the client.

In all other states, there are no statutes allowing for the practice of herbal medicine, however, any diagnosis and prescribing would fall under medical practice acts and therefore be prohibited to anyone not licensed to diagnose and prescribe. Technically, therefore, if someone comes to you and says, "I have sinus congestion, a sore throat, a headache, and a fever," and you say, "Oh, you have a cold," you have just diagnosed. If you then proceed to suggest Vitamin C and echinacea, you have also just prescribed. Both acts are a felony in most states. This is very different than the European model where herbal consultants are fully permitted to diagnose and prescribe. Many herbalists find the US limitations a hindrance to comprehensive and effective client care, as well as an obstacle to professional collaborations over client care with licensed care providers who may also be working with the client.

Herbalists address this obstacle in several ways. Some choose to buck the system head on, simply doing what they need to do to be effective consultants, and not trying to deny that they are doing anything but practicing in the full sense of the word – in other words they admit to practicing head on. Others avoid using any language that implies practicing any form of medicine (these individuals may say they practice herbalism, rather than herbal "medicine"): diagnosis, prescribing, or the use of any terms or practices that might implicate them in the practice of medicine without a license. Many of these individuals refer to themselves as herbal educators or herbal consultants. Rather than writing out a protocol for their clients (and in this case, client would be the more appropriate word, patient implying a medical relationship), they might, for example, have the client write out

their own protocol. The consultant may or not even keep records on individual clients, again urging the client rather to keep their own health care records, and minimizing the likelihood that the herbalist be perceived as maintaining health records and acting as a "practitioner" rather than educator.

Most herbalists find a happy medium between these extremes, serving in most respects as an herbal educator/consultant. This middle ground is actually very natural for herbalists, as the principles and philosophies of herbal care engender more of a partnership model between consultant and client than a hierarchical doctor-patient model. Thus, rather than diagnosing and prescribing, the herbalist serves as a resource, assisting the individual in coming to their own diagnostic conclusion, or working with a preexisting diagnosis from a licensed health provider. Similarly, the herbalist provides the client with information and guidelines for herbal protocol, in the form of educational information, rather than "prescriptions," however she will generally perform a health history intake and keep records of client-practitioner interactions, all recommendations, etc.

Additionally, there is a fair amount of paperwork to keep up with – client records from your office, from other consultants and practitioners, HIPPA forms if you comply with federal privacy regulations, and possibly insurance forms and other paperwork. Finally, unless one has a credential as a health professional with diagnostic and prescriptive rights, or lives in one of the three states in the US that allows for freedom in health care (Rhode Island, California, Minnesota), the laws regulating the practice of medicine create the potential for unique, but not insurmountable, barriers for the clinical herbalist/herbal consultant.

Adding Herbal Medicine to an Existing Health Practice

Many currently licensed health practitioners – whether MDs, nurses, midwives, clinical pharmacists, NDs, etc, – wish to add herbal medicine to their practice repertoire. For some this is a response to client requests for reliable herbal information or a desire to provide clients with as broad a selection of health options as possible. For others it is a response to seeing clients using herbs indiscriminately, and yet for others it is based on personal experience and the belief that herbal medicines may offer health benefits to clients and should thus be included in the continuum of medical options.

While respect for herbal, nutritional, mind-body, and physical (i.e., massage, acupuncture) therapies is growing and many doctors and medical institutions are more tolerant of their use, even for licensed practitioners, practicing herbal medicine can be challenging, as some colleagues may consider prescribing herbs to be outside of the traditional scope of practice – or even downright irresponsible (you are fortunate if you live in a country where herbal and natural therapies are fully integrative into medical care). Further, lack of third party reimbursement can make it difficult to recommend a sometimes expensive herbal protocol over a relatively cheap drug. While I have presented some of the realistic challenges and obstacles, the rewards of supporting patients in getting well with therapies that are "outside the box" is tremendous and offers great potential for those who have been unable to get well solely with conventional therapies. I see this in my practice every day.

Regardless of why one is choosing to incorporate herbal medicines into medical practice, licensed health professionals whose scope of practice does not specify herbs may feel legally challenged by doing so, and those who are trying to rely on an evidence base may feel professionally challenged given the limits of the evidence. In addition to reading the chapter on "Ethical Considerations and Guidelines" in my textbook, I highly

recommend the chapter "Legal and Ethical Issues in Integrative Medicine" in *Integrative Medicine: Principles for Practice* by Ben Kligler and Roberta Lee (McGraw-Hill, 2004).

Selling Herbal Products in Your Practice

Many health care providers sell herbal products and nutritional supplements in their practices in order to provide convenience for clients; it is also a way that many primary care providers using integrative therapies augment their incomes. While selling products of high quality for your clients' convenience can be done gracefully and with integrity, there are, undoubtedly, potential competing interests and the potential for the client to perceive competing interests. There are also potential legal issues both in terms of selling from your office and the federal Good Manufacturing Practices (GMPs) to which small practices and small manufacturers are technically not exempt.

The American Medical Association actually has a policy (Policy E-8.063, Sale of

Health-Related Products from Physicians' Offices) that clearly states that in-office sale of health-related products by physicians presents a financial conflict of interest, risks placing undue pressure on the patient, and threatens to erode patient trust and undermine the primary obligation of physicians to serve the interests of their patients before their own.

The policy goes on to state that:

Physicians who choose to sell health-related products from their offices should not sell any health-related products whose claims of benefit lack scientific validity. When judging the efficacy of a product, physicians should rely on peer-reviewed literature and other unbiased scientific sources that review evidence in a sound, systematic, and reliable fashion.

Because of the potential risk of patient exploitation, it is stated that physicians who choose to sell health-related products from their offices must take the following steps to minimize their financial conflicts of interest.

- Limit sales to "products that serve the immediate and pressing needs of their patients"
- Provide products to their patients "free of charge or at cost"
- Disclose "fully" their financial arrangement with a manufacturer or supplier to sell such products
- and, Avoid "exclusive distributorships of health-related products which are available only through physicians' offices.

Practitioners are potentially subject to malpractice in the event of a problem arising as a result of a product sold to a patient in the context of a clinical practice, with greater likelihood of losing the case if claims for the efficacy and safety of the product cannot be scientifically substantiated.

While of course, most of you are not physicians, the above could be applied to any licensed practitioner in a court of law, and even if you are not licensed, you could become subject to these requirements if selling supplements and putting yourself out there as a practitioner.

My bottom line recommendations if you are considering selling products in your practice are:

1. Don't do it for the money; unless you jack up your prices then it's not profitable. Thus selling at cost, which includes the cost of the product and any necessary packaging, shipping and handling to purchase and also distribute the product, and reasonable time included for filling orders, restocking, etc., means that you are providing a meaningful service to your clients and are adhering to the provisions above.
2. Make sure you do fully inform your client of any costs and conflicts of interest (i.e., you own stock in a company, you own the company, or you get "kick-backs" from a company whose products you sell).
3. Make sure you offer you clients alternative options to purchasing from you – i.e., 'you can also purchase this at the local food coop, herb store, Whole Foods or on Amazon.'
4. If you are storing, bottling, mixing, labeling, or in any way assembling or selling products to clients, keep careful records of batches should there ever be a problem with a product. For example, I once received a call from a major herb distributor that there had been a recall on their bulk milk thistle seeds because glass shards were found in a batch. I was able to track my batch number from that company to the individual products I had mixed and sold to clients and inform them of the problem.

Though most herbal practitioners don't, you might consider carrying some form of insurance or liability, particularly if you are a licensed provider or have a large or profitable practice. The more you appear to have something to lose, the more likely you are to be sued if something goes wrong. This is exceptionally rare for herbalists, but none of us is immune, particularly not licensed providers.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 8

Herbal Medicine Actions, Energetics, and Chemistry

Learning Objectives

By the end of this lesson you will be able to:

1. Define the commonly used categories of herbal actions for women's health
2. Explain the concept of herbal energetics
3. Explain the concepts of excess and deficiency patterns
4. List and describe two major herbal chemical constituent groups

Unit 1 Lesson 8 Actions, Energetics, and Chemistry

Required Reading

Textbook of Herbal Medicine for Women, 2nd edition (Romm)

- Chapter 3: The Actions of Herbs, pp 30-45

Key Terms

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Adaptogen	Antimicrobial	Demulcent	Pharmacology
Alterative	Anxiolytic	Diuretic	Phytoestrogen
Analgesic	Aphrodisiac	Emmenagogue	Sedative
Anti-inflammatory	Aromatic	Galactagogue	Spasmolytic
Antispasmodic	Astringent	Hemostatic	Stimulant
Anticoagulant	Bitter	Hepatic	Tonic
Antidepressant	Cardioactive	Laxative	Trophorestorative
Antiemetic	Carminative	Nervine	
Antifungal	Cholagogue/choleretic	Oxytocic	
Antihemorrhagic	Deficiency	*Partus preparator*	

Part 1: Herbal Actions

Herbal actions describe the observable clinical effects of herbs on the body. Many of these terms reflect the observations of traditional practitioners and botanical physicians. Some of the terms described in this section have been in use for hundreds of years or more. Others actions have been incorporated into herbal terminology more recently as modern herbal medicine has become informed through a contemporary understanding of the actions of herbs on physiology (i.e., adaptogens). Also, modern western medical language has been incorporated to describe certain effects of herbs, for example, the identification of an herb as estrogenic.

While the language of herbal actions reflects traditional perspectives, it is likely that the categorizations and observations that have long been in use will continue to be validated by a scientific understanding of the actions of these herbs on human physiology. As most herbalists and herb books, both classical and modern, are written in the language of herbal actions, it is essential to understand these terms. They are also very useful and

clinically practical when working to develop formulas and therapeutic treatment plans. Actions are presented alphabetically below.

This lesson was originally written prior to the publication of my textbook, *Botanical Medicines for Women's Health*, now in its 2nd edition. I've revised Part 1 of this PDF, **Additional Common Herbal Actions,** to include only those actions not found in my textbook, and which are less relevant to women's gynecologic and obstetric health, but are commonly used in herbalism and so I want you to be generally familiar with them should you go onto further herbal learning. They are not narrated – just read on your own.

The content originally contained in this pdf relevant to this course can now be found in the textbook accompanying this course. You'll also find a recording of textbook content on the website page for this lesson. Please read the textbook chapter first, and listen to the accompanying audio version for pronunciations and added content.

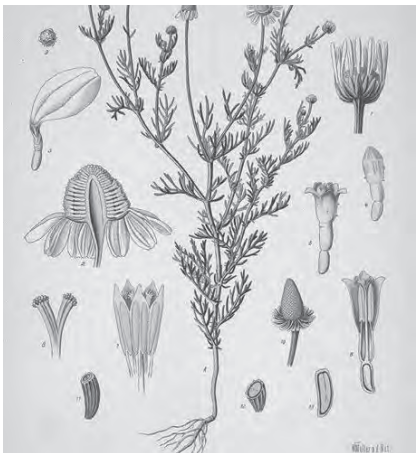
Make sure to also read parts 2 and 3 of this PDF, which you will also find in video and narrated forms on the website page for this lesson, and which are not in the textbook.

Additional Common Herbal Actions not found in *Botanical Medicine for Women's Health*

Anesthetics

Few herbs in the western herbal repertoire are effective topical or local anesthetics, especially when compared to the efficacy and controllability of pharmaceutical drugs. Oil of cloves has been used as a mild topical anesthetic on the gums of teething babies or for wisdom tooth eruption, and *Piper methysticum, Mentha piperita*, and *Lavendula officinalis* have been used as mild topical anesthetics, for example, as a spray in cases of sunburn, however, none provides significant anesthetic effect.

Antacids



Antacids reduce stomach acidity. Mechanisms may include the inhibition of gastrin and the reduction of stomach acid production by the parietal cells, and the stimulation of mucous by the cells of the stomach lining (e.g. licorice); and the presence of salicylates which reduce stomach acidity (e.g. Meadowsweet). Chamomile is another effective stomach antacid. Demulcent herbs (see below) should also be considered when there are stomach problems related to hyperacidic conditions, as they provide a protective effect on the mucosal tissue, and may prevent damage to the lining of the stomach.

Deglycchrized licorice (DGL) chewable products are an excellent alternative to antacid medications, which have numerous problematic side effects, and

are safe for individuals with high blood pressure in whom regular licorice might be contraindicated due to its potential hypertensive effects in sensitive individuals. Antacids are cooling.

Examples of commonly used herbal antacids include: *Filipendula ulmaria, Glycyrrhiza glabra*, and *Matricaria recutita*

Anthelmintic

Anthelmintics are agents that inhibits, slow, expel or kill worms. They often sedate or stun the nervous system of the parasite. They are not as effective as conventional medications, and in large doses, many can exert toxic effects. They are listed here for informational and historic purposes only.

Examples of commonly used herbal anthelmintics include: *Allium sativum*, A*rtemesia absinthum*, *Curcubita pepo* (pumpkin seed), and *Dryopteris felix-mas*

Antiasthmatic

Antiasthmatics relieves symptoms of asthma through a variety of mechanisms which can include anti-inflammatory, antiallergenic, bronchospasmolytic, anticatarrhal, nervine, and general antispasmodic effects.

Examples of commonly used herbal antiasthmatics include:

Albizzia lebbeck

Boswellia serrata

Cimicifuga racemosa

Coleus foskohlii

Dried ivy

Ephedra sinica

Ginkgo biloba

Glycyrrhiza glabra

Lobelia inflata

Petasites hybridus

Pimpinella anisum

Scutellaria baicalensis

Thymus vulgaris

Tylophora indica

Viburnum prunifolium

Zingiber officinalis

Anticatarrhals

Catarrh is mucus. Anti-catarrhals eliminate excess mucus from the upper respiratory tract. They are appropriate in the treatment of sinus, throat, ear, and eye congestion and drainage. While catarrh may be a response to invading microorganisms, excessive untreated catarrh can become a breeding ground for such organisms, leading to acute or chronic infection (e.g., sinus infection). The tannin and volatile oil content of many of the anti-catarrhal herbs accounts for its actions.

Examples of commonly used herbal anticatarrhals include:

Achillea millifolium
Ephedra sinica
Hydrastis canadensis
Matricaria recutita
Pimpinella anisum
Plantago spp. (plantain)
Sambucus spp.
Glycyrrhiza glabra
Thymus vulgaris
Zingiber officinalis

Anticoagulants

Botanical anticoagulant activity is typically attributed to dicoumarol, a powerful anticoagulant substance formed from coumarin by bacterial action in molding sweet clover hay. Many herbs contain coumarins and furanocoumarins, however, this does not mean they have anticoagulant activity. Coumarins, for example, are widely present not only in botanical medicines, but also in food sources such as carrots, celery, and parsnips. Their activity is 1000 times weaker than dicoumarol. However, several herbs are known to affect bleeding time, and some have been theoretically associated with interactions with anticoagulant therapy. Therefore, it is best to err on the side of caution, particularly when a patient is using anticoagulant therapy, or prior to, during, or shortly after surgeries. Herbs that have been associated with anticoagulant activity include garlic, ginkgo, and dong gui.

Antifungals

These herbs are used to reduce local fungal infections, i.e. Athlete's foot or vaginal candida infection, and are also used by integrative practitioners when there is intestinal yeast overgrowth (i.e., intestinal dysbiosis) causing digestive problems such as gas and bloating.

Examples of commonly used herbal antifungals include:

Allium sativa
Hydrastis canadensis
Melaleuca alternifolia
Origanum vulgare
Tabebuia spp.
Thymus vulgaris
Vitex agnus castus
Zingiber officinalis

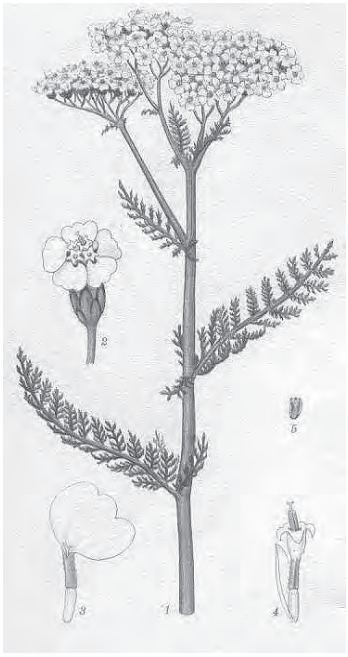
Antihemorrhagic

Herbs that inhibit hemorrhage; called "styptics" when used topically, and also referred to as hemostatics. Agents which arrest bleeding are frequently astringent, actually the origin of the word "styptic" (Greek). Antihemorrhagic herbs discussed in this course are used explicitly for the purposes of uterine bleeding. They may be useful in the treatment of heavy menses, metrorrhagia, menopausal flooding, postpartum uterine hemorrhage, or dysfunctional

uterine bleeding (DUB).

Examples of commonly used uterine antihemorrhagics:

Achillea millefolium
Alchemilla vulgaris
Capsella bursa-pastoris
Cinnamonum spp.
Erigeron
Geranium maculatum
Myrica cerifa
Panax notoginseng
Quercus spp.
Trillium erectum
Yarrow



Antihistamines

Inhibit or prevent action of histamine; histamine receptor antagonists. Their most relevant application is in the prevention and treatment of allergies and inflammatory reactions.

Examples of commonly used herbal antihistamines include:

Albizzia lebbeck
Euphrasia officinalis
Matricaria recutita
Petasites hybridus
Scutellaria baicalensis
Urtica dioica

Anti-lipemic, anticholesterolemic

Substances that prevent or reduce lipids accumulation in the blood. Some antilipemic agents work by enhancing the hepatic breakdown of LDL cholesterol and increasing the uptake of LDL from the blood into the liver (guggul), while others interfere with the absorption of cholesterol across the intestine and enhance the conversion of cholesterol into bile acid (ginger, curcumin).

Examples include:

Allium sativum
Commiphora mukul
Cratageus oxyacantha
Curcuma longa
Zingiber officinalis

Anti-lithics

Prevent formation of stones. Research indicates that much of the origin of urinary stones may be related to imbalances in dietary mineral availability, or mineral imbalances due to problems originating in the digestive system rather than solely in the urinary system. However, some benefits have been clearly demonstrated with the

use of urinary alkalinizing agents, capable of moderate solvent action on the stones. The treatment of galls stones and urinary stones differs, however in both cases antispasmodics are appropriate, and in the case of urinary antiseptics, demulcents should be included to protect the urinary mucosa from damage.

Herbs commonly used for pruritic skin conditions include:

Arcticum lappa (burdock)	*Equisetum arvense*	T*araxacum officinalis* (leaf)
Arctostaphylos (uva ursi)	*Lithospermum officinalis*	*Verbena officinalis*

Anti-pruritic

Reduces itching. Pruritic (itching) conditions are typically treated with a combination of anti-inflammatory (see above) and antihistaminic (see above) herbs for internal use, and emollient, anti-inflammatory (see above) herbs for topical use. Additionally, alteratives may be given to support eliminative functions if these are taxed, and nervines or sedative (see below) may be used for the irritability associated with itching.

Herbs commonly used for pruritic skin conditions include:

Berberis aquifolium	Hypericum performatum	Scutellaria baicalensis
Calendula officinalis	Rumex crispus	Taraxacum officinale
Glycyrrhiza glabra	Scrophularia nodosa	Urtica dioica

Antipyretics (also called febrifuges)

Herbs that reduce fever. These may have CNS action or peripheral vasodilatory effects. They are considered to have a cooling action. Fever management in herbal medicine requires understanding of the nature and underlying causes of the fever. It is not always advisable to reduce a fever and in fact, at times it is advisable to even raise a fever. However, risks of fever, and also of the underlying disease process must be thoroughly considered. Sometimes with pregnant women or young children, it is desirable to keep the fever below a threshold, and appropriate antipyretics may be used. Many antipyretics are also nervine relaxants.

Examples of commonly used herbal antipyretics include:

Achillea millefolium	*Melissa officinalis*	*Sambucus spp.*
Eupatorium perfoliatum	*Nepeta cataria*	*Tilia spp.*

Antiseptic

Substances able to inhibit the growth of infectious organisms. Some are used internally, i.e., buchu or uva ursi as urinary antiseptics, or internally and/or topically, for example, goldenseal or thyme.

Examples of commonly used antiseptics include:

Allium sativum
Arctostaphylos uva ursi
Calendula off.
Echinacea spp.
Hydrastis canadensis
Hypericum perforatum
Larrea tridentate
Lavendula off.
Thymus vulgaris

Antitussives

Herbs that inhibit coughing. These herbs relax or discourage cough reflexes either through direct respiratory antispasmodic activity or inhibition of the mucociliary escalator. Examples of commonly used herbal antitussives:

Angelica archangelica
Cimicifuga racemosa
Dioscorea villosa
Drosera rotundifolia
Eschscholzia californica
Glycyrrhiza glabra
Hypericum perfoliatum
Leonorus cardiaca
Lobelia inflata
Matricaria recutita
Mentha piperita
Nepeta cataria
Passiflora incarnata
Petasites (butterbur)
Pimpinella anisum
Piper methysticum
Piscidea piscipula
Thymus vulgaris
Valeriana officinalis
Verbena officinalis
Viburnum spp.

Aromatics

Aromatic herbs (sometimes called aromatic bitters, though they are not bitter) are typically digestive stimulants with a fragrant, spicy, or pungent odor and taste. They were historically used to mask the flavor of unpleasant tasting herbs and medicinally were used to improve digestion. Frequently they were made into aperitifs by macerating in alcohol. Aromatics are often rich in volatile oils, thus they are commonly used today to improve digestion, relieve intestinal griping and flatulence, and relieve nausea. Many are also antiseptic and antispasmodic to the respiratory system, and several, such as anise and fennel, have estrogenic activity and are used in reproductive system disorders.

Examples of commonly used aromatics include:

Amomum cardamomum
Angelica archangelica
Cinnamomum spp.
Foeniculum vulgare
Matricaria recutita
Pimpinella anisum
Trigonella foenum graecum
Viburnum spp.
Zingiber officinale

Cathartic

Cathartics are a potent class of laxatives that cause dramatic or violent elimination. Also called "purgatives." They are considered habituating and unsafe for long-term use; they are contraindicated during pregnancy. Most herbalists do not recommend them for use.

Decongestants

Herbal decongestants are commonly used for the treatment of upper respiratory catarrh and upper respiratory infection, or allergies. They may be warming and stimulating, dry secretions, or facilitate a mucolytic action that assists expectoration of mucus. They may be taken internally as teas or tinctures, or in the case of essential oils, used in steam inhalations.

Examples of commonly recommended herbal decongestants include:

Allium sativum

Camphor (EO/stm)

Eucalyptus (EO/stm)

Glycyrrhiza glabra

Matricaria recutita

Mustard (externally applied)

Peppermint (tea, EO/stm)

Pimpinellla anisum

Sambucus nigra

Thymus vulgaris (tea, EO/stm)

Zingiber officinalis

Diaphoretic, Sudorific

These are agents that promote perspiration. They are generally used to slightly increase temperature in infectious diseases or to cause fever reduction when fever is uncomfortably high. These agents promote a safe fever by raising body temperature while simultaneously allowing the body to modulate it through the normal cooling mechanism of sweating. Hot infusions enhance the diaphoretic effect. Diaphoretics also often have an overall relaxing effect on the musculoskeletal system and after diaphoresis; patients with the flu or upper respiratory infection often sleep better.

Examples of commonly recommended herbal diaphoretics include:

Melissa officinalis

Nepeta cataria

Sambucus spp.

Tilea spp

Zingiber officinalis

Emetics

Emetics induce vomiting. These work by directly stimulating the gut (which also stimulates a cough reflex, hence some of the emetics are also expectorants and vice-versa), as well as by stimulating the "vomit center" of the brain in the medulla. They are rarely used therapeutically. Classically they may have been used in cases of croup to eliminate excess catarrh.

Examples of emetics include: Ipecachuana, *Lobelia inflata*

Emollients

Substances that moisten and soothe the skin are referred to as emollients. Typically, vulnerary herbs are infused in oils, or made into ointment/salve and applied to the skin to soothe irritation and inflammation, or chapped, dry tissue. Demulcents herbs may also have an emollient effect.

Expectorants

Expectorants improve the expulsion of mucus from the lungs or throat. They can also increase secretions from the bronchial passages in order to thin or liquefy viscous congestion, facilitating mucus expulsion. There are generally considered to be two classes of expectorants: stimulating and relaxing, though there is really crossover in the actions of these groups, making the terminology somewhat vague. As a clinician I tend to consider stimulating expectorants those herbs that cause strong expectoration, while I consider relaxing expectorants those that thin the mucus and enhance its elimination while being more antitussive in overall action. The latter class might be considered more bronchospasmolytic. Many of these herbs enhance the activity of the mucociliary escalator. Many of the expectorants that are rich in volatile oils are also antiseptic.

Examples of commonly recommended herbal expectorants include:

Cimicifuga racemosa
Drosera rotundifolia
Glycerrhiza glabra
Grindelia camphorum
Inula helenium
Ipecachuana
Lobelia inflata
Pimpinella anisum
Prunus serotina
Thymus vulgaris
Tussilago farfara
Verbascum thapsus

Galactagogues

Galactagogues stimulate the production or flow of breast milk in lactating women. They may act hormonally, or may include herbs that are nutritive, to improve milk quality and quantity, or nervines to encourage relaxation and the letdown reflex.

Examples of commonly recommended herbal galactogogues include:

Althea officinalis
Avena sativa
Foeniculum vulgare
Galega officinalis
Matricaria recutita
Pimpinella anisum
Taraxacum officinale
Trigonella foenum graecum
Vitex agnus castus

Hemostatics

Substances that slow or arrest bleeding; they may also be called styptics, especially when applied externally. Many commonly used hemostatics are actually astringent herbs, and these are commonly used topically, or internally for conditions such as IBS or ulcers that are often accompanied by some internal bleeding. Tannins lead to local vasoconstriction, and hence a hemostatic effect. Hemostatics may be used to quell uterine bleeding when there are fibroids, or in the case of miscarriage or as a temporary measure to arrest postpartum bleeding. They are not adequate for treating copious or prolonged blood loss; in such cases emergency measures should be sought.

Examples of commonly used herbal hemostatics include:

Achillea millifolium
Capsella bursa-pastoris
Cinnamomum spp.
Erigeron canadensis
Hamamelis virginiana
Hydrastis canadensis
Myrica cerifera
Tienchi ginseng

Hypotensive

Varied mechanisms account for the blood pressure lowering activity of many herbs including increased diuresis, which leads to decreases in sodium and water and thus reduced blood volume and blood pressure; inhibition of cAMP phosphodiesterase (hawthorn) causing relaxation of arteriole smooth muscles, and presence of beta-2 agonists (cramp bark, black haw) which dilate smooth muscles, or EDRF (ginkgo), an effective vasodilator.

Examples of commonly recommended hypotensives include:

Allium sativum
Cimicifuga racemosa
Crataegus oxyacantha
Ginkgo biloba
Passiflora incarnata
Tilea spp.
Viburnum spp.
Viscum alba

Immunomodulator

These herbs enhance the activity of the immune system through a wide variety of mechanisms including direct and indirect stimulation of the immune system, through effects on the adrenal axis, via cortisol and through improving stress resistance. Some herbs may be more appropriately classified as immunostimulants, and are apt to be used to treat colds and infections, whereas others, more strictly considered immunomodulators, are likely to be used when there is poor resistance to stress and infection, or for recovery and convalescence after an illness. Also see Adaptogens.

Examples of commonly recommended herbal immunomodulators include:

Allium sativum
Andrographis paniculata
Astragalus membranaceus
Bupleurum falcatum
Echinacea spp.
Eleutherococcus senticosus
Ganoderma lucidum (reishi)
Lentinus edodes (shiitake)
Panax ginseng
Sambucus spp.
Withania somnifera

Lymphagogues

Lymphagogues, or lymphatics, are herbs that are believed to improve the flow of lymph through the lymphatic circulation, improving overall waste elimination. They are typically used for skin conditions, chronic infections, in the case of acute eruptive infections, for example, chicken pox and measles. They are also commonly incorporated into cancer treatments and protocol for arthritis and other inflammatory conditions. Many are considered alteratives (see above).

Examples of commonly used lymphagoguses/lymphatics include:

Baptisia tinctoria
Calendula officinalis
Ceanothus spp.
Echinacea spp.
Galium aperine
Phytolacca spp.
Stellaria media

Mucolytics

Mucolytic herbs thin respiratory mucus secretions and are used when there is thick, tenacious mucus in upper respiratory infection and congestion. They are commonly combined with expectorants, and in fact, many have a high volatile oil content and possess expectorant mucolytic and antimicrobial properties.

Examples of commonly used mucolytic herbs include: *Pimpinellla anisum, Thymus vulgaris, and Zingiber officinalis*

Rubefacients

These herbs stimulate reddening of the skin through increasing local circulation. They often have a heating effect and the increased circulation enhances localized healing, waste elimination, improved oxygenation, immune response, and pain reduction. Substance P activity has been shown to be reduced with topical application of Capsaicin, reducing pain perception at site. Rubefacient herbs are used topically in the treatment of arthritic conditions, strained and sore muscles, often in liniments and ointments.

Examples of commonly used rubefacients include:

Capsicum spp.

Cinnamomum camphora (camphor)

Cinnamonum zeylanicum

Gaultheria procumbens (wintergreen)

Syzygium aromaticum (cloves)

Sedatives

Herbs with sedating effects are often used in the treatment of acute stress, insomnia, and pain. Other related terms are hypnotic, narcotic, nervine and soporific. (See Nervines above).

Examples of sedative herbs include:

Corydalis spp.

Eschscholtzia californica

Humulus lupulus

Lactuca virosa

Lobelia inflata

Matricaria recutita

Passiflora incarnata

Piscidea erythrina

Valeriana off.

Spasmolytics

Another term for antispasmodics. See Antispasmodics, above.

Stimulants

This term may refer to nervous system stimulants as discussed under Nervines (above) or the term may refer to stimulants for any number of body systems, for example, circulatory stimulants, digestive stimulants, respiratory stimulants, etc.

Circulatory stimulants, such as Capsicum or Prickly ash are typically used to improve peripheral circulation, promote warmth, and improve overall systemic circulation. Circulatory stimulants may also be used topically as

rubefacients (see above) to improve local circulation.

Examples of commonly used herbal circulatory stimulants include:

Capsicum officinale

Rosmarinus officinalis

Zanthoxylum americanum

Zingiber officinale

Digestive stimulants are typically bitters that encourage digestion, appetite, and elimination.

Respiratory stimulants are herbs that promote increased respiratory action, most notably, the expectorants,

Tonics

Tonics improve or strengthen the functional and structural health of a tissue, organ, or cell. General systemic tonics are also called adaptogens and are discussed above. Tonics may also be specific to particular body systems, for example, reproductive tonics (*Rubus idaeus*, *Mitchella repens*), respiratory tonics (*Codonopsis pilulosa*, *Verbascum thapsus*), immune tonics (*Echinacea* spp., *Allium sativum*) or cardiac tonics (*Crataegus oxyacantha*, *Leonorus cardiaca*).

Trophorestoratives

An elegant word for tonics; trophorestoratives nourish and restore the healthy functioning of the organs. Also see Tonics. Adaptogens are prime examples of systemic and adrenal trophorestoratives.

Vulneraries

These herbs promote wound healing. They are typically used whether alone, or with herbs that have astringent, antiseptic, or demulcent activity.

Examples: *Hypericum perfoliatum*, *Calendula off.*

Therapeutic Actions by Body Systems

Herbal actions can be assigned to the body systems in which they provoke the most noticable physical responses. Conceptualizing actions according to physical systems provides the herbalist with a further way to refine his or her prescriptions. The following illustrates this categorization. Some of the actions listed below are not found in the above list, as they are specific properties that might come as sub-categories of those previously neither discussed, nor is the following categorization comprehensive. It is offered as a sampling to help you understand this concept.

Cardiovascular system

Antilipemic

Cholesterol lowering

+, - chronotrope, inotrope

Circulatory stimulant

Hypotensive/Antihypertensive

Hyperemic

Vascular tonic

Dermatologic

Absorbent

Antiperspirant

Astringent

Rubefacient

Vulnerary

Endocrinology/Reproductive

Abortifacient

Anti-estrogenic

Emmenagogue

Estrogenic

Galacatagogue

Partus preparator

Gastrointestinal

Aperient

Anti-emetic

Anti-inflammatory

Bitter

Carminative

Laxative

Spasmolytic

Hematologic/Lymphatic

Alterative

Hemostatic

Lymphocyte, increases

Mitosis inhibitor

Platelet aggregation inhibitor

Immune system

Antibacterial

Antifungal

Antimicrobial

Antiparasitic

Antiseptic

Antiviral

Immunomodulator

Thermogenic stimulator

Unit 1 Lesson 8 Actions, Energetics, and Chemistry

Liver/Gallbladder

Cholagogue

Choloretic

Hepatoprotective

Neurologic

ACT inhibitor

Analgesic

Anesthetic, topical

Anticholinergic

Anticonvulsant

Antidepressant

Antipyretic

Antispasmodic

CNS stimulant

MAO inhibitor

Sedative

Respiratory

(URT, LRT, ENT)

Antitussive

Bronchoantispasmodic

Demuclent

Expectorant

Mucociliary activity, increases

Urinary Tract

Diuretic

Kaliuretic

Naturietic

Part 2: Herbal Energetics

Herbal energetics is a way of thinking about plants, people, health, disease, and nature in a dynamic, fluid way. Energetic systems of healing are found in the traditional medicine systems of almost every culture. They provide a model for practice using a world-view that integrates the story and health of each individual client – a way of thinking about plants and people – and the relationship between them and our place in the world around us. Commonly, energetic systems are intrinsic to the global philosophies and beliefs that shape a culture, embracing the religious, spiritual, and practical aspects that govern the rest of life – including, and perhaps most importantly, a culture's relationship to nature. Many traditional healing systems have energetic models rooted in nature, whereas modern western culture, which is largely materialistic and technological, lacks an energetic system, and the principles of healing are mostly mechanistic.

Herbal medicine as currently practiced in the US, Europe, Canada, and other western nations, is both the result of – and in an ongoing process of – evolution that has been a part of the evolution of western medicine, and which has also had its own branches. Not only does western herbal medicine continue to reflect glimmers of its ancient European roots, it is has incorporated other traditions and influences into a larger amalgamation of ideas and practices. In many ways this is just part of the phenomenon occurring in so many aspects of society accompanying globalization and blending of cultures, but it is also a phenomenon specific to herbal medicine, the traditions and systems of which have been interrupted in their development, continuity, and recording due to various political and social changes in history.

Lacking a consistent internal and inherent system for understanding and categorizing herbs, conditions, and individuals, herbalists have turned to systems that have largely remained intact and uninterrupted, such as traditional Chinese medicine (TCM) with its five elements theories, yin and yang, etc., and Ayurveda with the doshas, for example, all of which offer models for diagnosis and prescribing, and also understanding health, disease, people, and herbs in the language of nature's own patterns and recognizable terms such as hot, cold, damp, dry, excess, deficient.

Though this may seem an archaic way to approach healing, it can provide a useful adjunct tool to more modern herbal practices, by helping herbalists to differentiate and refine the selection process for an herbal formula or protocol. For example, when considering whether to take a sedating or calming approach versus a stimulating approach to a client with fatigue, it can be helpful to know whether the client is intrinsically energy deficient and in need of tonification, or actually chronic hyperstimulated and in need of nervines. Further, knowing whether an herb has heating or cooling actions, something not readily revealed simply by the pharmacology, but by actions observed and studied by herbalists, one can determine whether it is best to warm or cool based on the client's condition and constitution.

The concepts introduced in this lesson are not easy to convey, nor to immediately comprehend. In fact, only time, keen observation, mentorship, and perhaps the study of old texts can truly impart an understanding of herbal energetics. There is not a great deal of literature in contemporary western herbal medicine on which to rely. Many herbalists, because of this, will take a more reductionist approach and apply botanicals based more on traditional or even pharmaceutical actions, or will turn to eastern systems for a framework in which to apply western herbs. There is no fault in this and it is quite logical, and can provide a basis for a broad and multidimensional understanding of botanical medicine and human health and illness, however, understanding herbal medicine in the context from it arose maintains a certain congruence with the history in which the use of

those herbs evolved.

This part of the lesson will explain the concept of energetics from a historic western perspective, comparing these at times with language from TCM and Ayurveda specifically in terms of herbal energetics. Graduates of this program are not expected to be experts in energetic herbal medicine, nor are they even expected to practice within an energetic model. However, to be fully educated about the language of herbal medicine, it is important to have a basic knowledge of the terms and concepts in this lesson as they are used in contemporary herbal practice. I have found that incorporating an ernegetic perspective in my formulating allows me to adjust herbal and dietary plans for clients in a refined and specific way, which I believe enhances the efficacy of my recommendations and minizmies adverse responses to protocol.

The practice and renaissance of herbal medicine by women in modern times has its own language and philosophy that is also touched on in this lesson. Concepts presented in this lesson step off of a strictly linear path and enter a realm where nature, intuition, and observation intersect. This is a realm of herbal medicine that may not appeal to those with a pragmatic or skeptical orientation. That is okay. Nonetheless, it is part of the roots of herbal medicine, worldwide, to step outside of the confines of the obvious and visible into the realm of the cosmos, and the effects of such on health and illness. One may choose to approach this material as metaphor or as a model. That is up to the individual student. It is, however, critical to retain an open mind, as not only can intuition bring marvelous insights into the clinical setting, it is a realm from which many clients will be operating, and requires our respect and understanding.

History and Language of Western Herbal Energetics

While it is often pointed out that Western herbal medicine lacks a system of energetics, this is in fact, untrue. However, herbalists must dig deeply into European roots and then to trace that trail from ancient Greece into the late 19th and early 20th centuries in the US where herbal medicine remained alive and vital, both in folk healing and also in the practices of the Eclectic and Physiomedical physician who maintained very specific approaches that have their origins in energetic concepts. A number of herbalists today are having conversations about the need to articulate a core, systematized model of western herbal medicine, aware that none truly exists, and recognizing the need for harmonization in order to teach herbal students a clear system with which to practice.

The Ancient Energetic Model

Ancient and traditional western herbal medicine had a very defined system of energetics, dating back to prior to the time of Hippocrates, and using terms and ideas such as hot, cold, damp, and dry; melancholic, sanguine, phlegmatic, choleric. These terms related both to the patient and to the herbs. Healing occurred at the juncture where the proper herbal energetic was matched to the patient's energetic state. Medicine reflected elements in nature – present in persona and plant – and healing was about restoring the proper "amount" of an element, or removing obstacles to the proper balance or flow of these elements. So, for example, much as one might place a dehumidifier or a heater in a damp basement where there is overgrowth of mold, the traditional western herbalist may use herbs that dry moisture and provide appropriate warmth if there is dampness.

To further expand this example, one might think of vaginitis as an example of damp heat (discharge, inflammation, itching). Western medicine would identify a pathogenic microorganism and give a substance to kill the organisms whereas the herbalist would identify herbs that reduce heat and dampness. Interestingly, both choices may be antimicrobial herbs, and in fact, if one were to apply an energetic model to western pharmacology, we might also call might antibiotics as substances that dispel dampness and heat – or what we all commonly recognize and refer to as inflammation.

In fact, herbs can also be used in these straight-forward reductionist ways, i.e., as antimicrobials, however, herbalists prefer to consider the impact of the substance on the whole organism. Thus goldenseal, for example, which is a known antimicrobial with direct actions against organisms that cause vaginal infection (i.e., yeast, gardinerella) might be used simply because it is antimicrobial, but one can broaden that view and consider it an herb that is cooling and drying, as it has traditionally been classified. Therefore, it might be recognized that long-term use of it, for example, for bowel dysbiosis, which may require months of treatment, might lead to imbalances in the body due to the excessively cold nature of the herb, and hence for long-term use it may actually be combined with herbs that are slightly warming, for example, ginger or prickly ash, for balance.

The Value of the Energetic Model

Perhaps one of the greatest beauties of the energetic model of herbal medicine, in contrast to a reductionist model (and note, the two models are not mutually exclusive – they can inform each other), is that because the energetic model draws on nature for its language, it reminds us continually, as Matt Wood eloquently states in *The Practice of Traditional Western Herbalism: Basic Doctrine, Energetics, and Classification*, that "We are not isolated from life, we are an expression of life. We are part of this unseen force that propels and patterns us in our daily lives." Nature is a dynamic force, not a static entity. The human body, seen as a reflection of nature, can also be seen as a dynamic entity, fluctuating along a large continuum between health and disease, and with herbs having the ability to move the body, more or less, along this continuum, either toward health, or in the case of toxic or inappropriately applied herbs, toward disorder. Seeing the human body as fluid, changeable, and dynamic allows us to see disease as a changeable state rather than a static and permanent status.

Vital Force

Central to an energetic model is the concept of a vital force, or what in TCM is called qi (chi) and in Ayurvedic medicine, prana. Vital force is the energy infusing all life, and it is also more than that – it is considered intelligent, not in terms of "intelligent design" in a religious sense, but in the sense of there being an intrinsic wisdom that dictates the functions of living organisms and systems of living organisms. This is apparent when one starts to study core medical sciences such as physiology, immunology, and genetics, and realizes, even at the most microscopic level, there is an incredibly perfect intricacy and organization to the human body that is constantly changing internal milieu to regulate the organism and maintain a steady state both in relationship to itself and to the environment.

The adaptive powers of the body are nothing short of amazing! Even modern pharmacology recognized that drugs do not create *de novo* changes in the body – they work with what is there to change those reactions,

responses, and patterns. According to Priest and Priest the great value in herbal medicine in herbal medicine is to supply reconstructive forces and restorative materials not available to the organisms because of obstructive conditions or acquired conditions, Herbalists sometimes use what is called the "nudge approach" which means finding the herbs that will nudge the body to its own optimal response for the situation or condition. Herbs are not used to superimpose a state on the body or individual tissues, but whenever possible, to support, stimulate, or quiet the intrinsic response so that healing can occur.

Tissue States

Another concept that was used in traditional herbal energetics, and which continues to be used by some herbalists today, is that of tissue states, referring to the patient rather than the plant. Examples of these tissue states include excitation or depression, tension or relaxation, referring to the tissue, not the emotional state. Clients may also be described as sthenic or asthenic, that is, having tone or lack of tone. According to classical herbal medicine, the goal of a treatment is achieved by restoring a balance between extremes of tissue states (i.e., hypertonia and hypotonia). The herbalist knows whether to apply herbs that increase or decrease tone, using those botanicals with qualities that affect those states, often using principles of contrary therapies (i.e., applying warming herbs when there is a cold condition).

Tissue States

Tissue State	Quality
Irritation, excitation	heat
Constriction, tension	wind
Atrophy	dry
Relaxation	damp, flowing
Torpor	damp, stagnation
Depression	cold

From Matthew Wood's *The Practice of Traditional Western Herbalism: Basic Doctrine, Energetics, and Classification*

Comparison of Energetic Systems

Greek	Ayurvedic	TCM
Ether	Ether (wind)	Wind
Fire	Fire	Fire
Air	Air	Metal
Water	Water	Water
Earth	Earth	Earth

From Matthew Wood's *The Practice of Traditional Western Herbalism: Basic Doctrine, Energetics, and Classification*

Understanding Herbs from an Energetic Perspective

Applying the concept of energetics to herbs in a practical way, we will focus on what are typically considered the most important qualities: hot and cold, moist and dry, with gradations of those qualities falling between the extremes, i.e., warm and cool. The following are examples of how herbs are classified according to these energetic principles.

Anti-inflammatory

Bupleurum falcatum	bupleurum	cold	dry
Curcuma longa	turmeric	cool	very dry
Matricaria recutita	chamomile	cool	dry
Glycyrrhiza glabra	licorice	cool	moist

Antimicrobial

Hydrastis candensis	goldenseal	cold	dry
Melaleuca alternifolia	tea tree	warm	dry
Thymus vulgaris	thyme	warm	dry
Allium sativum	garlic	hot	dry

Antiseptic

Allium sativum	garlic	hot	dry
Thymus vulgaris	thyme	warm	dry
Echinacea spp.	echinacea	cool	dry
Hydrastis canadensis	goldenseal	cold	dry

Antispasmodic

Zingiber officinale	ginger	warm	dry
Angelica sinensis	dang gui	warm	dry
Dioscorea villosa	wild yam	neutral	neutral
Viburnum opulus	cramp bark	cool	dry

Astringent

Achillea millefolium	yarrow	warm	dry
Quercus spp.	oak bark	cold	dry
Rubus idaeus	raspberry leaf	cool	dry
Hamamelis virginiana	witch hazel	cool	dry

Bitter

Matricaria recutita	chamomile	cold	dr
Berberis aquifolium	Oregon grape root	cold	dry
Taraxacum officinalis	dandelion	cold	dry
Verbena officinalis	vervain	cold	dry

Carminative

Foeniculum vulgare	fennel	warm	dry
Matricaria recutita	chamomile	warm	dry
Pimpinella anisum	anise	warm	dry
Zingiber officinale	ginger	warm	dry

Demulcent

Althaea officinalis	marshmallow	cool	moist
Plantago major	plantain	cool	moist
Symphytum officinale	comfrey	cool	moist
Ulmus vulva	slippery elm	cool	moist

Nervine

Leonurus cardica	motherwort	cool	dry
Scutellaria lateriflora	skullcap	cool	dry
Verbena officinalis	vervain	cool	dry
Valeriana officinalis	valerian	warm	dry

Vulnerary

Aloe vera	aloe	cool	moist
Plantago spp.	plantain	cool	moist
Symphytum officinale	comfrey	cool	moist
Calendula officinalis	calendula	cool	dry
Echinacea spp.	echinacea	cool	dry

While at first glance you might wonder how to make sense of what herbs have which qualities, as you learn the clinical indications for these herbs, the qualities of each herb become increasingly apparent. If someone has a sunburn, this is an obvious hot and dry condition. What qualities would you seek in an herb? Cool and moistening. While you may not readily know yet that aloe vera is cool and moistening when applied topically, its known application for treating sunburn is a clue to the energetics of the herb. While this is a simplistic approach to the material, it gives you a start for thinking about herbs in this practical way.

Herbal energetics are the basis of the principles that ultimately evolved into complex medical systems such as TCM and Ayurveda.

Deficiency and Excess

Deficiency and excess are two additional states commonly integrated in traditional principles of herbal medicine assessment and therapeutics, and which have relevance in contemporary practice. While there are subtle variations and complex combinations of patterns, these states are broadly easy to identify observationally and are what you might expect. A deificient client typically appears thin, dry, fatigued, pale, and may report feeling cold all of the time. A client with an excess state is likely more robust, perhaps loud, ruddy, may have acne, high blood pressure, or apparent signs of inflammation, and may often feel hot and bothered.

Excess and deficiency in terms of tissue states

	Excess	Deficiency
Rate	Excitation	Depression
Tension	Constriction	Relaxation
Density	Atrophy	Torpor

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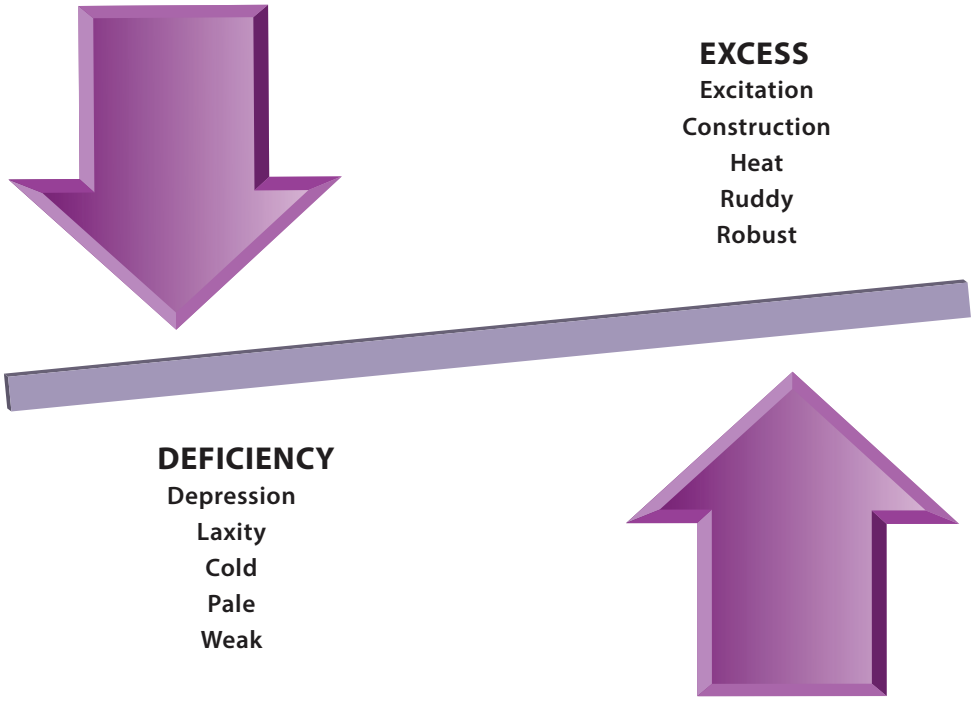


These states also translate into gynecologic patterns. Herbalist Michael Moore described these patterns as follows:

Deficiency symptoms in women include long cycles (30 days or more); erratic cycles; menses that start slowly, with cramping and spotting and that extend too long. Deficiency can also include frequent vaginal or uterine inflammation or congestion, and herpes flare-ups around the time of menstruation. Since liver deficiency is often present, the anabolic peak of days 21-24 is poorly handled, with a sense of heaviness, malabsorption, and pelvic congestion due to portal blood engorgement. Food cravings before menses tend towards sweets and CHOCOLATE! The woman generally feels better while in an estrogenic and catecholamine-dominant mode, uncomfortable under progesterone influence.

For women with defiicency Moore described using stimulating herbs to increase the utilization of steroids, improve pelvic circulation, or effect the hypothalamus/pituitary relationship – for example, *Angelica sinensis*

(dong quai) as a stimulant to the primary gonadal hormones if they are low and Vitex as a stimulant to increase progesterone.

Excess symptoms in women manifest with short cycles and an estrogen rapid peak after menses. Premenstrual

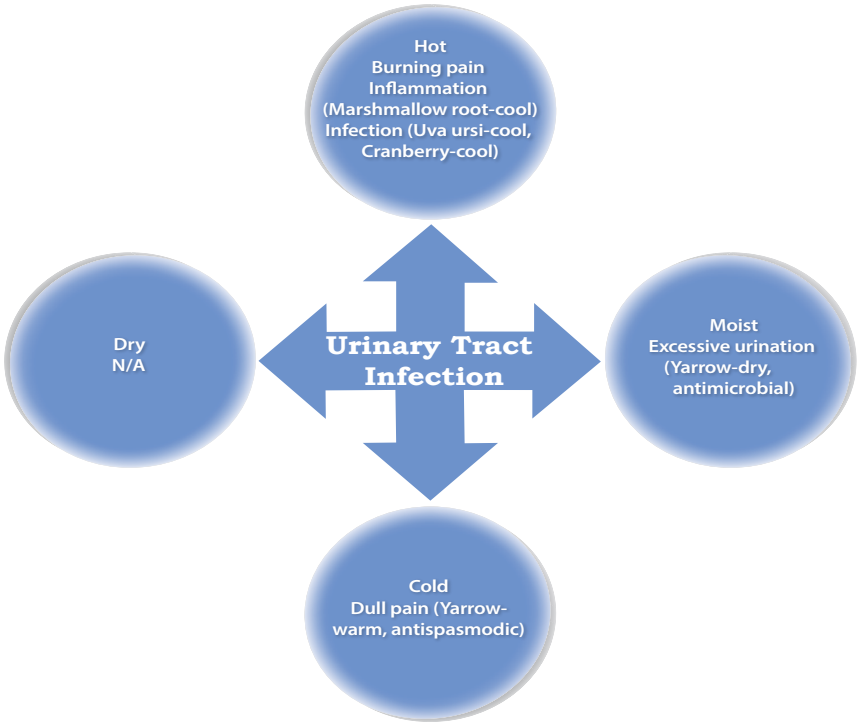
food cravings tend towards proteins and fats. Reproductive excess women feel better during the progesterone phase, not as well under estrogen influence, and may be especially sensitive to the brief estrogen surge just before ovulation.

For those with patterns of excess Moore described modifying the diet and using methods of diminishing adrenal stress, but also recommended herbs such as *Pæonia* (peony) and *Nuphar*, and herbs similar to *Nypmhea odorata* (white pond lily).

Applying Herbal Energetics to Clinical Conditions

The main purpose of applying energetics to the herbal prescription is to individualize the formula to the specific state of the client, rather than just giving herbs based on their action or pharmacologic categorization. Creating the formula becomes a process of going from the general to the specific. For example, in selecting an herb for a client with severe premenstrual cramps you might inquire whether she has nausea, diarrhea, and aching thighs accompanying the cramps. One might select antispasmodics, bowel astringents, and an anti-nauseant/ anitemetic. This would lead to the possibility of any number of herbs in these categories. How, then, does one make the selection of herbs client specific – that requires looking more closely at the individual symptom picture and the client's overall status. Does she feel weak and depressed with her symptoms – does she need to lie down? Or is she generally hearty and does movement help? This might help you choose between tonic herbs or sedating herbs. Is she overheated with the diarrhea, or is does she experience coldness and pinching pain with the cramps? All of these questions help to refine whether you will want to use herbs with heating or cooling properties. Often, you will use a combination of both, emphazing those herbs whose energy you want to predominate the formula. Often an herbalist will specifically add an herb such as cinammon or ginger to warm a formula that is otherwise excessively cooling for a specific client.

Some conditions are somewhat generic in their presentation – they have a similar appearance regardless of the client's constitution and state. For example, urinary tract infection (UTI) nearly always presents with burning urination, heat, and pain. It is an inflammatory infection requiring cooling, demulcent, antimicrobial herbs for treatment. However, some women may experience sharp pain (heat), in others dull pain (cold), etc. Paul Bergner illustrates the energetic treatment of UTI schematically as adapted below in a model you can use to apply to other conditions. One would use the model to add symptoms and herbs into the appropriate locations until a formula is built.



Part 3: he Chemical Language of Herbs

While understanding the "phytochemistry" or the pharmacology of plants is not intrinsic to the understanding of or ability to use herbal remedies, it does impart a greater awareness of what, from a chemical sense, makes plants work, which can be a fascinating subject. This knowledge also enables you to make greater sense and more accurate use of the information found not in only many herb books, but in scientific literature about herbal medicines.

Herbs are complex – they are not made up of single types of constituents, but a composite of many. This is precisely what makes it difficult to establish a single active ingredient for most herbs; multiple ingredients may combine to have numerous different effects on how the herb behaves once ingested. Combined constituents may serve as buffers to the harmful effects of any single ingredient, may improve (or inhibit) absorption of the herb, may have additive effects that increase the activity of the herb, or any number of other actions. Using single or multiple active ingredients from herbs, when they are known, as medicines themselves outside of the context of the whole plant can no longer strictly be called herbal medicine, but should be thought of more as phytopharmaceutical medicine.

The discussion that ensues is a primer on the main active constituents found in plant medicines, what general effects they have in the body, and examples of plants that contain these constituents. This section is meant to

be an overview, not an exhaustive presentation of this subject. You are not expected to memorize all of this information. Please familiarize yourself with the "big picture" concepts for each category.

Alkaloids

Alkaloids are nitrogen-containing compounds. Over 10,000 different alkaloids have been identified with new alkaloids mentioned in the scientific literature daily. Major classes of alkaloids include pyrrolizidines, pyrroles, piperidines, pyrrolidines, tropanes, isoquinolines, indoles, and quinolines, among others. Alkaloids have powerful and potent effects on the body, and have played important roles in society and medicine. There are so many alkaloids that it is impossible to list all of the possible actions of this diverse category, or to provide examples of all types. Characteristically, alkaloids can be recognized by the suffix –ine at the end of the compound name. Commonly known alkaloids are found in such plants as coffee (caffeine), tobacco (nicotine), morphine, cocaine, and deadly nightshade (atropine). In large amounts many alkaloids are toxic, with some toxic even in small doses. Demonstrated actions of alkaloids include analgesia, local anesthesia, hypotension, hypertension, vaso-constriction, cardiac stimulation, respiratory stimulation, anti-neoplasia, muscle relaxation, and psychoactivity. Alkaloids are capable of crossing the blood-brain barrier and thus exert their stimulating or depressant effects on the central nervous system. Comfrey and coltsfoot are herbs which contain pyrrolizidine alkaloids which have been implicated in liver damage (venoocclusive liver disease – VOD). Ephedra and lobelia both contain alkaloids (ephedrine and lobeline respectively) which have powerful effects on the nervous and respiratory systems. The berberine alkaloids in goldenseal makes it a powerful antimicrobial. California poppy and Corydalis are examples of herbs with alkaloids (isoquinone alkaloids) that exert mild analgesic and anxiolytic effects.

Anthraquinones

Anthraquinones are glycoside (see below) members of the quinone family. The anthraquinone class is an important compound found in many of the gentle herbal laxatives including yellow dock, the buckthorns, and *cascara sagrada*. Aloe-emodin from the aloe plant is also an anthraquinone, and senna contains anthraquinones as well. Because they trigger bowel peristalsis which may stimulate uterine contractions, anthraquinone-containing herbs are generally contraindicated in pregnancy, though yellow dock is often excepted from this contraindication due to its mildness. Hypericin in St. John's wort is a dimeric anthraquinone.

Carbohydrates (Oligosaccharides and Polysaccharides)

Carbohydrates serve as sources of energy, carbon for metabolic processes, sweet flavor in foods and herbs, sources of fiber, and function in cell-to-cell recognition. For our purposes in this course, we focus on oligosacchardies, polysaccharides, and mucopolysaccharides. They are classified as such based on the number of saccharides present, and have different bioactivity. Important oligosaccharides function as prebiotics –

indigestible food ingredients which are able to stimulate or serve as substrates for the growth of specific intestinal bacteria. They may have anticarcinogenic, antimicrobial, hypolipidemic, and glucose-modulating activities. Inulins are an important polysaccharide present in many common fruits and vegetables, including garlic, onions, and bananas. Inulins from chicory and Jerusalem artichokes are sold as dietary supplements. Inulins are also found in burdock root, globe artichoke, elecampane, and dandelion root. They are used for hypoglycemic, hypolipidemic, antitumor, and antimicrobial actions. In vitro research suggests immunostimulatory activity from polysaccharides, for example, in echinacea and many of the medicinal mushrooms (i.e., reishi, maitake, shiitake, and others).

Flavonoids

Also known as flavonoid glycosides, these ubiquitous plant constituents are responsible for the beautiful yellows, oranges, and reds found in the leaves, flowers, stems, and fruits of plants. For example, oranges, lemons, carrots, strawberries and melon are rich in them. Flavonoids are nourishers of the cardiovascular system, improving the tone of the blood vessels. They reduce free radical damage, and they are also powerful anti-inflammatories, making them invaluable in the treatment of allergy problems. Bioflavonoids are flavonoid compounds found in conjunction with Vitamin C, and are abundant in citrus, rose hips, cherries, and berries. These are also strengthening to the blood vessel walls, and are particularly useful when there is a tendency toward nosebleeds, bruising, or cardiovascular problems. While hundreds of flavonoids are known, only quercetin, kaempferol, and myricetin are common. Important sources of quercetin include evening primrose, calendula, onion, cranberry, apples, garlic, cayenne, and plants in the Brassicasae family, for example, cabbage, kale, and Brussels sprouts. Quercetin is widely regarded for its anti-inflammatory effects, and it may also serve a role as an antiviral agent and in tumor inhibition. Rutin, known for its vascular strengthening effects, is also a member of the quercetin family, and is found in dozens of important and commonly used medicinal plans including yarrow, garlic, calendula, St. John's wort, neem, hawthorn, California poppy, anise seed, chamomile, passionflower, elder, motherwort, and numerous others. Kaempferol is found in garlic, calendula, boneset, thyme, green tea, devil's club, ginkgo, elder, milk thistle, chamomile, basil, passionflower, marshmallow, dill, and many others.

Glycosides

There is not a distinct phytochemical category for glycosides; rather, any type or class or molecule may occur in the form of a glycoside. Simply put, a glycoside is any molecule with one or more sugar groups attached. The molecule without its additional sugar group/s is called an aglycone. For example, the purple anthocyanin compound called 'cyanidin' can occur as a free aglycone, or in the form of numerous glycosides with various different sugar groups attached. One of these glycosides is known as 'cyanin.' Well-known groups of compounds such as the cyanogenic glycosides and the cardiac glycosides are best classified according to the structure of their aglycones.

Isoflavones

Isoflavones differ from flavones in their structure and in how they are found in nature (free rather than in glycoside form). More than 600 types have been identified. Isoflavones have received a great deal of attention due to their affinity for estrogen receptors and thus their potential effects in preventing, treating perimenopausal and menopausal symptoms, and their possible beneficial – or harmful – roles in breast and other estrogen dependent cancers, especially in women. The greatest attention has been placed on genestin and daidzin from soy and formononetin and biochanin A from red clover. The ability of the body to transform the isoflavones in plants into bioactive forms of estrogens (equol) appears to be largely individual, dependent on the types and amounts of bowel flora present.

Lipids

Lipids are a large group of organic (carbon containing) molecules broadly distributed in nature. They are largely insoluble in water, but are alcohol soluble. Fatty acids, fats, oils, phospholipids, steroids, terpenes, and waxes are examples of substances in this class. Lipids form the basic structure of cell membranes, provide an method of storing energy, provide vitamins, form the basis of hormones, act as protective covering for plants, and act as carriers of fat-soluble vitamins (i.e., A, D, E and K). Numerous plants used medicinally contain lipids, including evening primrose, borage, and flax.

Mucilage

Polysaccharides (complex sugars) when in contact with water, form the slippery, viscous substance known as mucilage, that is soothing and moistening to inflamed tissue, both when topically applied and taken internally. When soaked in water, certain herbs, such as flax, psyllium, and slippery elm, form a gelatinous matter that serves well as a bulk laxative. Comfrey root, marshmallow root, and plantain are effective topical applications for burns, irritations, and dry skin, whereas taken internally for coughs, marshmallow root and slippery elm relieve irritation. Because mucilage is hydroscopic – that is, it absorbs water – many of these herbs are also excellent for absorbing excessive secretions from wounds and from the upper respiratory passages.

Resins

Resins are a form of plant exudate, as are balsams. Synthetic resins are also available. Most natural resins are from trees, for example, pines and firs, and are a natural response to damage to the plant. Like lipids they are mostly water-insoluble, and alcohol soluble. They often have an aromatic scent. Some examples of resin containing herbs and their uses are: frankincense (*Boswellia serrata*) which is antinflammatory and used in perfumery, camphor, a rubefacient, myrrh, an antimicrobial, yerba santa and grindelia, both expectorants, and the latter also an anti-inflammatory, and damiana, a nervine.

Saponins and Sterols

Mixed with water, the glycosides in saponin-containing plants form a soapy lather. Saponins have a wide range of effects in the body, with some such as mullein acting as expectorants, and others such as wild yam acting as anti-inflammatories. Certain plants contain steroidal saponins, which closely resemble hormones produced by the ovaries, adrenal glands, and testes. In the body, these support the sex hormones and adrenal glands, the latter preventing the deleterious effects of stress and benefiting the immune system. Examples of these include ginseng, licorice, Siberian ginseng, and black cohosh, as well as industrial source of steroids, for example, soy, wild yam, fenugreek, sarsaparilla, beth root, and yucca, among others. Cardioactive saponins include lily-of-the-valley, digitalis, and hellebore.

Sesquiterpenes

Sesquiterpenes include chamazulene from chamomile, yarrow, and wormwood, zingiberine from ginger and plants in the Curcuma genus, and gossypol is found in cotton root, for example.

Sesquiterpene lactones

Sesquiterpene lactones are highly biologically active and are a common cause of allergic reaction from contact dermatitis. While they may have antitumor activity, most are too toxic for internal consumption.

Tannins

These are substances whose main therapeutic action is astringent to the tissue they contact. This means that they tone tissue as well as forming a protective layer, making tissue less permeable to invasive organisms. Tannin-containing herbs such as white oak, plantain, witch hazel, and raspberry leaf are used to treat a variety of conditions including diarrhea, burns, ulcerative conditions, inflammation, sore throats, hemorrhoids, and weepy rashes. They should not be taken internally for an extended period of time as they can interfere with nutrient absorption.

Terpenes

Terpenes are found in volatile oils, resins, sterols, and carotenoid pigments. They are found as unsaturated hydrocarbons, alcohols, esters, aldehydes, and ketones. Examples of monoterpenes are limonene, linalool, citronellal, and carvone. Iridoids are also a form of monoterpenes, and form what is classically known as "the bitter principle" which is common in plants used to stimulate digestive secretions and as bitter tonics.

Volatile Oils

Volatile oils, composed of alcohols and hydrocarbons, are complex substances responsible for a wealth of healing properties, and are found widely throughout the herbal materia medica. Volatile oils lend fragrance to plants, including many of those we use for seasoning our foods, including rosemary, dill, anise, parsley, basil, thyme, and mint. Many of the nervine herbs are rich in volatile oils, as are those which have marked therapeutic value as respiratory antimicrobials and antispasmodics. Their therapeutic actions include: antimicrobial and antiseptic action, immune enhancement, reduction of intestinal gas and cramping, nervous system relaxation, smooth muscle relaxation, anti-inflammatory and antispasmodic qualities, and enhancement of both digestion and expectoration. They also have wide application as aromatherapy agents, acting upon both the physical and psycho-emotional bodies. Though they are delicate substances, they are easily absorbed, and can be used in teas, tinctures, baths, steam inhalations, massage oils, and aromatherapy diffusers, depending upon the effects you are seeking.

Bringing it All Home

Ok, yes, a lot of information. You will see many of these terms repeatedly throughout the course and by the time you get to lesson 50, many of them will be old friends! You're doing great so keep on keeping on! Herbal medicine is a continual learning process. In fact, you might say plants are a growth field!

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 9

Herbal Preparations & Maintaining an Herbal Pharmacy

Learning Objectives

By the end of this lesson you will be able to:

1. Recognize and describe the most commonly used forms of herbal preparations
2. Differentiate between water, alcohol, and oil based preparations and their uses
3. Understand the basics of maintaining an herbal pharmacy
4. Prepare an herbal infusion
5. Prepare an herbal salve
6. Prepare an herbal oil
7. Prepare an herbal suppository
8. Understand the basics of tincture making.

Unit 1 Lesson 9 Herbal Preparations

Required Reading

Botanical Medicine for Women's Health, 2nd edition (Romm)

- Selecting and Identifying Quality Herbal Products, pp 82-86
- Botanical Preparation Forms, pp 52-62

Key Words

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Acetract
Compress
Decoction
Douche
Essential oil
Fluid extract
Glycerite
Infusion
Menstruum
Poultice
Salve
Ointment
Standardized extract
Suppository
Syrup
Tea
Tincture
Wash

Just as flowers grow from the Earth, so the remedy grows in the hands of the physician…the remedy is nothing but a seed which develops into that which it is destined to be. -Paracelsus

Herbal Preparations

The art and science of preparing herbal medicines is at the heart of both traditional herbal medicine and modern herbal pharmacy. Understanding the many different forms of herbal preparations is essential to knowing which type of medicine will be the most effective and user-friendly for different herbs, conditions, and for different individuals. Understanding herbal preparations will also allow you to educate your clients, patients, and students about which products available on the herbal market are of high quality and efficacy, and which to avoid.

Many herbal medicines can be effectively and inexpensively prepared at home, which is fun and rewarding, and a part of the healing journey. It is also a place where beauty becomes a part of the healing process. Herbal medicine making is one of my favorite aspects of herbal medicine. Depending on where in the process you jump in, it can take you from harvest to healing medicine, or if you purchase the raw materials, at least through the

creative process of medicine making. For me, the energy and intention I bring to medicine making feels similar to the energy I might put into creating a nourishing meal for family or friends, or the caring I might put into serving a cup of tea or soup to a friend or loved one who is feeling ill. It is also a wonderful sensory process filled with color and scent, and as you will see in the end of this lesson, a place that if you wish, you can actually bring art into the process, though for certain, some of my colleagues, for example, the folks at Herb Pharm and Gaia Herbs, blend the art with refined botanical science!

This lesson discusses the most common forms of herbal preparations. Instructions are provided for most of the preparations that can be made at home. Special preparations (i.e., boluses, sitz baths) specifically for gynecologic concerns, and which are not readily available on the herbal market, are also described. This lesson discusses storing herbs, shelf life, identifying high quality herbs and products, and the art and science of packaging and labeling. The lesson also includes a downloadable list of Resources for raw materials, herbal products, and packaging materials. The measurements provided in this chapter for tinctures are not for pharmaceutical standard preparations; they are for simple medicines that can be prepared in the home or clinic setting. Depending upon the type of practice you have, you may prefer, as many herbalists do, to purchase professional quality tinctures.

If you wish to learn more about medicine making I recommend that you also consider adding these books to your library:

- *Making Plant Medicine* by Richo Cech
- *The Herbal Medicine Maker's Handbook* by James Green
- *Medicines form the Heart of the Earth* by Sharol Tilgner

It is difficult to meet pharmaceutical standards of quality, or even the standards for Good Manufacturing Practices (GMPs) now established by the FDA for herbal products at home or in the clinic. However, even small herb business and practitioners are not exempt from these, so it would be wise to at least be familiar with these, and follow high standards of cleanliness, labeling, and record keeping if you maintain an apothecary or sell products.

Getting Started: Supplies

A variety of easily obtainable supplies are required for making everything from teas to salves and basic tinctures in your kitchen or clinic pharmacy. You will need:

- Glass jars of varying sizes with lids
- Glass or stainless steel pots
- A sharp knife
- A small funnel
- Mesh strainers and cheesecloth or muslin
- A vegetable grater
- Measuring spoons
- Wooden and stainless steel spoons, and optionally, glass stirrers
- A cutting board

Water, vegetable oil, vodka (or other alcohol), glycerine, and beeswax complete the basic list once you have the herbs you need. A coffee grinder is valuable for making small amounts of powders, though they will not be extremely finely ground and a grinder will not work with very hard roots. If you will be making percolations or products requiring powders, you will need to invest in a substantial grinder. A tincture press is optional, though invaluable if you are making tinctures in quantity or regularly.

If you plan to use your own preparations as the primary medicines in your practice, or even your own personal medicine chest, you will need to plan ahead. Tinctures, for example, take weeks to prepare, so you will need to have these on hand in advance, as you do not have weeks to wait if you need a tincture today. Some products are only useful when made from fresh herbs, and the herbs may only by available seasonally. Most herbalists stock a combination of purchased and self-prepared products. A very busy practice generally requires increased reliance on purchased herbal products.

Types of Preparations

There are many possibilities for extracting the elements from plants needed for an herbal remedy. Different types of preparations are required for different plants, conditions, and circumstances. A menstruum is a base or solvent used for extracting medicinal constituents from plant material. Water, alcohol, glycerin, and oil are the most commonly used menstruums.

The following are the most regularly used forms of herbal preparations and the most important for you to know how to use. Herbal practitioners should be able to define each of these preparations and their most important uses, as well as have an understanding of what herbs are most amenable to yielding good medicines in the different forms. The most commonly used of these preparations for women's herbal medicine are explained in detail following this list.

- Acetract, vinegar extract
- Baths
- Capsule
- Compress
- Decoction
- Douche
- Essential oil
- Fluid extract
- Glycerite
- Infusion (cold/hot)
- Lozenge
- Oil
- Oxymel, honey extract
- Pill
- Powder
- Salve/ointment
- Standardized extract
- Suppository/bolus
- Syrup
- Tea
- Tincture
- Wash

Liquid Preparations

Water-based preparations

Our bodies are comprised of mostly water, as are the earth and the plants. Water based preparations – or aqueous extracts – are just that: products prepared using water to extract the valuable constituents that make the plant a medicine. They include such preparations as teas, infusions, and decoctions, and the many more preparations that are made from these such as syrups, baths, and steam inhalations. Most tinctures also contain some water, but they are considered alcohol extracts (see below). Our bodies accept water-based solutions easily. Water-based preparations are generally inexpensive to prepare and are often quite safe because they are relatively dilute, though this is not always a reliable safety guideline. Their taste is variable, but many teas and infusions are wholly palatable if not altogether tasty. Many herbs can be used to enhance the taste of infusions. The unpleasant taste of some herbs may actually be a way that nature protected our ancestors from ingesting noxious chemicals in large volumes – it would be hard to drink a whole cup of a bitter-alkaloidal tea, but not so difficult with a pleasant tasting gentle herb. Again, not an absolute rule, but a small guiding principle. It is when we begin to use concentrated, strong herbs that we'd otherwise never get down in larger amounts that we sometimes run into greater trouble.

Water-based products require preparation at home which some clients/patients might enjoy doing, but which others might see as too time consuming, There are a few other potential disadvantages: it may be difficult for clients/patients to transport teas and infusions to work, they have a short shelf life requiring preparation every few days, and they don't always taste very good! Aqueous extracts also make only the water-soluble constituents available to the patient, so they are inappropriate if non-water soluble constituents are required for treatment.

Teas, Infusions, and Decoctions

The three basic types of water-based preparations (aqueous extracts) are teas, Infusions, and decoctions. Most other forms of water-based preparations for internal and external use (i.e., syrups, baths, washes) are made from these basic forms.

Teas

A tea is prepared from a very small amount of herb steeped for a brief time in boiling water, usually 1-2 teaspoons of herb per 250 mL (1 cup) of water. Beverage teas made from commercially available tea bags are really more of a culinary event than a medicine, though some, if good quality and taken over time, might accumulate beneficial effects for the consumer.

Nervine Tea

Combine equal parts:

Matricaria recutita	chamomile
Melissa officinalis	lemon balm
Lavendula officinalis	lavender

Indications: General relaxing beverage, relieve stress, promote sleep.

To prepare: Steep 2 teaspoons of dried herb in 250 mL boiling water for 10 minutes. Place a lid on the vessel while steeping. Strain; sweeten if desired.

Dose: 1 cup 1-3 times/day

Ginger Tea

Zingiber officinalis	ginger root

Indications: Early symptoms of cold with chill; menstrual cramps; nausea and vomiting of pregnancy (NVP)

To prepare: Grate 1 heaping tsp of fresh ginger. Place in a cup, cover with 250 mL boiling water, and steep covered for 10 minutes. Strain, sweeten with honey, and drink hot.

Dose: For NVP sip 1-2 cups through the day as needed; otherwise, 1-4 cups per day. Hot ginger tea can also be applied as a fomentation over the abdomen for menstrual cramps.

Infusions

Infusions are principally made from the above ground or delicate parts of dried herbs, including leaves, stems, and flowers, aromatic seeds (i.e. anise and fennel seeds), and fruits. The plant parts, or at least the desired constituents from these parts, should be highly water soluble for the preparation to be effective. Some infusions can be quite strong tasting, but many are pleasant and easily palatable. There are two types of infusions: hot and cold. Cold infusions are also called macerates.

To prepare a hot infusion: Place the herbs in a clean vessel with a cover (cup, tea pot, glass canning jar). Bring the desired amount of water to a boil, pour over the herbs, and cover the vessel. Steep for the recommended amount of time for the herbs being infused. Strain and take hot or at room temperature as recommended or preferred. Typically 1 tablespoon of dried herb per 250 mL (1 cup) of boiling is used. Steeping time is as follows:

- Aromatic plants/plant parts: 10-15 minutes
- Non-aromatic leaves and flowers: 30 minutes to 1 hour
- Woody plant parts and soft roots: 1-4 hours

Sample Infusion: Nourishment Blend

Urtica dioica	nettles	4 parts
Rubus idaeus	red raspberry leaf	3 parts
Rosa canina	rose hips	2 parts
Mentha spicata	spearmint	1 part

Indications: A gently nourishing tonic for use during pregnancy.

To prepare: Steep 1 Tbs herb per 250mL boiling water for 30 minutes. Strain and serve hot or at room temperature.

Dose: 1-3 cups/day.

To prepare a macerate: Prepare as above, however use cold water in place of boiling water. The steeping time varies from 1 to 4 hours, depending on the herb and its extractability. Cold infusions are used for extracting mucilaginous compounds from herbs such as marshmallow root (*Althaea officinalis*) and slippery elm (*Ulmus rubra*), or when one wants to extract constituents from tannin-rich plants while avoiding extracting high quantities of tannin, for example, from uva ursi (*Arctostaphylos uva ursi*) or red raspberry leaf (*Rubus idaeus*). As no boiling water or alcohol is used to prepare cold infusions, microorganisms that would otherwise be killed might remain in the final cold infusion product. Caution may be warranted in using cold-infusions with immuno-compromised patients. A solution to this problem is to prepare the cold infusion, then bring it to a quick boil before consuming.

Sample Cold infusion (macerate): Bowel Anti-inflammatory Blend

Althaea officinalis	marshmallow root	4 parts
Matricaria recutita	chamomile	4 parts
Zingiber officinalis	ginger	1 part
Mentha piperita	peppermint	1 part

Indications: Irritable bowel syndrome; bowel inflammation; stomach upset; dyspepsia (heartburn)

To prepare: Steep 1 Tbs herb/250 mL cold water for 1 hour, stirring a couple of times. Strain; bring to a boil for 1 minute, and serve warm or at room temperature.

Dose: 1-3 cups per days as needed.

Decoctions

Decoctions are made from tougher plant parts, for example, tough roots, barks, and non-aromatic seeds. Simmering or boiling the herbs in an appropriate volume of water extracts the desire water-soluble constituents.

To prepare a decoction: Place the required volume of herbs into a pot with a lid. Typically from ¼ to 1 ounce of herb is used per quart of boiling water. Cover with the necessary amount of water as described in the specific recipe. Slowly bring the water to a simmer, using a wooden spoon to stir the herbs in as the water just begins to boils. Reduce heat to maintain a gentle simmer and cook for 20 minutes or longer, depending upon the desired strength and concentration. Decoctions are concentrated herbal medicines, and unfortunately, are too unpalatable for most Americans.

Sample Decoction: Alterative, Aperient Formula

Taraxacum officinale	dandelion root	3 parts
Rumex crispus	yellow dock root	2 parts
Mahonia aquifolium	Oregon grape	2 parts
Glycyrrhiza glabra	licorice root	2 parts
Zingiber officinalis	ginger root-dried	1 part

Indications: Mild acute or chronic constipation; inflammatory skin problems (i.e., acne, itching, eczema)

To prepare: Place 4 Tbs herb in 1 liter of cold water. Slowly bring to a boil, and then reduce to a simmer. Simmer partially uncovered for 30 minutes. Strain.

Dose: ¼-1 cup 2-3 times/day

Syrups

Syrups are concentrated, sweet preparations made from an infusion or decoction base that has been simmered down to a significantly reduced volume. They are easy to make once you have made your decoction. Sugar and honey are the most commonly used sweeteners. Refrigeration is required for home-made syrups. Addition of a small amount of a sweet alcohol such as brandy can extend the shelf life of syrup to several weeks. The concentration of simple sugars needed to prevent microbial growth is approximately 50% of the total volume. Syrups are very palatable medicines but expose the patient to the regular consumption of sugar, thus may not be optimal for regular, long-term use. Syrups can be used for short-term delivery when unpalatable herbs would otherwise prevent completion of a protocol. Care must be taken with diabetic patients.

Alcohol Extracts

Tinctures and Fluid Extracts

Most tinctures are hydroethanolic extracts – that is, a combination of water and alcohol. The combination optimizes the extraction of plants when both water- and alcohol-soluble constituents are desired in the final product. Alcohol content ranges from 30% to 95% ethanol depending upon the amount of alcohol required for optimal extraction and preservation of the desired constituents. The remaining percentage of liquid is the water content of alcohol, therefore, water does not need to be added – it is already in the alcohol (grain alcohol is an exception at nearly 100% alcohol). Old pharmacopoeias and a number of contemporary herb books provide specifications on the alcohol concentration required for different herbs.

Tinctures have a long shelf life, frequently lasting many years. The alcohol content preserves the tincture from bacteria and fermentation, even when left at room temperature, however they should ideally be kept in a cool location away from direct heat and light. Some research shows substantial degradation of individual constituents at room temperature after 3-6 months, thus, studies are needed to determine optimal storage conditions and shelf life for various plants. This could play a significant role in cost-savings to patients and industry, as well as play a substantial role in plant preservation by eliminating waste that occurs as a result of unnecessarily short expiration dates. Also, by determining which plants have a short shelf life, such studies could help to maximize medicinal plant efficacy by ensuring that patients receive fresh product.

The potency of hydroethanol extracts is written as a ratio in weight to volume (w:v). A 1:1 means that 1g of the herb material by weight was extracted with 1 mL of liquid solvent, a 1:2 extract uses 1 gram of herb to 2 ml of liquid solvent, etc. The weight of the fresh plant includes the water weight of the raw material. An average fresh herb is 67% water by weight, where three pounds dry down to one pound. The amount of actual plant tissue in 1:2 fresh plant maceration is equivalent to 1:6 dry plant maceration. This can be confusing since the 1:2 fresh plant maceration seems more potent by threefold, yet they use the same amount of plant tissue and can be viewed as equivalent.

There are 2 main types of alcohol-based extracts: macerations and percolations. The difference between them is in how they are prepared. Both are discussed below.

Herbal Preparations Glossary

- Aqueous: dissolved in water; water-based
- Hydroethanolic: a water-alcohol combination; used to make tinctures.
- Marc: the herbal "waste" material left over after making an extraction
- Menstruum: the liquid used to extract plant material, i.e., water for teas; alcohol for tinctures

Macerations

A maceration is a type of tincture made by soaking the herb in an alcohol and water menstruum for 2-6 weeks. The mixture is gently shaken or agitated once every few days. At the end of the extraction period the mixture is pressed to extract the liquid from the solid material. The liquid is then finely filtered to obtain a final extract and the marc discarded. Macerations are very easy to make at home and when good quality starting material is used and the proper ration of plant to alcohol is used, they can yield a high quality tincture. All that is needed are large glass bottles with fitted lids, a method of pressing and straining the liquid from the herbs, and herbs and alcohol. Affordable tincture presses are available for home use, however most herbalists in small-scale production fashion homemade sacks out of cheesecloth and use a good deal of elbow grease to wring out the liquid. This, however, is a much less efficient pressing method than a tincture press with much extract inevitably retained in the marc.

Most fresh plant tinctures have a 1:2 to 1:3 w:v ratio, however sometimes herbs that are potentially toxic are intentionally made more dilute – even up to 1:10. Fresh plant tinctures capture constituents close to harvest, without exposing plants to the drying process which for many plants can reduce their potency, thus certain herbs with sensitive constituents are prepared only as fresh tinctures. The actions of certain herbs may be different depending upon whether they are prepared fresh or dried. *Lobelia inflata*, for example, is parasympathomimetic when fresh and primarily emetic when dry. A few plants, for example, *Frangula purshiana* (cascara sagrada) bark, must be dried first, in this case, to eliminate the plant's cathartic qualities.

Dried plant macerations are prepared in the same way as fresh, but the starting material is first dried. Due to the reduced water volume in the dried starting material, these tinctures are generally prepared in 1:4 to 1:5 w:v concentrations. It is difficult to make these more concentrated. Except in very resinous plants such as such as *Commiphora molmol* (myrrh), the menstruum seldom exceeds 60 to 70% ethanol.

Making a Tincture: Traditional Method

The following is a method for making tinctures at home without massive amounts of calculations. While you will not necessarily be extracting your herbs with a scientifically quantified amount of alcohol specific to that particular herb or its constituents, you will still generally yield a good end product. The key is to begin with high quality starting materials. Choosing herbal materials is discussed further down.

Supplies

- 1 clean, dry, quart-sized canning jar with a tight fitting lid
- 100 grams of fresh or dried herb, as appropriate to the plant being tinctured
- Vodka: for fresh plant 200 mL, for dried plant 400 mL

Place the plant material in a pint jar. If using fresh herbs, clean them by picking out damaged parts and brushing dirt off roots. Do not wash above ground plant parts. Roots, stems, and barks need to be chopped. Now pour your alcohol over the herbs to about ½ inch over the top of the herbs (use extra alcohol if necessary, but do not

add water).

Cap the jar tightly and label it with the name of the herb, alcohol content, and the date. Store where it won't be exposed to direct sunlight, and give it a gentle shake every few days. If you see the liquid level going down below the surface of the herbs, top it off with some more alcohol. Some herbalists let their tinctures "work" for only two weeks. I prefer to let mine tincture for six weeks, starting at the new moon and ending at the full moon six weeks later. At the end of this period, strain your alcohol tincture thoroughly from the plant material. This usually requires some vigorous wringing of the herbs in cheesecloth or cotton muslin to extract as much of the liquid as you can. Pour your tincture into clearly labeled glass jars or tincture bottles and store away from heat and light. Store tinctures out of reach of children. Properly prepared, tinctures remain good for a minimum of two to three years.

Sample Tinctures

Cramp-Ease

Viburnum opulus	(cramp bark)	1:3	30 mL
Dioscorea villosa	(wild yam)	1:3	20 mL
Cimicifuga racemosa	(black cohosh)	1:3	20 mL
Matricaria recutita	(chamomile)	1:2	15 mL
Leonorus cardiaca	(motherwort)	1:3	15 mL

DE-stress

Passiflora incarnata	(passionflower)	1:3	30 mL
Withania somnifera	(ashwagandha)	1:2	30 mL
Leonorus cardiaca	(motherwort)	1:3	30 mL
Lavendula officinalis	(lavender)	1:4	10 mL

Lemon balm simple

Melissa officinalis	(lemon balm)	1:3

Percolations

Percolation, meaning to slowly seep, is another method of preparing tinctures. It is a more complicated process requiring specific glassware for extraction, as well as the ability to obtain finely powdered herbs. In percolation the powder is first macerated in a small amount of alcohol for 24 hours. The moistened herb is next packed into a percolation cone and the menstruum poured over the top of the herb. The menstruum is allowed to "percolate" through the herb in a continuous flow, with an extraction rate of 1-3 drops per second. Menstruum is moved through the herb until the desired amount of tincture has been produced. The weight to volume ratio

is predetermined, and historically was done to a 1:5 concentration. Recently, percolations are being produced at much higher concentrations of 1:2 and 1:3 ratios, although these have not been shown to represent more thorough extractions.

It is undetermined whether percolation provides a superior tincture compared to maceration. Maceration allows the use of fresh or dry starting material and requires less equipment, while percolations can only be performed with dried, powdered starting material and percolation cones. Percolations can be produced at much higher concentrations and in a shorter period of time, typically 2-3 days.

Fluid Extracts

A fluid extract (FE), by definition, is a 1:1 w:v extract. They are highly concentrated and thus are particularly suitable for herbs that require high dosing for efficacy. FEs cannot be prepared by maceration without the application of additional heat or vacuum to remove excess liquid, processing steps that may damage important plant compounds. Percolation also does not yield a true FE unless the marc is repercolated to fully exhaust the plant material. Herbal manufacturers generally professionally prepare FEs. There is no defined advantage to an FE over a good quality maceration or percolation.

Standardized Extracts

Standardization refers to the manufacture of botanical extracts with consistent methods and materials to ensure that products contain the desired ingredients and reliable quality. Optimal standardization practices begin with the starting materials: guaranteeing correct plant species, quality of the materials to be used, and sometimes the identification of "marker compounds" to ensure identity, quality, and strength.

Marker compounds are specific chemical constituents known to occur in certain plants in certain general qualities. These compounds indicate that the manufacturer has the correct species in the correct strength. When marker compounds are reassessed in the final product, this confirms that the contents and quality of the final product matches that of the starting materials.

The term standardization has been misinterpreted and misapplied by manufacturers and consumers, and is sometimes misrepresented as a marketing tool by the former, to mean "active constituents." However, there is not enough evidence with most plants to equate clinical outcomes with certain specific constituents. In some cases markers are well known and they play an essential role in the plant's effectiveness, for example, the chemical complex known as silymarin from *Silybum marianum* (milk thistle) must be present in an extract for the product to be effective. Sometimes, however, there are only one or so of many important compounds, such as hypericin and hyperforin from *Hypericum perforatum* (St. John's wort).

Standardization of manufacturing procedures and material quality has certain advantages, most importantly a measure of control over batch-to-batch variability and certainty to dosing. However, the value of standardization of compounds is uncertain and might not justify the costs of these products over regular tinctures. There may also be dangers to this practice, not to mention marketing hype and dubious practices such as "spiking" products with the desired marker compounds to make them look more effective, and the need for harsh chemical solvents to

make the desired product. For example, recent evidence suggests that the practice of concentrating Hypericum products to higher hyperforin concentrations than are found in nature may lead to the highly publicized effects of the herb interfering with CYP450, and consequently lead to herb-drug interactions with this plant. Yet manufacturers continue to tout these products as "superior."

Glycerites

Glycerin, technically an alcohol, has a solubility very similar to water, a sweet taste, and a syrupy consistency. If you are making glycerites, obtain vegetable glycerin. Most tincture manufacturers use vegetable glycerin but it is advisable to make sure that this is the case, as it is also possible to use animal- or petroleum-derived glycerin, which are not desirable for herbal products. Glycerin is used to prepare "alcohol-free" tinctures, and to preserve and sweeten the taste of liquid extracts. It is used for preparing extracts of plants that contain primarily water-soluble compounds, and is not generally able to dissolve alkaloids, resins, lipids, lignans, phenylpropanoids, or terpenoids.

It is relatively simple to prepare glycerites at home: they are made essentially the same way as tinctures. Glycerites of plants containing constituents that are not soluble in water, such as some of goldenseal's alkaloids, are made by first preparing an alcohol tincture, evaporating off the alcohol with heat, and then adding glycerin. Another method of making a glycerite is to simply add 5- 20% glycerin to an alcohol tincture. While this will not be "alcohol-free," it will have a more palatable taste than a standard tincture. Clinically, most herbalists prefer this latter method as we find alcohol extraction to be more effective for making medicines than glycerin. Pure glycerites have a few other disadvantages. Unlike ethanol, which actually slightly increases absorption of many constituents, glycerin slightly interferes. Glycerites also have a shorter shelf life than tinctures. A minimum of 50% glycerin is necessary to prevent microbial growth in glycerites. Glycerin's viscosity and stickiness make it unsuitable for percolation.

Acetracts

An acetract is essentially a vinegar tincture. Acetracts are prepared by maceration in the same way as tinctures, but they have a shorter shelf life (not longer than a year) and must be kept refrigerated. Vinegar extracts are uncommon today but have a long history of use in botanical medicine. Alkaloids form alkaloidal salts become water soluble in acidic solvents. As a result, vinegar is a good extraction medium for alkaloid-containing plants like goldenseal and lobelia. Herbal vinegars are a popular method amongst many women herbalists for incorporating herbs into the diet. They are simply added to salad dressings!

Sample Acetract: Immune Boost Vinegar

- 250 mL good quality apple cider, balsamic, or champagne grape vinegar
- 3 cloves fresh garlic, minced
- 1 tbs fresh rosemary
- 1 tbs fresh thyme
- 1 tbs fresh oregano

Mix all ingredients in a clean glass jar. "Steep" in the refrigerator for 3 days. Strain out the herbs and re-bottle. Use on salad or fresh vegetables, as is or mixed with a small amount of good quality extra virgin olive oil.

Solid Preparations

Powdered Herbs, Capsules, and Pills

An herbal powder is the finely ground form of the crude herb. Generally the powder is in tablet, pill, or capsule form, but occasionally palatable herbs are taken with hot water or even sprinkled onto foods. Tablets, pills, and capsules are inexpensive and are a widely recognized form of medicine to patients and easily accepted by most. Powdered herbs present the whole herb to the patient's digestive system and thus may be a preferred choice when the therapeutic goal requires direct contact between the herb and the GI tract, as is the case with mucilaginous and vulnerary herbs used to treat IBS. Powdered herbs are only valuable when they contain active constituents. The grinding of the herb generates heat that may break down valuable medicinal components. Once ground, herbs oxidize more readily than whole herbs, given the vast increase in surface area. Usually, the time from harvest to purchase is an unknown factor that may significantly affect the medicinal qualities of the preparation. Practitioners who recommend herb capsules should carefully query manufacturers about their production practices, select recent lots of products, and carefully select brands for their patients to optimize freshness and effectiveness. It is also easy to stock fresh powered herbs and keep a "Cap 'Em Quick" type of devise in the office or available for sale to clients. They are very inexpensive and allow clients to make up their own capsules affordable and easily.

Proper doses of powdered, crude herbs have not been determined rigorously in clinical trials, but are based on clinical observation over millennia. It is important to consult with various materia medica to determine dosing rather than accepting label "serving size" recommendations.

Concentrated Powdered Extracts (Granules)

Granules originated in traditional Chinese and Ayurvedic herbalism, though they are now commonly used in European herbal products as well. Crude herbs are first decocted, usually in water. The liquid extract is then concentrated and vacuum dried onto small particles of herb or starch. The final granules usually have a 5:1 w:v concentration (5 g of crude herb concentrated into 1 g of granule extracted). The granules are either dispensed as is to be eaten or made into a tea. They can also be pressed into pills or encapsulated. Some companies capture the essential oils during processing and add them back into process before vacuum drying. Granules allow practitioners to dispense relatively high doses of plant material in a small volume. They also reduce palatability problems, particularly when taken as a pill. They are easy to dispense and formulate. They are fairly stable and last at least 2 years if stored in a cool, dark place.

Freeze-dried Botanicals

Freeze-drying is a dehydration process that removes the water from a substance by exposure to dry, freezing air. The solid residue product is then packed into capsules. Opinions vary about the value of freeze-dried herbs, with some claiming that freeze-dried herbs are superior to other types of dried herbs and others other arguing that freeze-dried herbs are unstable and rapidly degrade upon exposure to air once a product bottle is opened. A pilot clinical trial found 600 mg freeze-dried, powdered *Urtica dioica* (stinging nettle) leaf one or more times a day significantly more effective than placebo at reducing symptoms of allergic rhinitis. Whether freeze-drying is beneficial may depend on the plant in question. Research comparing the activity of freeze-dried versus herbs preserved by other means has not been conducted systematically.

Topical Applications

Many botanicals are used topically for the treatment of a variety of skin conditions, and most have good safety profiles. However, certain compounds such as toxic pyrrolizidine alkaloids and methyl salicylate are reportedly absorbed to some extent through the skin – enough to warrant awareness with long-term use, or use on open skin or inflamed skin and wounds which will absorb compounds more readily and extensively, or regular use over a large area of the body.

Compresses

A compress or fomentation is the application of a cloth that has been soaked in an infusion, decoction, or dilute tincture, wrung out, and applied hot or cold depending upon the condition. Poultices and compresses are generally used short-term for wounds, bruises, sprains or strains. Compresses require the patient to sit or lie still during use for thirty minutes or longer several times a day for optimal results. Poultices and compresses have extremely short shelf lives and must be prepared for each application, though oftentimes the infusion or extract used for the compress may be reheated and a fresh cloth dipped in it before applying.

Care is warranted to make sure that bacterially contaminated herbal material is not put into or on a wound. In early stages of wound healing moist herbal compresses will generally work best, provided they are changed many times a day.

Essential Oils

Essential oils are prepared by steam distillation and are highly concentrated substances whose actions may be vastly different than the herbs from which they were obtained. For example, *Matricaria recutita* (chamomile) leaf and flower contains matricin, which is converted to chamazulene by steam distillation. Chamazulene is not found in unheated, crude chamomile. Many medicinal properties of chamazulene have been discovered that do not necessarily apply to crude chamomile.

Essential oils are always used in extremely low doses and with great care. They can cause serious consequences in case of overdose, harming highly fatty tissues of the nervous system in particular. With oral dosing, there is

also concern about potential harm to the liver. A typical oral dose for an average sized adult is 1-3 drops three times daily, though this will vary with the oil. Some are not suitable for internal consumption in any quantity. Essential oils are generally administered only by inhalation or topically. Note that transcutaneous absorption of significant amounts of essential oil can also lead to toxicity; topical use can also lead to contact dermatitis. They are generally not applied undiluted (neet) to the skin. A sample of the oil should be patch tested prior to extensive application, and a highly diluted product should be used.

Processes other than steam distillation can also produce essential oils. Some plants will yield oil by simple expression while others are extracted using organic solvents. Petroleum ether is one of the most common solvents in current use, having replaced the highly toxic benzene.

Powder

Powdered herbs can be applied directly to the skin, or mixed with water or other extracts to form a paste. They are typically applied dry to weeping skin conditions to absorb discharge and impart antimicrobial or vulnerary action.

Vaginal Rinses

Perineal rinses are commonly recommended for the treatment of vulvar inflammation, for example when there is vaginal candidiasis, to reduce pain and inflammation from dysuria associated with UTI, or to reduce perineal microbial contamination that can lead to UTI, for example, from *E. coli*. They may also be used postnatally for the repair of episiotomy damage or perineal tears from birth.

To prepare a vaginal rinse: Fill a "peri" bottle or a clean, plastic squeeze bottle with a well-strained, strong infusion or decoction. Squeeze the warm or room temperature over the perineal area either during or after urination. This significantly reduces inflammation and stinging, and promotes tissue healing. One to two teaspoons of sea salt may be added to each 8-ounce bottle.

Douches

Douches are prepared the same way as vaginal rinses, except that the infusion or decoction is placed in a douche bottle or bag apparatus. Given the stigma around women's vaginal odors, and the risks associated with douching if there's vaginal or cervical infection, and during pregnancy, I no longer ever use douches in my practice. Vaginal suppositories are as effective and safer, and lack the stigma of douching and the 'garden fresh scents' we're told we're supposed to have by the billion dollar feminine products industry.

Herbal Baths

Herb baths can be a rejuvenating ritual, an opportunity for relaxation, or a healing external application. They are useful for a variety of symptoms: sore muscles, exhaustion, stress, irritability, insomnia, headache, and respiratory

congestion. Sitz baths can be used to facilitate tissue repair (for example, to heal an episiotomy), to reduce inflammation (as with hemorrhoids and postnatal perineal trauma) and genitourinary infection, for example vaginal candidiasis. Care must be taken with baths to avoid burns from overly hot water.

A **full herbal bath** can be made two ways. One is to fill a cotton cloth, clean sock, or large cotton tea sack with at least 1 ounce of aromatic or mucilaginous herbs. Fasten the closed cloth to the faucet and let hot bath water run through the sock while filling the tub. Squeeze the sack now and then to wring out the "tea". This will make a mild but pleasant herb bath. The second method is to prepare 2 quarts of a strong herbal infusion or decoction, strain out the herbs, and pour the liquid into the tub of water. Additionally, a few drops of essential oil may be added to the bath after it is filled to add to the aromatic or antimicrobial effects of the bath.

If using aromatic herbs, keeping the door to the bathroom closed while filling the tub will allow the aroma of the herbs to fill the air. This adds to the relaxing effect of the bath.

A **sitz bath** is prepared as for the second method of the full herbal bath. One quart of strong decoction, or 2 of quarts of strong infusion, are placed in a sitz bath, or alternatively, in a shallow tub with filled with just enough water to reach hip level. Sea salt and antimicrobial essential oils such as lavender, thyme, rosemary, or oregano are commonly added to the water for additional antiseptic effects.

Herbal Oils

Herbal oils, sometimes called medicated oils, are vegetable oils in which herbs have been infused. This is different than an essential oil. Herbal oils are used in the treatment of sore muscles, sprains, aches, infections, irritated skin, and for massage. They also can be used as the base for other preparations, such as salves or in suppositories and pessaries. Oil-based preparations use olive oil, almond oil, coconut oil, cocoa butter or other oils as a base, to which are added medicated herbal oils, essential oils, herbal powders, and tinctures. Oil-based preparations that can be easily made at home or in the clinic pharmacy are herbal oils, salves and ointments, and suppositories and pessaries.

To make herbal oil, fill a clean and totally dry jar with dry herbs. Next fill the jar to the brim with oil. Almond, olive, and sesame oils are the most commonly used, but any vegetable oil is acceptable. Store at room temperature in semi-sunlight for one to four weeks. Some herbs, such as garlic and rosemary, will keep well in oil for the longer time span, while other herbs, particularly the more delicate plants and plant parts such as chickweed and rose petals, will begin to spoil after a week. Additionally, hot weather will cause the plants and oil to spoil more quickly, whereas plants extracted in a cool environment will keep longer before you must decant them. Direct light and heat should be avoided. Infuse and store on a surface that will not be damaged by any oil seepage that may occur. At the end of your given time period, strain well and store in a cool, dark place or refrigerate. Oils will keep for up to a year or more, and are considered good as long as the oil has not turned rancid. A rancid oil has a peculiar smell that is distinctly different from either the smell of the fresh oil or the plant being steeped. If you suspect that your oil has turned, discard it and begin anew.

Salves (Ointments)

Salves, or ointments, are topical products where the herbs are extracted into vegetable oils by maceration at

either room temperature for a specified length of time, in a low heat infusion or in a higher heat decoction. After filtration, the herbal oil is then combined with beeswax so the product is a solid at room temperature. Commonly salves are vulnerary, used to soothe and heal skin conditions. They are relatively easy to prepare and when stored in a cool, dark environment, have a long shelf life – often up to a year or more. Salve can be made from pre-made infused oil or by simmering herbs in oil to extract their constituents. Additionally, dried powdered herbs, essential oils, and tinctures can be added to a salve. Herbs commonly used in salves include *Calendula officinalis, Plantago lanceolata, Stellaria media, Hamamelis virginiana, Hypericum perforatum, Commiphora mol mol, Hydrastis canadensis*, and *Symphytum officinale* (radix or folia),

Store salves in wide-top jars, and apply with the finger, massaging the product directly into affected tissue.

To prepare herbal salve: (Note: If making salve from premade oil, begin with step 3.)

1. Place 1 ounce of dried herbs and 1 cup of good quality olive oil in a small saucepan. Simmer for 1 hour on a **very low** flame with the pot covered. Add additional oil if necessary to keep the herbs immersed, and watch carefully to avoid scorching.
2. Strain the herbs well through a cotton cloth or cheesecloth, squeezing as much of the oil as possible out of the plant material. You may need to let the oil cool before this can be done.
3. Pour the extracted oil into a clean, dry saucepan, adding half of the grated beeswax. Melt over a low flame, stirring constantly until the beeswax is fully dissolved. (Optional: Add a couple of drops of lavender essential oil.)
4. Check for readiness by pouring 1 teaspoon of the product into a small clean glass jar and placing in the freezer for 3 to 5 minutes. The salve should be firm and solid without being so hard that it can't be melted into your skin. If the consistency is correct, then pour the salve into small jars, cool to room temperature, cover, label and store. If your salve is too soft, reheat and add more beeswax; if it is too hard, reheat and add more oil. Then place back into the freezer and repeat test for firmness.

Simple salve recipe

- Equal parts of: calendula flowers, comfrey leaf, plantain leaf, or chamomile flowers
- Olive oil
- Beeswax
- Optional: Lavender essential oil

Suppositories

Suppositories allow for the insertion of herbal preparations into a body orifice. They are commonly used for vaginal and rectal symptoms. The word suppository is derived from the Latin suppositorum, which means, "Something placed beneath." Pessary is an interchangeable term, usually referring specifically to a vaginal

suppository. Suppositories, like many of the other preparations discussed in this section, are made from herbs that are anti-inflammatory to the mucus membranes, astringent to excessive discharges and damaged tissue, and antimicrobial. They are used extensively for vaginal infections and inflammation, cervical dysplasia, rectal fissures, and hemorrhoids.

Suppository molds can easily be prepared at home by patients, using a homemade mold fashioned from aluminum foil that has been folded several times lengthwise, and then widthwise, to form a "trough" approximately 8 inches in length and ½ inch in width. Alternatively, suppository molds can be purchased from apothecary supply shops. The base of the suppository is a combination of coconut oil and cocoa butter, to which is added the desired combination of medicated oils, powdered herbs, and tinctures. This is then poured into the mold, refrigerated to harden, cut into pieces the size of the patient's pinky finger, and inserted as needed. It is recommended that women wear a sanitary napkin when the suppository is in place, lest the melting oil stain the undergarments.

To prepare a suppository

1. Melt ¼ cup each of cocoa butter and coconut oil.
2. Add 2 tablespoons of powdered herbs, for example, a combination of *Hydrastis canadensis*, *Ulmus rubra*, and *Althea officinialis* powders.
3. Add 15 drops of essential oil, for example, *Lavendula officinalis* and *Thymus vulgaris* and/or 1 tablespoon of appropriate herbal tincture.
4. Add 1 tablespoon of infused oil of *Calendula officinalis*.
5. Stir well and pour into the suppository mold. Refrigerate until firm. Insert vaginally or rectally as needed.

Suppositories will keep in the refrigerator or freezer for many weeks.

Maintaining an Herbal Pharmacy

Many herbalists choose to stock an herbal pharmacy, also called an apothecary or dispensary, in order to provide their clients/patients with high quality herbal products with convenience and affordability. Being able to fill a formula for – or with – a patient immediately or soon after an appointment increases the likelihood that she will actually take the herbs. It saves your client the effort of trying to locate products, and if you purchase in bulk and mix herbs yourself, the costs will be substantially lower than retail prices. Furthermore, unless you have a compounding herbal pharmacy or shop in your community, you cannot otherwise obtain custom blended, individualized formulas. All in all, it is a service to your clients and community to keep on hand those herbs and herbal products you most frequently use and recommend.

What to stock and where to keep your products is very individualized. I stock primarily bulk herbs and tinctures, most of which are purchased from other herb companies, and some of which I made myself or were made by herbal colleagues. I also stock a variety of premixed generic tinctures and oils for acute cases (i.e., I always have on hand premade garlic-mullein oil for pediatric ear infections, as I also see children in my practice), a

small number of herbal products that I have found over the years to be reliable and of good quality, and a few supplements I commonly use in my practice, for example, calcium and magnesium, a good quality prenatal vitamin, and essential fatty acid supplements.

No doubt, there is an initial investment of resources when beginning your apothecary. In my early practice years I invested about $500 in bulk herbs, tinctures, and storage glassware. My apothecary now holds several thousands of dollars worth of products and supplies. It is sensible to start small, obtaining only those herbs for conditions you regularly treat. If you are going to specialize in herbal obstetrics and gynecology, or just the latter, this narrows your scope. However, a woman might come in with a vaginal yeast infection and an earache, so you'll still need to stock some general types of herbs and products to meet the needs of your clientele. Fortunately, a small number of herbs have a wide variety of applications.

As you expand the materia medica you use, you can increase the number of herbs you stock. Initially I probably had 50 different herbs; now my apothecary has about 300 herbs. Some of these I use frequently, others only occasionally. I purchase larger bulk amounts of certain herbs, for example, black cohosh, passionflower, vitex, and cramp bark, which you will see in this course, are in many formulas. Other herbs, for example, poke root, are used in such small amounts, that a small bottle of tincture may last for years before needing to be restocked. Many tincture companies offer a variety of tincture size options for purchase, typically 1 oz, 2 oz, 4 oz, 8 oz, 16 oz, 32 oz, and 64 oz. Price per ounce decreases as quantity increases. Bulk herbs are typically sold by the pound only, and unfortunately their shelf life is quite a bit shorter than tinctures. They are also fairly inexpensive. It is ideal if, at first, you can join together with other students or practitioners in your community and split orders, allowing you to enjoy bulk cost savings without getting more than you will use.

Herbs must be stored carefully away from heat and light in order to maintain their effectiveness and to prevent spoilage. For much of my early practice I had a very small space in which to keep herbs. I had several bookshelves and an armoire in my office for storage. I kept the bookshelves covered by curtains I'd made and fastened to the top inside shelf.

My apothecary has variably been on bookshelves in a small office, in cabinets in a small converted kitchenette in a little cottage on my land, and previously in a walk-in storage closet that was converted into a beautiful apothecary lined with shelves that were designed to fit various sized tincture bottles – a carpenter friend built it for $500 plus supplies (another $250). This was an ideal situation: the shelves were narrow to avoid having to sift through bottles to see what was hiding behind them, and the shelves had a small lip at the front to prevent bottles from being knocked off the front when moving them around filling formulas. There were waist high countertops that held mixing, measuring, and grinding supplies, and below these, large shelves for storage of plastic bins that held extra bulk herb supplies and packaging materials. There is also a place for labels and miscellaneous paper products. The apothecary was lightly stained and finished with an easily cleaned polyurethane varnish. There was a wooden chair in the apothecary for patients to sit in while I mixed their products, artwork on the walls, a place to keep outstanding invoices and product orders and refills from clients, and good lighting. It was one of my favorite rooms to spend time in! It did not meet GMP specifications for product manufacturing, but did allow me to make products in a clean, hygienic setting. The one thing I would have added if the space allowed: a sink would be invaluable.

Stocking an apothecary for a busy practice is a part- or full-time job, depending on the practice volume. If you are going to fill products yourself, then allow 15 minutes extra per appointment for mixing, packaging, documenting, and labeling. You must also build time into your practice for taking inventory, placing orders,

restocking, and cleaning your pharmacy. If you develop a large practice, you might want to consider hiring an assistant for maintaining an apothecary. Given the product mark-up at retail shops, often 200% or more, it is quite possible to charge enough for products to help cover maintenance costs, and still offer products at a lower price than retailers.

Obtaining Quality Products

Purchasing Herbs/Herb Products

There are two keys to good quality herbal supplies and products: excellent quality starting materials and a knowledgeable person behind the process – whether that be a knowledgeable wildcrafter, herbal manufacturer, or herbal formulator. In my opinion and experience, the most reliable and high quality herb companies are those that are herbalist owned and operated – or that at least hire herbalists for product development and oversight of manufacturing.

The following are general guidelines to obtaining high-quality raw materials and products:

1. Obtain organically cultivated plants or ecologically wildcrafted products whenever possible. Many inorganic herbs are fumigated with fungicides and insecticides during storage, and some are even irradiated. Organic products tend to be grown with a greater level of care and knowledge of the plants than regular commercial products

2. Make sure the company obtains positive identification of their raw materials. This is important for both efficacy and safety. If you buy a product that contains the wrong plant species or the wrong plant altogether, your medicine may be ineffective for the purpose you are using. Further, mistakes can be dangerous. Not too long ago, mistaken identification led to the substitution of the common plant plantain with the highly toxic plant foxglove, and a number of cases of poisonings resulted. The lesson on herb safety in pregnancy discusses a case of a baby born with congenital androgenism due to a product consumed by the mother during pregnancy that inadvertently contained an adulterant contraindicated in pregnancy. If the company produces its own tinctures, do they conduct assays or otherwise assess the quality of the final product?

3. It is important to know whether the proper plant parts, harvest time, collection and drying techniques, and preparation techniques were used. Companies owned and run by herbalists are more likely to tend to these details, as herbalists know that these important factors determine the efficacy of the final product.

4. All herbs and herb products should have a fresh smell and the colors should resemble the color of the original plant material. Herb freshness will affect the potency and therefore the effectiveness of your treatments. A moldy odor in bulk herbs indicates that the herbs are not fresh. Look closely for insects, as one infested batch of herbs can contaminate your entire bulk herb stock.

5. Ascertain from the company what their standards are for product purity, for example, cleanliness and microbial contamination.

6. Does the company follow ethical and ecological wildcrafting standards?

From the Wild

Many herbalists wildcraft, that is, harvest herbs from their wild, natural environments, to make herbal products. Most, however, purchase bulk herbs, tinctures, and other products from companies that obtain their raw materials through cultivation and commercial wildcrafters. A few plants grow nearly everywhere and in profound abundance – for example, plantain and chickweed, and may be easily identified and harvested for use in salves and other preparations.

Broad scale wildcrafting to obtain most of the products for your practice or apothecary use requires significant knowledge of not only plant identification, but when and how to harvest herbs for their medicinal effects, as well as the ability to travel and harvest, and then properly process and store plant material. If you are going to use wild plants you must be absolutely certain of your plant identification. Mistakes can be fatal. It is best to apprentice with an herbalist or botanist knowledgeable in plant ID and the correct medicinal species. You must also have proper knowledge of which herbs to pick and which to avoid – for example, avoiding herbs that grow in areas that are regularly sprayed with pesticides, such as under power lines, and to know which herbs should be left to grow because they have endangered status. It is the responsibility of herbalists to look after the ecological wellness of our medicines. Always offer your thanks to the plants and ask for their blessing and assistance in healing.

From the Garden

The greatest joy I find in herbs is when I am sitting in a garden filled with healing plants. So many of the herbs are not only useful, but also beautiful. When they are in bloom bees and butterflies will visit your garden often. Growing your own herbs helps you to develop a greater understanding of those plants and a profound connection with the plant world. You will see how they change through the seasons, what conditions cause them to thrive, and you will learn to recognize their scent and appearance.

The initial investment in seeds or starter plants can vary based on how much you want to grow. A small, well-tended garden can provide you with enough herbs to make small batches of a variety of remedies. A large garden could potentially provide you with many of the herbs you will need for a small practice. However it is unlikely that you would be able to grow all of the species you could possibly need in one garden in a single climate – not all herbs grow in every climate or location. Herbalist Richo Cech of Horizon Herbs offers an amazing selection of medicinal herb seeds and instructions for planting and growing, a gem of a resource if you are interested in medicinal herb cultivation.

Product Records

Maintaining product records is an essential aspect of product quality control in your practice, as well as a way to keep track of patient's products and refills. There are two levels of product records that should be kept in an herbal practice: records of the patient's formulas and product purchases/refills that are kept in the patient's files, and bulk and mixed product batch records. Keeping patient charts will be discussed later in the course. Now

let's turn our attention to the apothecary. The story I told in Lesson 8 about the milk thistle recall illustrates the importance of basic record keeping.

When you fill herb jars from bags received from companies, keep track of where the herb in the jar originated. This can be done on a stock record sheet, a record of each herb in your pharmacy kept on a separate sheet of paper in a notebook, or as a small pencil notation on the label of the jar itself. It takes time, but once you get a system going, is not hard to maintain. If there is any problem with product contamination or adulteration on the market, you will be able to easily track the product in your practice.

Product Labeling

Accurately labeling products is essential in the herbal pharmacy. At a minimal, each product should be clearly labeled with the product name, its ingredients, the date it was filled, dose, and any appropriate warnings (i.e., not for use during pregnancy and lactation). Tinctures you purchase in bulk must also include the percentage alcohol used for extraction, the w:v ratio of herb to menstruum, and whether the starting material was fresh or dried herb. A 1:2 tincture of lobelia would have a very different strength than a 1:10 tincture, thus dramatically changing the dose and strength of the product and the volume you would put into a compound. Similarly a 1:4 fresh herb tincture has a different strength than a 1:4 tincture of the same herb dried. Reliable herb companies will always include this information on the label; if it is not on the label, do not purchase the product.

Packaging

Drug companies spend a lot of time on the aesthetics of drugs – from the color, shape, and size of a pill to the color, shape, and size of the package. It is these aesthetics that largely determine whether the product will be purchased and taken. While you do not need to approach the products in your pharmacy from the perspective of marketing, you do want to maximize adherence to using the herbs. The actual mixing of herbal products to maximize use is discussed in another lesson. Here we are looking at the packaging. Herb bottles, containers, and bags are fairly generic. You can purchase clear, amber, or cobalt blue tincture bottles, glass or plastic containers typically in clear or white, and bags can be plastic or plastic lined paper. Costs are comparable for the various products in a genre.

For tinctures: In my practice I use amber glass tincture bottles in 1 oz, 2 oz, 4 oz, and 8 oz sizes, with glass droppers. I never use plastic droppers because I am concerned about the interaction between the plastic and the alcohol in the tincture. I also keep blue glass tincture bottles on hand for special occasions – to make a product look prettier for a woman feeling depressed or more fun for a kid. I also use the cobalt bottles for herbal oils, for example, calendula oil, or essential oil blends.

For salves I use 1, 2 and 4 oz clear glass bottles with white plastic unlined caps. I have found over the years that the metal cap tends to rust over time, or gather more moisture from condensation and thus lead to mold. This has never been a problem with the plastic.

For bulk herbs: I have used both plastic "sandwich" and storage bags for bulk herbs, as well as plastic-lined

and non-lined paper bags. The latter is the most environmentally responsible. However, clear plastic bags allow clients to see the herb mixtures, some of which can be quite beautiful, so I have tended to favor these.

In all cases I encourage clients to bring their packages in for refills, and offer a discount on the product equivalent to the cost of the glass bottle. I try to also be as ecologically sound as possible in my practice, cleaning (putting tincture bottles and droppers removed from the rubber cap into the dishwasher cleans them nicely) and reusing glassware whenever possible, and recycling glassware that cannot be reused.

There are several labeling options: purchasing predesigned labels which you either write a prescription on directly or run through a computer printer to label; doing the same with plain white Avery labels; or purchasing a computer labeling program that will allow you to custom print every label for each order/prescription. The latter option is favored by herbalists with very busy practices as handwriting dozens of labels is week is otherwise time consuming and tedious.

The look of your label and packaging should be appropriate to your client/patient base. A professional, medical looking label might be most appropriate in some contexts, but in others you might chose a more artsy label. In my practice I have a simple label with a logo, my address, and a place to fill in product information. It is professional but earthy. I often embellish packaging with a piece of raffia tied around the neck of a tincture bottle or bag of herbs. Adding beauty to the package makes it more inviting for the client/patient to pick up and take, and I believe this positive experience has the potential to increase healing. In any case, a medicine only works if it is taken. I may also squeeze a few inspirational words on the label for a client struggling with a particular issue.

Weights and Measures Conversion Table

TO CHANGE	TO	MULTIPLY BY
gallons	liters	3.7853
grams	ounces	0.0353
grams	pounds	0.002205
kilograms	pounds	2.2046
liters	gallons	0.2642
liters	pints (dry)	1.8162
liters	pints (liquid)	2.1134
liters	quarts (dry)	0.9081
liters	quarts (liquid)	1.0567
ounces	grams	28.3495
ounces	pounds	0.0625
pints (dry)	liters	0.5506
pints (liquid)	liters	0.4732
pounds (ap or troy)	kilograms	0.3732
pounds (avdp)	kilograms	0.4536
pounds	ounces	16
quarts (dry)	liters	1.1012
quarts (liquid)	liters	0.9463

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 10

Formulation and Dosing Strategies

Learning Objectives

By the end of this lesson you will be able to:

1. Understand and apply the principles of herbal formulation
2. Define elegant formulating
3. Identify herbal dosing strategies

Unit 1 Lesson 10 Formulation and Dosing Strategies

Required Reading

Botanical Medicine for Women's Health, 2nd edition (Romm)

- Selection Criteria, Formulation, and Prescribing, pp 42-52
- Botanical Medicine Dosing, pp 62-63

Introduction

Finding the proper actions to meet your goals is at the heart of herbal medicine practice. Custom formulation allows practitioners to build formulas for clients' unique needs, addressing symptoms and underlying causes, and blending herbs in an elegant way that allows for maximum client adherence to the protocol – taste, affordability, and ease of dosing. There are many factors to consider when choosing which herbs to include in a formula, the exact proportions of all of the herbs, and the dosing schedule. This lesson will give you the foundational knowledge you need to begin building successful herbal formulas: determining the correct herbs, their proper proportions, and the dosing strategy. Time and practice throughout the course – and beyond – will help you begin to master this art and science which takes years of practice to ultimately refine! After 35 years I think I might finally just be getting there myself!

Developing Herbal Formulas

Formulating for the Individual Client

The most important factor determining the selection of herbs for a formula is the individual client's condition. This is determined by:

- Differential diagnosis and physical assessment
- The client's overall health status (current and past medical history)
- An understanding of underlying factors associated with the disease or disorder process, including but not limited to: health of the major body systems (i.e., whether there are chronic digestive or circulatory problems, inflammation, issues with detoxification, etc.) and social, emotional, and psychological stressors and factors affecting the client

Selecting Your Herbal Medicine System

The system of herbal medicine the practitioner follows will determine the language of the diagnosis and the selection of herbs and the reasons for their use. For example, a western biomedical herbal practitioner

diagnosing a client with symptoms of vaginal itching, yellowish-white discharge, and frequent urination might diagnose *vaginal candidiasis*, whereas a TCM practitioner might diagnose the same client with damp heat and blood deficiency.

While there will be some crossover in the herbs that are selected by each practitioner, for example, both may end up with a berberine-containing herb in the final formula, perhaps *Coptis chinensis* (goldthread) or *Hydrastis canadensis* (goldenseal), the language to describe their inclusion would differ. The western practitioner would include one of these herbs for their antimicrobial, anti-inflammatory constituents; the TCM practitioner would describe these same effects as "heat clearing" and "cooling." The TCM practitioner might also include herbs that nourish the blood, for example, a combination of *Angelica sinensis* and *Rehmannia glutinosa* as part of a larger formula for treating the perceived underlying blood deficiency. The western practitioner may also separately provide tonics for the client with recurrent problems with vaginal candidiasis.

Practitioners must define for themselves the system of herbal medicine they are using, and from this they can define the language that will shape their system of herb selection.

Selecting Herbs for Their Actions

Central to the ability to create an herbal formula is having knowledge of the properties, actions, appropriate indications, and contraindications of each herb. This is something that comes with time, practice, and study. Practitioners should have access to a selection of reliable reference books. At first you will refer to these often, but over time, will gain intimate knowledge of a wide variety of herbs that will allow more spontaneity in formula development. However, even experienced practitioners regularly turn to their reference books.

Availability of Herbs

Clients must be able to obtain the herbs and products in their formulations. Many herbal practitioners prefer to fill the formulation themselves in order to retain control over the quality and to guarantee that the client leaves with the intended formulas. If the practitioner plans to fill the formulation from his/her own dispensary, the herbs must be in stock, or a similar and adequate substitute must be available.

Financial Considerations

Cost is a major concern for most clients. It is important to discuss financial ability with clients in order to provide protocols that will allow them to take enough of the herbs for a sufficient duration of time to have the desired effect, and not add high herbal costs to their burden of health care costs. Herbal formulations may need to be tailored to meet the needs of the client's budget, for example prescribing teas as a less expensive option to tinctures, and teaching clients to make their products whenever possible rather than purchasing them pre-made at health food retailers. Expensive, exotic, "designer" herbs and herbal products are not necessarily more effective than simple herbs, and in fact many trendy products may be less safe and effective than time-tested home remedies.

Unit 1 Lesson 10 Formulation and Dosing Strategies

Herbal formulas often need to be changed or modified as clients start to experience results; also sometimes the correct formula is not achieved immediately, requiring a new formulation (and thus for the client to purchase a different formula) after trying an initial protocol for only a short time. In TCM it is not uncommon for the Chinese doctor to alter an herbal formulation every few days. Careful attention to formulating and prescribing the minimum effective dose can reduce product waste and loss of money to the client; however, it is not possible to entirely eliminate this factor from herbal practice, and this should be clearly explained to clients prior to initiating an herbal protocol.

Ecological Considerations

The modern herbal medicine renaissance has led to overharvesting of certain plant populations. One cannot ultimately separate the health of the environment from the health of the individual; thus attention to ecological herbalism is part of the responsibility the practitioner assumes in assuring the long-term health of clients. A responsible herbalist will avoid the use of endangered plants and seek appropriate substitutes wherever possible.

Client Engagement

If the herbs aren't taken, they will not work! Herbal preparations can be time consuming to make and are not always pleasant tasting, factors that can reduce adherence/engagement with otherwise good herbal protocol. Selecting the form of the herb that will most likely encourage its use is also important. For example, a single working mother may be more likely to take a tincture, tablets, or capsules that she does not have to prepare, and which can easily fit into her purse, than a tea that she has to prepare at home and carry along on her busy day. These considerations can be discussed with clients prior to writing their formulations.

Taste is not always possible to fully mask with herbs, particularly with bitters where the actual bitter taste is in part necessary for the effects of the medicine. However, much can be done to improve the taste of many herbs. In teas, infusions, and decoctions a corrigent (a flavoring agent) such as licorice, anise seed, spearmint, or peppermint may be use; in tinctures, glycerine, elderberry syrup, the aforementioned herbs, or one or two drops of a pleasant flavored essential oil, such as anise seed, cinnamon, peppermint, or spearmint, may be used. Tinctures may be taken heavily diluted in water, or taken in a small amount of juice to mask the taste. With experience practitioners can learn to combine herbs to maximally enhance their taste, however it is inevitable that some herbs will have a very strong taste. This should be explained to clients in advance, and if necessary a very small amount (i.e., ½ ounce of tincture) of the herbal product mixed and sent home with the client to see if the product is tolerable prior to assembling a full formulation. For clients who find the taste of liquid and alcohol extracts intolerable, capsules and tablets may be substituted for some herbs. An in-office dispensary reduces the need for the client to seek out herbs on her own, minimizing her time expense, and maximizing the likelihood that the herbs will actually be obtained.

Factors Affecting Herb Selection Criteria

Individual Client's Condition	Accurate diagnosis, understanding of underlying or concomitant factors, history, etc.
Herbal Medicine System	Assessment of client and understanding and prescribing of herbs is consistent with an herbal medicine system or context (i.e., western herbal medicine, TCM, Ayurveda)
Herbal Actions	Understanding the pharmacologic, biologic, traditional, and synergistic actions of herbal medicines
Availability	Clients' ability to obtain ingredients in herbal formulas
Financial Considerations	Clients' ability to afford herbal formulas in adequate amounts and for adequate durations for efficacy
Ecological Considerations	Use of herbs that are not endangered or rare; recognizing the intrinsic relationship between planetary health and individual health in choices of medicine
Adherence/Engagement and Aesthetics	Clients' ability to adhere to protocol, based on ease of obtaining and preparing herbs, and palatability

From Romm, A, *Botanical Medicine for Women's Health*. Churchill/Elsevier.

An effective formula will lead to the desired health outcome with maximal benefits, client engagement in tasking the formulae, and minimal, if any, side effects. It will be cost effective and ecologically sustainable. There is no right or wrong way to design an herbal formula – herbal formulation is as much an art as it is a science. General formulation strategies are presented below.

Setting Therapeutic Goals and Priorities

Before developing protocol and formulas for an individual client, clear therapeutic goals and priorities must be established. A therapeutic plan is devised that addresses the most urgent and challenging symptoms for the client, while beginning to address any underlying conditions in a systematic manner. Here are the core goals:

- Heal the underlying (root) causes; i.e., inflammation
- Promote and nourish healthy functioning of tissues, organs, and systems related to the condition being treated
- Support the innate healing mechanisms and support vitality
- Calm symptoms that interfere with healing or trouble your client/patient

The Structure of an Herbal Formula

All herbs in a formula should support the therapeutic goals either directly, or by supporting the actions of the primary herbs in the formula.

An herbal formula typically consists of:

- The primary herb(s)
- The adjuvant, secondary, or supporting herbs which support the actions of the primary herb(s) and as needed
- Ingredients to enhance the flavor or tolerance of the preparation
- A warming, carminative, or spicy herb such as ginger or cinnamon to prevent digestive discomfort from an herbal formula and to enhance the metabolism of the herbs
- Trophorestorative or tonic herbs that support specifically stressed body systems
- Nervines, as stress is a common component of health problems, either as an underlying factor, or as a result of the presence of illness

The latter two categories may be addressed in a primary formula, or an adjunct formula may be provided to support the nervous system since you can only put so many herbs in a formula.

How Many Herbs in a Formula?

An herbal formula should not contain so many ingredients that the client is receiving inadequate amounts of the individual herbs. Ideally, an herb may serve multiple purposes, for example an herb such as ginger or cinnamon may act as both a flavoring herb and a carminative. A goal I like to keep in mind is "exquisite formulating" – using the minimal number of the most exact herbs in a formula. Think of creating a formula that is elegant and streamlined.

How Many Formulas Should I Give?

For some clients a single formula with only a few herbs may be effective for treatment. For many clients, it will be necessary to provide more than one formula at a time, for example the use of a tincture and a topical application in the case of a skin condition or vaginal infection, or a formula for acute use and another for chronic use.

Creating the Formula

Bone and Mills best describe the steps for developing a formula in *Principles and Practice of Phytotherapy*:

1. Make sure the goals are individualized to the needs of the specific case

2. Decide upon the immediate treatment priorities
3. Determine what actions are required, based on the treatment goals
4. Choose reliable herbs that have the desired actions, with as much overlap as possible to minimize the number of herbs in the overall formula
5. If a particular action needs to be emphasized, select more than one herb with this action, or include a single very effective herb with the desired action
6. Combine the herbs in appropriate proportions and doses

Choosing the Herbs

The simplest method for selecting specific herbs is to take a fresh piece of paper and on it create columns of the various therapeutic actions needed for the formula. Under each column, jot down herbs from your reference sources and knowledge that fit the category and the client's condition. You will find that herbs are repeated under more than one column. Narrow your selection by first choosing those herbs that address more than one need.

Next, select herbs that most specifically address any remaining symptoms or conditions that are intended to be addressed by this formula, keeping an eye to the key components of a formula outlined above. Finally, make sure that there are no contraindications to any of the herbs you have selected for the client, including potential herb-drug interactions, or herb-herb interactions within the formula, or between formulas if more than one has been given. You must also select the preparation form that will allow you to effectively deliver the medication to the client. For example, if you are prescribing highly bitter or unpleasant tasting herbs, you will want to use a form that is most palatable, probably a tincture or possibly a capsule; if you are prescribing demulcent, mucilaginous herbs, you will want to use a tea or infusion, as many mucilaginous herbs are not highly soluble in alcohol.

Sample Formula Development for Client with Dysmenorrhea

Therapeutic goals:

- Relieve pain and cramping (anti-inflammatory; antispasmodic; pelvic circulatory tonic)
- Reduce stress and anxiety

Anti-inflammatory	Antispasmodic	Nervine	Pelvic Circulatory Tonic
wild yam	wild yam	chamomile	ginger
ginger	angelica	lavender	black cohosh
chamomile	chamomile	skullcap	angelica
carmp bark	cramp bark		

Note that *any of the above herbs may be selected*; I've simply demonstrated by selecting those herbs that appear several times to show that any number of herbs have multiple actions, and thus the number of herbs in a formula can be kept to a minimum by selecting those that have some cross-over categorically.

Sample Basic Formula for Dysmenorrhea

Mix the following tinctures:

Viburnum prunifolium (cramp bark)	1:3	30 mL
Dioscorea villosa (wild yam)	1:3	25 mL
Matricaria recutita (chamomile)	1:3	20 mL
Angelica archangelica (angelica)	1:2	15 mL
Zingiber officinalis (ginger)	1:4	10 mL
		Total 100 mL

Dose: 2.5-5 ml of tincture in a small amount of warm water 2-3 times daily, or as needed.

Herbal Dosing Strategies

How Do I Choose the Correct Proportions of Herbs in a Formula?

The amount of each herb in a formula depends on the relative importance of the herb in the formula (i.e., whether it is a primary herb, a secondary herb, or a flavoring), the amount of each herb required for therapeutic action, and the strength of and safe dosing range for each herb. Synergistic activity between herbs should also be considered, as the presence of more than one herb with a similar action often allows the formulator to reduce the volume of one or other of the herbs.

Tincture formulas are generally built around a final product of 100 mL, with the herb volumes proportioned accordingly. Herbal infusions and decoctions are typically based on "parts." If you consider a formula to be comprised of 100 parts as a total amount, then each herb would be assigned a certain number of parts, similar to the percentage of the herb in the formula. The word parts can then be translated into ounces, grams, teaspoons, etc., based on the measurement you are using and the total volume you need to prepare. In this course, rather than assuming 100 parts for a whole formula, I assume 10 parts to make the numbers more manageable. Let's use a formula from a different lesson as an example:

Another Example of Formulating with "the Formulation Grid" (See BMWH 2nd Editon, p 49)

Gut Healing Blend

Althaea officinalis	marshmallow root	4 parts
Matricaria recutita	chamomile	4 parts
Zingiber officinalis	ginger	1 part
Mentha piperita	peppermint	1 part

Indications: Irritable bowel syndrome; bowel inflammation; gas/bloating; "leaky gut"

In this example you can see that there are 10 parts total. The parts are written in descending order of volume. In this case marshmallow and chamomile happen to also be the primary herbs in the recipe. Ginger and peppermint are important bowel anti-inflammatory herbs, but in this recipe also serve as secondary and adjunct herbs, the ginger warming the digestion and improving the taste, and the peppermint acting as a carminative and also improving the taste.

The Prescribing Schedule

How often a client should take the herb formula(s) depends on the severity and urgency of the condition, the strength and safety of the herbs, and the likelihood of the client's adherence/engagement. The following is a general summary of the prescribing range for various herbal products:

- Tinctures: 2-7 mL, 1-3 times daily
- Infusions: 1-3 cups daily
- Decoctions: ¼- 2 cups total daily
- Capsules and Tablets: 1-4 capsules, 1-3 times daily

Occasionally, products are suggested with special instructions, for example, *Vitex agnus castus* is often suggested in a single 5 mL dose in the morning, or other herbs may be suggested for taking prior to bed or with meals.

In acute conditions the prescribing schedule may be more aggressive. For example, a woman experiencing uterine contractions with a threatened miscarriage may take a uterine antispasmodic formula every 15 minutes for a set period of time (i.e., 2 hours) in a reduced dose until relief is achieved.

Where adherence is concerned, the practitioner may ask the client how often she will realistically take the suggested formula, and adjust the individual dose to accommodate a daily therapeutic dose in that intake frequency. For example, if a woman tells you she will not take her formula at the office, prescribing a formula to be taken 2.5 mL 4 times daily will be ineffectual. Better to suggest a dose of 5 mL twice daily, if the herbs in the compound are safe in that individual dose.

Formula Writing

The following Latin terms and abbreviations will often appear in herbal medicine writings, especially old herbals, as well as texts and pharmacopoeias from Europe. They are provided as a reference to help you decipher herbal terms and formulations.

Plant Parts: English and Latin Names, and Abbreviations

Plant Part	Latin Name (singular/plural)	Abbreviation
Leaf	folium (folia)	fol.
Flower	flos (flores)	flor.
Fruit	fructus (fructus)	fruct.
Herb	herba (herbae)	herb.
Root	radix (radices)	rad.
Rhizome	rhizoma (rhizomae)	rhiz.
Bark	cortex (cortices)	cort.

From Kraft K and C Hobbs. *Pocket Guide to Herbal Medicine*. Stuttgart: Thieme, 2004.

Formula Writing: Terms and Abbreviations

English Instruction	Latin Equivalent	Prescription Nomenclature/ Abbreviation
Water	aqua	aqu.
Add	adde	add.
Or similar	aut similia	aut. simil.
With	cum	c.
Cut	consisus	cc., conc.
Crushed	contusus	cont.
Give the client	da	d.
Give and label as follows	detur signetur	d.s.
Make, prepare	fiat	Ft.
Drops	gutta, guttae	Gtt. (gtt.)
Make an infusion	infunde	Inf
Mix	misce	m.
Mix and make	misce, fiat	M. f.
Mix and make a tea	misce fiat species	M. ft. spec.

Mix and make an ointment	misce fiat unguentum	M. ft. ungt.
Mix, give, label as	misce, da, signe	M.D.S.
After meals	post cibum	p.c.
Pills	Pilliulae	pill.
Powder, pulverize	pulvus, pulveratus	pulv.
Take:	recipe	Rx
Label	signa	S.
Tea	species	spec.
Suppository	suppositorium	supp.
Divide into X doses	tales doses	Tal. dosis No. X
Tincture	ticntura	tct., tr.
Ointment	unguentum	ungt.

From Kraft K and C Hobbs. *Pocket Guide to Herbal Medicine*. Stuttgart: Thieme, 2004.

Dosing Strategies

How much of any herb to give at once time, over the course of the day, or over the course of a week will depend on the therapeutic goals associated with that herb, the strength and relative safety of the herb, and the condition of the client (i.e., a dose might be adjusted for pregnancy or lactation). Also, the client's age, weight, metabolism, any relevant disease processes, and concurrent medications or dietary supplements must be considered as these can all effect the amount of herb absorbed after consumption.

Doses for most herbs are found in the pharmacopoeias of the nations in which those herbs are commonly used. Thus, for many European and western herbs, dosages can be found in US and European pharmacopoeias, whereas the herbs of China or India would be found in their respective national pharmacopoeias. Recognized monographs (i.e., ESCOP, WHO, AHP) are also a source of dosing information. Additionally, doses for some herbs for specific conditions have been determined through clinical trials, i.e., specific doses of St. John's wort for depression based on *Hypericum* and depression trials. However, many herbalists feel that the forms of herbs and dosages used in many clinical trials do not yield maximally effective results because they differ from the forms and doses herbalists actually use in clinical practice. (Most herbalists consider the doses used in clinical trials to be below maximally effective).

Finally, doses that are reported in books and lectures by reliable clinical practitioners and teachers may also be considered when determining an effective and safe therapeutic dose. Unfortunately, herbal practitioners do not universally agree on therapeutic dosages, and it is up to the individual practitioner to determine what sources they consider most reliable for their dosing information. This course relies upon pharmacopoeias, recognized monographs, and clinical experience for dosing information.

When prescribing a dose it is important to carefully consider both the necessary dose to create an effect, and the maximum safe dose. The ideal is always to suggest the minimally effective dose – that is, the smallest amount of herb that can be given to achieve a therapeutic effect. It is sometimes necessary to start with a modest dose and

increase until the effective dose is found. Also, how the dose is distributed throughout the day can be significant. For example, it may be appropriate to give 15 mL of a particular herb over the course of the day; however, 15 mL of that same herb given in a single dose may cause harm.

It is essential to communicate very clearly with clients when giving them their formula and dose. I once heard a story of a licensed naturopath who recommended 4 drops twice daily of a fairly toxic herb. The client misunderstood and took 40 drops twice daily, experiencing significant side effects which fortunately discontinued upon discontinuation of the herb. Having the client repeat to you what they understand about their protocol is a helpful practice that can prevent mishaps later.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 11

The Client Encounter 1: The Business of It

Learning Objectives

By the end of this lesson you will be able to:

1. Identify key forms needed in clinical practice
2. Establish practice guidelines
3. Communicate effectively with professional colleagues about the use of botanicals in clinical practice
4. Describe strategies for effective practice management
5. List strategies for preventing burnout

Unit 1 Lesson 11 The Client Encounter I

Key Terms

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

- Code of Ethics
- Documentation
- DSHEA
- HIPPA
- Informed Consent
- Professionalism

Introduction

The next two lessons focus on the nuances of being a clinical herbal educator/practitioner. Whether you're incorporating herbal medicines into an existing practice or starting a new consulting practice, these lessons offer pearls of wisdom and tips from decades of clinical experience. Even if you do not plan to practice herbal medicine, but rather envision establishing an apothecary, offering classes, or being a professional herbal writer, for example, these lessons provide insights into communication skills, professionalism, and taking care of yourself so that your work is sustainable.

The bonus business live/recorded business mini-herbal MBA, as I call it, with this course focuses on additional professional and career possibilities in herbal medicine, including writing, teaching, and being involved in the products' side of the industry. The bonus lesson also helps you to develop your business from the marketing end including internet marketing, blogging, social media, and other aspects of business and brand development for your practice or other chosen herbal professional avenues.

Let's Start With Incorporating Herbal Medicines into Your Existing Licensed Clinical Practice….

And Good Advice for Everyone Else

While herbal medicine is well established in many other countries as part of the conventional pharmacopoeia, it is in its infancy in the US and other nations. Many practitioners find themselves in a gray zone when wishing to recommend herbal products to patients. Many licensed midwives in the US and Canada have written to me with questions about liability, how to get other practitioners in their practices to accept and respect what herbs have to offer clients/patients, and many are uncertain about product safety and reliability. This section addresses these and other practice concerns. Ultimately, your knowledge of herbal medicines will be a great asset to you if you are in a group practice, as increasing numbers of patients are using and inquiring about them, and you might be the only knowledgeable practitioner in your office. Most health professionals don't have the time to devote to learning herbal medicines in the depth provided in this course, so whether you are in a group or solo practice, you will also be an asset to practitioners in your community who can turn to and refer patients to you for herbal

medicine questions and consultations.

This section will help you to win over your skeptical colleagues and provides advice for intelligently incorporating herbal recommendations and medicines into your existing practice – advice which should be followed in new practices as well.

Many health professionals wonder whether herbal medicines fall under their scope of practice, and the answer to this is yes – in fact, many have a strong evidence base behind them and questions about their use can be found on medical board exams for primary care physicians! The most important protection for you as a practitioner is to have some training in any modality you choose to offer. Training that is approved by your professional organization, for example, as demonstrated by CEU's being granted, adds that much more credence that you were trained in the modality and gained some level of proficiency or skill. Make an effort to continually learn by taking classes, attending conferences, and obtaining available credentials if you are able.

Establishing the support of your colleagues also makes it easier to incorporate botanicals into your practice. Out-patient clinics and private practices are great places to do this, and are much easier than in hospitals where dispensing standards might preclude your ability to provide botanical medicines to patients. I found that my use of botanicals in my residency clinic, particularly those that were backed by solid evidence, for example the use of horse chestnut for venous insufficiency or St. John's wort for depression, influenced other doctors in the clinic, who also slowly began to add herbs to their own repertoire. In fact, one of my supervising physicians told me he added horse chestnut to the protocol of a morbidly obese diabetic gentleman, and his varicosities had improved with 3 months of use!

One key way to build collegial support is to become an information resource for your practice. Other providers may actually be interested in expanding their own repertoire but feel too pinched for time to learn new information. Offering a lunchtime class, in-service training, grand rounds lectures, and other opportunities for learning that don't impinge on your colleagues' time can make you a trusted and invaluable resource in your group or community. You might also see if your practice can invest in an online herbal database that any of the practitioners in your practice can reference should they want to learn more, use a quick resource when patients ask questions, or want to try an alternative. Examine.com is one example, and Natural Medicines Comprehensive Database is used by many medical centers and is good one to recommend to your office.

One of the main objectives asserted by health professionals who are skeptical of herbal medicine safety is that they are not regulated by the federal government. In fact, this is not true. Herbal products are classified as dietary supplements under the Dietary Supplement Health and Education Act of 1994 (DSHEA). Products are allowed to carry health-related information stating the effect of the product on the body's structure and normal function; however, labels may not claim therapeutic value. Statements must be truthful and based on documented scientific evidence available through the manufacturer. A disclaimer must state that the FDA has not evaluated the claim. Additionally, new regulations require all manufacturers to follow Good Manufacturing Practices (GMPs) (discussed in a previous lesson).

Some colleagues might already want to incorporate herbs into their practice, but may not know where to turn for reliable products, so they don't make recommendations to patients. Identifying companies whose products suit the needs of your patient population, and researching their manufacturing practices from quality of starting materials to adjunct ingredients to packaging, and sharing information on the top quality products may provide

reassurance to your colleagues and will give you a selection of companies to which you can refer clients. Whether your practice decides to establish accounts will determine whether some products are accessible to clients as some professional quality companies do not sell direct to patients. You will also need to establish a method for incorporating herbal recommendations into patient's charts – will you be writing them as formal prescriptions as I do in my practice? Or will you just note them in the patient's records.

Also you will want to develop patient information handouts specific for various conditions and products, to include dosing, warnings, and instructions. An excellent resource for recommending integrative medicine to patients in general, and which includes some evidence-based herbal recommendations for the conditions covered on the website is http://www.fammed.wisc.edu/integrative/modules. I use this site frequently in my practice.

Clinical documentation of herbal recommendations made to patients is critically important for your liability, as well as for effective information gathering. Include any specific products that you recommend, including the name of the company, and specific dosing. If there are herb-drug interactions the patient needs to be aware of, make sure to discuss these with the patient and document that you did so. If you create a customized formula, notate it completely as you have learned to do in this course. This will allow you to refill it if necessary, adjust it as appropriate, and gives you documentation of the recommendations should side effects or other issues arise.

All practitioners are open to liability issues when making any recommendations – whether for conventional or "alternative" medications. Again, careful documentation is critical. If the patient specifically requested alternatives, note that in your chart; if you mentioned the possibility and the patient preferred to try an alternative before a conventional approach, note that. Make sure to "keep your thinking cap on." Too often, conventionally trained health professionals, fed up with the "same old same old," throw the baby out with the bath water, becoming less discriminating about alternatives and more apt to disregard standard practices. Maintaining a balanced, intelligent approach that acknowledges and respects all possibilities and recognizes a time and place for what is appropriate, is most likely to keep you out of trouble.

Cost may be an issue for patients, as most alternative therapies are not covered by insurance, despite the fact that many of these can represent substantial savings to the health care system. As discussed earlier in the course, providing herbal supplements in your practice can make them more affordable to patients, particularly if you provide them at cost, however this opens you up to a whole additional level of product liability.

Increasing numbers of conventionally trained and licensed practitioners are incorporating botanicals into their practices. Understanding the issues specific to your license or credential, and having open discussions with your colleagues, can facilitate your doing so safely, effectively, and with added value to your professional and patient community.

Clinical Training in Herbal Medicine

For those intending to go into clinical practice, and who lack other primary health care training or licensure, obtaining clinical training is probably the most difficult aspect of getting your herbal education and getting started working with clients. Even many of you with licenses in another health field may wish to see how another practitioner adds herbs to their practice, particularly if you want to add them in the context of a more

comprehensive herbal philosophical approach rather than simply as "green allopathy." Throughout the course I'll share examples of herbal procotocls woven into my medical practice.

If you do not already have a license or credential in a health field, a number of options exist including:

- Returning to school to obtain a license if you do not already have one (i.e., acupuncture, nutrition, nursing, medical, naturopathic)
- Becoming a health coach and working in your own private practice or joining a medical or other office (health coaches will be increasingly in demand as medical professionals seek to motivate clients to adopt healthy lifestyles but lack time to provide this coaching themselves)
- Working as an herbal consultant in the office of a licensed provider, i.e. being the herbalist in a doctor's, nurse practitioner's, or midwife's practice
- Practicing "underground" as an herbalist outside of the scope of conventional constraints

The best way to gain clinical training is to find a personal mentor and work directly under that individual for a set period of time. This program will provide you with an excellent foundation that will make you an asset to a clinical practice, and because you will have a strong academic background in herbal medicine, a desirable clinical student.

The American Herbalists Guild, the only herbal credentialing organization in the US (though not a formally recognized credential) recommends a minimum of 400 hours of clinical training/experience before applying for professional membership status - to give you some perspective and guidelines if you're planning to apply - but also a sense of what's considered an entry level experienced herbalist. It is expected that clinical training also extend over a 2-year period to allow time for integration and study of what is learned in the clinic. Some herbal schools offer on-site clinical training - or you can use the AHG mentorship handbook, created by yours truly back in the late 1990s, as a guide for working with a mentor which can be done creatively in a virtual format (via Zoom, for example). The handbook offers suggestions for students and mentors, helps each delineate their responsibilities and expectations, provides forms for documenting training, and also evaluation forms for both student and mentor. It also discusses some of the issues that can arise in mentorship both for teacher and student, and how to establish healthy lines of communication.

Now Let's Shift Gears to Practice Management

Practice management relates to those aspects of running a consulting or clinical practice ranging from the physical and business management of the office to the policies of the practice to actually seeing clients. The following sections break down the practical aspects of herbal consulting and practice.

Professionalism in the Practice Setting

When I use the word professionalism, I am referring to having standards of care, how one presents oneself to

clients and to the public, and a level of personal ethics that infuse one's practice, whether as an educator or a clinician. These are values that can be adopted regardless of what form of herbalism one practices, whether being an educational consultant, a community herbalist practicing from one's kitchen table in a cabin in the woods, or a medical herbalist practicing out of a hospital clinic (or any type of combination!).

It's each herbalist's responsibility, in my opinion, to represent the profession of herbal medicine as a whole. While herbalists come from many backgrounds and have many types of appearances, from wearing overalls and a straw hat to rocking dreds to high heels (or all at the same time!), keep in mind that there are centuries of attitudes and misconceptions about what an herbalist is (think witchy, crunchy, etc.). And while we shouldn't ever change who we are for anyone, we do have an opportunity from a PROFESSIONAL standpoint to get the health professional to rethink herbs, herbal medicine, and herbalists. And how we appear does influence this. So, it's just something to keep in mind if you do have a chance to give a presentation at your local med school, for example.

In the past, I've also heard lecturers at herbal conferences punctuate their sentences with curse words and cynicism, or rampant criticism and bashing of medical professionals. Many times afterward nurses or physicians who have been in the audience have expressed hurt feelings, alienation, or anger. As healers ii is our job to both speak the truth, but also to bring people together and make change effectively. We do our overall profession – and ultimately our clients/patients – a disservice by creating alienation and distance between medical professionals and herbalists. Similarly, how we present ourselves to other health professionals reflects on herbalists as a whole. For example, if one of our clients is also working with another health professional, and we provide information to clients on scraps of paper rather than on professional forms, it gives an impression of unprofessionalism. And believe me, I've seen this happen!

How we interact with our clients is also important. It is critical to maintain healthy boundaries, honesty, and integrity in client interactions. Returning phone calls in a timely fashion, following through on what we say we are going to do, being on time for appointments, having clear and professional policies regarding finances, cancellations, observing client confidentiality, communicating respectfully, and honoring where our clients are at in their own lives non-judgmentally, are all ways we express professionalism in practice. It is imperative as consultants that we understand our own scope of practice and our limitations, and convey these absolutely clearly to clients. If you have never worked with a pregnant woman with a threatened miscarriage or PUPPS, or a client with breast cancer, and one presents to you, you must clearly explain your experience, and understand for yourself – and convey to your client – what your role can most appropriately be. It does not mean you cannot work with that person, it just means that you are providing full disclosure. Often putting such things in writing clarifies the situation for the client, and gives you some protection as well.

It is also important to be aware of sexual energy between practitioner and client. This is not too likely to be a problem in same-sex consultations, but it can be. Be mindful and thoughtful about your own body language, what you're wearing, etc., and while touch can be deeply compassionate and therapeutic, keep it therapeutic and watch boundaries. The same considerations pertain to office staff, should you have any.

Your Office

Your office sets the context for the tone of your visit, and many women are seeking out alternatives because they want a different tone than is found in the typical medical office. An office is a very personal space that provides grounding and comfort for both you and your clients. There are many possibilities, as my own evolution as a practitioner illustrates.

For many years I practiced from the living room of my tiny house, clearing my family out of the house during office hours. Naturally, this had enormous limitations, but was what I could afford – and it was acceptable to my clients at the time as I was practicing as a community herbalist in a very hippie community. I then progressed to a small office in the main area of our home. Eventually I expanded to a floor of my house – a finished walkout basement – where I had my own office large enough for a desk, books, a supply closet, chairs and a sofa for clients, and a massage table. An adjacent family room doubled as a sitting room, with an adjacent bathroom as well. I also had a large walk-in closet in another room that was converted into a full apothecary with a chair on which clients could sit while I mixed their formulas. Working from home was convenient and affordable, especially with a family. Rather than having to rent an office, I was able to take tax deductions on my home for the designated office space, and if there was ever a cancellation or postponement, I could either choose to stay in the office and get other work done, or integrate back into my home until the next appointment. It allowed a great deal of flexibility.

Then for several years I practiced in a formal medical office that was custom built for the practice I joined. Our space is made of eco-friendly materials and is low scent, low residue for our patients, many of whom are chemically sensitive. We had 4 doctors, 4 nutritionists, a nurse practitioner, 4 nurses as support staff, and a dozen administrators and office staff, plus a a full service lab and a billing department. We didn't keep any supplements on the premises, but the practice owner maintained an online formulary used by our practice as well as by other practices that allowed patients to purchase the products we recommended at their convenience should they choose to do so. There were so many advantages to having a full support team at my service and in service of the patients – now I'm back to a solo practice, and in this pandemic moment, all teleconsulations. As a solo-practitioner more does fall to you, but you can work affordably with any number of small online companies that offer telemedicine options, medical records, scheduling, and sometimes even billing - and which allow you to build up an electronic herbal and supplement formulary and integrate it with some of the major practitioner dispensaries like Fullscript.

If you work from home, including doing telemedicine, having a separate space you can go to consistently for quiet and importantly privacy, is really essential. Having a separate phone line if you work from home is critical both for your client's ease in leaving messages, and for your own peace of mind (i.e., not being interrupted in the middle of dinner by a client with an urgent need – which may or may not turn out to actually be urgent when you get to the phone!). If you don't have a separate line, you can set up a Google phone account that will have voice mail service, and you can schedule to ring into your home phone during office hours – but not during off hours. It's just more work to remember to make those shifts.

A few disadvantages to a home office include the need to keep your home spit spot if the entrance to your office requires clients to pass though the main part of your home, potential for noisy distractions coming from your home if other family members are in the house during consultations, and lack of privacy and possibly security issues in having clients know where you live. Noise, the visuals of the space, and family members intruding are

also challenges with telemed from home – and IMHO – clients and patients really do want to know you're a professional and that when you're on a call or telemed visit, they really have your undivided attention.

Wherever you practice, create an environment that is a healing space for you, too, with sound, color, and scent that are calming and have an easy flow, and allows for client comfort and privacy – as well as a place for you to think, work on notes, etc.

Of course maintaining a full clinic brings with it many advantages for attracting clients, for example, offering massage therapy is a great way to bring in clients who might not otherwise know what an herbalist is, but can be introduced to herbal care through coming in for massage appointments. Running a clinic also brings in further business complexities and responsibilities – insurance, salaries for other practitioners, taxes for employees, benefits, interpersonal issues that occur when you are the boss or manager of a center, and so on. Clear written policies and expectations for other employees become essential.

Scheduling Visits, Seeing Clients, and Managing Your Work Day

Working with clients as your mainstay means careful planning and scheduling. The workload on every level can be demanding and intense. There are instructions to be written, formulas to be filled, and charts to be completed. Clients may change appointments, be late, miss appointments, or require extra time. And the office space needs cleaning and maintenance, charts sent to clients, and if you maintaining an apothecary, that needs to be inventoried and re-stocking. How do you manage all of this?

First you need to identify how many days a week you want to/are able to devote to herbal practice. Most people start slowly – seeing a few clients per week or even every couple of weeks. Over time busy consultants can end up seeing anywhere from 15 to 80 clients/week, however the larger end of the scale tends to be the case for practitioners licensed in other areas, for example, nurse practitioners, acupuncturists, naturopaths, or physicians. Most herbalists without additional credentials see in the range of 10-20 clients/week. This may not sound like much, but it adds up in work time very quickly, as most clients will have questions between appointments, herb orders that need refilling, protocol that need to be written or adjusted, etc. Initial appointments will take between 1 and 1.5 hours. Follow-ups and acute care appointments will take between 30 minutes and 1 hour. You will need some time between appointments to write up any impressions or notes from the previous appointment when the client has left the office. Then at the end of the day you will need time to sum up all of your day's appointments in charts and write protocol for any clients who have not yet received a health plan – this latter part can take a lot of time!

If you are stocking an apothecary and will be filling the orders yourself, you'll need at least 15 minutes per client to fill the order, write up labels, do necessary documentation, create a receipt, etc. so you must add in this time between appointments when you schedule visits. Another option is to include the cost of shipping into your products, and fill orders at the end of the day and ship them out, or have an order pick-up day once or twice a week where you have clients come by for their products – this is less convenient for clients unless you live in a small community and see local clients only. Of course for acute cases you'll have to fill orders on the spot.

You'll need to leave some time during the day to return phone calls – and phone time adds up quickly, so give yourself ample time proportional to the size of your client load. You may want to tell clients up front, or have a

voice mail message that states how long it usually takes you to return calls – for example, "I will return your calls as quickly as possible. It may take me up to 48 hours to get back to you." This way clients have reasonable expectations and don't feel disappointed that you aren't calling back immediately. You can choose to carry a pager for emergencies.

Here's How Seeing Clients Works

The Initial Phone Call

The first contact with a prospective client is generally through the initial phone call made to your office or preferably, in my experience, though a form you make available for prospective clients/patients to fill out online. I have a 5 question application I have folks submit electronically to be considered for becoming a patient in my practice to make sure it's a fit for them and me.

If you're just starting out or have a solo practice, you're unlikely to have a receptionist, so you'll most likely be responsible for fielding calls. It actually adds a significant amount of time to your schedule if you are the one doing this as many people will try to 'bait' you into a conversation or ask health questions then and there. If an assistant takes calls, the caller is unlikely to try to engage them in a lengthy conversation about their needs and concerns in the call – they will just convey the basic information needed to make the appointment, and schedule the time. If, however, you as the consultant are taking the calls, then the potential client is likely to try to discuss their situation, and if you are new and eager to please, you will be apt, in your eagerness to gain a new client, to give a lot of extra information and time in the initial call.

It is amazing how quickly you can find yourself spending an hour on the phone with each person who calls, essentially giving out free appointments! The initial screening application cuts through that issue.

Setting your boundaries early in the relationship is really important for avoiding burnout, compassion fatigue, and feeling overextended. Remember, part of why individuals seek health care is not just because they feel unwell – they are also often seeking connection. Many alternative and integrative care givers have shared a similar observation – when clients realize that you are an open and caring person, willing to give more time than the average 7 minutes a patient receives from their medical doctor, you become a prime candidate for people to expect a lot from you.There is a double-edged sword to being a consultant who prides oneself on taking a lot of time with clients – you can expend an enormous amount of your energy and quickly become overextended! Again, setting reasonable boundaries is critical.

So, you are setting up an initial appointment. What information do you need to get from the client, and what do you need to tell them? From them you want their name, phone number, and reason for their seeking an appointment (the nature of their problem/concern/condition). The latter is very useful information to have in advance, especially when you are a new consultant, as it allows you to get a jump-start on researching the condition, especially if it is new to you, or if you haven't delved into the literature on the subject. Make a note of the condition next to their name and appointment time in your planner. You can then enter their consultation more prepared and can provide information more effectively. With a little practice you should be able to keep the

initial call down to 5 minutes.

What do you want to tell them? Here's a list of what you can send to them by email, ideally, far enough ahead of the appointment that they have time to fill in any forms, gather records you might need, and even get all of these back to you electronically so you can review them before you meet them!

1. How long to expect the initial appointment to last, and the costs of initial and follow-up visits, payment methods, etc.
2. To bring a 3-day diet diary – all you eat and drink…be honest, as this will help me to best understand your symptoms, conditions, and nutritional needs
3. To bring to the appointment ALL supplements (herbs, vitamins, minerals, etc.) and medications you are currently taking or take regularly (don't have them bring a list, have them bring the actual bottles – you'll be amazed at how many people will show up for their appointment with two plastic grocery bags filled with "stuff" they are taking!!)
4. To bring any relevant and recent medical or laboratory records/results they have on-hand or can obtain
5. To bring a check (or form of payment you accept) for the amount of the appointment (see below Expenses and Fees, and Dealing with Money)
6. Your cancellation policy
7. How to access directions to your office

I also inform clients that they may not receive their initial protocol at the first appointment, that we may first need to review dietary or lifestyle factors, and that it may take me more than one appointment to best identify an appropriate herbal protocol for them. This is very important for intractable chronic cases which you may need to research or think about before giving a recommendation, and is a policy that even the most experienced herbalists I know will inform their clients of. This is discussed further below under "The Initial Appointment." This policy is rarely necessary for acute cases, the protocol for which is generally much more obvious and immediate.

The Initial Appointment

The first appointment with herbalists generally lasts from 1 to 1.5 hours. My initial patient appointment is 80 minutes, with the expception of mini-consults which are 50 minutes and for very focused issues rather than a comprehensive holistic approach. My initial appointment consists of a health history intake, review of the current condition or problem, review of a diet diary, discussion of previous diagnoses, review of current supplements and medications, lifestyle habits, and in some practices, a physical assessment. New herbal consultants may take up to 2 hours for an intake; with experience it becomes easier to directly elicit information and keep the appointment on track, thus cutting down the time required for the appointment. Acute care appointments, for example, for a pediatric ear infection, may require only 30-45 minutes, or less, depending upon the circumstances and the experience of the consultant.

During the initial appointment you are trying to get a sense of the client – both their condition, and the context of their condition in their life – not just what they have, but who they are. As we've discussed in Lesson 2, herbal consulting and formulating is much more than See A (as in a specific condition) and Do B (as in give a specific protocol). You are, instead, working with the whole person. So Sally comes in with severe acne as her primary concern, but you discover that she has regular constipation that always accompanies the exams she is taking as part of her graduate school program. She also has PMS. And she's newly married. And has a history of sexual abuse. Clearly, simply giving alternatives for the acne is not going to address her problems. Assessing root causes takes time and careful consideration. I let the feeling of the client wash over and through me when I am sitting there with them, listening to and recording their health history, their life story. As you get more experienced you become more sensitive and also as you know the herbs better, you make faster connections between people and herbs, conditions and protocol. But a complex case takes time even for the most experienced herbalist.

As discussed in earlier lessons, herbal medicines are only a part of herbal care. Equally, if not more important, are nutrition, exercise, lifestyle and general health, as well as referrals to other practitioners for situations beyond your scope and experience. If a client comes in reporting of menstrual cramps but is overweight, has a family history of heart disease and osteoporosis, eats red meat and drinks alcohol four times per week, has ice cream every night after dinner, and has never had a green vegetable or whole grain in her life, cramp bark is only going to work so well.

Frequently, when a client comes in for the initial appointment fairly clueless about lifestyle habits, I do not initially give any herbal protocol, instead making the initial protocol something like: okay, substitute two red meat dinners per week with fresh fish, and add broccoli to one meal and a fresh field greens salad to another. Do that for one week and then come in for a follow-up appointment to further discuss diet. Similarly, if a client comes in with health problems but seems too busy to follow the protocol, or uninterested in making lifestyle changes, I will do something much like I just described. At the second appointment, usually made 1 or 2 weeks down the road, I will assess whether they even got started with the simple recommendations from the previous appointment. If they have, we go onto further dietary changes and a simple herbal protocol – maybe as simple as an herbal bath or cup of chamomile tea 3 nights/week. I may continue like this for several appointments until they are seriously establishing new lifestyle patterns and are showing some seriousness about following an herbal plan. This saves them a lot of effort and money wasted if they purchase herbs they wouldn't use, and saves me the time and effort of writing up a protocol that they might otherwise not have followed. Clearly having some nutritional and lifestyle counseling skills, or being able to refer out for these is indispensable. You might also keep a lending library or for-sale selection of nutrition and cookbooks on hand. Your clients will appreciate this.

Sometimes I'm uncertain of exactly what to do for a client on the basis of an initial visit, especially if they have multiple concerns, an unusual condition, or have had a long-standing and somewhat intractable problem. When this happens, I honestly inform the client that I would like to think about their situation for a day, or even a few days, possibly do some research, and then get back to them. I have never had anyone complain about this, and know many other experienced herbalists who do this as well. Most people want to leave the office with something in-hand to get started with (most Americans are accustomed to leaving a physicians office with a prescription, so their expectation is probably based on this), and feel that because they have paid for a visit, in fact they should have something to show for it. Thus I will often create a simple nervine or nourishing tea or tincture formula to get them started, and will always give some dietary and lifestyle recommendations. Then, when I have had sufficient time to mull over their case and provide a write-up of the protocol, I will email, mail,

or have them pick-up their written recommendations, as well as a list of products they will need (and if needed, estimated product costs).

Sometimes it's evident upon your initial phone conversation or initial office appointment that the client has something going on that is a red flag for a more serious condition that requires further evaluation. Never hesitate to tell a client, even upon an initial contact, that you cannot consult with them until they've had a formal medical evaluation and diagnosis. I keep clear records documenting this.

Follow-Up Visits

My follow-up appointments are between 25 minutes and 50 minutes hour, depending upon what's going on. Here's an example: Let's say you've been working with a client who had herpes outbreaks every two weeks prior to consulting with you. She began working with you in February, and had a series of two 50-hour appointments to work on her diet and stress management, and started an herbal protocol consisting primarily of nervines and antivirals shown to reduce herpes outbreaks. It's now September, and she's not had an outbreak since April, so she wants to simplify her protocol so she is taking her herbs less often. You schedule a 25-minute appointment to modify her protocol, and after 8 weeks she has still had no outbreaks and is very satisfied. It is now December 4th, and she knows she's prone to increased outbreaks during holiday time and wants to bump up her plan again preventatively, so you schedule a 25-minute appointment, revise her protocol, and again she has good results. In March she calls you and says she is 10 weeks pregnant. She stopped the protocol as soon as she knew she might have conceived, but is now having outbreaks again, every 2-3 weeks. You schedule a full 50 minutes to discuss prevention possibilities that are safe during pregnancy. As you can see, the time allotment for a follow-up is highly variable and follow-ups may be irregular and intermittent.

The most important thing is to let clients know initially that follow-up times will vary according to their situation, and that you will do your best to keep their appointments to a minimum to be considerate of their time and financial needs.

Follow-up phone call and email policies: Even if you always do your best to make sure your client understands her plan, and has had her questions answered in the appointment, post appointment questions will often arise. Many times clients will have questions for you after leaving your office…perhaps they forgot to ask you something or were to shy to ask in the office but now feel comfortable asking over the phone. Or they got home and realized they did not fully understand what they were supposed to do or how to prepare something and they send an email. Or perhaps a week later they want to discuss something else. Or they can't tolerate the taste of the tea they are supposed to take….

Amazingly, short questions from clients can add up to hours of returning phone calls and emails, especially in a busy practice. If your practice is busy enough to justify an assistant, that person can field and return many of your calls and emails for you. But a large number will still require your direct response. So how do you manage it when clients call between appointments? I have what I call the ten-minute rule/two question rule. That is, a client can call me and ask questions for 10 minutes, or email me with two questions related to the appointment, without requiring an appointment and at not charge. However, if their questions are complex or involved, or are about a new concern, I will schedule an appointment and charge as well. If it's quick, I'll prorate the time – but it's much more effective care for them and more responsible of you to really carve out the time rather than hammering

emails back and forth because things can get missed. For example, once a patient I'd not seen in many months emailed me 3 weeks in a row about some symptoms: one week it was constipation, then next feeling depressed, and then next aches and pains. It dawned on me that groans, bones, and moans were part of a mnemonic for hyperparathyroidism, so along with thyroid testing for those symptoms, I ordered parathyroid testing – and sure enough, that was the diagnosis! Had I just sent her some thoughts on constipation one week, something for mood the following, etc, I'd have missed what it took an appointment and some lab tests to uncover. Setting boundaries around emails is also so important for your health – and your client's. I had one patient have an initial appointment not return for her follow up, but pepper me with emails – to the tune of 38 emails in 3 months. I really had to let her know that wasn't good medicine for her - or sustainable for me. This policy prevents you from becoming over extended, expresses clear boundaries to the client, and also allows you to provide the most thoughtful and effective consultations.

Teleconsults

Because herbal consultants and practitioners are so few and far between, many received requests from potential clients all over the country for their services long before COVID pushed so many practitioners into a primarily telemedicine model. Also, sometimes a particular herbalist is especially skilled or specialized in one area (for example, pregnancy and lactation, or pediatrics), and thus may be one of only few herbalists in a large region able to address certain questions and conditions. In response to this need, many herbal consultants allow for phone consultations when an office visit is not possible or practical. Phone consulting may be the only option for clients who otherwise lack access to local herbalists. I have also relied on consultations when treating infectious illness, rather than having the client come into the office where they might expose others.

My telemedicine practice, which may be a video chat consultation initially with video or just phone follow-ups, is almost identical to my physical practice – just the setting is different.

The most effective way I have found to consult by phone, from a business perspective, is to set up an initial appointment contingent upon receipt of payment in advance. It is easier for someone to forget or not show up for a phone consultation than an in-office visit. This policy prevents you from investing time if someone is not serious about the appointment. When payment is received, the potential client is then emailed the intake forms, which are to be returned electronically prior to the initial appointment. At the scheduled time for the phone consultation, the client call or videoconferences into the practitioner. Follow-up appointments are scheduled in the same way. As with in-office appointments, protocol may be given on the spot or sent some time shortly after the appointment. Written protocol and instructions can be sent to the client via email or electronic medical portal.

Paperwork and Forms

Keeping accurate and professional records are essential. It is both the record of your client's concerns and progress and your legal documentation of everything that transpires between you and the client. Keeping clear records allows you to follow the effects of protocol, modify them, easily refill formulas, and also can provide excellent material for published case histories (with client anonymity of course). Careful records allow your client to show their primary care providers and other practitioners with whom they may consult exactly what they are

taking and doing. This reduces the potential for herb-drug interactions and other clinical problems to arise as often happens with multiple care providers.

Here is a list of the basic essential forms you'll want to have in each client folder:

- Informed disclosure: This explains your background, training, experience, and role in the client's care
- Unless you are one, it should explain that you are not a licensed care provider, and do not claim to be one, nor do you diagnose or prescribe.
- History/Intake: a basic sample history form is provided with this lesson
- Diet diary: a form for recording 3-5 days of food intake including meals, snacks, beverages, and supplements
- Client Plan: This is your personalized recommendation form, and for most herbal consultants includes space for the herbal protocol, dietary changes, lifestyle and other recommendations, and instructions for implementing the protocol. A new client plan is generated at each appointment, so keep multiple copies of this accessible in your consulting office.

Finances and Fees

Determining your fees and how you handle client payments is a very personal matter, and will depend on many factors, including your business expenses, how you choose and need to value your time financially, the fees your community can bear and their needs, the fees of other comparable practitioners in your community, insurance reimbursement, and the economic status of your clientele. If you are already in a primary care practice – for example, you are a midwife, naturopathic physician, MD, or other licensed provider – your herbal consulting will just fit in as an extension of your other services (however, because herbal medicine is not generally reimbursable by insurance, it will require out-of-pocket payment by your clients).

Money is a fraught issue for many. So before you even begin to determine your consulting fees, it is a good idea to take a look at your own money issues, as well as how you might deal with those of your clients. If you are pretty much single-handedly managing your practice, you will be interfacing with clients not only about their health, but also about fees and payments. Sometimes herbal consultants, especially those coming from a more alternative perspective about social economy, or a spiritual perspective about healing, may consider making money doing health education work to be inconsistent with their values or the spirit of healing – that their work should simply be a service with no charge. If you feel this way, then by all means, follow your heart (and skip the rest of this section).

If you want to both make money and do good work, you can do this successfully and with integrity, but you must be clear about your own needs and expectations, your ability to communicate clearly and directly (and without guilt or apology) about money with clients and employees, and your ability to set financial goals and boundaries that value your time, knowledge, and effort. Being an herbal consultant is a fantastic form of right livelihood, and you deserve to be reimbursed for what you put into both your education and your work. Your fees should ultimately be based on the amount of money you need to make to cover your office expenses, meet your living

needs, plus a profit if possible. At first, most consultants do not see enough clients to give up their "day jobs" so have to creatively schedule appointments around their primary work, and essentially be managing two jobs until they can solely rely on their herbal education practice or other work as an herbalist. Also, at first, you may have less confidence, knowledge, and experience, so may charge less, seeing the opportunity to consult as part of your education and paying your dues. This is very common, and as you grow in experience, you will naturally be able to charge more. You will also become busier and thus have less time to "give away" your services.

Any time one starts a new business, more time goes into it initially than is repaid monetarily, but you should keep careful track even of incidental expenses such as postage for mailing out forms or protocol, phone bills, copy paper, electricity, even toilet paper for the client bathroom, This will help you to determine your actual expenses vs. your needed income, and thus how many clients you will need to see, how often, and at what price, to recoup expenses.

The average fee range of herbal consultants who don't also have another recognized license or certification (in which case fees may be higher) is from $50/hour to $180/hour. Some herbalists practice on a sliding scale basis; some barter for some of their services. The lower end of the fee range tends to be that of herbalists who are just starting out or herbalists serving very rural or economically depressed communities. Experienced herbalists and/or those living in major cities that can bear a higher fee scale typically charge the higher fee range. Fees include consultation time, handouts, and actual protocol. They do not usually include the cost of herbs, though a few practitioners may build the cost of simple teas to start the client out with into their fee.

The initial consultation cost is almost always higher than the follow-up costs – typically equal to the cost of 1.5 hours of consulting time, as the intake requires a longer visit. Most consultants expect payment at the time of the office appointment, though may accept payment on terms from established clients. Herbal consultants may also have cancellation policies. In my practice, one missed appointment is generally not billed, however, more than one is billed, and a client with repeated missed appointments is no longer scheduled. I have never had money problems with clients. I am very clear and direct about my needs and expectations, and expect clients to be as well. I've had clients whose entire fees have been waived based on need (though I generally require payment for the herbs themselves), clients who have bartered, and those who have paid and then given gifts on top of it. The main thing is to be clear about money itself – and the energy exchange it represents. I know an herbalist who used to say, "I do not get paid for the healing work, but I do get paid for the office space, electricity, books I've had to read, and the food I have to eat to make it to the appointment."

Paying Taxes

Main point here: all income is taxable, and most work expenses tax deductible – this includes your office space if dedicated solely to your work, books, and conferences. You will be earning money from and spending money on your practice. An accountant can help you plan your finances, what type of corporation to set up (i.e, LLC, S-corp or other) and what is – and isn't deductible.

Insurance

Insurance is a complex area. Most consulting services provided by an herbalist are not insurance reimbursable; as an herbalist, it's not likely to be an issue you have to address. As a licensed provider, if you do take insurance,

you'd simply bill for the condition or for face-to-face time. You may also choose not to accept insurance in your practice – which will limit your practice to those who can pay out of pocket, but does allow you to avoid the complexities of HIPAA, insurance billing, etc.

As for PERSONAL insurance, as stated earlier, it is essential to have accident insurance on your property if you're seeing clients physically in a space you own or rent. You also need product liability insurance if you are manufacturing and selling your own products.

Most herbal consultants also do not carry malpractice insurance, as it is just not available. A few herbalists I know have insurance as a lifestyle educator or lifestyle counselor. For $500 /year they are covered for a lawsuit of about $100,000. However, if they got accused of practicing medicine without a license, or if there was truly a serious adverse outcome as a result of a client using herbs that were suggested by the consultant, this insurance might not go very far. Licensed care providers are covered by their malpractice insurance as long as they are practicing within the scope of practice defined for their profession.

Working with Licensed Care Providers: Community Referrals and Collaborative Care for the Herbal Educator and Consultant

Practicing collaboratively in a supportive and cooperative community is ideal for everyone – the practitioners, the educators and consultants, and most importantly the patients/clients. Openness and disclosure to primary care docs about herbal use by the patient can help the primary care doc truly understand not only the client's needs and preferences for care, but also the progress of their case. Openness on all accounts can also help both the herbal consultant and the primary care provider avoid needless and possibly harmful herb-drug interactions.

As an herbal educator, you may encounter situations that go beyond the scope of herbal education, and require referral to a physician or other appropriate licensed primary care provider. Being established in your community as a respected herbalist will allow you to facilitate a referral for your client. Being respected in your community, you may be able to continue consulting with your client, in conjunction with the primary care provider, enabling your client to receive the medical care they need, and the herbal information that may be of benefit, or at least support the client's right to access the integrative care they desire.

Communities vary on their attitudes toward herbal medicine, with some being generally supportive and others very conservative. Within those communities is the same range of attitudes amongst practitioners. One of the best ways to meet local practitioners is actually through your clients. Many times a client will be consulting with you and a primary care provider. With your client's permission you can send a letter of introduction to the care provider, and through your client, keep them apprised of any herbal protocol your client may be using. You can also ask them if they are interested in receiving other information on herbal medicine, and provide them with handouts on herbal safety, herb-drug interactions, how to identify quality herb products, etc., all of which might be useful to other patients in their practice. You can also give talks at local hospitals and medical schools. Over time, these relationships can be of great benefit to your clients, as well as to helping your practice grow. Remember, physicians and nurse practitioners have an enormous amount of new medical information to keep up – they do not have the time to become experts in herbal medicine as well. Many physicians have told me they

would love to have well-trained herbal educators and practitioners with whom they could work and to whom they could send patients for safe and accurate herbal information. The Certified Women's Herbal Educator will hopefully begin to fill that niche in women's health care.

Working with Low Income and Undeserved Clients

There are tremendous barriers to the utilization of natural health models in low income communities – namely the lack of availability ("food deserts" or food apartheid as it's more accurately called) and high costs of quality foods, lack of safe places to exercise, lack of safe places to enjoy nature, sparse access to integrative practitioners, and high costs of supplements and botanical products. In fact, for those low-income individuals who have health insurance, conventional care is much more affordable than herbal treatments in many cases. For example, for depression Prozac might costs a few dollars per month with insurance coverage for medications, whereas St. John's wort tincture, dosed adequately, could cost several dollars/day – and up to $20/week. While to many of you this may seem affordable, many individuals are living far below subsistence on just a few hundred dollars per month for food for a family. Yet many of the chronic diseases and gynecologic and obstetric problems that ensue, are highly correlated with poverty, poor diet, and stress. Working with lower income clients requires knowledge of available resources and creative ways to create access for clients. It can be deeply rewarding work, and in some communities, herbalists and other health care providers have joined forces to create free clinics.

IM4US (im4us.org) is an organization that provides excellent accessible resources for you to share with clients on how to make optimal natural health care something affordable for everone.. There are also options for you to contribute by creating content and commenting on existing content, a rich area in which HMW students can make a difference!

Taking Care of Yourself and Preventing Burnout

As your practice grows, so will the demands on your time and your involvement in other people's lives. Unlike some jobs that you can turn off when you close your office door, being involved in people's health, even as an educator, work is not something you simply leave behind at the end of the day. You may think about the woman with stage 3 uterine cancer who is having surgery this weekend, the pregnant mother with a history of miscarriage who called your office to report that she was lightly spotting, or you may have three papers to write for an upcoming conference and a load of client paperwork to catch up on in the evening or over the weekend. In order to keep your energy fresh and your heart and mind clear for your work, it is essential to have down time where you replenish yourself. This keeps you fresh, open, soft, and patient, all-important characteristics to keep alive to serve clients effectively. In order to have enough energy to give abundantly to everyone, you have to have your own cup running over. If your own cup is empty, there will be little to give – and either you or your clients won't get enough. In my 37 years of experience, I have found this to be true.

Learning what replenishes you, and making time for taking care of yourself is essential and is an art. Even if you set aside 15 minutes in the midst of a busy day to step outside and breathe deeply, and perhaps a longer time

once each week to spend an hour nourishing yourself, whether through time outdoors, a long bath, tea and a novel, creating or seeing art or music, journaling – some time of solitude can be deeply replenishing. I also believe that as an herbalist, making time to breathe in deeply the essence of plants is part of your line of wisdom into the plant world. If you have a garden, access to woods and meadows, then getting out and playing with herbs is easy. If you live in the city – even in an apartment – then keep plants in your windowsills, go to botanical gardens, and occasionally get out into wide-open space, even if it's taking a plant identification class through a local botany club.

Also, it's important that your social time with friends not be filled with your being asked for healthadvice. At first, it's fun and maybe even ego gratifying to be able to share your knowledge and be in the center of attention when people are at a party and everyone is asking you for herbal advice. But after while, the fun wears off, and also you realize the information is only generalized so not necessarily helpful out of the context of a more private consultation.

What is helpful, on the other hand, is a small circle of close friends who are also health care providers with whom you can share the joys and frustrations of client education and care, and with whom you can toss around difficult cases or get some feedback or a second opinion. These folks may be in your community, or people at a distance with which you have phone and email connections. A great way to meet other herbalists is to attend herb conferences. Many people have 1 or 2 favorite conferences to which they attend each year – this can become an annual retreat time for building those relationships while gathering new skills and ideas. My herbalist, midwife, and physician friends can uniquely understand my work, and the challenges of it – in addition to the joys.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 12

The Client Encounter 2

Learning Objectives

By the end of this lesson you will be able to:

1. Understand the importance of boundaries in the consultant-client relationship
2. Apply mindfulness to improve clinical and professional acumen
3. Obtaining a meaningful client story
4. Synthesize client information and herbal knowledge into a comprehensive herbal plan

Unit 1 Lesson 12 The Clinical Encounter 2

Required Media

You will be prompted in the body of the lesson when to listen to each of these talks. Note that each talk is about 90 minutes and is important to your work as an herbal educator and practitioner.

- The Art of the Health Interview
- Organizing Information, Creating a Plan
- Engaging Follow Through, Optimizing Success
- Bonus: Insights from Nutritional Physical Exam Findings

Key Terms

Be sure to familiarize yourself with the definitions for all key terms. These can be found in the course resources or by using an on-line medical dictionary.

Boundaries

Compliance

Concordance

Engagement

Mindfulness

Relationship

Supplies

- 2 tsp each of red raspberry leaf, slippery elm power, and dandelion leaf
- Small amount each of yarrow, goldenseal, and echinacea tinctures

Introduction

Being invited into someone's life in the intimate capacity of healing is a privilege. It is a sacred space. It is also complex: it involves relationship skills, the ability to sort and integrate information, the ability to connect meaningfully, listen well, and simultaneously dig for, understand, and make meaning of a wide variety of factors that contribute to health and health disruption.

At whatever point we are invited into someone's life to help them with their health, we want to keep in mind how very marvelous the human body is. We also want to reflect on the role we want to have, and understand what role the client expects us to have, and make sure everyone's goals and expectations are harmonious. We want to remain mindful of our role as educator, resource, and facilitator, rather than " healer", "fixer." or "doer".

We must always remember that in front of us is a person with a life, family, personality, history, hopes, fears, and expectations – not just another interesting case for us to solve. How do we help this human being in front of us feel respected and heard? How do we help her identify and to kick-start her own self-repair mechanisms? What is missing from her life that she needs for health? What has and hasn't worked with other consultations? What brought her to us today? And how do we help her to tune in and identify her healing potential and self-care responsibility and capacities?

This lesson takes you to the next level of the clinical encounter, allowing you to begin to work with your clients in new ways – pulling together women's ways of knowing and herbal tradition and science into a plan that nourishes and restores wellness in whatever ways possible for the woman before you in the consultation, class, or other herbal endeavors in which you are applying clinical information. Remember your goals:

- To increase women's access to responsible and reliable resources of herbal information and education.
- To assist women in creating empowered lives and livelihoods incorporating herbal medicines

The required videos accompanying this lesson, which you may watch now or when prompted in the body of the lesson, will provide you with pearls and skills based on my 30 years of experience in clinical practice with an enormous variety of patients. They are really the heart of this lesson!

Getting Started: Establishing Relationship and Gathering Information

Getting started with the client is about three things:

1. Establishing relationship
2. Clarifying goals and expectations
3. Gathering information from the client

Establishing Relationship and Expectations

Serving as an herbal educator and practicing herbal medicine clinically are incredibly rewarding paths, allowing you to be part of empowerment, transformation, and healing with your clients – and yourself. It is also a powerful form of "right livelihood."

No doubt, however, it can also be challenging: it is emotionally, mentally, and physically demanding to become a participant in so many other peoples' lives. Regardless of how much you emphasize client responsibility and empowerment, some clients will develop expectations of what they think you should/shouldn't, can/can't do for them. Many issues can get overlaid onto the client-consultant relationship, and a few individuals will inevitably be unsatisfied and points needing clarification may arise.

Establishing relationship clarity and expectations (a.k.a. boundaries) from the beginning generally facilitates an optimal and sustainable healing relationship. It is common and natural when you first start out, to feel you need

to give and give, meet every one of your client's needs and expectations, and to be so open and connected in relationship that you don't establish boundaries. Further, as women, we may be co-dependent in relationship, and have the need to be "liked" and approved of. Because we are practicing outside of the norm, we may also feel a need to go above and beyond with what we offer in a sort of overcompensation to demonstrate how our care is so different from the mainstream. Our personal open philosophies may also engender a "no boundary" approach to connection.

While I hug my patients, cry with them, and build deep connection, I have learned from decades of training and clinical experience that setting boundaries is essential to an effective long-term consultant-client relationship. Getting very clear about your fees, your availability, your services, your office hours, missed appointment policies, how you can be reached, your physical office space – you name it… if it's important to you – put it in writing and share it with your clients before they start their relationship with you, at the first visit, and as reminders as needed. In the long run you will be happier and will minimize the risk of burnout, which is a reality for many busy practitioners. Reminding clients that it is their job to do the work of healing puts the process firmly into their hands, which is where it belongs. They have to make the changes, take the herbs, create healthier lifestyles, and show up on time.

People work is demanding – boundaries make it so much easier, clearer – and more enjoyable!

Practical Mindfulness for Practitioners

Mindfulness is the key that unlocks the door to successful client consulting – both in terms of relationship and creating effective plans. Mindfulness requires being aware of yourself – your thoughts, distractions, judgments, and intentions, while paying attention to both what the client is intentionally sharing, and the subtext, body language, tones, and other tacit messages you receive. To receive the messages you have to be fully present and paying attention. Therefore, before you enter each client encounter, take a minute to "drop in" to yourself and recognize any clutter you have accumulated in your day. Take a few deep breaths and find your core.

An important question to ask yourself before engaging in each client encounter is, "What kind of practitioner/educator do I want to be today?" Then act from that place.

The Herbal Educator as Facilitator and Coach

Part of establishing clear boundaries and expectations is getting clear within yourself about your role and what you can and cannot do. Important reminders to self:

I am not doing the work of healing. I am a resource. I am a cheerleader. I am a curious researcher. I care. It is not my job to fix everyone and everything. I cannot help everyone. I deserve to enjoy my work and be compensated for my time.

It is so easy to think we can or should be able to "fix" every client's every problem, but this is impossible for a variety of reasons. Some client's health problems will be beyond the scope of your care, or of herbal care (i.e., if a woman has high blood pressure in pregnancy, she might need a conventional medication; if she needs a

mastectomy for breast cancer, herbs won't fix this). Reframing your role to one of educator – even when you are a licensed practitioner – can add to your therapeutic value because it keeps you out of your ego and in your curiosity and desire to serve.

Effectively engaging clients in their own healing process is an art and a skill that is acquired over time. Steps you can take right from the start include:

- Encourage clients to keep their own health records, providing them with educational information about their concerns so they can become knowledgeable, engaging in a partnership model at all times rather than a hierarchical model. (I've seen a lot of alternative providers become quite patriarchal – even women providers! It's easy to slip into this.)
- Have your client regularly reassess her own life and self-help engagement. This can be done using a medical symptom questionnaire (see below) and using the set of questions below for self-reflection. A scored medical symptom questionnaire (MSQ) that clients fill out prior to the initial appointment and then prior to each subsequent appointment allows not only you, but the client to objectively assess what is, and what isn't improving – and gives you a starting point for discussions around obstacles to improvement, whether they be adherence to a plan or need for a revised plan. Examples of MSQs are available online from various practices. You can use one of these as a model to create your own.

Questions your client can use as self-assessment of how the plan is going include:

Nutrition:

- How many fruits and vegetables do I eat in a day?
- Is there anything I eat too much of, or too often?
- What is my relationship to food?
- Have I been able to make recommended dietary changes? If no, why not?
- What changes can I make to overcome this obstacle?

Movement:

- What activities do I like to do?
- In an ideal world how would this fit into my life?
- Have I been able to make recommended exercise changes? If no, why not?
- What changes can I make to overcome this obstacle?

Herbs/Supplements

- Am I taking using my herbs regularly and as suggested? If no, why not?
- What changes can I make to overcome this obstacle?

Lifestyle

- Is there a substance or habit that I use too much and would have trouble giving up?
- What changes can I make to overcome this obstacle?
- Are there any relationships that need my attention right now?

Mind-Body

- What are the top 1-2 sources of stress in my life right now?
- What are the top 1-2 sources of laughter and joy in my life right now?

Meaning and Purpose

- What are my sources of meaning, hope, strength, peace, love and connectedness?

Have your client sign a contract. Here is an example from the University of Wisconsin Center for Integrative Medicine

Client Contract for Self Care Responsibility

I am responsible for my health, my life, and me. The path to healing involves looking at the truth of my life, accepting the state and conditions of my life as they are right now, and accepting responsibility for those things I can change. Happiness is an inside job and only I can discover this for myself. No one can give this to me, and no one can fix all my problems or make all my challenges go away. I intend to lean into the tension and stress areas of my life with curiosity and be present with my pain as it arises as best I can. With practice, patience, and persistence, little by little I will be kinder and friendlier toward myself and others. I will not project hate and blame onto others because that only distracts me and prevents me from healing the root cause of my pain – unheard and unseen loss, anger, disappointment, sadness, grief, fear, and guilt. May I be able to accept those things I cannot change, have courage to change the things I can, and have the wisdom to know the difference. I understand that this pain I feel shows up as a "sideways leaking-out' expression of my deepest inner-hurt, where my innocent child-like heart feels wounded. There is no person, pill, supplement, or procedure that can fix what hurts deep inside – only the messy, frustrating, long, and at times unpleasant work of being honest with myself and the circumstances of my life. May I be able to re-create myself and be kind to myself and others. I must see what lies hidden, pushed down, and out of sight – an imprisoned and ignored companion who demands to be

seen and known. I admit that I'd rather numb myself, run away, fight with, and dismiss all this pain – but the hard truth is I've already tried these and a myriad of other things without any luck. I am stuck with this, just as it is… me, just as I am – in this moment and in these circumstances. But I also know that I have a choice, that I can accept what is happening, stop ignoring and fighting it, sit with my pain, and finally be healed by it. I pledge this to myself, for my happiness and wellbeing, and for the happiness and wellbeing of those I care about.

Signed: _____

If obstacles to self-care are identified, using the Making Shift Happen worksheet from Lesson 3 can be very useful.

Gathering Information: The Art of the Health History Intake

Each woman who comes to us has a story to tell. Central to understanding a woman's health concerns is not only the ability to gather a complete and accurate general health and gynecologic health history, but to truly begin to understand who she is as a person, which can best be done through hearing her story.

Gathering information requires:

1. Presence
2. Establishing trust
3. The ability to educe a story
4. Effective information gathering tools
5. Body knowing," and insight into body language, tone, etc
6. Knowledge of what information is important to gather

These skills are fleshed out in the required video **The Art of the Health Interview.** Watch – or rewatch – now.

Challenges for the Herbalist and Western Trained Health Provider

One of the greatest deficits we face as herbalists is lack of a cohesive system for organizing the information we gather and translating this into a meaningful, effective plan for our client. While TCM and Ayurveda have many thousand years of relatively unbroken history and tradition, western herbal practice is largely fragmented into almost as many styles as there are herbalists! In fact, the inability to agree on core practice guidelines and principles also makes it very difficult for herbalists to formalize and organize as a profession. Most strikingly,

herbal medicine lacks formalized and internally consistent language and understanding of disease, as well as methods of:

- assessment
- diagnosis
- herb selection
- formulation, and
- dosing

As a result, many turn to other systems, for example, TCM and Ayurveda, for a framework for applying western herbs. Others turn to Native American models, New Age and Earth-centric philosophies, or hang onto the words and philosophies of contemporary herbalists who have developed discreet methods of their own for addressing these deficits, for example, Michael Moore's models of assessment, Matthew Wood's drop dosing model, and Susun Weed's Wise Woman Tradition.

However, none of these quite hits the nail fully on the head (though I do believe the heart of the Wise Woman philosophy can and should be applied in every setting), in large part because few of the herbal writers and philosophers are in actual clinical practice, following numerous clients over an extended period of time and following up on what really does – and does not – work for real people with complex health problems.

Over my own now 30+ years of working with herbs clinically, initially as an herbalist, and now as a physician, I too have struggled to find a meaningful structure – and architecture – that allows me to organize my findings, thoughts, and the client's concerns into a cohesive, clinically practical whole that leads to a plan. As the President of the American Herbalists Guild for over a decade, I also had intimate glimpses into what large numbers of herbalists around the country, including most of the leaders in the field, struggled with – and many also found significant deficits in the consistency of knowledge, guidelines, and practices in the profession.

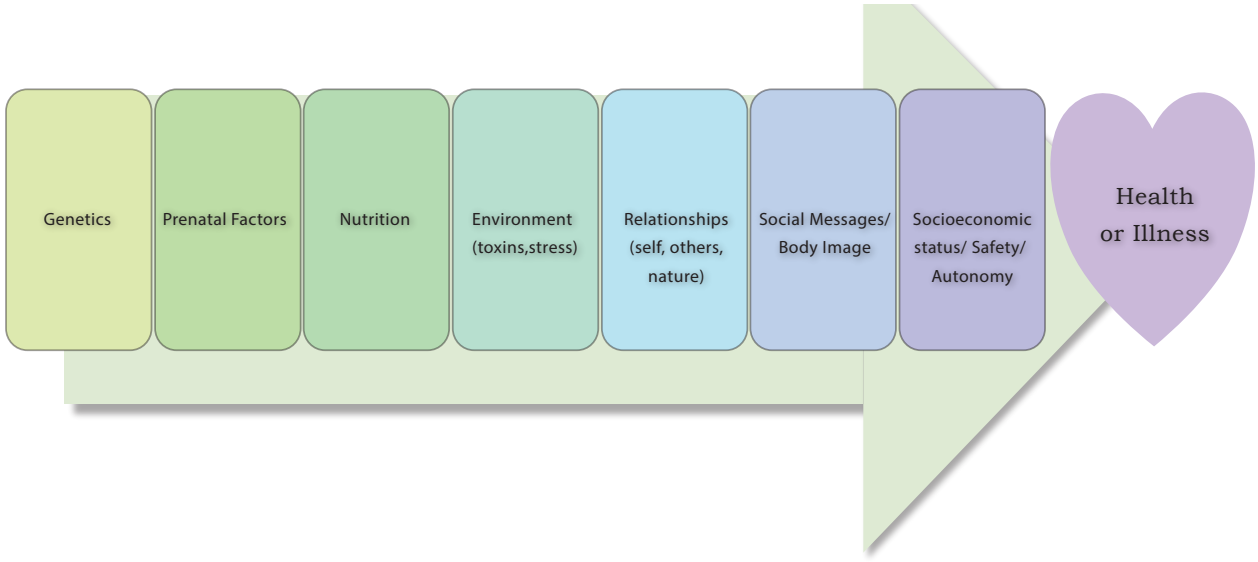
The accompanying required video, **Organizing Information, Creating a Plan** provides you with five important frameworks to work with when organizing your information and creating your plan.

- Timeline
- 8 Ingredients for Health
- Health Foundations Arrow
- Health Wheel
- The Functional Medicine Matrix

Creating the Plan

In recent years I have found that the model I am using from functional medicine is the most cohesive western model available. I do sometimes combine this with TCM philosophies and practices, particularly when I need more of an energetic model than I find with western herbs, but this is generally after I've exhausted a western approach or need to reach for deeper tonics than western herbs provide. Of course, however, a comprehensive presentation of TCM is well beyond the scope of this course, though you will find a number of herbs from Chinese and Ayurvedic medicine incorporated throughout the course.

My herbal practice relies on a physiologic model of health and imbalance that takes into account the 8 Ingredients for Health The Strengths/Vulnerabilities Arrow (see below for both) – always looking for what needs to removed – and what added – to restore wellness.



Engaging Client Follow Through

If the client doesn't follow the plan, it ain't gonna' work. You will have wasted a lot of time putting it together, and they will have invested time, money, and hope, only to potentially end up with a sense of failure. While follow through is in the hands of the client, there is a lot that you can do to improve the likelihood of the client's success with follow through, and thus the success of your plan.

Compliance is a passé word commonly used in the medical world, and sadly, in their quest for acceptance as mainstream modalities, the naturopathic and herbal worlds have adopted them as well. However, it is a pejorative word that I will ask you to entirely expunge from your vocabulary from this moment forward.

Compliance implies a hierarchy in which you tell the client what to do and she follows. It is a relic of paternalism that has no place in modern women's herbal medicine.

Rather than trying to get compliance, the goal should be to

1. Establish engagement: an exciting, dynamic partnership in which you captivate the client and motivate her to make change
2. Seek concordance: harmonious agreement over goals between you and the client
3. Set the stage for success: this means establishing realistic goals that your client can achieve, including realistic time frames, amounts of herbs, forms of preparations considering her lifestyle, costs, etc. Too many herbalists, naturopaths, and integrative physicians lay out extensive plans that require clients to take multiple herbal products and nutritional supplements. Sometimes our clients can't afford these but are too embarrassed to admit it. Sometimes the time required for preparing products is unrealistic – and it's not that they are lazy or uncommitted – it's just that they are already really overwhelmed by life, family, work, or feeling unwell – and usually a combination of the above! And sometimes the amount of stuff they have to take is just too much for them. It's OUR job to check in with our clients and make plans that real women can really follow!

These points are all reviewed extensively, with specific guidelines, in the accompanying webinar: **Engaging Follow Through, Optimizing Success**. Please watch now.

Challenging Clients and Situations

"There is nothing like a difficult patient to show us ourselves." William Carlos Williams

Not everyone in your practice is going to have significant improvement. Not everyone is going to follow through. Not everyone is even going to like you. And a few may present some real challenges – dissatisfaction, not showing up for appointments, not following through on protocol but complaining that you're not helping them at all.

This is par for the course of being in a service industry. Further, it has been well-documented that those seeking integrative health advice are actually more likely to have mental health issues than the average population, and as part of this, have been to a gamut of providers before coming to you, all of with whom they have also been dissatisfied.

While this would seem to be a natural "red flag," it's complicated because women with hard to treat health concerns, for example fibromyalgia and chronic fatigue, may truly have not gotten useful information or satisfactory help from other providers and now are at the end of their rope, seeking alternatives.

Setting clear boundaries, both verbally and in writing (and making sure you are consistent between the two), is the best method you have for preventing complicated client situations, and for straightening them out if they arise.

Make sure to document all issues as they arise, should you need to recall or cite them later (i.e., client late for appointment or client argumentative with what I say to her – and be specific.

BodyWisdom is perhaps your best asset when facing a challenging client situation and deciding whether and how to continue the relationship. You have to trust your gut. If you feel uncomfortable with a client, don't enjoy working with her, feel threatened by her, or find yourself wanting to just run away from the encounter when you are in it, something is not right and needs to be addressed – whether speaking with the client openly and honestly or gracefully terminating the relationship. Not trusting your gut is a sure way to get burned in this business! If you are a licensed provider and need to terminate a client relationship, make sure to do so legally. Regardless of your professional status, try to work things out – and document this, and if the problems can't be resolved, inform the client verbally and by certified letter that you will need to terminate the relationship. Do so without blame, but clearly laying out your reasons.

No Improvement

"Change takes time, and is meted out in the mutuality of human relationship -- where the doctor and the patient cling to a common log on a rising river." David Loxterkamp

You are absolutely going to encounter clients whose symptoms do not improve in the time you or they hoped. And some symptoms may not improve all the way, ever; for example, chronic pain due to prior injuries or surgeries. While you and your client may hope that all the herbs in the world are going to bring that pain from a 12 on a scale of 1-10 down to a zero, this is often entirely unrealistic. Again, realistic goals become critical to success. I often ask clients, on a scale of 1-10 how much are these XYZ symptoms affecting your life? What number do you need to get that symptom to, on a scale of 1-10, to feel happy, satisfied, functional, etc. If it's a 2, would you be happy with that? What about a 4?

Again, you can't fix everything and everyone, so if that's you're goal, that's what needs fixing! Rather than approaching people and their lives as needing fixing, look at everything as a shared journey, a partnership, and an experiment. Solicit feedback on a regular basis regarding what's working and what's not, what's improving, and what's not. Try not to address every symptom at once – create a longitudinal plan that addresses them in a logical order, knowing what to approach first, and then subsequently over time.

Always treat pain and poor sleep from the beginning because pain and lack of sleep make everything else in our lives more challenging!

Be receptive and willing to regularly adjust course with your client, based on her feedback and experiences, and your observations over time. The picture usually changes over time, as some symptoms resolve and others persist and new ones surface. Stay humble, know when to say "I don't know," be willing to investigate with your client, and also know when you've reached your limit and need to "call a friend" for advice, or refer out. Your goal should be your client's best interests, not your ego investment in solving the problem! Remember, resilience is one of the core properties and humility one of the key attributes of healing.

Personal Meditation for Restoring Your Energy

This is a meditation you can do any time – very deliberately and slowly, or even in 5 minutes if you need a quick boost between clients. Once you've done this once or twice, you'll have the idea and can use this meditation or modify to images that are meaningful to you.

Find a comfortable position, sitting in a soft chair, laying on your bed, sofa, or floor, or even at your desk, with your head resting on your arms. May sure your clothing is loose and comfortable, and remove your shoes (very important!). Clothes your eyes, and begin to follow your breath as you inhale and exhale more deeply. Slow your breathing, and continue to follow your breath as you slow it down. Imagine that you are standing under a gentle warm waterfall in a beautiful mountain setting.

Take several minutes to establish the feeling, sounds, and scents of this place. It is a very private, secure place that is a secret to only you and your closest family and friends. A place you return to again and again for peace and nourishment. Feel the water gently cascading over the top of your head, down the back of your neck, down your back, sides, over your breasts and belly. Feel the warm water rolling over your feet, running between your toes. Wiggle your toes gently and feel yourself smile slightly at the feeling.

Now imagine that you have become a hollow vessel, and the water is beginning to enter the top of your head, and slowly filling you up, the way you would fill a tall glass of water from a fountain. The water is filling you, slowly, cooling you gently and refreshing you, beginning with your feet and slowly, slowly, working its way, gently, through your insides to your head. You feel the invigoration of the fluid flowing through you, reaching all the places in which you felt empty or drained. Filling and replenishing you. All the while you hear the sound of the waterfall around you, like a gently fountain, washing away your cares and concerns. Allow your self to feel complete and whole, filled and replenished, in this space for several minutes.

When you are ready, slowly open your eyes. When your eyes are open, feel this space for a minute, and then rejoin your day.

HERBAL MEDICINE FOR WOMEN

Unit 1 Lesson 13

Materia Medica for Women 1

The materia medica sections of each unit provide you with an overview of herbs that are relevant for understanding treatments of conditions found in the subsequent units. Unit 1 materia medica pertains to general gynecologic and menstrual conditions, Unit 2 materia medica relates to concerns that arise in the childbearing cycle, and Unit 3 materia medica is relevant to conditions and concerns of pre-, peri- and menopausal women. These are by no means exhaustive materia medica, and you will learn the uses of many more herbs in this course than are included in the materia medica lessons. Because most herbs have many different actions and are useful for multiple conditions, there will necessarily be overlap between the herbs in each unit. Thus, there may be questions that arise in earlier units though the materia medica for that herb is not presented until a later unit. In such cases, you will be provided with the information necessary to answer questions.

Unit 1 Lesson 13 Materia Medica for Women 1

This is the information covered in the mini-monographs in this lesson and in subsequent materia medica lessons. The information in the monographs pertains most greatly to the indications relevant to women's health conditions, as opposed to the myriad conditions that these herbs are used for (general health, pediatrics, etc.)

This knowledge doesn't come easily or with one quick pass over the material. It takes time and practice, and actually using the herbs, to begin to own your knowledge. You will want to refer back to the materia medica pages many times. More comprehensive information about each herb, for example, relevant animal or clinical studies, are found in *Botanical Medicine for Women's Health* (Romm), both with discussion of various conditions and in the Plant Profiles. Tieraona Low Dog's *Women's Health in Complementary and Integrative Medicine: A Clinical Guide* provides excellent clinical discussions of many of the herbs used in this course. As an herbalist you will want to build a strong reference library to supplement your knowledge, as no single course, book, or even full-time school could impart all there is to know. I highly recommend the following sources as "must haves" for materia medica references.

- Blumenthal M. *The ABC Clinical Guide to Herbs* (2003)
- European Scientific Cooperative on Phytotherapy (ESCOP). *ESCOP Monographs: The Scientific Foundation for Herbal Medicinal Products*, 2nd Edition (2003)
- McKenna DJ, Jones K, Hughes K, Humphrey S. *Botanical Medicines: The Desk Reference for Major Herbal Supplements*. (2002)
- Mills and Bone. *The Essential Guide to Herb Safety*. (2005)
- Upton R. *American Herbal Pharmacopoeia and Therapeutic Compendium Series*

While herbal information is constantly evolving and books are static unless periodically updated, the resources above provide the most comprehensive data on botanically relevant clinical (and other) studies, safety, contraindications, etc. In essence, these books do the work for you of compiling the data. The information in the materia medica in this course is derived from these resources, as well as from the following additional sources:

- Barrett M. *Handbook of Clinically Tested Remedies*, Vols 1 and 2 (2004)
- Basch, E and K. Ulbricht. *Natural Standard Herb and Supplement Handbook*. (2005)
- Blumenthal M, Busse W, Goldberg A, Gruenwald J, et al. *The Complete German Commission E Monographs: Therapeutic Guide to Herbal Medicines* (1998).
- Blumenthal M, Goldberg A, Brinckmann J. *Herbal Medicine: Expanded Commission E Monographs*. (2000)
- Bone K. *A Clinical Guide to Blending Liquid Herbs* (2003)
- Bone K. *Clinical Applications of Ayurvedic and Chinese Herbs*. (2000)
- Bruneton, J. *Pharmacognosy*. (1999)
- Bruneton, J. *Toxic Plants Dangerous to Humans and Animals* (1999)

- Ellingwood, F: *American Materia Medica, Therapeutics, and Pharmacognosy*. (1919)
- Felter H, Lloyd J: *King's American Dispensatory, Vols I and II*. (1898)
- Felter, H: *The Eclectic Materia Medica, Pharmacology and Therapeutics*. (1922)
- Gardner, Z, McGuffin M, et al: *American Herbal Products Association Botanical Safety Handbook* (2013)
- Mills, E. Duguoa, JJ, Perri, D. Koren, G. *Herbal Medicines in Pregnancy and Lactation*. (2005)
- Moerman D. *Native American Ethnobotany*. (2000)
- O'Dowd, MJ. *The History of Medications for Women: Materia medica woman*. (2001)
- Schulz V., Hansel R., Blumenthal M., Tyler VE. *Rational Phytotherapy*. (2004)
- Weiss, R and V Fintelmann. *Herbal Medicine*, 2nd Edition. (2000)
- WHO. *The World Health Organization Monographs*. Geneva: WHO.
- Wichtl, M. *Herbal Drugs and Phytopharmaceuticals: A Handbook for Practice on a Scientific Basis* (2004)
- AltMedDex: *The US Pharmacopoeia herbal monographs* (online database)
- BIOSIS (online database)
- Cochrane Collaboration (online database)
- Medline (online database)

Note that because the information in all of these books and monographs has so much overlap and redundancy, the mini-monographs presented in the materia medica throughout this course are not individually referenced and reviews of the literature are not included. They can be found by reading Textbook of Herbal Medicine for Women (Romm) and reviewing the books and mono- graphs listed above. At this point in your career it is not necessary to be able to cite the literature or the studies 'chapter and verse'; it is more important to learn the basics — the people, the plants, and the conditions.

The plants covered in this unit include:

cramp bark/ black haw	dong quai	licorice
chaste berry	ashwagandha	thyme
black cohosh	calendula	motherwort
wild yam	partridge berry	uva ursi
yarrow	goldenseal	marshmallow
shepherd's purse	lemon balm	cranberry

Assignments for this unit are found after all of the materia medica sheets at the end of this lesson. Questions in Unit 2, as well as subsequent units, will also require you to refer back to these pages.

Cramp bark and Black haw

Botanical name: *Viburnum opulus/Viburnum prunifolium*

Plant part(s) used: dried or fresh bark of roots, stems, or branches

Actions

- uterine tonic
- uterine antispasmodic
- musculoskeletal antispasmodic

Historical Use

- used by eastern Native American tribes as an antispasmodic and for gynecologic problems and obstetric care
- first described in American botanical medicine in 1830 by a botanical physician who used it generally to relax cramps and spasms
- popular among Eclectic physicians and physiomedicalists for
- relaxing camps and spasms in asthma, hysteria, pains incidental to females, during pregnancy, and convulsions
- stimulant tonic to the reproductive nerve centers, acting on the uterus to regulating its function
- nervous conditions of pregnant women
- threatened abortion
- uterine hemorrhage
- vomiting of pregnancy
- dysmenorrhea with cramp-like pains
- amenorrhea
- metrorrhagia
- after-pains
- spasmodic contraction of the bladder
- spasmodic stricture

Cramp bark was official in the USP from 1894 to 1916 and official in the NF from 1916 to 1960 for use as a sedative and antispasmodic. Black haw was cited in 1850 for its use in the treatment of uterine hemorrhage, and in 1859 for the treatment of threatened miscarriage. In 1866 it was described as a uterine sedative and anti-abortifacient, and in 1876, it was included in an allopathic medical report for the treatment of menorrhagia, metrorrhagia, and dysmenorrhea. It was listed as an official drug of the USP from 1882 to 1926 and cited in the NF from 1926 to 1960, and is considered a uterine spasmolytic and uterine anodyne. As of 1983 it was listed in the British Herbal Pharmacopoeia, and in the late 1990s uterine spasmolytic activity was confirmed in animal studies.

Modern Clinical Indications

- after birth pains
- chronic pelvic pain
- dysfunctional uterine bleeding
- dysmenorrhea
- hypertension
- incoordinate uterine contractions
- irritable uterus
- irritable bladder
- muscle spasms
- neuralgic pain
- parturient/labor analgesia
- Partus preparator
- premature labor
- threatened abortion

Cramp bark, and its very similar sister herb, black haw, are among the most valued uterine anti- spasmodics, used widely by herbalists, midwives, and naturopathic physicians. Contemporary use of cramp bark includes treatment of cramps and spasms of most types, particularly involving the uterus and bladder (i.e., dysmenorrhea, threatened miscarriage, spasms accompanying UTI, irritable bladder, chronic pelvic pain, irritable uterus, "after pains"), for inflammation, neuralgia, as a mild sedative, a hypotensive, and occasionally in formulae for heart palpitations, often combined with motherwort (*Leonurus cardiaca*) for this latter indication. Black haw and cramp bark extracts may also be used topically for the treatment of musculoskeletal pain. No clinical trials have been conducted on the use of either herb. Cramp bark has demonstrated smooth muscle relaxant activity, hypotensive effects, and cardiotonic effects. Both hypotensive and hypertensive effects have been reported from black haw studies.

Preparation and Dose

Tincture: 5-10 mL 3 times daily Decoction/infusion: 2.5-5g 3 times daily

Commonly combined with

- antispasmodics
- analgesics
- antipyretics
- nervines
- sedatives

Major Safety Information

Caution is advised in patients with kidney disease may be warranted due to oxalic acid content in black haw. No similar cautions are listed for cramp bark. Due to the coumarin content of these herbs, a theoretical caution exists for using these herbs in combination with anticoagulant medications, or that these herbs may cause hemorrhagic problems. However, anticoagulant activity has not been demonstrated in vivo nor is there any evidence these herbs increase the risk of bleeding.

Use During Pregnancy and Lactation

Care should be taken with the use of all herbs during pregnancy and lactation, and especially during first trimester pregnancy. Reports from the Eclectic physicians suggest that this herb may have been used to prepare a woman for labor; however, its contemporary and widespread use is as an herb to relax the uterus in threatened miscarriage. There are no reported specific contraindications to the use of this herb in pregnancy or lactation. Based on a review of the literature, no adverse effects are expected from use during pregnancy or lactation

Chaste berry

Botanical name: *Vitex agnus-castus*

Plant part(s) used: fruit

Actions

- menstrual cycle regulator
- in vitro dopaminergic
- prolactin release inhibition
- possible antimicrobial effects

Historical Use

- mentioned early in history by Greek philosopher and naturalist Plato (circa 428-348 BC), who described the herb's anaphrodisiac effects
- The ability of chaste tree fruit to stimulate menstrual flow was reported by Lonicerus in 1582.
- mentioned in ancient herbals for the treatment reproductive pain
- briefly by Felter and Lloyd in King's American Dispensatory as a galactogogue, emmenagogue, and anaphrodisiac

Modern Clinical Indications

- premenstrual syndrome (PMS)
- amenorrhea (primary and secondary)
- mastalgia
- fibrocystic breasts
- acne
- menstrual irregularities (oligomenorrhea, polymenorrhea)
- progesterone deficiency
- luteal phase dysfunction
- infertility
- history of recurrent miscarriage
- insufficient breast milk
- possible emmengagogic/uterine stimulant activity
- The essential oil of chaste tree is reportedly active against gram-positive and gram-negative organisms; ethanol extracts have demonstrated activity against *Candida* spp, *E. coli*, and a number of other microorganisms.

Vitex, or chaste berry, is one of the most popular herbs for the treatment of menstrual irregularities, particularly PMS, amenorrhea, progesterone/luteal phase insufficiency, infertility, and fibrocystic breasts and mastalgia. Its effects are thought to be mediated by its action on the anterior pituitary, as a dopaminergic agonist inhibiting prolactin release. The data on the effects of chaste berry on progesterone, FSH, and LH are inconclusive.

Preparation and Dose

Powder: 30-40 mg once daily

Tincture: 20 drops 2-3 times daily, or 5 mL daily, taken first thing in the morning

Commonly combined with

- blue vervain
- motherwort
- tribulus
- black cohosh
- blue cohosh
- Adaptogens
- partridge berry
- ladies' mantle
- dong quai
- peony
- cramp bark
- wild yam
- dandelion root

Major Safety Information

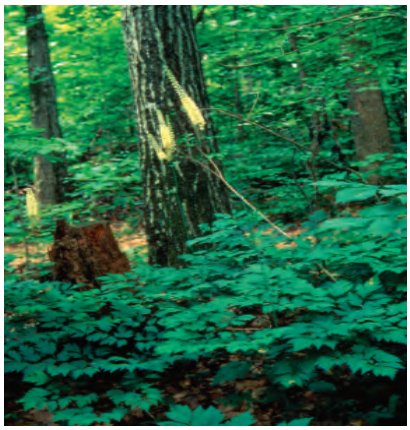
There are no major safety concerns associated with use of chaste berry, however it should not be combined with dopaminergic or antidopaminergic medications, progesterone, oral contraceptives, or hormones replacement

therapy (HRT). Herbalists have reported cases of increased depression in women taking vitex for premenstrual syndrome or other hormonal dysregulation. Chaste tree has demonstrated mild estrogenic activity and is therefore contraindicated in women with estrogen sensitive cancers. This herb may interfere with the effectiveness of oral contraceptives. It has been suggested that the progesterogenic activity of chaste tree may exacerbate a relative estrogen insufficiency. Occasionally, nausea, rashes, and pruritis have been reported as side effects of use. Rarely, headache, fatigue, tachycardia, and menstrual irregularities have been reported. Several case reports have demonstrated increased depression in some women when they begin taking vitex; should this occur, discontinue use of this herb.

Use During Pregnancy and Lactation

Generally considered contraindicated during pregnancy, though may be used during first trimester for the prevention of miscarriage when there is progesterone insufficiency and/or history of luteal insufficiency. There is controversy about the effects of chaste tree use during lactation. Because it has reported dopaminergic activity, it is generally considered inappropriate for use during lactation, however, in small doses, the herb has actually demonstrated increases in breast milk production. It is recommended that this herb be used only by qualified professionals during pregnancy.

Black cohosh



Botanical name: *Actaea racemosa syn. Cimicifuga racemosa*

Plant part(s) used: root

Actions

- Adaptogen
- Immunomodulator

Historical Use

- an indigenous North American used by eastern Native American tribes for gynecologic complaints, and pain, including rheumatic pain
- treatment for colds, coughs, fatigue, sore throat, and snakebite
- described in the botanical literature as early as 1749 for female debility and for pain relief, cardiac tonic, and uterine tonic
- called Macrotys by the Eclectics who used it extensively for muscular pains, uterine pains with tenderness, false pains, irregular pains, rheumatism of the uterus, dysmenorrhea
- used by the Eclectics as a sedative
- used by the Eclectics for improving cardiac contractile force
- used to aid in birth and relieve pain afterward
- treatment of all manner of musculoskeletal and neuralgic pains
- Listed in the USP from 1820 until 1920, it was and continues to be one of the most popular herbal medicines sold.

Modern Clinical Indications

- dysmenorrhea
- ovarian pain
- menopausal symptoms: hot flashes, reduction of sweating, headache, heart palpitations, nervousness, insomnia, irritability, depression (for the latter in combination with Hypericum per- foratum (St. John's wort), and possibly for vaginal dryness and atrophy
- musculoskeletal pain
- aching associated with influenza
- myalgia, sciatica, arthritis, neuralgia
- anxiety
- insomnia due to anxiety

Possible additional indications include

- uterine contractions in threatened miscarriage (see Use in Pregnancy and Lactation, below)
- osteoporosis (possible SERM activity or other explanation for improved bone density markers in human and animal studies

Used widely today as an antispasmodic and musculoskeletal anodyne when there is generalized muscular tension, premenstrual tension, aches and tension as with the flu or fever, and for treating spasmodic or paroxysmal coughs. It is now also the most widely used herb for the treatment of menopausal complaints both in the United States and Europe.

Preparation and Dose

Dried root/rhizome: 1 g up to 3 times daily Tincture: 1.5-3 mL daily

Commonly combined with

- antispasmodics analgesics
- uterotonics

Major Safety Information

Overdose of black cohosh has been associated with vertigo, gastric discomfort (including nausea and vomiting), frontal headache, and visual disturbance, though the herb is generally well tolerated and side-effects or adverse reactions are seldom seen. There are no expected herb-drug interactions, and even in combination with HRT, minimal side effects have been observed. No mutagenicity (Ames test) has been found and the herb has a very low toxicity risk based on animal toxicity studies. One case of nocturnal seizures was reported in a 45-year-old woman taking a combination of black cohosh, chaste tree, and evening primrose oil for menstrual irregularity. Her sister had also been taking this combination for duration of 1 to 2 years with no reported side effects. The woman's seizures abated upon discontinuation of the herb, no other pathology was identified, and the seizures were not directly attributed to the herbs in combination or singly. The German Commission E Monographs prescribes a limited duration of six months for black cohosh use with no specific rationale provided for this caution. Recent significant concern has been raised regarding the possible hepatotoxicity of black cohosh based on a number of adverse events reports, including liver failure after only one week's duration of use. Several nations have required warning labels about hepatotoxicity on black cohosh products. At present, there is significant controversy regarding this issue. On March 4, 2004 the Center for Science in the Public Interest (CSPI) wrote to the FDA asking them to warn women about the risk of liver toxicity on consuming black cohosh. To date (December, 2006), the FDA has not issued any such warning.

Questions persist regarding the estrogenic effects of black cohosh and safety for use in women with a history of or risk of uterine and breast cancer. To date, effects on vaginal epithelium remain inconclusive. Two out of five RCTs specifically evaluating effects on vaginal cell proliferation have demonstrated a stimulatory effect. An additional open trial also demonized an increase in vaginal cell proliferation. The remaining studies demonstrated no change. Because no trial has been con- ducted for duration greater than six months, and it may take this long to see marked proliferation, lack of demonstration of cell proliferation in shorter trials is not a conclusive finding. While reduction of LH has been demonstrated in animal studies (ovariectomized rodents), human clinical trials have consistently failed to show an effect on FSH and LH levels, leading to the current belief that black cohosh's mechanism of action is non-estrogenic. Further, black cohosh has shown antiproliferative activity in vitro on MCF-7 breast cancer cells under conditions testing for estrogenic activity and actually enhanced the anti-estrogenic effects of tamoxifen in a trial combining the two agents. It appears by all data available at this time that this herb does not increase or predispose to breast cancer risk and is not contraindicated in such cases.

It appears that black cohosh is safe and effective for some of the neurovegetative and psychological effects of menopause, well as for numerous other complaints, particularly musculoskeletal and gynecologic pain. It also appears that the efficacy of this plant is not due to direct estrogenic effects, and the herb has a significantly greater safety profile than HRT, especially for women who cannot use HRT due to cancer risk. It has recently been postulated that black cohosh's effects may be due to SERM activity, as with improved bone markers, or through effects on neurotransmitter activity, leading to improved neurovegetative and psychological symptoms. A common use pattern is for women to use black cohosh preparations for one to two years for the treatment of menopausal symptoms, then to discontinue use after this duration and with improvement of symptoms. It would appear that such use at this duration is beneficial with minimal risk compared to conventional hormonal preparations, and can be confidently used in the care and treatment of menopausal women, however, due to lack of long-term clinical studies, long term safety is not conclusive. All women at risk for medical conditions should be re-evaluated by their primary care provider at regular intervals, and patients should be queried for use of black cohosh and other herbs. Short-term use of black cohosh for acute conditions and within recommended doses appears to be a safe practice.

United Plant Savers classifies black cohosh as "At-Risk" in the wild; this herb should be purchased only from a supplier of organically cultivated products.

Use during pregnancy and lactation

Until the question of hepatotoxicty has been resolved, it is prudent to avoid black cohosh used during pregnancy, with the exception of short duration use for relief of labor pain or dysfunctional labor contraction. Nursing women should avoid its use until safety been established.

Wild yam

Botanical name: Dioscorea villosa

Plant part(s) used: root

Actions

- antispasmodic
- anti-inflammatory
- estrogen modulation

Historical Use

- Native tribes used wild yam for colic and for pain associated with childbirth.
- Wild yam was in the National Formulary from 1916 to 1942 for use as a diaphoretic and expectorant.
- Widely used by the Eclectic physicians for the treatment of:

neuralgic pain

nervous irritability

intractable vomiting

spasmodic asthma

pain of the hollow organs

dysmenorrhea

ovarian neuralgia

nausea and vomiting of pregnancy

after birth pains

Modern Clinical Indications

Contemporary herbalists rely on wild yam for many of the same indications as its historic uses including:

- gastrointestinal spasms or cramping
- *hyperemesis gravidarum*
- dysmenorrhea
- uterine cramping
- after pains
- premature labor/ uterine irritability
- vaginal dryness in menopausal women
- selective estrogen receptor modulation (SERM)

Wild yam is primarily used in gynecology and obstetrics as a uterine and bladder antispasmodic, often combined with cramp bark or black haw, and possibly black cohosh for these effects. It may also be combined with uterontonic herbs such as blue cohosh or partridge berry. It is used for spas- tic bladder and for bladder irritation associated with cystitis. Contrary to popular mythology, while the precursors to the progesterone in oral contraceptives are derived from wild yam, the herb itself possesses no progesterone or progesteronic activity. Wild yam creams that are used for progesterone insufficiency are either ineffective or are effective because they have had pharmaceutical progesterone added. Wild yam does, however, contain saponins which exert estrogenic activity. Estrogen activity has only been demonstrated for wild yam in vitro, however, the constituent profile suggests the herb may have SERM activity and be of benefit in reducing neurovegetative complaints of the perimenopause, for example, hot flashes.

Preparation and Dose

Tincture: 5-10 mL daily

Commonly combined with

- antispasmodics
- analgesics
- anti-inflammatories
- uterotonics

Major Safety Information

Saponin-rich herbs may cause GI irritation or upset. Herbs with potential estrogenic effect should not be taken by women with a history of estrogen sensitive cancers.

Use During Pregnancy and Lactation

No contraindications to use during pregnancy or lactation have been identified, however, given the estrogenic potential of the herb, regular or prolonged use is not recommended during these times. Acute use does not appear to be associated with any reports of teratogenicity or adverse effects.

Yarrow

Botanical name: *Achillea millefolium*

Plant part(s) used: aerial parts, primarily flowers

Actions

- antihemorrhagic
- hemostatic
- antimicrobial
- vulnerary
- antispasmodic
- bitter
- diaphoretic
- emmenagogue

Historical Use

- Yarrow was used extensively by Native Americans for the topical treatment of wounds, bruises, and skin conditions.
- Infusion has been used internally for digestive problems and as a diaphoretic for fever.
- Yarrow flowers were official in the United States Pharmacopoeia from 1863 to 1882 for use as a tonic, stimulant, and emmenagogue.

Modern Clinical Indications

- Herbalists and midwives consider yarrow one of the foremost uterine antihemorrhagics for the treatment of bleeding associated with menorrhagia, inevitable miscarriage, and menopausal flooding.

It is commonly used as a urinary antiseptic when there is cystitis, and is especially useful when there is cystitis with accompanying uterine bleeding. Yarrow is used in postpartum sitz baths to reduce tissue swelling and trauma, and to promote healing of lacerations. The German Commission E approves the use of yarrow as a sitz bath for the treatment of painful cramp-like conditions of psychosomatic origin in the lower part of the female pelvis.

- It is used to relieve tension and discomfort associated with fever and colds.

Preparation and Dose

Infusion: 1-2 tsp/cup of boiling water, cover and steep for 20 minutes. Strain and take 1-4 cups daily. For uterine bleeding, take 1/2 cup infusion repeated every 15 minutes until bleeding stops.

Tincture: 3-6 mL daily

Midwives and herbalists have reported that infusions are more effective treatment for both uterine bleeding and UTI than tincture.

Soaking >2 menstrual pads in 30 minutes is considered a hemorrhage and requires emergency medical attention; any vaginal bleeding during pregnancy requires emergency medical attention.

Commonly combined with

elder flowers, peppermint, marshmallow root, wild yam, dandelion leaf, corn silk, bayberry bark, shepherd's purse

Major Safety Information

No adverse effects are expected when this herb is taken in recommended doses, however, cases of contact dermatitis have been reported with topical use and handling of the herb. People with allergies to plants in the Compositae family may have sensitivity to yarrow.

Use During Pregnancy and Lactation

Not for use during pregnancy or lactation due to potential toxicity of thujone in some species.

Shepherd's purse

Botanical name: *Capsella bursa pastoris*

Plant part(s) used: aerial parts

Actions

- uterine antihemorrhagic

Indications

Used by many midwives and herbalists for the treatment of menorrhagia, menopausal flooding, and non-emergency uterine bleeding in the postpartum. Shepherd's purse is approved by the German Commission E for the treatment of nosebleeds and excessive uterine bleeding. Very little scientific literature is available on this herb and no clinical studies were identified.

The herb contains a peptide which has shown oxytocic activity in vitro leading to increased uterine contraction. Shepherd's purse may possess muscarinic-like effects in high doses, with dose dependent affects on blood pressure (elevating or lowering) and positive inotropic and chronotropic activity. Shepherd's purse in sometimes included in European urologic herbal products.

Preparation and Dose

Used as a fresh tincture or fresh plant infusion for maximum efficacy. Tincture: 5-8 mL/day

Commonly combined with

uterine hemostatic, tonic, and astringent herbs including yarrow, bayberry bark, cotton root, blue cohosh, cinnamon, white oak bark, and others

Major Safety Information

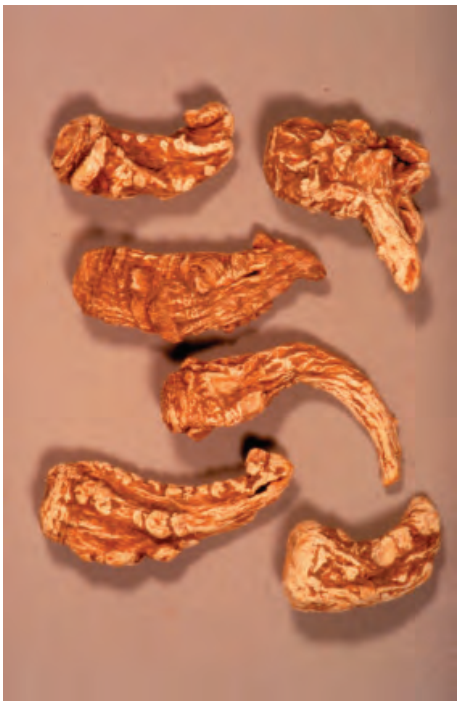
There are no known contraindication or safety issues associated with this herb, however, given its possible effects on cardiac tone and rhythm, as well as blood pressure, it seems best to avoid this herb in the presence of cardiovascular disease or use of cardiovascular medication without the supervision of a qualified medical care provider.

Use During Pregnancy and Lactation

Due to possible oxytocic effects shepherd's purse should not be used internally during pregnancy.

NOTE: Shepherd's purse is not an adequate substitute for pharmaceutical antihemorrhagic drugs which should be administered along with proper medical care in the event of bleeding with childbirth or other uterine hemorrhage.

Dang gui (Tang gui, Dong quai)



Botanical name: *Angelica sinensis*

Plant part(s) used: dried root

Actions

- anti-inflammatory
- antispasmodic
- anti-platelet
- "nourish yin and blood, move blood"

Historical Use

Dang gui is considered one of the most important herbal medicines in traditional Chinese medicine (TCM), used for at least 2000 years. Its primary use is as a tonic for women's health and to treat a variety of menstrual complaints. It is also used for the general treatment of blood deficiency and for the treatment of blood stagnation.

Modern Clinical Indications

- dysmenorrhea
- amenorrhea
- endometriosis
- uterine fibroids
- constipation
- "blood deficiency"
- "blood stagnation"
- fatigue
- weakness
- convalescence
- inflammation
- hypertension

Dang gui is used for the treatment of menstrual disorders and combined with other herbs for specific disorders. It is used for the TCM diagnoses of "blood stasis" and "blood vacuity" which corresponds clinically with amenorrhea, dysmenorrhea, endometriosis, uterine fibroids, and some cases of infertility. Ligustilide and ferulic acid are key constituents associated with its effects. Dang gui is also used to lubricate the bowels when there is constipation and dryness, to promote circulation, and as a warming tonic especially for women, when there is fatigue, low vitality, or convalesence from ill- ness. One of the traditional applications of dang gui in TCM is its use in the treatment of "blood vacuity", which closely but not completely corresponds to a western medical diagnosis of anemia. One case report of a man receiving hemodialysis demonstrated improved iron levels even

though the patient was resistant to erythropoietin, however, other similar studies have not been identified.

Dang gui was first presented into western medicine by Merck in 1899 who included it in a product called Eumenol, promoted for treating menstrual disorders. In 1937 dang gui was included as an unofficial drug in the 22nd edition of the United States Dispensatory, which reported on its use to reduce blood pressure, promote diuresis, and stimulate smooth muscles of the uterus in animals. Since 1977 dang gui has been included in the Pharmacopoeia of the People's Republic of China to enrich blood, activate blood circulation, regulate menstruation, relieve pain, and relax the bowels.

The effects of dang gui on uterine muscle activity appears contradictory, with a volatile oil component exhibiting uterine muscle antispasmodic effects in vitro and a non-volatile, water soluble component stimulating uterine activity in vivo. The herb appears to have analgesic activity, which may explain its efficacy in treating dysmenorrhea, as well as its use for the treatment of headaches and musculoskeletal pain.

Dang gui is noted for its anti-inflammatory effects, which may be due to inhibition of prostaglandins, as well as IL-8, a cytokine responsible for local inflammation via attracting poly- morphonuclear cells (neutrophils). Dang gui may also exhibit immunosuppressive activity via inhibition of antibodies, especially IgE associated with allergic reactions.

To date, the presence of phytoestrogens in dang gui remains unconfirmed. An estrogenic effect may be of potential concern to women with estrogen sensitive conditions. Studies have demonstrated that the herb does not bind to estrogen receptors and it does stimulates the growth of estrogen receptor positive human breast cancer lines. A double blind randomized placebo-controlled study found no change in serum hormonal changes, vaginal cell maturation, or endometrial proliferation in menopausal women after 12 weeks ingestion of 4.5 grams of dang gui daily.

Dang gui and its constituents have been shown to relax the smooth muscle tissue of the vascular system and reduce blood pressure and enhance peripheral vasodilatation. In animal studies (administered IV) it has been shown to improve coronary blood flow, decrease myocardial ischemia, and act as an antiarrhythmic. Ferulic acid inhibits platelet aggregation via inhibition of serotonin and ADP release by platelets.

Preparation and Dose

Dried root: 6-12 g daily prepared as a decoction Tincture: 3-5 mL 3 times daily

Commonly combined with

numerous Chinese herbs in traditional formulas: dong quai and peony formula is a classic gynecologic formula used for many menstrual complaints

Major Safety Information

Dang gui is a warming herb. Therefore, while it is often recommended as part of menopausal formulas, women should be informed that is could increase heat, hot flashes, night sweats, insomnia, and irritability. In TCM

it would be combined with herbs that balance the heat and provide moisture; for women who experience exacerbations of perimenopausal symptoms, its use should be dis- continued or formulae appropriately modified to ameliorate these side-effects. There are anecdotal reports of dang gui alone increased blood flow during menses. Women with menorrhagia or menopausal flooding may best avoid use of this herb. Concerns cited by herbalists include use of dang gui by cancer patients and in those with digestive disturbances and hyperestrogenic. Two reports suggest that dang gui can enhance the effects of warfarin, a synthetic anticoagulant. Patients should consult with a qualified health care professional prior to using dang gui if they have bleeding disorders, are using anticoagulant medication, and use of this herb should be discontinued several weeks prior to planned surgery.

Use During Pregnancy and Lactation

A number of authoritative herbal resources consider dang gui contraindicated during pregnancy. According to TCM practice, dang gui is used in combination with other herbs for various stages of pregnancy, particularly miscarriage prevention and to nourish the blood. Because of its blood- moving properties, dang gui should only be used in pregnancy while under the supervised care of a qualified health professional. Data regarding the effect of dang gui preparations on the fetus are lacking. Dang qui use by lactating mothers in the early weeks of postpartum has led to rash in the nursing newborn; no data was identified in the literature otherwise contraindicating dang qui use during lactation.

Ashwagandha

Botanical name: *Withania somnifera*

Plant part(s) used: root

Actions

- adaptogenic tonic
- anti-inflammatory
- immunomodulator
- musculoskeletal relaxant
- anxiolytic
- sedative
- antianemic

Historical Use

- a traditional Ayurvedic medicine, classified as rasayana, meaning a rejuvenative tonic used to improve general health, longevity, and prevent and treat disease through the restoration of a healthy balance of life
- The Latin species name somnifera means “to sleep” and appears to reference its use as a mild sedative.
- wasting conditions

- inflammatory conditions such as arthritis
- asthma and bronchitis
- infection
- gastrointestinal disorders
- sedative in the treatment of epilepsy
- pain
- improvement of libido
- disrupted mental state
- cancer
- heart disease
- weakened immune system
- female complaints, including sexual debility, as an aphrodisiac, and as an emmenagogue

Modern Clinical Indications

- anemia; improve hemoglobin production
- antioxidant
- anxiety
- arthritis; osteoarthritis; rheumatic pain
- cancer
- convalescence from illness or surgery
- debility
- epilepsy
- fatigue and debility; poor stamina
- growth and development
- hypercholesterolemia
- improve non-specific immune resistance
- improve stress coping mechanisms and adaptability
- improve symptoms and conditions of aging
- inflammation
- insomnia
- memory decline
- morphine withdrawal
- muscle spasm; musculoskeletal pain
- possible thyroid stimulatory capacity
- sedation
- sexual debility; low libido
- stamina
- thyroid stimulation

Herbalists describe ashwagandha as less stimulating than Chinese ginseng (Panax ginseng), prefer- ring it for patients with irritability, anxiety, and insomnia, and as a gentle tonic herb for the nervous system. Ashwagandha improves energy in patients experiencing stress-induced illness or exhaustion. It is indicated in inflammatory conditions such as arthritis or other musculoskeletal disorders, and it is combined with other herbs in the treatment of cancer. Antimicrobial effects have also been noted. Ashwagandha is also reported to be hematopoeitic, making it useful in the treatment of anemia. It is combined with L-Dopa tropane alkaloid containing plants, and other herbs as a therapy for Parkinsonism. Withania and other herbs may take the place of benzodiazepines and have a calming effect on the nervous system. It improves appetite and weight gain. Ashwagandha use has been evaluated for the treatment of memory enhancement, Alzheimer's, insomnia, and mental stress. In additional to adaptogenic activity, observational animal studies suggest a cardioprotective and cardiotrophic effect, including mild inotropic and chronotropic effects and improvement in myocardial energy levels.

Preparation and Dose

Powder: 3-6 g daily

Liquid extract (tincture): 5-13 mL daily

Commonly combined with herbal adaptogens, nervines, anti-inflammatories, analgesics

Major Safety Information

Ashwagandha is considered to have very low toxicity. Central nervous system and respiratory depression, decreased body temperature, gastrointestinal upset, and kidney and liver abnormalities have been noted. In animals the alkaloid fraction of ashwagandha produces sedation that may lead to respiratory depression as the dose increases. Overall, toxicity studies have demonstrated a high level of safety of ashwagandha and its extracts. No drug interactions are to be expected, however, it should be avoided in patients with leukemia who are being treated with cyclophosphamide for endometrial thickness based on ultrasound examination.

Use During Pregnancy and Lactation

This herb has not been studied in pregnancy or lactation, and its safety in pregnancy is controversial. Ashwagandha has been used as a tonic and nutrient herb during pregnancy in traditional Ayurvedic medicine. There is anecdotal evidence of abortifacient activity from the herb, however the reports remain unsubstantiated and its traditional use to stabilize pregnancy when there has been habitual miscarriage is in conflict with this assertion. It is the recommendation of the AHP that ashwagandha only be used during pregnancy with the direct supervision of a qualified health professional.

Calendula

Botanical name: *Calendula officinalis*

Plant part(s) used: flowers

Actions

- anti-inflammatory
- vulnerary
- bitter

Historical Use

Historically, calendula was used locally, to treat wounds and injuries to prevent suppuration and promote rapid healing. Internally it was used to treat capillary engorgement, varicose veins, old ulcers, and splenic and hepatic congestion. It was considered emmenagogic, capable of bringing on a delayed menses.

Modern Clinical Indications

- internal and topical treatment of inflammatory mucosal changes
- wounds, including poorly healing wounds

This is one of the most reliable herbs for healing irritated, inflamed, or ulcerated tissue, as well as eczema, burns, abrasion, and bruising. Calendula oil is a key ingredient in vaginal suppositories and vulvar rinses for the treatment of irritation and inflammation associated with vaginal infections. Healing of irritated vaginal tissue is an important strategy in the prevention of sexually transmitted diseases, including HIV transmission. Herbalists have historically used small doses of calendula internally as a digestive bitter. It is used as a rinse for oral ulcers and as a gargle for pharyngeal inflammation.

Preparation and Dose

Topical

Tincture is applied either straight on unbroken skin or diluted (1:3 with boiled water) on broken skin/open wounds.

Calendula oil as needed to unbroken skin

Infusion (1-2 g per 150 mL water) used as a wash on broken skin

Internal use

Infusion of dried flowers: 1-3 g steeped in 1 cup of boiling water for 5-10 minutes; 1-3 cups daily

Tincture: 2-4 mL/day

Commonly combined with topical vulnerary, astringent, emollient, and antiinflammatory herbs

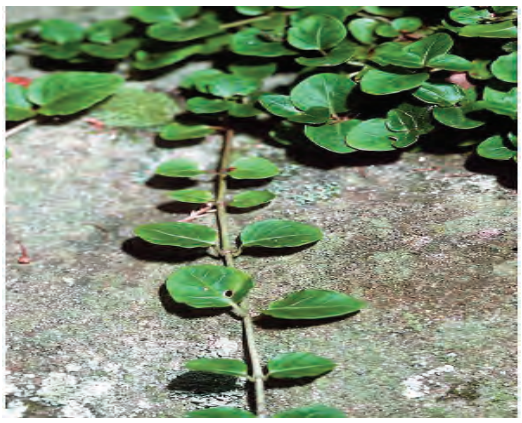
Major Safety Information

No known contraindications for topical use

Use During Pregnancy and Lactation

Safe for topical use during pregnancy, including use in vaginal suppositories. Not for internal use during pregnancy; historically used as an emmenagogue for delayed menses. Commonly used as a topical treatment for cracked, sore nipples during lactation with no known side effects to infant, however, mother may wish to apply after feedings and gently wipe off any excess prior to nursing.

Partridge Berry



Botanical name: *Mitchella repens*

Plant part(s) used: herb

Actions

- parturient
- astringent
- diuretic

Historical Use

Partridge berry was a popular herb among the Eclectics, used as a parturient, diuretic, and astringent. It was also used as an astringent in the treatment of edema, and diarrhea. It was considered to have a special affinity for the uterus, exerting a powerful tonic influence. It was used in the treatment of amenorrhea, some forms of dysmenorrhea, menorrhagia, chronic congestion of the uterus, and nervous system conditions associated with gynecologic disorders. Partridge berry was considered of great value in nervous and uterine difficulties incident to women, including weakness of the back, leucorrhea, uterine prolapse, cramps, persistent menstruation. It was considered excellent for quieting nervous irritability and imparting balance throughout the latter months of pregnancy, and was considered a preventative against miscarriages when there is a history of pregnancy loss. Mother's Cordial was a popular late pregnancy tonic (recipe below). Partridge berry was considered mild in action, yet highly reliable. It was traditionally called squaw vine, however, use of this name has been discontinued in recent years as "squaw" was allegedly a derogatory term used by early settlers for women's genitals. It was said that Native American women drank a decoction of this plant for several weeks prior to birth, for the purpose of rendering parturition safe and easy. The berries were a popular remedy for diarrhea and dysuria. A salve was made from the berries and applied to sore nipples.

Mother's Cordial (traditional Eclectic recipe)

Partridge berry *(Mitchella repens)*

False unicorn root (*Chamaelirium luteum*)*

Cramp bark (*Viburnum opulus*)

Black cohosh (*Cimicifuga racemosa*)

Blue cohosh (*Caulophyllum thalictroides*)

Mix in brandy, with sugar and essence of sassafras for flavor.

Dose: 2-4 ounces, 3 times a day

Note: As will be discussed in Unit 2, blue cohosh is not recommended for use as a partus prepara- tor. See Unit 2 and Chapter 18.1 of Textbook of Herbal Medicine for Women (Romm) for a discus- sion of partus preparators.

* False unicorn root is an endangered plant; only cultivated herb should be used.

Modern Clinical Indications

Mitchella continues to be used as a uterine tonic and for the treatment of dysmenorrhea, amenorrhea, menorrhagia, and chronic congestion of the uterus. It is also sometimes included in formulae for the prevention of miscarriage, ostensibly for its uterotonic actions. No scientific literature was identified on this herb, and very little is written about it in the modern herbal literature.

Preparation and Dose

Tincture: 2-4 mL 1-3 times daily

Commonly combined with

blue cohosh, black cohosh, ladies' mantle, false unicorn, red raspberry leaf, damiana, chaste berry, passion flower

Major Safety Information

No safety data identified

Use During Pregnancy and Lactation

No known indications or contraindications to the use of partridge berry in pregnancy or lactation

Goldenseal

Botanical name: *Hydrastis canadensis*

Plant part(s) used: root and rhizome

Actions

- antimicrobial
- anticatarrhal
- antihemorrhagic
- astringent
- uterotonic
- mucous membrane tonic

Historical uses

Goldenseal is an indigenous North American herb which has been widely used by Native Americans and whose common name derives from the Thomsonian herbalists who named it for the vivid golden-yellow color of the rhizome's interior. In addition to its uses as a dye plant, it was used as a medicine for the treatment of conditions that, by description, may have been cancer, as well as being used as a wash for eye inflammations and as a bitter tonic. It was used by northeastern US tribes for infectious diseases, pertussis, diarrhea, fever, pneumonia, stomach conditions, and tuberculosis. In 1828 a bitter principle that we now know to be berberine, was identified. Hydrastine and then canadine were identified by 1873. Its use by the Eclectics was first described in the early 1800s. They used it for the treatment of gastrointestinal (GI) complaints, jaundice, infections, as a mucosal tonic, as a bitter digestive tonic, and as a uterine tonic. Both the tincture and fluid extract (1:1) were official drugs in the 1834 Dispensatory of the United States of America and the United Sates Pharmacopoeia from 1830-1926.

Modern Clinical Indications

- antimicrobial
- mucosal astringent/antisecretory
- antidiarrheal
- mucosal antimicrobial: sinusitis, vaginal infections, cystitis, conjunctivitis, gastroenteritis
- bitter digestive tonic

Goldenseal is one of the most popular and widely regarded herbal medicines in the US and is a mainstay in herbal practice as an antimicrobial for the treatment of a wide range of topical and internal infections and for

gastrointestinal disorders, particularly inflammatory and secretory bowel disorders (e.g., diarrheal conditions). Infections for which goldenseal has shown efficacy in treating include:

- infectious diarrhea
- conjunctivitis and trachoma
- *Heliobacter pylori*
- major Candida species

It is also a reliable ingredient in vaginal suppositories for the treatment of vaginal infections and excessive vaginal discharge, in a wash for eye infections, in a topical wash or ointment for superficial infections, as a powder to dry weeping sores, and as a bitter digestive tonic.

Preparation and dose

Powder: 2 g/day

Tincture: 8 mL/day

Dilute infusion of the powder for an eyewash.

Powder or tincture mixed into suppository blend for treatment of vaginitis.

Commonly combined with

- antimicrobial herbs for treatment of infection
- immunomodulatory herbs to boost immune system
- anti-inflammatory herbs
- vulnerary herbs
- digestive bitters

Major safety information

Goldenseal has demonstrated in vitro inhibition of CYP3A4, an important enzyme in the CYP450 detoxification system. Therefore, the herb may interfere with the metabolism of medications and drugs that rely on this system. Inhibition of CYP3A4 usually leads to increased effects of medications; with medications with a narrow therapeutic window, an effective increased drug dose can be dangerous. Limited studies suggest that isolated berberine has an antagonistic effect on heparin and may interfere with the effectiveness of chemotherapeutic agents via enhanced activity of multi-drug resistance transporters. The effects of isolated berbeine, however, cannot be equated with use of whole root products. High doses of goldenseal fluid extract have been reported to cause gastric pain, nausea, faintness, giddiness, extreme weakness, headache, visual hallucination, dyspnea, and precordial distress. An unreferenced report states that undefined, extremely high amounts may lead to cardiac and respiratory depression.

Use during pregnancy and lactation

Studies on the effects of smooth muscle are contradictory, with some studies demonstrating anti- spasmodic activity and others demonstrating increased contractility. Due to its theoretical potential to cause uterine contractions, goldenseal is contraindicated during pregnancy. Topical use and use for vaginal suppositories is safe. Short term oral use (e.g. maximum 24 hours) may be accepted for treatment of diarrheal conditions, but only with appropriate professional supervision, and not during first trimester as goldenseal has been shown to cause mutations in DNA repair mechanisms in yeast strains. Goldenseal is often used for the treatment of thrush infections of the nipples; inges- tion of goldenseal by the newborn has been associated with neonatal jaundice, therefore, goldenseal products should be applied after a feeding and excess wiped off prior to the next nursing.

Lemon balm

Botanical name: *Melissa officinalis*

Plant part(s) used: leaf

Actions

nervine

mild sedative

antiviral

antidepressant

febrifuge

antispasmodic

Historical uses

Lemon balm was known as "gladdening herb" in antiquity, for its reputed effects for treating "bad spirits," or what we might call depression. Traditionally it has been used to calm fussy children, soothe the discomfort associated with fever, treat colic and indigestion. It was used by the Eclectic physicians as a diaphoretic and antispasmodic for both the treatment of febrile illnesses and dysmenorrhea.

Modern clinical indications

- carminative and antispasmodic for infant colic, flatulence, and indigestion, and minor abdominal spasms
- musculoskeletal antispasmoic for use with fevers, colds, influenza
- topical treatment for herpes virus
- sleeping disorders due to anxiety
- depression
- tenseness, restlessness, and irritability
- treatment of hyperthyroidism
- anti-inflammatory effects through inhibitory effects on complement C3-convertase
- possible cholinergic effects useful in the treatment of Alzheimer's disease

Preparation and dose

Infusion: 2-3 g of herb in infusion, 2-3 times daily Tincture: 2-6 mL 3 times/day

Commonly combined with

nervines, for example, chamomile, lavender, skullcap, passion flower

motherwort for the treatment of hyperthyroidism with heart palpitations

antispasmodics including chamomile, cramp bark, black cohosh, ashwagandha

febrifuges: catnip, peppermint

carminatives: catnip, chamomile, anise seed, fennel, valerian

antivirals, for the topical treatment of herpes, licorice root

Major safety information

There are no known contraindications to the use of lemon balm; caution should be used in patients with thyroid disorders or on thyroid medication due to its possible effects on thyroid function. Possible interactions with barbiturates, sedative drugs, and thyroid hormone.

Use during pregnancy and lactation

There are no known contraindications to the use of this herb during pregnancy. Caution should be used in patients with thyroid disorders or on thyroid medication due to possible effects on thyroid function. Taken traditionally during lactation by the mother to relieve colic in the baby and to relieve tension and anxiety in the mother.

Licorice

Botanical name: *Glycyrrhiza glabra*

Plant part(s) used: root

Actions

- anti-inflammatory
- demulcent
- adaptogen
- aperient
- antitussive
- expectorant
- mineralocorticoid effects

Historical uses

Licorice has a 3000 year history as a medicine plant. The name Glycyrrhiza means "sweet root." Its use as a carminative and expectorant was described by the ancient Greeks, who used it for the treatment of dry cough, asthma, and other lung diseases. It was used as an antacid and for the treatment of peptic ulcer disease after World War II when pharmaceutical drugs were not widely accessible. It is the most extensively used herb in Chinese medicine, employed for its sweet nature to regulate stomach function, tonify the "qi" and "spleen" and to harmonize the other herbs in formulas in which it is included. It is also used in TCM as an antipyretic, anti-inflammatory, a respiratory demulcent, and an expectorant. Stir-fried in honey it is given for weakness, lassitude, cough, short- ness of breath, and heart palpitations. It is also used an antispasmodic for abdominal pain. In Ayurvedic medicine licorice is also used as a tonic, expectorant, a demuclent for catarrhal conditions of the genitourinary tract, for stomach pain, and as a gentle laxative.

The Eclectic physicians used licorice root as an emollient, demulcent, and nutritive to relieve inflammation in mucosal surfaces, lessening irritation, and was consequently used for the treatment of coughs, catarrhs, irritation of the urinary organs, and pain of the intestines in diarrhea. It was also used as a gentle moistening laxative.

Modern clinical indications

Current European and Chinese pharmacopoeias list the following uses for licorice:

- expectorant for the treatment of bronchitis, coughs, catarrh, and hoarseness
- in the treatment of tuberculosis

- anti-inflammatory in gastric and duodenal ulcers
- pharyngitis
- apthos ulcers
- anti-inflammatory for arthritis and rheumatism
- flatulence and poor digestion
- hepatic in the treatment of viral hepatitis
- as an adrenocorticotropic in Addison's disease (adrenal insufficiency)
- postpartum anterior pituitary hormonal insufficiency

Licorice is considered an effective topical antiviral for the treatment of herpes lesions, both HSV-1 and HSV-2. Glycyrrhetininc acid has hypertensive effects due to its effects on mineralocorticoid receptors in the kidney, and is therefore sometimes used for the treatment of hypotension. This metabolite of licorice has been shown to inhibit testosterone production in vitro, and combined with peony root (*Paeonia alba*) lowered FSH/LH ratio, reduced ovarian testosterone production, and stimulated regular ovulation in patients with polycystic ovarian syndrome (PCOS). This combination is used in Japanese traditional medicine for the treatment of dysmenorrhea. In animal studies licorice has prevented the development of ulcers and inhibited gastric ulcer section. It provides protection of the gastric mucosa against NSAIDS (e.g., aspirin and ibuprofen) and bile. Positive anti-inflammatory effects have been demonstrated in vivo in the treatment of inflammation, including arthritis. It has demonstrated increase leukocyte counts in recovery from irradiation in experimental models. Topical antiviral effects have been identified against the herpes viruses HSV, VSV, and in vitro anti-HIV effects have been demonstrated. Oral doses of licorice have demonstrative antitussive effects comparable to codeine. Oral intake in animal models has reduced symptoms of hyperphagia and polydipsia, associated with diabetes. There may be some benefit to patients with chronic fatigue syndrome due to adrenal stimulation from this herb. The German Commission E approves the use of licorice root for the treatment of upper respiratory tract congestion and for gastric and duodenal ulcers.

Preparation and Dose

Dried root: 5-15 g licorice root daily, prepared as infusion or decoction Tincture: 5-15 mL licorice extract

For children as an expectorant: is only in aqueous extracts in proportions of adult dose adjusted for age and body weight.

Commonly combined with

Licorice can be found in numerous herbal combinations.

For topical application for the treatment of herpes lesions: lemon balm extract, myrrh, St. John's wort

Major safety information

Contraindications:

extended use

hypertension

hypokalemia

cardiovascular disease

diabetes

renal disease

Use during pregnancy and lactation

Licorice root is not recommended for internal use during pregnancy; topical use is safe. Use of high doses during pregnancy has been associated with increased incidence of premature labor. Use during lactation is appropriate under the supervision of a qualified practitioner.

Thyme

Botanical name: *Thymus vulgaris*

Plant part(s) used: leaves

Actions

- antimicrobial
- antispasmodic
- expectorant
- rubefactient

Historical uses

Thyme was used as a medicinal herb as far back as ancient Greece. The antiseptic properties of thyme were fully recognized in classic times, referenced by Virgil for use as a fumigant, and Pliny "to flight all venomous creatures." It has been used in traditional herbal medicine as a syrup for the treatment of cough and as a tea and seasoning for flavoring and prevention of intestinal griping.

Modern clinical indications

Herbal medicine employs thyme in the treatment of cough, upper respiratory congestion, and upper respiratory infection. It is a key ingredient in many vaginal suppositories for the treatment of vaginal bacterial and fungal infections, often used as an essential oil added in small doses (e.g., 5-10 drops per ¼ cup oil base). The infusion and tincture are sometimes also used as a topical wash for microbial infections of the skin.

Preparation and dose

Infusion: 1 tsp herb to 1 cup of boiling water, cover and steep 10 minutes. Dose 1-2 cups daily. Syrup: 1-3 tsp as needed for cough, repeated up to 6 times/day

Tincture: Topical: 1 tbs per ¼ water

Internal: 2-6 mL/day

Essential oil: 5-10 drops per ¼ cup oil base

Commonly combined with antimicrobial herbs, antispasmodic herbs, carminative herbs

Major safety information

Allergic contact dermatitis has been observed with prolonged contact with thyme herb. Essential oil should not be ingested.

Use during pregnancy and lactation

Not for internal consumption during first trimester. Only small amounts of syrup (maximum 3 tsp daily for up to 3 days) during pregnancy for the acute treatment of irritable cough. Vaginal suppository use during pregnancy is safe. No data on the use of this herb during lactation, however, no adverse effects expected.

Motherwort

Botanical name: *Leonurus cardiaca*

Plant part(s) used: leaves

Actions

- nervine
- antispasmodic
- emmengagoue
- hypotensive
- cardiotonic
- anxiolytic

Historical uses

The name motherwort means healing herb for mothers; the botanical name *Leonurus cardiaca* means "lion hearted." Motherwort was traditionally used by the Eclectic physicians as an emmenagogue, nervine,

antispasmodic, and laxative. It was given as a warm infusion in amenorrhoea that was thought to arise from exposure to cold temperatures and in suppressed menstruation. It was recommended in nervous complaints, gynecologic pain, irritability, nervous excitability, and all chronic diseases accompanied by restlessness, wakefulness, disturbed sleep, and neuralgic pains in the stomach and head. It was considered specific for nervous conditions with a tendency to choreic or spasmodic movements, pelvic and lumbar uneasiness or pain, bearing down pains, and irritability due to female disorders. Combined with black cohosh, it was considered a superior antispasmodic, nervine, and emmenagogue.

Modern clinical indications

Motherwort is still considered a superior nervine, specifically for the treatment of irritability and emotional lability, especially when associated with hormonal changes (e.g., PMS) and exhaustion (e.g., postpartum). It is commonly included in a wide variety of formulas for gynecologic complaints ranging from amenorrhea, dysmenorrhea, and PMS to anxiety and stress in the perimenopause. It is also a useful tonic and uterine antispasmodic, imparting tone while relieving spasticity, thus useful in the treatment of cramping and uterine pain. As a bitter, it is considered a useful herb for improving the function of the liver, an action which herbalists consider important in the treatment of hormonal dysregulation and mood swings. It is useful in relieving heart palpitations associated with anxiety as well as due to hyperthyroidism. It is also considered a cardiotonic, sometimes taken as a cardiovascular supportive herb along with hawthorn. Blue vervain (*Verbena officinalis*) has similar actions on the nervous system and is sometimes used interchangeably; how- ever, it lacks the significant uterine antispasmodic and cardiotonic activities.

Preparation and dose

Tincture: 2-4 mL, 1-3 times daily

Commonly combined with

black cohosh, lemon balm, passion flower, dong quai, peony, hawthorn, blue cohosh, ladies' mantle, partridge berry, red raspberry leaf, and numerous other herbs for treating nervous and gynecologic complaints

Major safety information

No known side effects within recommended doses.

Use during pregnancy and lactation

Contraindicated for use during pregnancy due to possible emmenagogic activity. Traditionally used for emotional support during lactation.

Uva ursi

Botanical name: *Arctostaphylos uva ursi*

Plant part(s) used: leaf

Actions

- diuretic
- astringent
- urinary tract bacteriostatic
- anti-inflammatory

Historical uses

Uva ursi was used by over 12 Native North American (US and Canada) tribes as a diuretic or for treatment of inflammation of the genitourinary tract. New Mexicans of Hispanic descent used an oral decoction as a treatment for bladder infection and in sitz baths for vaginitis, amongst other conditions. It appears to have been introduced into European medical practice in the 13th century as an effective treatment for conditions of the bladder and kidney, and as such has remained in use since. Early American medical botanists reported on its usefulness in the treatment of genitourinary disorders and by the late 19th century it was widely used by Eclectic physicians as an astringent tonic for chronic diarrhea, dysentery, and menorrhagia, as well as for genitourinary disorders and diabetes. It has had an official entry in pharmacopoeias of numerous western nations since the 18th century, including the London Pharmacopoeia, the British Pharmaceutical Codex, the British Herbal Pharmacopoeia, the National Formulary, and the United States Dispensatory. It continues to be considered an important agent in genitourinary formulas and can be found in the pharmacopoeias of numerous countries including Austria, Czechoslovakia, Egypt, France, Germany, Hungary, Japan, Russia, Switzerland, and others.

Modern clinical indications

- uncomplicated cystitis
- urethritis

Uva ursi is one of the most commonly used urinary tract disinfectants in modern herbal medicine. The leaves are primarily used as an antiseptic in urinary tract infections. It is approved by the German Commission E for the treatment of inflammatory disorders of the descending urinary tract, and by ESCOP for the treatment of UTI not requiring antibiotics. It is a highly astringent herb with efficacy as an antidiarrheal, though it is not usually used for that purpose. It is widely used in the treatment of uncomplicated acute and recurrent urinary tract infection, based on its astringent and antibacterial actions, and when antibiotics are not deemed essential. Midwives include the herb as an astringent anti-inflammatory in sitz baths and perineal rinses for postnatal perineal healing and as part of treatment of vaginitis and urethritis. Unfortunately there are few clinical trials and pharmacodynamic studies of uva ursi. In vitro studies using crude leaf preparations and extracts of uva ursi leaf have demonstrated mild

antimicrobial activity against known UTI-causing organisms including *C. albicans*, *E. coli*, *S. aureus*, and *Proteus vulgaris*, among others. Several studies have also demonstrated anti-inflammatory activity of the herb, particularly enhanced when extracts are used in combination with anti-inflammatory pharmaceutical drugs, for example, prednisolone, indomethacin, or dexamethazone. Uva ursi is most effective in an alkaline urinary environment, which favors the conversion of arbutin to hydroquinone. It is therefore recommended that if the urine is acidic, or if there is no improvement after 24 hours of treatment, 2 "00" capsules of sodium bicarbonate (non-aluminum baking soda) be given along with each dose of uva ursi infusion.

Preparation and dose

Infusion: 5 g leaf steeped in 8 oz boiling water for 1 hour. Strain and take ½-1 cup 4 times daily. The infusion is to be taken with 2 "00" capsules of sodium bicarbonate (non-aluminum baking soda) if the urine is acidic. Alternatively, a cold infusion may be prepared by steeping 8 g leaf in 8 oz cold water for 8 hours. The dose is the same as for hot infusion. Cold infusion contains less tannins as they are more extractible in hot water. Tannins are GI irritants, so some patients may tolerate cold infusion better.

Commonly combined with marshmallow root, wild yam, dandelion leaf, yarrow, corn silk for treatment of UTI

Note that it is sometimes stated that uva ursi should not be combined with cranberry juice, as it acidifies the urine, but this effect is so mild as to not interfere with the effectiveness of uva ursi.

Major safety information

GI irritation is the most common complaint associated with uva ursi use. Headache and tinnitus have been reported with use of high doses. No drug interactions have been reported. However, due to its diuretic effects, theoretically it should not be used when taking medications with a narrow therapeutic window. This herb is considered generally safe, however, hydroquinone is a potentially toxic substance associated with B-cell suppression and nephrotoxicity. Therefore, it is generally not recommended at high doses or for long durations. It is recommended that the herb be taken for 5-7 days, and repeated if symptoms recur.

Use during pregnancy and lactation

Uva ursi is considered contraindicated in pregnancy due to theoretical risks of uterine stimulant activity or possible toxicity associated with hydroquinone. Medical protocol is to treat all pregnant women with bacteriuria, regardless of whether they are symptomatic, with antibiotics because the risk of pyelonephritis to the mother and fetus are significant. Midwives commonly use uva ursi as an initial treatment for mild, uncomplicated cystitis, particularly for mothers who prefer not to use antibiotics as a first recourse. No adverse effects have been reported in the midwifery community. It is generally recommended to use it only after the first trimester.

Marshmallow

Botanical name: *Althea officinalis*

Plant part(s) used: root, leaves, and flowers

Actions

- demulcent
- urinary demulcent
- emollient
- galactogogue

Historical uses

Marshmallow root has an ancient history of use. Used as long ago as 200 BCE, the Greek name Althea means "to heal". Theophrastus (c. 372-286 BC) reported that it was taken in sweet wine for the treatment of coughs; Hippocrates described it for the treatment of wounds; Dioscorides prescribed a vinegar infusion as a cure for toothaches and recommended a preparation of the seeds to soothe insect stings; and the Roman poet Horace claimed the root and leaves had laxative properties. During the Renaissance, herbalists used marshmallow root for treating sore throats, stomach problems, gonorrhea, leucorrhea, and as a gargle for infections of the mouth. The Eclectic physicians found the root decoction valuable for treating diseases of the mucosa, and conditions such as hoarseness, catarrh, pneumonia, gonorrhea, renal irritation, acute dysentery, and diarrhea. It was also used in the treatment of urinary conditions including inflammation of the bladder, hematuria, retention of urine, and some forms of gravel. It was considered efficacious in gastro-intestinal irritation and inflammation. Externally marshmallow root was used in the form of poultice to treat painful, inflammatory tumors, and swellings as well as wounds, bruises, burns, and scalds. It was considered an immensely safe herb that could be taken freely.

Modern clinical indications

- oral mucosal irritation
- esophageal irritation
- irritable bowel syndrome
- pharyngitis
- dry cough
- cystitis
- urethritis
- vaginitis
- insufficient breast milk
- skin inflammation
- eczema
- renal stones

All parts of the marshmallow plant have medicinal properties. The leaves have demulcent, expectorant, diuretic, and emollient properties and are generally used in conditions of the lungs and the urinary tract. The root has demulcent, diuretic, emollient, and vulnerary properties. It is generally used for inflammations of the gastrointestinal, respiratory, urinary, and genital tracts. It is traditionally used to increase the flow of breast milk.

It has been used to treat constipation as well as irritable bowel syndrome. Topically the root has been used as an emollient for dry, irritated skin conditions, eczema, and the treatment of ulcers, abscesses, and boils. It is a commonly used ingredient in vaginal suppositories, imparting an anti-inflammatory and emollient quality, and with urinary antiseptics for the treatment of lower urinary tract infections.

Preparation and dose

Marshmallow root may be prepared as a hot or cold infusion. For the treatment of patients with HIV/AIDS or who are immunocompromised, it is preferable to boil the herb to endure that there is no microbial contamination of the final product.

Dried herb: up to 15 g daily prepared as either as a hot infusion or cold maceration, or as a powder

Syrup: 2-8 mL daily

Commonly combined with demulcent herbs, warming digestive herbs, urinary antiseptic herbs, antimicrobial herbs

Major safety information

There are no expected adverse effects from the use of marshmallow root; however, the absorption of other medications taken simultaneously may be inhibited.

Use during pregnancy and lactation

There is no data on the safety of marshmallow root use during pregnancy.

Cranberry

Botanical name: *Vaccinium macrocarpon*

Plant part(s) used: fruit

Actions: urinary antiseptic

Historical uses

Used as a food, though not widely reported as a medicine, by Native American tribes of the northeastern US. A mountain cranberry species was reportedly used by an indigenous Alaskan tribe for the treatment of pleurisy, tonsillitis, and as a gargle for sore throats. It was reported for its medicinal use by the Eclectic physicians in 1865, when it was described as a refrigerant, diuretic, antiseptic, laxative, and astringent.

Modern clinical indications

The use of cranberries for the treatment of urinary tract infection (UTI) dates back to the mid-19th century when German chemists discovered that consumption of the berries produced a bacteriostatic acid in the urine. By 1900 in the US it was postulated that eating cranberries acidified the urine and prevented UTIs. This mechanism of action has been questioned as studies have failed to consistently show acidification of the urine with consumption of cranberry juice. There are mixed results regarding the effect of cranberry juice, fruit, and extract on urine pH. It appears that cranberry does not consistently lower urine pH and it is uncertain whether any reduction in urine pH that does occur has an anti-bacterial effect. However, the use of cranberry products continues to be a popular and empirically efficacious means of preventing and treating uncomplicated lower UTI. It is now accepted that the primary mechanism of action of cranberries is due to two compounds in cranberries that each prevent fimbriated *E. coli* from adhering to uroepithelial cells in the urinary tract. These compounds are also found in blueberries, which may be also used as part of the prevention and treatment of UTI. While cranberry has primarily been used against uropathogenic

E. coli, recent evidence from in vitro studies suggests that it may have activity against other uropathogenic organisms, and also against *H. pylori*, responsible for gastric ulcers. Cranberry may also prevent the formation of biofilms on epithelial mucosa, reservoirs of bacteria which are difficult to effectively treat with antibiotics. Based on a comprehensive review of the literature by the Cochrane Collaboration, there is some evidence from two good quality RCTs that cranberry juice may decrease the number of symptomatic UTIs in women over a 12-month period. Based on the literature, there have been problems with non-compliance over long periods of administration, probably due to the taste of some cranberry products or possibly other side-effects, and the optimum dosage and administration methods (e.g. juice or tablets) are unclear, necessitating further properly designed trials. However, clinical experience with cranberry juice products in herbal practice suggests that compliance problems can be overcome by using palatable products such as mixing 1 part cranberry concentrate diluted in 4 parts unfiltered organic apple juice, using unsweetened cranapple juice products, or making preparations with fresh frozen cranberries in the blender or juicer with fresh apple juice or other fruits and

juices. In two good quality RCTs, cranberry products significantly reduced the incidence of UTIs at twelve months compared with placebo/control in women. One trial gave 7.5 g cranberry concentrate daily (in 50 mL), the other gave 1:30 concentrate given either in 250 mL juice or in tablet form. There was no significant difference in the incidence of UTIs between cranberry juice versus cranberry capsules. The safety of cranberries and their general healthful properties, along with combined empirical evidence of numerous practitioners, suggests that it is reasonable for women with no other significant health problems to use cranberry products for the prevention of recurrent UTI. A recent review article on cranberry summarizes that recent, randomized controlled trials demonstrate evidence of cranberry's utility in urinary tract infection prophylaxis and that cranberry is a safe, well-tolerated herbal supplement that does not have significant drug interactions.

Clinical trials suggest that use of cranberry juice products may prevent periostomal skin conditions in urostomy patients and reduce odor and obstruction of urinary catheters by mucus. Cranberry may also enhance absorption of Vitamin B12.

Preparation and dose

Cranberry juice: 30-300 mL daily or three 8 oz glasses of unsweetened juice daily Juice extract: 1 tablet (300 to 400 mg) of cranberry extract tablets twice daily

Commonly combined with

Cranberry can be used alone, but for the treatment of UTI, it is often combined with a protocol that includes uva ursi, marshmallow root, nettle leaf, and other herbal urinary antiseptic, anti- inflammatory, and diuretic herbs.

Major safety information

There are no known side effects or contraindications associated with cranberry juice. There has been some speculation as to whether individuals with a tendency to form calcium oxalate kidney stones should avoid regular consumption of cranberry products; however, the relationship between cranberry and calcium oxalate kidney stones is undetermined. Conversely, cranberry products may be associated with prevention of struvite stones which are associated with chronic UTIs.

Use during pregnancy and lactation

Considered safe for use during pregnancy and lactation.