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Abstract

There is a tradition in Western herbal medicine of using certain herbs at different times during the menstrual cycle in women. This treatment is utilized to help restore balance to hormonal fluctuations.

The Concept of Multiphasic Prescribing

In women who are having menstrual cycles, regulating these cycles is often an important part of dealing with various women's reproductive problems. In addition, sometimes, the cycles themselves are out of balance, causing distress and other problems, and need to be rebalanced. One approach to these issues is to use distinct herbs at different times during the cycle to bring the cycle back to normal, an admittedly variable state from individual to individual.

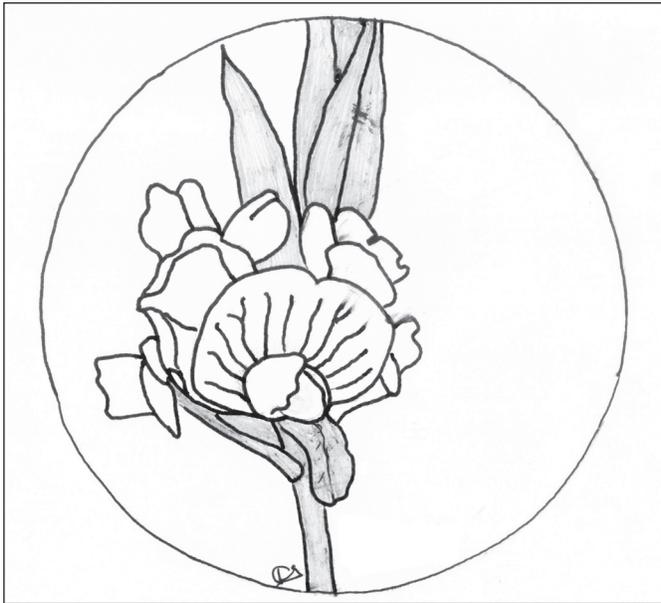
One of our mentors (E.Y.), Silena Heron, N.D. (1947–2005, formerly a private practitioner in Sedona, Arizona), was one of several pioneering doctors who frequently used biphasic or triphasic formulas for her patients, and many of the ideas in this article are heavily influenced by her experiences and theories.

The multiphasic approach in Western herbal medicine usually involves two or three distinct formulas (biphasic or triphasic formulations, respectively). The first formula, or follicular formula, is generally begun after menstruation is complete and this formula is continued until just before ovulation begins. The second, or luteal formula, is begun at ovulation and continued until menstruation stops. Optionally, a third, or menstrual formula, is given from when bleeding starts until it stops.

At times, the signals to change formulas are unclear or absent, such as in women who are amenorrheic or who have anovulatory cycles. In such situations, the point is to impose switches by changing formulas on whatever the normal schedule would be for that patient. The idea is to provide stimuli so that the body will reset to the normal pattern. This may be particularly important in a world in which many of the connections to nature (lunar cycles, day/night switching, changes in the seasons, etc.) that women previously had have been severed by artificial light, variable and unnatural work or life schedules, and residing in places outside of nature. In addition, the widespread use of oral contraceptives has tended to wreak havoc on normal cycles in many women. In women with no known normal cycles, or who have been away from normal cycles for a long time (particularly long-term oral contraceptive users), one has to choose an arbitrary cycle, generally either by linking it to the phases of the moon or by choosing a 28-day cycle.

For example, assume a woman was previously having normal, pain-free menstrual cycles lasting 28 days with 2 days of heavy bleeding and 2 days of light bleeding. Then she developed menorrhagia with 35-day cycles, and the timing of ovulation became very unclear. In such an instance, the switch from follicular to luteal formulas should be made at 14 days, and the switch to a menstrual formula made at 28 days to mimic the original normal cycle for this woman. If bleeding does not occur when a switch is made to a menstrual or back to the follicular formula, then it may be necessary to return to the luteal formula briefly until bleeding occurs, or to stop all herbs until that point and then restart the follicular formula.

Often, based on our experience, we have noted that it takes multiple cycles for multiphasic formulas to have their full and



Glycine max (soy) flower. Drawing ©2009 by Kathy Abascal, B.S., J.D., R.H. (AHG)

complete impact. Most patients should be advised that they will have to use the formulas for a minimum of two or three cycles to see results or to gain the totality of benefits.

Follicular-Phase Hormone Regulators

Herbs and foods rich in phytoestrogens, most notably isoflavones, coumestans, and lignans, are important hormone regulators (see Indications for Multiphasic Prescribing). Phytoestrogens are most specific to the follicular phase (see Table 1), particularly when relative or absolute estrogen dominance is suspected or known. Estrogen dominance can occur any time during the cycle, when estrogen levels are excessive, as a result of either absolute high E or relative to low P levels. Signs and symptoms of estrogen dominance include water retention, moodiness, breast tenderness, and measured high levels of endogenous estrogens, particularly relative to progesterone. These symptoms may tend to occur during the luteal phase or in perimenopause but can definitely occur at any time during the cycle.

Phytoestrogens act primarily as weak estrogen receptor-beta (ER β) agonists.¹ Physiologic doses from diets rich in phytoestrogenic foods provide sufficiently high levels of phytoestrogens to have these effects in humans.² In a setting of high endogenous estrogen levels, the net effect of phytoestrogens seems to be antagonism of the negative effects of estradiol and similar native estrogens, apparently by maximizing protective ER β activation by the phytoestrogens and minimizing harmful ER α activating by estradiol.³ If estrogen dominance is believed to exist in the luteal phase, which is often related to insufficient progesterone production (relative estrogen dominance), then phytoestrogens may still occasionally have a role to play during that time as well.



Trifolium pratense (red clover).

Overdose of phytoestrogens can, on occasion, lead to estrogen-excess symptoms. This rarely occurs in someone who is using liquid herbal extracts and is generally only seen in patients who are taking capsules with concentrated phytoestrogen extracts and eating a diet very high in phytoestrogen-rich foods. Otherwise, these substances are extremely safe.

Table 1. Herbs Used in the Follicular Phase

Phytoestrogens

- Foeniculum vulgare* (fennel) fruit
- Glycine max* (soy) fruit and all other legumes to varying degrees
- Glycyrrhiza glabra* (licorice) root
- Humulus lupulus* (hops) strobile
- Linum usitatissimum* (flax) fruit
- Medicago sativa* (alfalfa) leaf
- Pimpinella anisum* (anise) fruit
- Pueraria montana* var *lobata* (kudzu) root
- Punica granatum* (pomegranate) seed
- Trifolium pratense* (red clover) leaf and flower
- Trifolium repens* (white clover) leaf and flower
- Trifolium subterraneum* (subterranean clover) leaf and flower

Possible phytoestrogens

- Panax ginseng* (Asian ginseng) root
- Panax quinquefolium* (American ginseng) root

Estrogen-metabolism optimizers

- Brassica oleracea* (cabbage, broccoli, cauliflower, etc.) leaf and/or flower

Hormone regulators with follicular affinity

- Angelica sinensis* (dang gui, dong quai) prepared root (definitely to be avoided in menorrhagia during follicular phase)
- Polygonum multiflorum* (he shou wu) prepared root

Notes: For midcycle spotting or bleeding, use astringents (see list in herbs used in menstrual phase).

For *mittelschmerz* (pain associated with ovulation), use spasmolytics (see list in herbs used in menstrual phase).

As examples, *Trifolium pratense* (red clover), *T. repens* (white clover), and *T. subterraneum* (subterranean clover) are isoflavone- and coumestan-rich herbs that have been fairly well-studied for use as phytoestrogens. The idea that these herbs could be simple replacements for endogenous estrogen was not borne out by the largest, negative clinical trial on *T. subterraneum* extract in perimenopausal women.⁴ Some smaller trials have suggested that *T. subterraneum* extracts can provide relief

If amenorrhea or oligomenorrhea is the main issue, then dang gui may be indicated.

from hot flashes or improve high-density lipoprotein (HDL) cholesterol levels in perimenopausal women.^{5,6} Although it has not yet been proven in humans, extracts of these herbs also consistently show anticancer activity in vitro and in animal studies.^{7,8} Much work remains to be done to parse the detailed actions and effects of these herbs. Detailed discussions on the other phytoestrogenic herbs can be found elsewhere.⁹

Coupled with knowledge about phytoestrogens, there is growing awareness of the need to optimize catabolism of estrogen. Studies now show fairly consistently that elevated levels of 16- α hydroxy-metabolites of estradiol and estrone are associated with many of the negative effects of estrogens, while the 2-hydroxy-metabolites are much safer and possibly even protective.¹⁰

Table 2. Herbs Used in the Menstrual Phase

Astringents (for menorrhagia)

Alchemilla vulgaris (lady's mantle) leaf
Lamium album (white deadnettle) leaf
Mitchella repens (partridge berry) leaf and fruit
Rubus spp. (blackberry, raspberry) root or leaf
Trillium ovatum (Pacific trillium) root*
Trillium grandiflorum (bethroot) root*

Emmenagogues (for oligo- or amenorrhea)

Artemisia vulgaris (mugwort) leaf
Hedeoma pulegioides (American pennyroyal) leaf
Mentha pulegium (European pennyroyal) leaf
Paeonia suffruticosa (mu dan pi, tree peony) bark
Ruta graveolens (rue) leaf
Salvia officinalis (sage) leaf

Styptics (for menorrhagia)

Capsella bursa-pastoris (shepherd's purse) herb
Panax notoginseng (tienchi ginseng) root

Spasmolytics (for dysmenorrhea)

Dioscorea villosa (wild yam) root
Ligusticum walichii (chuan xiong) root
Paeonia lactiflora (chi shao, red peony) root with bark
Viburnum prunifolium (blackhaw) leaf and bark
Viburnum opulus (crampbark) leaf and bark

*Threatened in the wild, use sparingly if at all.

A simple urine assay can quickly determine if an individual patient has an imbalanced 2-OH-E₂/16- α -OH-E₂ ratio.¹¹ Cruciferous vegetables contain various glucosinolates, including indole-3-carbinol, that promote metabolism of estrogens toward the 2-hydroxylation pathway. In a clinical trial, consuming cabbage was associated with increased 2-hydroxylation and reduction of recurrent respiratory papillomatosis, a condition known to be aggravated by 16- α -hydroxylation metabolites.¹² Isolated indole-3-carbinol has also shown excellent activity against conditions, such as cervical dysplasia, that are associated with high levels of 16- α -hydroxy estrogen metabolites; these metabolites also stimulate human papillomavirus (HPV) activity.¹³

Angelica sinensis (dang gui, dong quai) prepared root is a nonphytoestrogen hormone regulator.¹⁴ Although it does not have a particular action that would make it more indicated during the follicular phase, there is a reason this herb is often avoided during the luteal phase. Dang gui is described as a "Blood mover" in traditional Chinese herbal medicine and may increase menstrual bleeding. Thus, dang gui is generally avoided during the follicular and menstrual phases, particularly if menorrhagia is already a problem. If amenorrhea or oligomenorrhea is the main issue, then dang gui may actually be indicated. *Polygonum multiflorum* (he shou wu) prepared root is another nonphytoestrogen hormone regulator that appears to have more affinity for the follicular phase, although this affinity is not well-understood.

Luteal-Phase Hormone Regulators

Very little work has been done to investigate the effect of herbs on hormonal levels during the luteal phase exclusively. Several herbs are traditionally considered to be hormone balancers with an affinity for the luteal phase, (see Table 2) al-

Table 3. Herbs Without Cyclic Components

Uterine tonics

Aletris farinosa (true unicorn) rhizome
Caulophyllum thalictroides (blue cohosh) root
Chamaelirium luteum (false unicorn) root (however, Dr. Heron considered this primarily a follicular tonic)

Hypothalamic-pituitary-hormone regulators

Actaea racemosa (black cohosh) root (however, Dr. Heron considered this primarily a follicular tonic)
Paeonia lactiflora (bai shao, white peony) root without bark
Vitex agnus-castus (chaste tree) fruit

Hormone regulator

Smilax spp. (sarsaparilla) root (may be a luteal-phase tonic), mechanism unknown

Pelvic lymphagogues (almost always indicated)

Ceanothus greggii (red root) root
Fouquieria splendens (ocotillo) bark

Liver tonics (almost always indicated)

Arctium lappa (burdock) root
Silybum marianum (milk thistle) fruit
Taraxacum officinale (dandelion) root



Taraxacum officinale (dandelion).

though these have not been documented. These include *Smilax* spp. (sarsaparilla) root, *Mitchella repens* (partridge berry) herb, and *Alchemilla vulgaris* (lady's mantle) herb.

It is our opinion that most purported luteal-phase tonics can be explained better by other actions that are not specialized to the luteal phase. Therefore, the main approach to the luteal phase is essentially to remove herbs that are more focused on the follicular phase, to maintain hormone regulators without a cyclic component, and to manage any other symptoms. This is also often a time when herbs are included to ensure they are present at good levels in the body prior to the onset of menses, particularly when premenstrual syndrome or dysmenorrhea is a major issue.

Noncyclic Hormone Regulators

A number of hormone-modulating herbs do not have a clear cyclic component (see Table 3). The best-understood of these is probably *Vitex agnus-castus* (chaste tree*) fruit. This herb has been shown to have dopaminergic effects in the pituitary gland, suppressing prolactin levels, which are often associated with premenstrual syndrome, as well as correcting luteal-phase defects often seen in patients with infertility and menstrual disorders.¹⁵ There is some evidence for vitex specifically promoting corpus-luteum formation or function shown in clinical trials.¹⁶ The often-proclaimed idea that chaste tree acts by affecting luteinizing hormone (LH) or follicle-stimulating hormone (FSH) levels does not have well-documented support in humans. One recent rat study did show that chaste tree can lower LH levels.¹⁷ The historical use of chaste tree for both galactorrhea and insuf-

*For more information on chaste tree, see "Chaste Tree Extract in Women's Health: A Critical Review" by Tieraona Low Dog, M.D., in this issue.

The Chinese Herbal Artificial Cycle

A concept similar to biphasic prescribing also exists in modern applications of traditional Chinese herbal medicine. One practitioner reported* using four distinct formulas to support normal menstrual cycles in women with infertility issues, coupled with acupuncture treatments. This practitioner's treatment program is outlined briefly below.

Phase 1, postmenstrual (proliferative), Follicle Stimulation Formula

Human placenta (zi he che)
Curculigo orchoides (xian mao) rhizome
Cuscuta chinensis (tu si zi) seed
Dioscorea opposita (shan yao) root
Polygonum multiflorum (he shou wu) prepared root
Angelica sinensis (dang gui) prepared root
Ligustrum lucidum (nu zhen zi) seed
Dipsacus asperoides (xu duan) root
Rehmannia glutinosa (shou di huang) steamed root
Lycium barbarum (gou qi zi) fruit
Epimedium spp. (yin yang huo) herb

Note: Most of these herbs are Kidney yin or yang tonics or other tonifying herbs.

Phase 2, midcycle, Ovulation Stimulation Formula

Curculigo orchoides (xian mao) rhizome
Cnidium monnieri (dong chuan xiong) fruit
Lycopus lucidus (ze lan) herb
Epimedium spp. (yin yang huo) herb
Leonurus heterophylla (chong wei zi) seed
Achyranthes bidentata (niu xi) root
Paeonia lactiflora (chi shao) root with bark
Carthamus tinctoria (hong hua) flower
Liquidambar spp.
Angelica sinensis (dang gui) prepared root
Cyperus rotundus (xian fu) rhizome
Vaccaria segetalis (wang bu liu xing) seed

Note: This formula adds many herbs that invigorate the Blood, as well as herbs to regulate Liver *qi* flow.

Phase 3, premenstrual (secretory), Corpus Luteum Stimulation Formula

Rehmannia glutinosa (shou di huang) steamed root
Angelica sinensis (dang gui) prepared root
Dioscorea opposita (shan yao) root
Epimedium spp. (yin yang huo) herb
Cistanche deserticola (rou cong rong) herb
Codonopsis pilosula (dang shen) root
Curculigo orchoides (xian mao) rhizome
Cuscuta chinensis (tu si zi) seed
Glycyrrhiza uralensis (gan cao) root
Cinnamomum cassia (rou gui) bark
Rubus chingii (fu pen zi) fruit

Phase 4, Menstruation Regulation Formula

Angelica sinensis (dang gui) prepared root
Prunus persica (tao ren) seed
Lycopus lucidus (ze lan) herb
Paeonia lactiflora (chi shao) root with bark
Carthamus tinctoria (hong hua) flower
Achyranthes bidentata (niu xi) root
Cnidium monnieri (dong chuan xiong) fruit
Cyperus rotundus (xian fu) rhizome
Leonurus heterophylla (chong wei zi) seed
Rehmannia glutinosa (shou di huang) steamed root
Citrus reticulata (qing pi) immature peel
Citrus reticulata (chen pi) mature peel

*Tang BJ. Traditional Chinese herbal and acupuncture treatment of female infertility. *Int J Oriental Med* 1991;16:91-99.



Paeonia lactiflora (peaonia; white peony) flower. Photo ©2009 by Eric Yarnell, N.D.



Humulus lupulus (hops).

ficient lactation strongly suggests that chaste tree has a balancing action on hypothalamic and/or pituitary secretions, or at least on prolactin.

Although *Actaea racemosa* (black cohosh) root was long believed to be a phytoestrogen, and although Dr. Heron considered this herb to be primarily a follicular tonic, there is now fairly good evidence that black cohosh actually acts in the

Indications for Multiphasic Prescribing

An effort should be made to identify and correct the cause(s) of each patient's problem and not just use herbal prescribing as that could mask symptoms and cause recurrent or chronic problems. Problems with many possible causes on the list below, such as menorrhagia or infertility, are assumed to be benign, idiopathic, and with no discernable pathologic causes (or with known causes but with the cycle still imbalanced despite treating those causes).

- Menorrhagia
- Lengthened or shortened cycle
- Female infertility
- Anovulatory cycles
- Premenstrual syndrome
- Dysmenorrhea—sometimes the follicular formula is unnecessary
- Luteal phase defect
- Oligo- or amenorrhea
- Uterine fibroids
- Endometriosis
- Ovarian cysts
- Support after discontinuation of oral contraceptives
- Any other conditions associated with a dysregulated menstrual cycle

hypothalamus and/or pituitary gland to regulate hormone levels in the body.¹⁸ Studies have suggested that black cohosh may have serotonergic effects.¹⁹ It is clinically quite helpful in many instances when there is hormonal imbalance, though this herb is most indicated for patients with concomitant arthritis or myalgia.

Paeonia lactiflora (bai shao, white peony) root without bark, and probably *P. lactiflora* (chi shao, red peony) root with bark, are also apparently generic sex-hormone (estrogen and progesterone) balancers without having hormonal components, perhaps even extending to balancing androgens.^{20–22} These herbs are also useful analgesics, spasmolytics, and inflammation modulators.^{23–25} The indigenous U.S. herb *P. brownii* (Brown's peony) root is believed to have similar actions according to the late, great herbalist Michael Moore (1942–2009), formerly of the Southwest School of Botanical Medicine, in Bisby, Arizona.²⁶

Miscellaneous Supportive Herbs

Herbs that support normal uterus tone and function are often important for helping resolve chronic issues with this organ (see Comparison of Views of Women's Herbs). These herbs should be included throughout the menstrual cycle. There is no research on these herbs, so their use is based solely on traditional practice. *Aletris farinosa* (true unicorn) rhizome, *Caulophyllum thalictroides* (blue cohosh) root, and *Chamaelirium luteum* (false unicorn) root are three classic uterine tonics. (Although Dr. Heron considered false unicorn to be primarily a follicular tonic, there is no clear understanding of why she had this idea). False unicorn is threatened in the wild as a result of slow growth, overharvesting, habitat loss, and overgrazing by deer, and should only be obtained from cultivated or sustainably harvested sources.

Pelvic lymphagogues are also almost always indicated in women with chronic reproductive problems. The mechanism of action of these herbs is also unknown; the herbs are used based on empirically derived knowledge. *Fouquieria splendens* (ocotillo) bark from the desert southwestern United States/northern Mexico is the most important of these herbs, al-

though *Ceanothus greggii* (red root) root can be used when this herb is not available.

Naturopathic physicians and herbalists commonly prescribe liver tonics to women with dysregulated cycles or conditions related to these, on the premise that these tonics help the liver to metabolize sex hormones properly. One

Comparison of Views of Women's Herbs

There is some difference of opinion among scholars and practitioners about the primary actions and effects of various herbs used primarily for women's health. The chart below highlights this and supports the strength that comes from diversity within the profession of herbalism. In cases when a distinct species was recommended by the author (usually the American native herb, in contrast to the Eurasian native herb), this is indicated.

Opinions on the Primary Actions of Herbs

Herb	Trickey*	Moore†, ‡	Soule§	Gladstar#
<i>Achillea millefolium</i>	Antihemorrhagic	Antihemorrhagic	Spasmolytic, antihemorrhagic, emmenagogue	Antihemorrhagic, spasmolytic
<i>Actaea racemosa</i>	Hormone balancer	Hormone balancer (<i>A. arguta</i>)	Spasmolytic, uterine tonic	Hormone regulator
<i>Alchemilla vulgaris</i>	Antihemorrhagic	Antihemorrhagic (<i>A. occidentalis</i>)	Anodyne, antihemorrhagic	Antihemorrhagic, spasmolytic
<i>Aletris farinosa</i>	Uterine tonic	—	—	Digestive tonic
<i>Angelica sinensis</i>	Uterine tonic	Female tonic	Circulatory stimulant, hormone balancer	Uterine tonic
<i>Artemisia vulgaris</i>	Emmenagogue	Bitter diaphoretic (<i>A. ludoviciana</i>)	Emmenagogue	Emmenagogue
<i>Capsella bursa-pastoris</i>	Antihemorrhagic	Anti-hemorrhagic	Antihemorrhagic	Antihemorrhagic
<i>Caulophyllum thalictroides</i>	Uterine tonic	—	Uterine tonic	Emmenagogue
<i>Chamaelirium luteum</i>	Uterine tonic	—	Uterine tonic	Hormone balancer, uterine tonic
<i>Dioscorea villosa</i>	—	—	Spasmolytic	Hormone balancer
<i>Lamium album</i>	Anti-hemorrhagic	—	—	—
<i>Leonurus cardiaca</i>	Cardiotonic, spasmolytic	Emmenagogue	Uterine amphoteric	Uterine amphoteric
<i>Mentha pulegium</i>	Emmenagogue	Emmenagogue	Emmenagogue	Emmenagogue
<i>Mitchella repens</i>	—	—	Antihemorrhagic	Uterine tonic, hormone balancer
<i>Paeonia lactiflora</i>	Hormone balancer	Hormone balancer, antihemorrhagic, spasmolytic (<i>P. brownii</i>)	—	—
<i>Pulsatilla vulgaris</i>	Anodyne	Sedative (<i>P. occidentalis</i>)	—	—
<i>Rubus idaeus</i>	Uterine tonic	Antihemorrhagic	Uterine tonic	Uterine tonic
<i>Ruta graveolens</i>	Emmenagogue	—	—	—
<i>Salvia officinalis</i>	Emmenagogue	Anti-hemorrhagic	—	Antilactation
<i>Tanacetum parthenium</i>	Anodyne	—	Emmenagogue, spasmolytic	—
<i>Trillium erectum</i>	Antihemorrhagic	Antihemorrhagic (<i>T. ovatum</i>)	—	—
<i>Viburnum prunifolium</i>	Spasmolytic	Spasmolytic (<i>V. edule</i>)	Spasmolytic (<i>V. opulus</i>)	Spasmolytic
<i>Vitex agnus-castus</i>	Hormone balancer	—	Hormone balancer	Hormone balancer

*Trickey R. Women, Hormones, and the Menstrual Cycle. Herbal and Medical Solutions from Adolescence to Menopause. Australia: Allen and Unwin, 1998.

†Moore M. Medicinal Plants of the Mountain West, rev. ed. Santa Fe: Museum of New Mexico Press, 2003.

‡Ref. 26.

§Soule D. The Woman's Book of Herbs. New York: Citadel Press, 1995.

#Gladstar R. Herbal Healing for Women. New York: Simon and Schuster, 1993.

—, indicates that herb was not discussed.



Punica granatum (pomegranate).

preliminary clinical trial using a complex formula (including *Silybum marianum* [milk thistle] seed, *Taraxacum officinale* [dandelion] root, and *Cynara scolymus* [artichoke] leaf, three liver tonics) showed that these herbs could have effects on follicular metabolism of androgens.²⁷ More research is need-

ed, but there may be some validity to using these herbs for women with hormonal issues.

Herbs for Symptom Management

Frequently, while working on the hormonal or other bases of female reproductive problems, it is necessary to reduce excessive bleeding, stimulate bleeding when little or none is occurring, manage pain, or otherwise handle symptoms. While these outcomes should not be the only objectives of treatment, they can be very important.

There are two classes of herbs that can help reduce excessive bleeding, spotting, or midcycle bleeding (see Table 2). The astringents contain tannins, and although they are not generally believed to be systemically absorbed to any significant extent, are still often effective for controlling excessive vaginal bleeding. Perhaps one of the most famous among herbs specific to the female reproductive tract would be the *Trillium* genus, although these herbs are slow-growing, and their forest habitats are threatened, so the much more sustainable *Rubus* spp. or *Alchemilla* spp. should generally be used instead. One European trial suggested that *Alchemilla* can be effective for addressing menorrhagia.²⁸

Nontannin-containing styptic herbs that can also reduce excessive bleeding include *Capsella bursa-pastoris* (shepherd's purse) herb and *Panax notoginseng* (tienchi ginseng) root.

Table 4. Dr. Selena Heron's Base Biphasic Formulas*

Follicular Base Formula

Latin name	Part	Form	Proportion
<i>Chamaelirium luteum</i>	Root	Tincture	15%–30%
<i>Medicago sativa</i>	Herb	Glycerite	15%–30%
<i>Angelica sinensis</i>	Decocted root	Tincture	5%–15%
<i>Actaea racemosa</i>	Root	Tincture	5%–15%
<i>Glycyrrhiza glabra</i>	Root	Fluid extract	5%–15%
<i>Mitchella repens</i>	Leaf and fruit	Tincture	5%–15%
<i>Taraxacum officinale</i>	Root	Tincture or glycerite	5%–15%
<i>Vitex agnus-castus</i>	Fruit	Tincture	5%–15%

Luteal Base Formula

Latin name	Part	Form	Proportion
<i>Taraxacum officinale</i>	Root	Glycerite	15%–25%
<i>Smilax ornate</i>	Root	Tincture	5%–15%
<i>Alchemilla mollis</i>	Leaf	Tincture	5%–15%
<i>Silybum marianum</i>	Seed	Tincture	5%–15%
<i>Dioscorea villosa</i>	Root	Tincture	5%–15%
<i>Mitchella repens</i>	Leaf and fruit	Tincture	5%–15%
<i>Viburnum prunifolium</i>	Bark	Tincture	5%–15%
<i>Vitex agnus-csatus</i>	Fruit	Tincture	5%–15%
<i>Eleutherococcus senticosus</i>	Root	Tincture or fluid extract	5%–15%

*The dose for both of these formulas was intended to be 1 tsp (5 mL) three times per day for an average-sized adult woman. These formulas should always be individualized to the specific patient.

Again, these herbs have rich historical traditions for use but have been poorly researched.²⁹ Tienchi ginseng was shown to be antihemorrhagic when it was applied topically in at least one clinical trial.³⁰

When insufficient menstruation occurs, emmenagogues are used. These are potentially abortifacient and should be used cautiously as a result. Again, very little information is available about how these herbs work, and their use is based on historical herbal medicine. If they do not work at usual doses, then higher doses are not recommended because they have some potential to result in excessive uterine bleeding.

For addressing uterine spasms or dysmenorrhea, herbal spasmolytics are often effective. *Dioscorea villosa* (wild yam) root, now widely though inaccurately believed to have progesteric or androgenic effects, is actually primarily an excellent uterine relaxer. In fact, none of the studies on this herb exploring progesteric or androgenic effects have produced any support for this concept,^{31,32} and it seems to have come from a misunderstanding that, industrially, the saponins in wild yam can be converted to steroid hormones. However, the human body is simply not able to do the same thing. Several other herbs are listed in Herbs by Their Primary Actions.

Conclusion

This article has provided basic information for practitioners so they can implement multiphasic prescribing of herbs more widely. The Western and Eastern traditions of doing so coincide and suggest that there is significant power in this approach. Refinement of which herbs are used at what points during the cycle is urgently needed, along with better understanding of how the herbs work, so that they can be targeted more selectively. Hormone-balancing herbs, tonifying and supporting herbs, and symptom-managing herbs should all be utilized in individualized formulas for treating menstruating women with apparent hormonal imbalances. ■

Conflict-of-Interest Disclaimer

Dr. Yarnell is part owner of Heron Botanicals in Poulsbo, Washington (the company founded by Dr. Heron, based on her personal dispensary), which sells many of the products mentioned in this article. These products are also readily available from other sources.

References

1. Harris DM, Besselink E, Henning SM, et al. Phytoestrogens induce differential estrogen receptor alpha- or beta-mediated responses in transfected breast cancer cells. *Exp Biol Med* 2005;230:558–568.
2. Rowland I, Faughnan M, Hoey L, et al. Bioavailability of phyto-oestrogens. *Br J Nutr* 2003;89(suppl1):S45–S58.
3. Katzenellenbogen JA, Muthyala R. Interactions of exogenous endocrine active substances with nuclear receptors. *Pure Appl Chem* 2003;75:1797–1817.
4. Atkinson C, Warren RML, Sala E, et al. Red clover-derived isoflavones and mammographic breast density: A double-blind, randomized, placebo-controlled trial [ISRCTN42940165]. *Br Cancer Res* 2004;6:R170–R179.
5. van de Weijer PHM, Barentsen R. Isoflavones from red clover (Promensil®) significantly reduce menopausal hot flush symptoms compared with placebo. *Maturitas* 2002;42:187–193.
6. Samman S, Wall PML, Chan GSM, et al. The effect of supplementation with isoflavones on plasma lipids and oxidisability of low density lipoprotein in premenopausal women. *Atherosclerosis* 1999;147:277–283.
7. Yanagihara K, Ito A, Toge T, Numoto M. Antiproliferative effects of isoflavones on human cancer cell lines established from the gastrointestinal tract. *Cancer Res* 1993;53:5815–5821.
8. Cassidy JM, Zennie TM, Chae YH, et al. Use of a mammalian cell culture benzo(a)pyrene metabolism assay for the detection of potential anticarcinogens from natural products: Inhibition of metabolism by biochanin A, an isoflavone from *Trifolium pratense* L. *Cancer Res* 1988;48:6257–6261.
9. Yarnell E, Abascal K. Herbal medicine for treating menopausal symptoms. *Altern Complement Ther* 2003;9:299–306.
10. Mueck AO, Seeger H, Lippert TH. Estradiol metabolism and malignant disease. *Maturitas* 2002;30:43:1–10.
11. Lord RS, Bongiovanni B, Bralley JA. Estrogen metabolism and the diet-cancer connection: Rationale for assessing the ratio of urinary hydroxylated estrogen metabolites. *Altern Med Rev* 2002;7:112–129.
12. Auburn K, Abramson A, Bradlow HL, et al. Estrogen metabolism and laryngeal papillomatosis: A pilot study on dietary prevention. *Anticancer Res* 1998;18(6B):4569–4573.
13. Bell MC, Crowley-Nowick P, Bradlow HL. Placebo-controlled trial of indole-3-carbinol in the treatment of CIN. *Gynecol Oncol* 2000;78:123–129.
14. Zhu D. Dong quai. *Am J Chin Med* 1985;15:117–125.
15. Wuttke W, Jarry H, Christoffel V, et al. Chaste tree (*Vitex agnus-castus*)—pharmacology and clinical indications. *Phytomedicine* 2003;10:348–357.
16. Gerhard I, Patek A, Monga B, et al. Mastodynon® for female infertility: Randomized, placebo-controlled, clinical double-blind study [in German]. *Forsch Komplementärmed* 1998;5:272–278.
17. Ibrahim NA, Shalaby AS, Farag RS, et al. Gynecological efficacy and chemical investigation of *Vitex agnus-castus* L. fruits growing in Egypt. *Nat Prod Res* 2008;22:537–546.
18. Liske E, Hänggi W, Henneicke-von Zepelin HH, et al. Physiological investigation of a unique extract of black cohosh (*Cimicifugae racemosae rhizoma*): A 6-month clinical study demonstrates no systemic estrogenic effect. *J Women Health Gend Based Med* 2002;11:163–174.
19. Powell SL, Gödecke T, Nikolic D, et al. In vitro serotonergic activity of black cohosh and identification of N(omega)-methylserotonin as a potential active constituent. *J Agric Food Chem* 2008;56:11718–11726.
20. Yasui T, Irahara M, Aono T, et al. Studies on the combination treatment with clomiphene citrate and toki-shakuyaku-san. *Jpn J Fertil Steril* 1995;40:83–91.
21. Aizawa H, Niimura M. Serum androgen levels in women with acne vulgaris: The effect of shakuyaku-kanzo-to (SK). *Skin Res* 1996;38:37–41.
22. Tanaka T. Effects of herbal medicines on menopausal symptoms induced by gonadotropin-releasing hormone agonist therapy. *Clin Exp Obstet Gynecol* 2001;28:20–23.
23. Tsai HY, Lin YT, Tsai CH, Chen YF. Effects of paeoniflorin on the formalin-induced nociceptive behaviour in mice. *J Ethnopharmacol* 2001;75:267–271.
24. Kumada T, Kumada H, Yoshida M, et al. Effect of shakuyaku-kanzo-to (Tsumura TJ-68) on muscle cramps accompanying cirrhosis in a placebo-controlled double-blind parallel study. *J Clin Ther Med* 1999;15:499–523.
25. Fujiwara H, Urabe T, Ueda K, et al. Prevention of arthralgia and myalgia from paclitaxel and carboplatin combination chemotherapy with shakuyaku-kanzo-to [in Japanese]. *Gan To Kagaku Ryoho* 2000;27:1061–1064.

26. Moore M. Medicinal Plants of the Pacific West. Santa Fe: Red Crane Books, 1993.
27. Greenlee H, Atkinson C, Stanczyk FZ, Lampe JW. A pilot and feasibility study on the effects of naturopathic botanical and dietary interventions on sex steroid hormone metabolism in premenopausal women. *Cancer Epidemiol Biomarkers Prev* 2007;16:1601–1609.
28. Petcu P, Andronescu E, et al. Treatment of juvenile meno-metrorrhagia with *Alchemilla vulgaris* fluid extract [in Romanian]. *Clujul Med* 1979;52: 266-270.
29. Schumann E. Newer concepts of blood coagulation and control of hemorrhage. *Am J Ob Gyn* 1939;38:1002–1007.
30. Fan GD, Song J, White CM. A comparison of the hemostatic effects of notoginseng and yun nan bai yao to placebo control. *J Herbal Pharmacother* 2005;5:1–5.

31. Zava DT, Dollbaum CM, Blen M. Estrogen and progestin bioactivity of foods, herbs, and spices. *Proc Soc Exp Biol Med* 1998;217:369–378.

32. Araghiniknam M, Chung S, Nelson-White T, et al. Antioxidant activity of dioscorea and dehydroepiandrosterone (DHEA) in older humans. *Life Sci* 1996;59:PL147–PL157.

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