THE LIFE CYCLES OF WOMEN: RESTORING BALANCE

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What is the answer when you hit menopause, moving along well, always fairly thin, then all of a sudden through no change of diet you gain weight, in my case 12 pounds in 6 weeks. The tiredness I felt was like no other as the hormones unbalanced themselves. The natural remedies just stopped working.

You are too tired for your walks and you see this weight piling on, something you are not used to seeing in the first place. I am searching for remedies to pick me up, but the weight, it is cruel especially when I have always maintained a healthy weight and lifestyle.

Does this mean it is over for us when we hit this age?

—Anonymous menopausal woman, in a post on a healthcare provider's website

WOMEN: SENTINELS OF IMBALANCE

A woman's health is a barometer of her environment. It is modeled and shaped according to her evolution in the womb and the social, cultural, and ecological environment of her childhood. It is created out of her relationships, her joys and traumas. It is grounded in the quality of her nutrition and the purity of the water and air around her. At each stage of a woman's life cycle, because of her innate connection to birth, creativity, and the protection of the human race, a woman's health represents a sentinel of subtle and great disturbances in our culture and our environment.

For that we should be thankful. Women are the canaries in the coalmine, warning us of imminent danger, of disturbances no one else can see or feel. Unfortunately, these disturbances register in the anatomy, the biochemistry, and the souls of women. They create imbalances, which can be healed by shifts in belief, nutrition, and activity and supported by the fruits and plants of the earth, which have evolved in harmony with our own bodies, offering healing and balance.

The canaries are singing loudly enough. Why is there an epidemic of hormonal disturbances in women's life cycles? Why is there an increasing incidence of early menarche, hormonal dysfunction, eating disorders, premenstrual syndrome (PMS), endometriosis, fibroids, menstrual difficulties such as pain and heavy bleeding, infertility, breast cancer, and difficult transitions through menopause? None of these barometers of imbalance is essential to being a woman. They have evolved out of disturbed families, ecosystems, and relationships to food, as well as distorted cultural images of what it is to be a woman in our world. Why do 1 in 3 women in this country reach age 65 without a uterus,[1] when only 1 in 18 women in Italy[2] are subject to losing their reproductive organs? Is there some innate defect in women that makes them subject to these various ills? Or perhaps it is women's innate sensitivity and connection to the earth that allows them to be windows to greater disturbances in our social and ecological systems. Rather than appreciate women as barometers of deeper disturbances in our culture and view these disturbances as an opportunity to change our culture and environment and to support wellness, we have pathologized the clues presented by women's hormonal and psychological maladies.

The history of women's health in this century (and throughout the ages) illustrates how we, as healthcare professionals, blame women and medicalize their complaints rather than looking inward at the ways our culture and our environment create imbalance and illness. We treat the canary, keeping it in the coalmine, supporting it with oxygen and medication, hoping it survives, while ignoring the poison gases all around.

MEDICALIZATION OF WOMEN'S HEALTH

Increasing numbers of young girls and women suffer from the vicissitudes of a toxic food environment filled with sugar and fats that promote obesity, increases in circulating estrogens, and early puberty.[3] Our industrial environment, filled with xenotoxic estrogens, disturbs normal hormonal cycles and stimulates premature development.[4] Early puberty is now seen in 8-year-old girls.[3,5] Teenagers experience increasingly irregular cycles, dysmenorrhea, amenorrhea, and premenstrual syndrome.[6] Physicians prescribe oral contraceptives to "regulate" patients' cycles rather than addressing lifestyle and environmental etiologies of altered function.

The psychological and behavioral manifestations of hormonal and neuro-regulatory imbalances observed in women have been labeled and treated with medication throughout the ages, but more so in the last half century than ever before. The word *hysteria* finds it root in *hustera*, the Greek word for uterus. From the end of antiquity to the Middle Ages and the Inquisition, women's hysteria was considered supernatural or a manifestation of demonical possession or witchcraft. "Hysterics" often were burned at the stake. Now they are medicated.

Mood disorders are epidemic, with depression affecting 20% of women—or twice as many women as men.[7] Depression and anxiety are accepted as "normal." The top-selling medication in the 1960s was Valium (diazepam), and it was used liberally to assuage women's hysteria until it was found to be addictive.[8] Now selective serotonin reuptake inhibitors (SSRIs), a class of antidepressants, lead the drug pack, used not only for anxiety and depression but increasingly for "off-label" indications for women's health complaints ranging from PMS to hot flashes.[9]

PMS affects between 60% and 75% of US women.[10] Is there a mutant gene damning women to inevitable suffering? The solution is a marketing slight of hand. Create a new disease—"premenstrual dysphoric disorder"(PMDD)—and repackage an anti-depressant as the solution. As the patent on Prozac expires, it becomes Sarafem (fluoxetine hydrochloride, Warner Chilcott). Good for revenue, bad for women.

Childbirth, a normal and natural function of human existence, has become a medical procedure. In the 1950s and 1960s, pregnant women were encouraged to take diethylstilbestrol (DES) not only to prevent miscarriages, but to ensure "healthy pregnancies," and this led to increases in reproductive deformities and cancer in offspring and mothers.[11] Electronic fetal monitoring was adopted as a standard without validation, only to be found to lead to more birth complications and increased rates of Caesarean section.[12]

Infertility is epidemic and "managed" by reproductive endocrinologists through invasive procedures and in vitro fertilization, often without looking at the causes of reproduction dysfunction, which can include insulin resistance, autoimmunity, gut dysfunction, nutritional deficiencies, and environmental toxins.

The hormonal shifts of peri-menopause are now widely treated with oral contraceptives in the absence of adequate long-term safety data and despite the evidence of increased cardiovascular and cancer risks and the promotion of inflammation from hormonal therapy. It is another uncontrolled experiment, reminiscent of hormone replacement for menopause.

For 50 years, hormone replacement therapy was thought to be the fountain of youth that would keep women "feminine forever." Robert Wilson, MD, sponsored by Wyeth Ayerst, the manufacturers of Premarin, wrote a tome with that title (*Feminine Forever*, M Brown & Co, New York), which spurred unchecked enthusiasm until it was found that unopposed estrogen increased the incidence of uterine cancer 8-fold.[13]

The next cycle of enthusiasm for hormone replacement therapy came with the discovery that progestins mitigated that risk. This opened the door to the misapplication of data from the nurse's health study despite warnings from the authors of the study to avoid applying epidemiological evidence without first confirming it with experimental data.[14] That led to another resurgence of hormone use, peaking at over 40 million prescriptions in the heyday of the use of Premarin to prevent aging, heart disease, and Alzheimer's. Physicians widely parroted the enthusiasm of pharmaceutical reps without carefully assessing that data, which were replete with clues of harm.

Until the data from the Women's Health Initiative clearly demonstrated risk in 2002,[15] for more than 3 decades women were the subject of widespread experimentation founded on absent or weak evidence, creating unnecessary harm through increases in uterine, breast, and ovarian cancer, as well as heart attacks, strokes, and thromboembolism.

Now a new wave of enthusiasm is emerging for bio-identical hormones, which may be a better iteration of hormone replacement, but certainly not without risk, and which have been inadequately investigated to date for widespread application as anything but a temporary solution to intractable (and often transient) menopausal symptoms.

Is breast cancer an inevitable consequence of being born a woman? One in 8 women will be diagnosed with breast cancer in their lifetime. Perhaps rather than attempting to discover better detection methods or investigating newer surgical, chemotherapeutic, or radiotherapeutic techniques to treat it, we might ask why breast cancer prevalence and incidence have risen so dramatically in the last 50 years. Might it have to do with diet, lifestyle, and other environmental triggers interacting with our ancient genome, which is ill-equipped to deal with these modern insults?

REDEFINING OUR APPROACH TO WOMEN'S HEALTH

If women's health (or lack thereof) is a sentinel for imbalance in our lifestyle and environment, then perhaps that is a better starting point of inquiry into etiology that might provide a better guide for therapy than accepting as normal hormonal imbalances that require medication. Let us examine the role of diet (one of many factors, including exercise, stress, and environmental toxins, that influence hormonal function).

The influence of diet on hormone balance is vast and includes the differential effects of specific types of carbohydrates and fats, amino acids, and fiber and gut flora, as well as micronutrient effects on hormone synthesis, receptor function, metabolism, and detoxification. Anti-nutrients—harmful foods and non-nutritive substances in our food supply, including xenobiotics, exogenous hormones, and antibiotics—have powerful effects on hormone function. The most striking and useful clinical examples of dietary influences on hormonal balance will be reviewed in reference to sex hormones; however, diet and environment also greatly influence the hypothalamic-pituitary-adrenal axis and thyroid function. Diet can create imbalance or restore optimal function. Emerging diagnostic and therapeutic strategies can help clinicians navigate a paradigm that regards symptoms as adaptive or maladaptive clues of functional imbalance.

The Master Hormones

Hormonal signals act as both a symphony of endocrine signals governing diverse functions throughout the organism and as a hierarchical system in which dysfunction in the "governing" hormones leads to dysfunction throughout the system. The key governing hormones regulated by dietary inputs, which interact in an immediate and direct feedback system, are insulin, cortisol, and adrenalin. These, in turn, influence sex steroid hormones, thyroid hormones, growth hormones, and others.

The Sex Hormones

Sex hormones are influenced by diet in many ways. A prime example is estrogen and conditions related to estrogen/progesterone imbalance, including hormonal cancers, endometriosis, PMS, uterine fibroid tumors, fibrocystic breasts, cervical dysplasia, and infertility. Hormonal balance can be improved through nutritional and lifestyle interventions such as increasing dietary fiber, reducing fat, increasing one's intake of phytoestrogens, losing weight, and exercising. Certain nutrients and phytonutrients may enhance specific pathways of estrogen metabolism and detoxification (eg, isoflavones, essential fatty acids, indole-3-carbinol, B vitamins, magnesium, limonene, antioxidants). Though diet can lead to suppression of hormones in diseases like anorexia nervosa, the focus here will be on modulation of excess endogenous and exogenous estrogens through diet. Following is a summary of symptoms, risk factors, and therapeutic strategies for hormonal imbalance in women.

SEX HORMONES AND DIET: THERAPEUTIC STRATEGIES

There are many risk factors for and symptoms of hormone imbalance in women; these are outlined in Table 1. Potential causes of hormone imbalance are listed in Table 2. Nutritional approaches to improving sex hormone balance and supplements that help regulate hormonal metabolism are presented in Tables 3 and 4, respectively. Other recommendations for creating hormonal balance include regular exercise and stress management.

Causes of Hormone Imbalance

The interventions listed in this article affect many of the underlying physiological causes for hormonal imbalance, primarily the following.

- Diet can modulate estrogen synthesis, receptor activity, and detoxification and metabolism of estrogens. Briefly, estrogen is detoxified and metabolized predominantly through phase I (hydroxylation) and phase II (methylation and glucuronidation) detoxification. Hydroxylation produces either 2-hydroxyestrone (2-OH), 4-OH, or 16α-OH. 2-OH is a weak estrogen that may have anti-cancer properties. 16α-OH and 4-OH metabolites have estrogenic and carcinogenic properties. Methylation renders the metabolites more inert, and glucuronidation is the major excretory pathway. *All of these detoxification pathways are influenced by diet.*
- Dietary causes of hormonal imbalance include excess energy intake and obesity, leading to increased conversion of androgens to estrogen by aromatase.
- Hyperinsulinemia increases ovarian testosterone production and reduces sex hormone–binding globulin (SHBG), increasing free estrogen levels.
- High-fat diets promote C-16α hydroxylation over C-2 hydroxylation.
- Antioxidant-deficient diets may promote the oxidation of catechol estrogens (2-OH and 4-OH), yielding toxic reactive molecules called quinones.

TABLE 1 Hormone Imbalance in Women: Common Symptoms and Risk Factors

- Premenstrual syndrome
  - Monthly weight fluctuation
  - Edema, swelling, puffiness, or water retention
  - Feeling bloated
  - Headaches
  - Mood swings
  - Tender, enlarged breasts
  - Depression
  - Feeling unable to cope with ordinary demands
  - Backache, joint or muscle pain
  - Premenstrual food cravings (sugar or salt)
- Irregular cycles, heavy bleeding, light bleeding
- Infertility
- Use of birth control pill or other hormones
- Premenstrual migraines
- Breast cysts or lumps or fibrocystic breasts
- Family history of breast, ovarian, or uterine cancer
- Uterine fibroids
- Peri-menopausal or menopausal symptoms
  - Hot flashes
  - Mood swings or depression or anxiety
  - Night sweats
  - Insomnia
  - Loss of libido or sex drive
  - Dry skin, hair, and vagina
  - Joint pains
  - Palpitations
  - Trouble with memory or concentration
  - Bloating or weight gain around the middle
  - Facial hair
- Exposure to pesticides (food, water, air)

TABLE 2 Causes of Hormonal Imbalance

- Saturated and trans fatty acids
- Refined sugars and carbohydrates
- Xenobiotics, antibiotics, and hormones in food from commercially raised livestock (meat and dairy)
- Alcohol consumption (should be no more than 3 glasses a week)
- Processed foods and artificial sweeteners
- Dairy products

- Alcohol interferes with estrogen detoxification, increasing estradiol levels and the risk of breast cancer.[16]
- Environmental toxins are a significant source of exogenous estrogen exposure (xenoestrogens), many of which find their way into our food supply through pesticides and herbicides. Hormones used in commercial livestock and milk production also increase exposure to environmental estrogens.[17] Even antibiotics found in the food supply may be associated with increased breast cancer risk by altering gut flora involved in enterohepatic circulation of estrogens.[18]

TABLE 3 Nutritional Approaches to Improving Sex Hormone Balance

- Increase phytoestrogens consumption (soy, flax, 1-2 cups of cruciferous vegetables daily)
- Eat organic foods to minimize intake of xenoestrogens, hormone, and antibiotics
- Use filtered water (reverse osmosis) to eliminate xenoestrogens
- Use garlic for sulfur and to help with detoxification
- Consume a high-fiber diet (25-50 g a day, including legumes, whole grains, vegetables, nuts and seeds, fruit)
- Increase intake of omega-3 fatty acids (small, non-predatory cold-water fish: wild salmon, sardines, herring) and flax seeds
- Balance glucose metabolism through a low glycemic load, high phytonutrient index

TABLE 4 Supplements That Help Regulate Hormonal Metabolism

- Multivitamin and mineral
- Calcium, magnesium, and vitamin D
- Methylation co-factors (folate, B_6, B_{12})
- Omega-3 fatty acids
- Probiotics
- Indole-3-carbinol
- Antioxidants and phytonutrients (vitamin E, resveratrol, curcumin, n-actetyl-cysteine, green tea, selenium)

Testing for Hormone Imbalance

In terms of basic assessment approaches, the following are useful laboratory tests.

- 24-hour urine for estrogen metabolism
- 2-OH:16α-OH estrogen ratios
- FSH, LH, estradiol, progesterone, free testosterone, SHBG
- Homocysteine
- TSH, free T4, free T3, thyroid peroxidase antibodies
- Single nucleotide polymorphisms (SNPs) involved in hormone metabolism and detoxification, such as 5,10-methylenetetrahydrofolate reductase (MTHFR), CYP 1B1, catechol-O-methyl transferase (COMT) and glutathione S-transferase M1 (GSTM1)

Correcting Imbalance

Fortunately, diet can promote normalization of estrogen metabolism through diverse mechanisms.

- Dietary fiber and lignins (found in flax seeds, the bran layer of grains, beans, and seeds) reduce the enterohepatic circulation of estrogen by binding unconjugated estrogens and enhancing fecal excretion. They also increase serum levels of SHBG and improve the balance of intestinal flora, reducing intestinal β glucuronidase and deconjugation of estrogens.
- Reducing glycemic load can diminish adverse effects on sex hormones (estrogen, testosterone, SHBG).
- Essential fatty acids increase C-2 hydroxylation and decrease C-16α hydroxylation in breast cancer cells.
- Probiotics found in food (yogurt and fermented products) and in supplements may help normalize estrogen metabolism by reducing β glucuronidase-producing bacteria and promoting the formation of anti-carcinogenic enterolactones from lignins.
- Indole-3-carbinol, a compound found in cruciferous vegetables such as broccoli, Brussels sprouts, and cabbage, increases the protective 2-OH estrogens. Clinically, it may help in the prevention and treatment of estrogen-related cancers and has been shown to reverse cervical dysplasia.
- Phytonutrients, often mislabeled phytohormones, modulate hormonal response through multiple mechanisms, including competitive inhibition at the receptor sites, increasing plasma SHBG levels, decreasing aromatase activity, and shifting estrogen metabolism from the C-16α to the C-2 pathway. The main dietary sources are isoflavones from soy,* kudzu root, legumes, and clover, and lignans from flaxseeds, other seed oils, whole grains, legumes, and vegetables.
- Other beneficial phytonutrients include curcumin, which can increase hepatic glutathione, and glutathione-S-transferase, which facilitates the detoxification of quinones from the oxidation of catechol estrogens. Antioxidants in food and supplements also may help reduce the oxidation of catechol estrogens into quinones.
- Multiple plant compounds may inhibit or modulate NF-κB: soy isoflavones have been shown to have anti-tumor and health-promoting effects[19] that may be a function of their effects on NF-κB. NF-κB is a critical gene transcription factor, the activation of which induces the expression of interleukin-6 (IL-6). IL-6 is an inflammatory cytokine controlled in part by hormonal feedback mechanisms. Excess IL-6 production stimulates tumorigenesis (breast, prostate, colon, lung, and ovary) and accelerates aging in general.

Other dietary factors promote hormonal balance, including methylation cofactors, folate, pyridoxine, and cobalamin. Elevated intracellular levels of B_6 decrease gene transcription responses when estrogen binds to the estrogen receptor. Methylation cofactors are also critical in DNA synthesis, repair, and methylation.

PREMENSTRUAL SYNDROME: A MODERN PLAGUE ON WOMEN

A Patient's Story

"Seventy-five percent of women are found to have a mutant gene that threatens their relationships, work, and well-being." This is a rhetorical statement that we all unconsciously accept. It

*Basic science and clinical data on soy are varied, yet both epidemiological and experimental data in animals and humans, with historically consumed levels of isoflavones, demonstrate protective effects through modification of estrogen receptor activity, increases in SHBG, and lower rates of hormone-dependent cancers. Soy isoflavones may help to restore balance by integrating hormonal ligand activities and by interfering with signaling cascades.

is the implication that women are defective, flawed, broken, and destined to suffer throughout their reproductive life from the curse of PMS. Is this just a "normal" part of being a woman, the product of some defective or mutant gene?

I do not believe so. The suffering related to menstrual cycles is unnecessary and not related to bad luck, but to bad habits, environmental toxins, and stress. This condition of mood swings, irritability, depression, anxiety, fluid retention, bloating, breast tenderness, sugar cravings, headaches, and sleep disturbances affects 75% of women. In 20% of women it is so severe they require medical treatment, and about 8% have extreme symptoms that have been given a new name: PMDD. Conventional treatments range from the anti-inflammatories, such as ibuprofen and naproxen, to oral contraceptives, to antidepressants (SSRIs, such as fluoxetine).

More aggressive pharmaceutical treatments include danazol, a drug that suppresses ovulation and causes increased facial hair, acne, and a masculinization of the voice. And newer, expensive medications such as gonadatropin-releasing hormone (GnRH) analogs change brain chemistry to turn off the ovaries' production of estrogen and progesterone. Side effects include osteoporosis. Diuretics such as spironolactone are used for fluid retention, and bromocriptine can be used to stop prolactin production and reduce breast tenderness.

Do women really need all that to feel well or function normally?

Pharma has created a new disease, PMDD, which is now classified in the psychiatric reference book DMSV-IV (*Diagnostic and Statistical Manual of Mental Disorders,* 4th ed). A new drug indication was created for a drug whose patent was running out—namely, fluoxetine, or Prozac. Now it is called Sarafem and used for this dreaded new condition called PMDD. This is another slight of hand by the pharma industry, which is skilled at producing new diseases to sell its drugs.

This plethora of pharmaceuticals is based on the assumption that these symptoms are an inevitable part of being a woman and require "medical (ie, pharmaceutical) intervention" to correct. We must challenge the assumption that 75% of women have a design flaw that requires medical treatment for them to live a normal life.

A patient who has been diagnosed with severe PMDD recently came to me for treatment. She was barely able to work or function in her family, suffering 3 weeks out of the month. She was 37 years old (many women feel worsening PMS symptoms as they enter their later reproductive years). She was deeply depressed, fatigued, and anxious, and experienced severe food and sugar cravings, leading to overeating and weight gain.

She had joint pain, breast tenderness, heavy bleeding, hot flashes, dry skin, acne, hair loss, trouble with memory, poor sleep, and no sex drive. She didn't drink alcohol but consumed 3-4 cups of coffee a day. She started the day with a bagel and cream cheese, had a cafeteria lunch, chocolates in the afternoon, and a healthy dinner, and then binged on ice cream, chips, and cheerios. She also ate a lot of dairy and complained of gas and bloating. Unfortunately, this is a common story.

Sugar, caffeine, alcohol, stress, and lack of exercise all contribute to worsening PMS. Dairy consumption can worsen hormonal imbalances because of endogenous hormones and xenoestrogens in milk.

This patient's "prescription" was a change in diet: elimination of dairy, gluten, sugar, and caffeine, and the consumption of a whole foods, plant-based diet. Nutrients, herbs, and exercise were recommended as well. Her symptoms resolved after 1 cycle, and she lost weight and had increased energy. Her mood stabilized, and her acne and dry skin resolved.

The approach I take to this problem is part of the overall approach of systems or functional medicine. Define the imbalance (in this case, severe hormonal imbalances) and address the causes first (namely diet/lifestyle here), and then help the body repair and regain balance. Then the body's natural intelligence takes care of the rest.

What is the underlying problem with PMS? Hormonal imbalance leads to the symptoms. Estrogen levels increase, and progesterone levels decrease either relatively or absolutely. Many factors promote these imbalances in hormones, including a high-sugar, refined-carbohydrate diet, caffeine, stress, dairy, hormones in dairy products and meat, and estrogen-like toxins from pesticides and pollution. Exercise helps keep hormones in balance. Alcohol impairs hepatic hormone detoxification, leading to high serum estrogen levels. Constipation and imbalances in the gut flora increase enterohepatic reabsorption of estrogen from the gut into circulation.

Hormone balance can be achieved through diet and lifestyle changes and the use of supplements and herbs. Improving diet is the first step: eliminating refined flours and sugars, processed foods, caffeine, and alcohol. Eating protein (eg, protein shake, eggs, nut butters) for breakfast and eating evenly throughout the day helps to correct insulin resistance and balance glucose metabolism. A trial of a food-sensitivity elimination diet (especially dairy and gluten) often is helpful.

Gut dysfunction can be corrected by increasing fiber through increased intake of vegetables, fruit, nuts, seeds, beans, and whole grains. Two tablespoons of ground flax seeds can correct constipation and help to balance hormones. Omega-3 fats from wild fish like sardines, herrings, and wild salmon, omega-3 fats, eggs, or walnuts can help with eicosinoid balance. Use of organic food and especially animal products can help prevent ingestion of environmental estrogens from pesticides.

Certain nutrients have been shown to help with PMS symptoms by improving metabolic function and hormone metabolism. These may be helpful.

- Magnesium citrate or glycinate, 400-600 mg a day
- Calcium citrate, 600 mg a day
- Vitamin B_6, 50-100 mg a day (along with adequate folate, 800 μg and B_{12}, 1000 μg)
- Evening primrose oil, 500 mg 2 twice a day
- Omega-3 fats EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid), 1000 mg 1-2 times a day
- Taurine, 500 mg a day, to help liver detoxification

Herbs and phytonutrients also can be helpful. Following is a list of the best studied and most effective.

- Chasteberry fruit extract (*Vitex agnus-castus*) can help balance the hormones released by the pituitary gland that control your overall hormone function. The usual dose is 100 mg twice a day of a 10:1 extract.
- Wild yam (*Dioscorea villosa*) and cramp bark (*Viburum opulus*) can help regulate cycles and relieve menstrual cramps. Dandelion root can help with liver detoxification and work as a diuretic.
- Isoflavones from soy, red clover, and kudzu root are all helpful in improving estrogen detoxification by improving the activity of specific detoxification enzymes and can be taken as supplements or in the diet.
- Flax seeds contain lignans that help balance hormone metabolism and block the negative effects of excess estrogens.

Often herbs and phytonutrients come in traditional Chinese herbal formulas. One of the most effective is Xiao Yao San, or Rambling Powder. It contains

- Bupleurum root (*Bupleurum chinense)*,
- Chinese peony root (*Paeonia lactiflora*),
- Dong quai root (*Angelica sinensis*),
- Bai-zhu atractylodes root (*Atractylodes macrocephala*),
- Poria sclerotium (*Poria cocos*),
- Ginger rhizomes (*Zingiber officinale*),
- Chinese licorice root (*Glycyrrhiza uralensis*), and
- Chinese mint leaf (*Mentha haplocalyx*).

Replacing healthy bacteria in the gut also helps normalize estrogen and hormone metabolism. Taking 5-10 billion live organisms daily in a probiotic is ideal. For intractable cases, topical natural bio-identical progesterone in the luteal phase of the menstrual cycle can be helpful. The usual dose is one half teaspoon (20-40 mg) applied at night to thin skin areas for the last 2 weeks of the menstrual cycle.

Exercise is also important, as it helps regulate hormonal function. Use of hot baths at night, massage, yoga, deep breathing, or meditation can help balance hormones via effects on the HPA axis.

Women are not defective, but rather wonderfully designed and sensitive beings that can thrive and be healthy with attention to a few natural laws of biology. Medications are not needed for women to be healthy.

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