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**Hosner HC, et al. Hormone-Balancing Effect of Maca-GO. International Journal of Biomedical Science 2006; 2(4):275-304

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by **TORI HUDSON, ND**

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Introduction

By the year 2015, nearly 50 percent of the women in the United States will be menopausal. Between 1990 and 2020, the menopausal population in the U.S. will double. This dramatic increase in the number of menopausal women is changing the world we live in, changing the way healthcare providers work with women, and changing medicine itself.

Additionally, the proportion of women in the United States experiencing troublesome symptoms during this stage of life continues to be significant. Current statistics estimate that more than 75 percent of women experience menopausal symptoms before or after menopause.

Although we are not completely sure what triggers perimenopause or postmenopause, we do know that the decline in function of the hypothalamus, pituitary, adrenal, thyroid, and ovary glands is at the root. The likely trigger is the same as most other health issues—age, genetics, diet, lifestyle, and the environment. While there isn't much we can do about getting older or our genes once we are born, diet, lifestyle, and the environment are very much in our control. They affect every aspect of our health. The fact that teens and young adults typically don't have many health issues is evidence that when the body is yet to be affected by poor nutrition, lifestyle habits, and environmental toxins, it can protect itself from illness more easily and even reverse most health issues.

Perimenopause and menopause are part of the normal aging process. Multiple factors determine the age of onset and the nature and intensity of symptoms. These factors influence the affected glands to a greater or lesser degree in each of us. Because these glands produce hormones, recent research has focused on addressing hormonal changes in treating the symptoms of perimenopause and postmenopause. While the basis for this approach is logical, it has spurred considerable debate over the past 10 years. Hormone replacement therapy (HRT) for menopausal women has been in use for several decades, primarily because doctors have believed that the only way to reverse hormone loss was to introduce them back into the body.

One of the most complicated and difficult healthcare decisions menopausal women face today is whether to use HRT. Women look to their healthcare providers for definitive answers to their questions. Practitioners are faced with an even greater challenge—evaluating the benefits and risks of HRT, as well as alternatives, for their individual patients.

Scientific research regarding the benefits and risks of HRT is complex, confusing, inconsistent, and continually changing. HRT poses some risks, but in most women this risk is slight for breast cancer, blood clots, and

No two women's menopause transitions are alike, and many women have other health issues intertwined with those related to menopause.



stroke. For women who start HRT 10 or more years after menopause, the risk of heart disease might be slightly increased. More recent research indicates that the more bioidentical forms of hormones now used and the way they are administered through creams or patches decrease risks. However women with ER+ breast cancer genes, family histories of breast cancer, or current health issues can have a higher risk and need to be assessed on an annual basis to determine whether taking HRT is right for them.

We know much about the benefits derived from the body's own hormones, and HRT has many of the same benefits. The most definitive is the relief of numerous menopausal symptoms, especially hot flashes and night sweats. But other benefits exist as well, including slowing bone loss and reducing fractures, and possibly reducing the risk of heart disease and dementia, if the hormones are started within the first 10 years of menopause. Women and their healthcare practitioners are faced with trying to make the best decision possible in the face of what we know, what we don't know, and what we're still uncertain about.

However, new research shows there are a number of other options for women to support their own hormone production, as well as many complementary and alternative therapies for specific menopause symptoms. Although the science underlying natural non-hormonal therapies for menopause symptoms still needs further investigation, decades (and in many cases centuries) of safe historical use and a growing body of research—including randomized, controlled clinical trials—provide compelling evidence of effectiveness and safety. Thus, natural approaches to menopause provide an appealing option for millions of menopausal women.

No two women's menopause transitions are alike, and many women have other health issues intertwined with those related to menopause. Because of this, women, educators, and healthcare practitioners are experiencing the challenge of evaluating and managing each woman individually to achieve optimal health.

What is Going on?

Many women begin to experience an array of physical, mental, and emotional symptoms long before they meet the definition of menopause. The changes that occur around age 40 to 51 are part of a transition period called "perimenopause" that can last for several years. A narrower definition is the transition from regular to irregular menses. On average, the onset of perimenopause occurs around age 47 and lasts four to seven years.

The symptoms of fluctuating hormones, and eventually lowered hormone levels, are varied and unpredictable, and they often go unrecognized as a sign of perimenopause. Due to lack of menopause expertise

on the part of many healthcare practitioners, lack of precision in blood testing, and women's poor understanding of menopause, many women become dissatisfied with the healthcare they receive.

Menopause is technically defined as 12 consecutive months without a spontaneous menstrual period. The average age of menopause is age 51. This can occur with or without symptoms. Perimenopause, which by strict definition is a shortening of the menstrual cycle, can also occur with or without symptoms. When perimenopausal symptoms do occur—and approximately 75 percent of women have symptoms within the first four years—they can include:

- irregularity frequency and flow of menses;
- daytime hot flashes and/or night sweats;
- vaginal dryness and thinning;
- skin changes, including dryness, aging, and wrinkles;
- fatigue;
- decreased libido and a decrease in arousal and orgasmic response;
- emotional changes, including depression, irritability, anxiety, and the feeling of being overwhelmed;
- changes in memory and cognition;
- sleep disturbances;
- hair loss on the head and hair growth and acne on the face;
- heart palpitations;
- nausea;
- headaches;
- urinary tract infections and urinary incontinence; and
- lesser known symptoms, including frozen shoulder syndrome, dry eyes, gum disease, changes to the voice, and joint pain.

These symptoms initially will vary from subtle and infrequent to overt and daily. Symptoms can be mild, moderate, or severe. Some women will have no significant perimenopausal or menopausal symptoms except changes in the menstrual cycle. Others will have symptoms that are progressive and problematic for many years. Fortunately, only 10 to 25 percent of postmenopausal women will continue to have significant symptoms beyond those first four years of symptoms.

Menstrual Changes

As perimenopause occurs, the amount of estrogen the ovaries produce can, at times, spike. At other times, the ovaries may not produce enough

estrogen. One of the earliest signs that perimenopause is occurring and that menopause is approaching is a change in the menstrual period. Many changes can occur—missed periods, periods that are closer together, a change in the amount of flow (becoming lighter or heavier), and bleeding that may be shorter or longer than what you are used to. It is important that you be aware of bleeding that is not normal for you. The following changes should be reported to your doctor.

- A change in your monthly cycle
- Heavy bleeding
- Bleeding that lasts longer than normal
- Bleeding more often than every three weeks
- Bleeding after sex
- Bleeding between periods

Eventually, the ovaries don't make enough estrogen to thicken the lining of the uterus. When this occurs, menstrual periods will stop. After menopause, small amounts of estrogen are still made by the ovaries, as well as the adrenal glands and body fat. Very small amounts of progesterone are also still produced.

Menopause can also be induced by surgical removal of the ovaries and by medications such as chemotherapy or drugs meant to shut down ovarian estrogen production. These circumstances often trigger sudden onset of severe menopause symptoms.

Hysterectomy (surgical removal of the uterus) also ends menstrual periods, but the ovaries continue to produce estrogen. This can make it difficult to recognize the start of perimenopause, because changes in bleeding patterns are not present.

Perimenopause and early menopause is a time of instability and unpredictability. Many things are changing aside from estrogen and progesterone levels. Women's serum hormone levels are changing, but these hormonal levels are also changing in relationship to each other. Women are also aging, which contributes to weight gain, changes in metabolic rate, and adjustments to outlook on life. Factors such as age, stress, and body weight begin to play a larger role in hormone balance.

Relief of uncomfortable perimenopausal and menopausal symptoms is of chief concern to women on a day-to-day basis because of their quality of life impacts. But bigger issues of aging also relate to menopause and hormonal changes. These include bone loss and the potential for osteoporosis, as well as heart disease, including abnormal cholesterol levels, heart damage, and heart attack.

Chapter One

Diet/Lifestyle

Dietary advice needs to be individualized to account for age, body weight, food allergies, digestive health, past and current medical conditions, family history, risk factors for chronic diseases, and a variety of family and economic influences. Nonetheless, certain basic principles hold true for most of us. These have nothing to do with reducing a particular menopause symptom, but rather are important for healthy aging and disease prevention.

- **Whole grains.** Eat grains in their complex carbohydrate form versus their simple carbohydrate form. Examples include brown rice, whole wheat bread, and brown rice pasta.
- **Nuts and seeds.** Add variety with almonds, walnuts, filberts, and cashews, and the seeds of sunflower, sesame, pumpkin, and flax.
- **Fruits and vegetables.** Try to eat at least five to nine servings of fruits and vegetables per day.
- **Good fats.** Good fats help prevent heart disease, diabetes, and osteoarthritis; bad fats help cause these same conditions. Opt for olive oil, nuts and seeds, nut butters (without sugar and partially hydrogenated fats), avocado, and fish.
- **Legumes.** These include dried beans such as pinto, red, kidney, black, and soy beans, as well as lentils.
- **Soy foods.** Increase your consumption of tofu, edamame, soy milk, soy nuts, and soy yogurt.
- **Water.** Drink plenty of pure water—at least six to eight glasses per day.
- **Alcohol in moderation.** Limit yourself to seven or fewer glasses of wine or beer per week (to reduce your risk of breast cancer, in particular).
- **Dairy.** Eat one serving of low-fat, organic dairy daily for its calcium content.
- **Meat.** Eat less poultry and red meat. When you do eat meat, choose free-range or organic poultry, and beef or buffalo meat from animals raised on grass versus grains. These grass-fed animals are lower in total fat and higher in good fats (omega 3 fatty acids).



It's also smart to avoid overeating. More than half of Americans are overweight, and excess weight can affect our estrogen levels. Here are a few tips for weight management:

- Take smaller servings. Serve up half the portion size you are used to and you'll probably end up eating an appropriate amount.
- Consider smaller, more frequent meals—up to five or six per day that total 250 to 300 calories each. This will help keep you satisfied longer and curb those sugar and carbohydrate cravings.
- Choose brightly colored foods, especially red, yellow, orange, and green vegetables and fruits. The brown and beige foods tend to contain more calories and fats.
- Start thinking about starch and protein as side dishes, not the main dish. Focus on vegetables with small amounts of lean protein and whole grains on the side.

Exercise

Exercise is one of the most powerful lifestyle tools available. You probably know by now that regular exercise is needed to increase metabolic rate, burn calories, increase muscle mass, improve fitness, and manage weight. Perhaps less known is that exercise is instrumental in reducing the risk of heart disease, osteoporosis, diabetes, breast cancer, osteoarthritis, and depression.

Consult your physician if you are not currently on an exercise program. This is especially important if you have health problems or are over the age of 40. Keys to successful exercise programs are selecting an activity you enjoy, making it fun, doing it for at least 30 minutes five times weekly, staying motivated, and getting some instruction on maximum heart rate and weight training. And remember, exercise means at least a little sweat! However, walking at a moderate pace should be adequate for most women.

It also turns out that individuals who exercise in the morning are more successful with staying on their exercise program. For weight loss, most menopausal women will need to exercise 60 minutes per day in order to burn 300 calories. Doing this seven days a week will lead to weight loss of at least a one pound per week in most women.

Chapter Two

Nutritional/Herbal Supplementation

The use of vitamins, minerals, and other food substances to support health and prevent or treat illness is an important aspect of a natural approach to healthcare. Vitamins and minerals are essential components in enzyme systems, cellular function, and tissue and organ function. Many nutrients also exert pharmacologic effects. When used in therapeutic doses, nutrients can stimulate specific physiologic changes in the body by inducing or inhibiting the manufacture of enzymes. The appropriate use of nutritional supplements is an important tool in maintaining and achieving health.

The options that are available to address menopausal symptoms and to reduce the risks of the diseases associated with menopause and aging are endless. But it is important to understand that they don't help everyone or in all situations. Healthcare practitioners trained in clinical nutrition, like naturopathic physicians, are the most well educated in this area.

Individual nutrients can be used for specific perimenopausal symptoms. Supplements such as pycnogenol, fish oils, vitamin E, bioflavonoids, and vitamin C have been shown to have some effectiveness in treating hot flashes. Melatonin, L-tryptophan and 5-hydroxytryptophan are the most effective nutrients for treating insomnia. Vitamins B₆, folic acid, B₁₂, and SAMe can increase serotonin levels to address mild to moderate depression. Gamma-aminobutyric acid (GABA) and L-theanine are very effective for mild to moderate anxiety.

The prevention and treatment of disease is more complex. Studies show that glucosamine sulfate, borage oil, fish oil, and chondroitin sulfate produce good results for joint pain and osteoarthritis. Nicotinic acid is well studied to treat elevated cholesterol and triglyceride levels. Calcium and vitamin D help maintain bone health and can be an important part of an osteoporosis prevention strategy that includes other nutrients like vitamin K, boron, silica, strontium, magnesium, and zinc.

Numerous botanicals have also been studied for menopausal symptoms, including black cohosh, red clover, kava, soy, hops, Siberian rhubarb, St. John's wort, ginseng, and maca. Individual symptoms call for specific

botanicals. Many of these have been scientifically studied, including valerian for insomnia, St. John's wort for depression, kava for anxiety, rhodiola for memory loss and fatigue, and ginseng for fatigue. Healthcare practitioners trained in botanical medicine are the most well qualified to help you in this area. Licensed naturopathic doctors are the only physicians trained extensively in medical school in the area of botanical medicine.

Let's take a closer look at some of the herbs that are used in clinical practice.

Black Cohosh (*Cimicifuga racemosa*)

Used for: Hot flashes, night sweats, depression

Summary of the science: During the last 25 years, black cohosh has emerged as one of the most studied herbal alternatives to HRT for menopausal symptoms. Since the 1980s, numerous studies—including several randomized controlled trials—have investigated the use of various black cohosh products, particularly isopropanolic or ethanolic extracts that are standardized to triterpene glycosides. The majority of the studies on the isopropanolic standardized extracts have specifically used the product Remifemin. Results are largely positive and encouraging, but there are mixed findings. Some studies show benefit while others do not. In one large retrospective, open, multicenter study, data on 629 women with menopausal complaints were treated by 131 general practitioners. Clear improvement in menopausal ailments was seen in approximately 80 percent of the women within just four weeks of beginning therapy with Remifemin. After six to eight weeks of taking 40 drops of the extract twice daily, complete disappearance of symptoms occurred in approximately 50 percent of the participants.

However, not all studies have shown similar results. In a double-blind study of black cohosh, 62 postmenopausal women were given either a daily dose of 40 mg of black cohosh or two capsules of 0.3 mg conjugated estrogens. The black cohosh demonstrated beneficial effects on bone metabolism by stimulating bone-building cells and had a weak effect on the maturation of vaginal cells. In another double-blind, randomized, crossover clinical trial, 132 patients were treated with 20 mg of Remifemin or a placebo three times daily for two 4-week periods. Yet in this study, the black cohosh was no better than placebo on hot flush frequency or severity.

There have been over 100 studies published on black cohosh and menopause symptoms. Despite some studies that concluded black cohosh has no benefit, the collective findings suggest that it is most effective for hot flashes (day or nighttime), mood swings, sleep disorders, bone health, and body aches.

Dosage: 40–80 mg of a standardized extract

Chasteberry (*Vitex agnus-castus*)

Used for: Irregular bleeding

Summary of the science: While it appears that practitioners commonly recommend chasteberry for symptom relief during perimenopause and menopause, there is not any evidence that supports using chasteberry alone for any symptom other than irregular bleeding. The most recent menopause-related study using chasteberry was in combination with St. John's wort. In this double-blind randomized, placebo-controlled, 16-week trial of late perimenopausal or postmenopausal women reporting hot flashes and other menopause symptoms, the effectiveness of the herbal combination was not significantly different from that of placebo. However, in perimenopausal women with PMS symptoms, a daily dose of herbal products containing St. John's wort with chasteberry was able to reduce the severity of PMS symptoms, especially depression and food cravings.



One of the most common changes during the menopause transition is irregular bleeding. Whether frequent or infrequent, heavy or light, ultimately a change and cessation will occur. In the process, some women will experience significant bleeding problems because of menses that is either too frequent or too heavy. These problems are some of the most convincing indications for chasteberry. Chasteberry is believed to act on the hypothalamus-hypophysis axis. This mechanism of action increases the secretion of luteinizing hormone (LH), a hormone that triggers ovulation and the development of the corpus luteum, and, as a result, has an effect that favors progesterone. In perimenopausal women, this progesterone effect becomes useful in managing the perimenopausal dysfunctional uterine bleeding (DUB) associated with the anovulatory cycles (menstrual cycles in which no ovulation occurs) of perimenopause.

Dosage: No clear dose of chasteberry has been established. Anecdotal reports from practitioners note that taking 215–430 mg of chasteberry standardized to 0.5% agnuside and 0.6% aucubin continuously throughout the month can stabilize the chaotic bleeding changes occurring during this time.

Ginseng (*Panax ginseng*)

Used for: Energy

Summary of the science: *Panax ginseng*, also known as Asian, Korean red, or Chinese ginseng, is the most widely used ginseng. A randomized, multicenter, double-blind, parallel group study investigated the herb's effects on quality of life and physiological symptoms in 384 postmenopausal

women. The ginseng extract—two capsules, each containing 100 mg of a standardized extract of ginseng—showed slightly better overall effect than placebo. However, ginseng's effect on depression and well-being were significant. In another randomized, controlled trial, 12 postmenopausal women with common menopause symptoms and eight postmenopausal women without any symptoms, received 6 grams per day of oral Korean red ginseng for one month. Improvement in psychological tests in the women with symptoms (especially fatigue, insomnia, and depression) were seen in the Korean red ginseng group.



Historically, ginseng has been used as a tonic in cases of fatigue and debility, and for declining capacity for work and concentration. It helps reduce mental and physical fatigue by supporting the adrenal glands. This enhances the body's ability to adapt to various physical and mental stressors. Of particular note for menopausal and postmenopausal women, ginseng can also treat atrophic vaginal changes due to lack of estrogen.

Dosage: 6 grams per day of Korean red ginseng.

Kava (*Piper methysticum*)

Used for: Anxiety, sleep disturbances, hot flashes

Summary of the science: Kava is most often associated with analgesic, sedative, anxiolytic, muscle relaxant, and anticonvulsant effects. While it is typically not thought of as an herb for menopause, kava may help ease the common menopausal symptoms of anxiety, irritability, tension, nervousness, and sleep disruption.

Two important studies have investigated the value of kava for menopausal symptoms. The first, a randomized placebo-controlled, eight-week study examined 20 patients with common menopause symptoms. Ten of the women were given 100 mg of a kava extract standardized to contain 70 percent kavalactones. The other 10 women received placebo. The kava group showed a significant improvement in anxiety, depression, well-being, and hot flashes compared with placebo. Anxiety symptoms improved within one week of using kava. The second trial—a randomized, prospective, open-label study—evaluated the effects of kava on anxiety, depression, and common menopause symptoms in perimenopausal women. Eighty women were randomized to three groups. All women received 1 gram per day of calcium for three months. The control group of 40 women received nothing else. Twenty women received 100 mg per day of a kava extract containing 55 percent kavain in addition to the calcium. Twenty women also received 200 mg per day of the same kava extract.

There was a clear reduction in depression and anxiety in the two kava groups compared with the calcium alone, but not a clear decline in general menopause symptom scores.

Dosage: The recommended daily dose is 100 to 210 mg of a standardized kava extract (70 percent kavalactones). Due to potential liver toxicity, avoid kava if you have a pre-existing liver condition or if you drink more than 1 alcoholic beverage per day.

Maca (Lepidium peruvianum)

Used for: Hot flashes, night sweats, mood changes, decreased energy, irregular bleeding, vaginal dryness, sleep disturbances, mental problems, heart and bone health

Summary of the science: Traditionally, maca is best known as an adaptogenic plant—a plant that modulates the body's response to physiological, biochemical, and psychological stressors. Adaptogens are among the most useful medicinal herbs, helping individuals better cope with fatigue, anxiety, stress, depression, and sleep problems. Of particular importance to menopausal women is maca's reputed effect on sex hormones, sex drive, metabolism, body weight, energy, mood, and memory. Over the last 15 years, mixed results have been observed with this herb in both medical journals and in clinical practice. The type, bioavailability, and concentration seem to all play a very important role in achieving improvements in hormone production and, in turn, heart and bone health.

A small, randomized, double-blind, placebo-controlled, crossover trial in 14 postmenopausal women looked at the estrogenic and androgenic activity of maca powder and its effect on hormone measurements and menopausal symptoms. The study subjects took 3.5 grams of powdered maca daily for six weeks or matching placebo for 6 weeks. Measurements of estradiol, follicle stimulating hormone (FSH), luteinizing hormone (LH), and sex hormone binding globulin (SHBG) were taken at baseline and weeks six and 12. The Greene Climacteric Scale (GCS) was used to assess the severity of menopause symptoms. No differences in serum concentrations of any of the hormones were seen with either the maca powder or placebo. The GCS revealed a significant reduction in psychological symptoms, however, including anxiety, depression, and sexual dysfunction, after treatment with maca powder when compared with baseline and placebo.

However, a double-blind, placebo-controlled trial of 168 women in early postmenopause found that, compared to placebo, taking two 500 mg capsules of a proprietary maca supplement called Femmenessence twice a day stimulated estradiol levels and suppressed FSH, T3, adrenocorticotrophic hormones, and cortisol. Those taking the supplement also experienced

increased HDL (good) cholesterol and a slight increase in bone density. In addition, Femmenessence significantly reduced both the frequency and severity of hot flashes, night sweats, insomnia, depression, and nervousness. Similar results were seen in a second study of 34 perimenopausal women taking Femmenessence. However, in this study, the participants also experienced an average 6 percent reduction in body weight in three months.

It appears that maca does not contain plant estrogens or hormones. The herb's therapeutic actions might be attributable to plant sterols that stimulate the hypothalamus, pituitary, adrenal, and ovarian glands. Because of these actions, maca also affects the thyroid and pineal glands. The result is an improvement in sleep, mood, fertility, energy, and hot flashes.

Dosage: 1,000 mg Femmenessence, twice daily

Pycnogenol

Used for: Heart health, hot flashes, sleep, mental health

Summary of the science: Pycnogenol is an extract from the bark of the French maritime pine tree. It contains several active constituents, including catechin, epicatechin, taxifolin, phenolic acids, and flavonoids called oligomeric proanthocyanidins. Although it is not yet understood how pycnogenol might alleviate menopause symptoms, a double-blind study of Taiwanese perimenopausal women, aged 45 to 55, showed distinct benefit. One hundred fifty-five women took 100 mg of Pycnogenol and 75 took a placebo twice daily for 6 months. The 36-item Women's Health Questionnaire (WHQ) was used to evaluate menopause symptoms at baseline and at one, three, and six months. The researchers also measured blood pressure and HDL and LDL cholesterol levels.

Blood pressure decreased similarly in both groups. HDL increased significantly in both groups, and LDL decreased significantly in the Pycnogenol group. The severity and frequency of depression, vasomotor symptoms, memory problems, anxiety, sexual dysfunction, and insomnia all improved significantly with Pycnogenol in both severity and frequency as early as one month after starting treatment. Most symptoms also improved with placebo, but not significantly.

Dosage: 100 mg twice daily

Red Clover (*Trifolium praetense*)

Used for: Hot flashes, night sweats

Summary of the science: Red clover leaves and flowers are rich in isoflavones and coumestans. Six key clinical trials have been conducted to investigate the effect of red clover isoflavones on vasomotor symptoms. Three



showed benefit, and three did not. The two initial studies on red clover and vasomotor symptoms showed no statistically significant difference between the red clover standardized extract and the placebo. However, two other studies had positive results. One randomized, double-blind, placebo-controlled trial used 40 mg of red clover isoflavones or placebo in 30 postmenopausal women. The red clover produced a 75 percent reduction in hot flashes after 16 weeks. A similar study found that red clover users had a 54 percent reduction in hot flashes versus 30 percent in the placebo group.

Two more recent studies continue the contradictory pattern. In 2002, a randomized, double-blind, placebo-controlled trial of 30 women was done in which all received single-blind placebo tablets for one month and then were randomized to either placebo or 80 mg of red clover isoflavones per day for 12 weeks. During the first four weeks of placebo, hot flash frequency decreased by 16 percent. During the next phase, there was a statistically significant 44 percent decrease in the isoflavones group and no further reduction in the placebo group. The 2003 Isoflavone Clover Extract (ICE) Study compared two different daily doses (82 mg and 57 mg) of red clover isoflavones with placebo. After 12 weeks, both doses and the placebo reduced the number of daily hot flashes similarly.

Dosage: 40 mg twice daily

St. John's wort (*Hypericum perforatum*)

Used for: Hot flashes, night sweats, mood, depression

Summary of the science: St. John's wort is the most thoroughly researched natural antidepressant, but the majority of studies have not involved menopausal women. One uncontrolled drug-monitoring study conducted in women with menopausal symptoms found that taking 900 mg per day of St. John's wort for 12 weeks significantly improved psychological and psychosomatic symptoms as well as the feeling of sexual well-being. However, another 12-week placebo-controlled study of perimenopausal women using 900 mg three times per day resulted in a non-significant decrease in hot flash frequency and the total hot flash score. The women in the St. John's wort group did, however, report significantly better quality of life and fewer sleep problems. More recently, a study of 100 Iranian perimenopausal or postmenopausal women reported fewer hot flashes after taking the herb for eight weeks.

Dosage: 300 mg daily if used in combination with 40–80 mg of black cohosh or 300 mg three times daily if used alone



Additional Botanicals and Herbal Formulas for Menopause

Multiple combination products are available for use in menopause, although most have not been researched. Typically the individual ingredients contained in these combination supplements have published research to support their efficacy.

In one small, placebo-controlled study of a five-herb combination formula for menopause symptoms, 13 peri- and postmenopausal women were randomly assigned to take either two capsules of the treatment formula or a placebo three times a day. The formula, called Women's Phase II, contained burdock root (*Arctium lappa*), licorice root (*Glycyrrhiza glabra*), dong quai, motherwort (*Leonurus cardiaca*), and wild yam root (*Dioscorea villosa*). After three months, the women receiving the herbal product showed a greater improvement than women in the placebo group. All of the women taking the botanical formula had a reduction in symptom severity, according to a symptom diary, while only 67 percent of women receiving placebo showed a decrease. Among the women taking the herbal formula, 71 percent reported a reduction in the total number of symptoms, and only 17 percent of the women taking placebo reported a decrease. The botanical formula was most effective in treating hot flashes, mood changes, and insomnia.

Chapter Three

Selected Menopause Symptoms

A note about botanical options for each symptom: It's not easy to know which herb or combination of herbs will work for you. If someone has hot flashes as her only menopause symptom, I would consider Femmenessence, black cohosh extract (Remifemin or similar), or a combination like Women's Phase II to be a good choice. Secondary choices would be Pycnogenol or red clover. If a woman has hot flashes and low libido and/or fatigue, I would choose Femmenessence. For a woman experiencing hot flashes and depression or mood swings, I would tend to choose black cohosh extract with St. John's wort extract, and I'd consider adding Femmenessence if there was an inadequate response. Think of Femmenessence, black cohosh extract, or Women's Phase II as foundational perimenopause/menopause formulations. Start with one of these for any menopause symptom, and augment with an herbs and/or nutrients that target insomnia, depression, fatigue, or anxiety.

Hot Flashes

Diet

- Whole-foods diet high in fruits, vegetables, whole grains, and legumes
- Emphasis on soybean products and flaxseeds
- Reduction in total fat, animal fats, simple carbohydrates; modest amounts of organic low-fat dairy

Exercise

- Regular weight-bearing, resistance, and aerobic exercise with light weight training

Herbal

- Femmenessence (1,000 mg twice daily) or black cohosh standardized extract (40 mg one to two times per day) or Women's Phase II (two caps three times daily)

Other possibilities

- Pycnogenol
- Red clover

Insomnia

In determining individualized treatments for insomnia, it is imperative to identify the underlying cause, address that chronic influence, and provide options for short-term relief. Underlying causes can include acute or chronic pain, thyroid problems, sleep apnea, anxiety, stress and related changes in cortisol production/rhythms, low blood sugar during the night, caffeine use, certain medications, and irregular bedtime and rising habits. Some women may need to be referred to a sleep specialist for evaluation.

Numerous plants have sedative actions and have been used historically to promote sleep and improve sleep quality. These include valerian, hops, skullcap, passion flower, chamomile, lemon balm, oatstraw, lavender, bitter orange, California poppy, and kava. Preparations can include powdered capsules, tinctures, and teas. Most of these herbs are mild sedatives and are unlikely to suffice alone, so they're typically used in combinations. Numerous supplements have also been effective, including synthetic melatonin or a plant-based melatonin supplement called Herbato-nin, L-tryptophan, and 5-hydroxytryptophan (5HTP).

Diet

- Avoid stimulants (e.g., coffee, caffeinated tea, chocolate, caffeinated sodas), especially during the second half of the day
- Eat a protein snack before bed

Lifestyle

- Get regular exercise.
- Practice good sleep hygiene. Sleep hygiene is anything that helps you sleep better and supports good health through sleep. Here are some basic sleep hygiene tips:
 - 1 Don't go to bed unless you are sleepy.
 - 2 If you are not asleep after 20 minutes, then get out of the bed.
 - 3 Begin rituals that help you relax each night before bed, such as a warm bath or reading for a few minutes.
 - 4 Get up at the same time every morning.
 - 5 Get a full night's sleep on a regular basis.
 - 6 Avoid taking naps if you can, or at least keep your nap to less than one hour and don't nap after 3 p.m.
 - 7 Keep a regular schedule for meals, medications, chores, and exercise.
 - 8 Don't read, write, eat, watch TV, talk on the phone, or play cards in bed.
 - 9 Avoid any caffeine after lunch.
 - 10 Avoid alcohol within six hours of your bedtime.
 - 11 Avoid nicotine before bedtime (or anytime for that matter).

- 12 Avoid going to bed hungry, but don't eat a big meal near bedtime either.
- 13 Avoid any moderate to heavy exercise within six hours of your bedtime.
- 14 Use sleep aids cautiously. It's best not to use over-the-counter or prescription medications for longer than three weeks.
- 15 Decrease stressors, anxieties, and worries.
- 16 Your bedroom should be cozy, quiet, dark, and a little on the cool side.

Herbs

- Black cohosh extract (40 mg twice daily), Femmenessence (1,000 mg twice daily), Women's Phase II (two capsules three times daily), or valerian (1-2 capsules before bed)

Nutritional supplements

- Herbatonin 0.3 mg about 5 hours before bed

For difficult cases

- Consider adding 5HTP, higher doses of melatonin, and other herbal combinations of hops, valerian, or passion flower

Mild Depression, Irritability, and Mood Swings

Diet

- Reduce alcohol
- Avoid sugar and simple carbohydrates
- Include whole grains, plenty of vegetables, nuts, seeds, fish, low-fat dairy, protein, and legumes
- Eat three meals per day at regular mealtimes.

Exercise

- 30 to 60 minutes of aerobic activity (e.g., walking, running, cycling) daily

Herbs

- Femmenessence (1,000 mg twice daily), black cohosh (40 mg of a standardized extract twice daily), Women's Phase II (two capsules three times daily), or St. John's wort (standardized extract, 300 mg three times daily)

Nutritional supplements

- Vitamin B6
- 5HTP
- SAMe
- L-tyrosine.



Anxiety

Diet

- Reduce alcohol
- Avoid sugar and simple carbohydrates
- Include whole grains, plenty of vegetables, nuts, seeds, fish, low-fat dairy, protein, and legumes

Exercise

- 30 to 60 minutes of aerobic activity (e.g., walking, running, cycling) daily

Herbs

- Femmenessence (1,000 mg twice daily), black cohosh (40 mg of a standardized extract twice daily), Women's Phase II (two capsules three times daily), or kava extract standardized to 70 mg kavalactones (one capsule two to three times daily)

Nutritional supplements

- GABA
- L-theanine

Heart Health

Heart/cardiovascular disease (heart attack and stroke) is the leading cause of mortality among men and women in the United States. It accounts for nearly 40 percent of all deaths. Interestingly, if all forms of cancer were eliminated, life expectancy would rise by only three years, yet if all forms of cardiovascular disease were eliminated, life expectancy would rise by seven years.

The risk of cardiovascular disease gradually increases for men beginning in their 30s. However, women have very low risk of cardiovascular disease until they reach postmenopause, when their risk increases dramatically. The risk for cardiovascular disease for both men and women appears to be influenced by hormones. Men's hormone production gradually begins to decrease in their 30s, and their risk for cardiovascular disease gradually increases. Conversely, women have relatively balanced, yet cyclic, hormone levels until menopause. But when their hormone levels drop significantly, their risk of cardiovascular disease increases dramatically. In fact some of the roles of hormones in the body highlight why they are so important for heart health. Estrogen increases HDL "good cholesterol," which reduces plaque buildup and possible blockage in arteries. It also reduces LDL "bad cholesterol," which can cause plaque buildup and possible blockages in arteries and maintains the elasticity of arteries

and blood vessels. Progesterone protects arteries from spasms. Women's arteries are much smaller than men's, and spasms of heart arteries can adversely affect blood flow to the heart. This demonstrates that there is a clear connection between hormone levels and cardiovascular health. Fortunately, cardiovascular disease is treatable and preventable—and there are actions you can take to minimize your risk.

What you can do? First, assess your cardiovascular disease risk factors. Many people do not know they have cardiovascular disease until they experience a major health issue such as a heart attack or stroke. For example, cardiovascular disease can affect people who are not overweight. Also, more than 25 percent of the population has high blood pressure, yet more than 30 percent of people with high blood pressure do not know that they have it. Traditionally cholesterol has been an important tool in determining risk for cardiovascular disease. However, as the medical community gains a deeper understanding of cardiovascular health, other important indicators have been associated with disease risk. Key indicators include triglyceride levels, C-reactive protein levels (which measure chronic, low-level inflammation), blood pressure, insulin resistance (or diabetes), homocysteine levels, abdominal fat, endothelial dysfunction, body mass index (BMI), and stress levels. Significant lifestyle risk factors include smoking, heavy drinking, and lack of exercise. Additional risk factors include a family history of premature cardiovascular disease and being a postmenopausal woman. Furthermore, symptoms such as chest pain or tightness, impotence (in men), reduced circulation in the extremities, and shortness of breath on exertion may indicate cardiovascular health problems. As you can see, there are a myriad of factors affecting cardiovascular health, which is why a comprehensive cardiovascular health assessment is so important. This can be done with your primary care practitioner.

The consistent hallmarks of a heart-healthy lifestyle start with a diet that is low in saturated fats, deep-fried foods, and partially hydrogenated fats. In addition, a high-fiber diet of whole grains, fruits, and vegetables that is low in white flour foods and refined sugar supports healthy cholesterol, triglyceride, and glucose levels—all of which are related to heart health. Medicinal heart foods include soy foods, fatty fish (e.g., salmon, tuna, halibut, sardines, mackerel, herring), walnuts, flaxseeds, and oatmeal, with a small amount of red wine.

Nutritional and botanical supplements known to have cardiovascular benefits include fish oils, niacin, red yeast rice, red clover, and Femmenessence, which supports hormones and metabolism for healthy body weight. Fish oil, in particular, has many different mechanisms by which it prevents heart disease, including lowering triglycerides, decreasing blood pressure, regulating heart rhythms, and reducing vascular inflammation.

Selected other nutrients can be used for specific cardiovascular conditions, including magnesium, CoQ10, D-ribose, and vitamin E. Some women will need very specific treatment plans to address their particular heart disease issues. These treatment approaches can include diet, lifestyle changes, and supplementation for many, but some individuals will need judicious, expert-guided use of medications to lower cholesterol and/or blood pressure, or to regulate irregular heart beats.

Bone Health

It is important to recognize and focus on different aspects of bone health at different stages in your life. Simply put, from birth to 25 years of age, you need to build the strongest, densest bones and minimizing any actions that hamper bone-building. The key from 26 to 51 years of age is to limit the amount of bone loss. Postmenopause or after age 52, it's important to continue limiting bone loss.

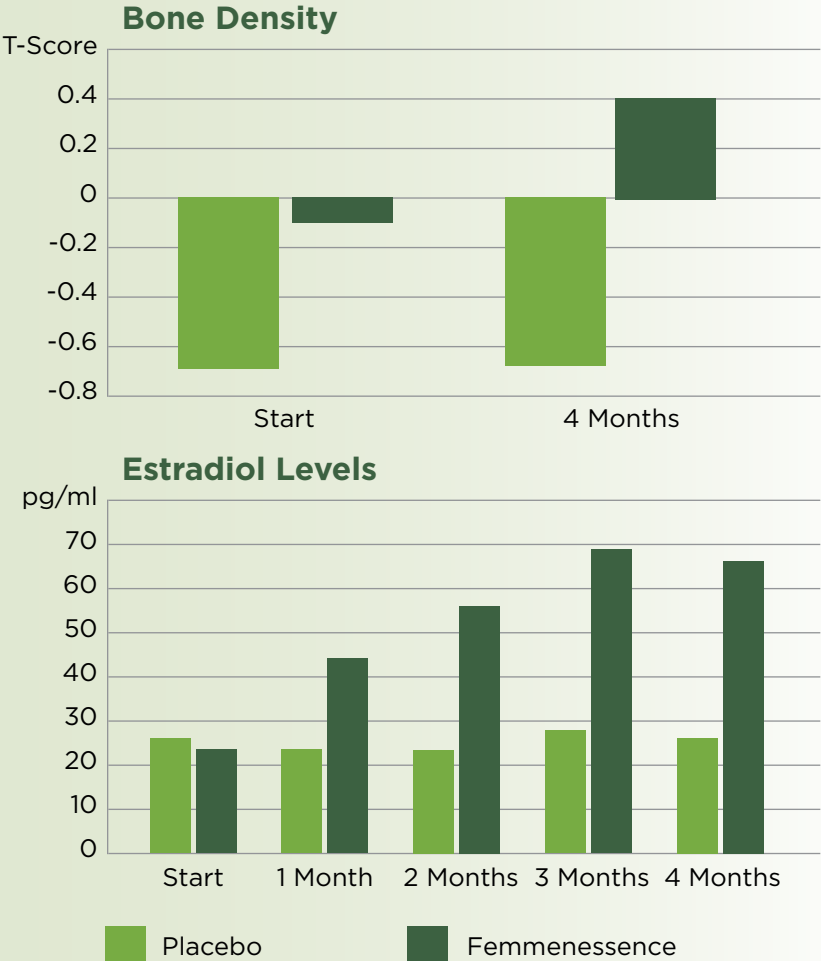
Osteoporosis is a chronic progressive disease that affects millions of American women. The most serious complication of osteoporosis is fracture, particularly of the hip. This can cause severe pain, disability, and increased risk of mortality. Osteoporosis is underdiagnosed and therefore often undertreated. Sadly, it is also too often a preventable disease.

An assessment of your bone health can be carried out by your health professional and will include a medical history and physical exam, as well as a bone mineral density test called a DEXA scan. Not all women need a DEXA scan, but if you fall into one of the following categories, it is recommended:

- Unexplained fracture after age 50
- Age of 65 or older
- Age under 65, but postmenopausal with one or more additional risk factors for osteoporotic fractures (e.g., weighing less than 127 pounds, family history of spine or hip fracture)
- Postmenopausal and have had a fracture since menopause (to confirm diagnosis and determine severity)
- Secondary causes of osteoporosis such as hyperthyroidism, steroid use, or suppressive doses of thyroid medication, hypogonadism, hyperparathyroidism, immobilization, or a malabsorption condition such as Celiac disease

A more extensive evaluation of underlying causes and management may include urinary and serum calcium levels, vitamin D levels, parathyroid and thyroid tests, urinary crosslinks of bone turnover, selected nutrient analysis, and the ongoing investigation of lifestyle, exercise, and nutritional habits.

The first thing that usually comes to mind when people think about bone health is calcium. Calcium is essential for healthy bone formation, but it does not function alone; it requires the presence of optimal amounts of other trace minerals and hormones to actually build bone. Other essential nutrients for bone health include protein, fatty acids, magnesium, manganese, vitamin D, vitamin K, boron, and zinc. Also, research shows that too much calcium (more than 2,000 mg/day) can be associated with an increased risk of renal stones and a possible increased risk of cardiovascular disease. It may also inhibit the absorption of other nutrients like zinc and copper.



A solution to the conundrum of too much or too little calcium is to estimate how much dietary calcium you are getting and then supplement the difference in to meet current guidelines:

Ages 25–50	1,000 mg/day
Postmenopausal women	1,200–1,500 mg/day

Even if you regularly eat calcium-rich food, it may be necessary to choose a calcium supplement to fill the gap and ensure that you meet your daily requirements. Less-constipating calcium choices include non-carbonate forms such as calcium citrate, calcium lactate, calcium acetate, and calcium gluconate. Current research reveals that the form or type of calcium is not an issue in most women if it is taken with food.

Calcium requires a number of other vitamins to create bone, primarily vitamin D, which is more correctly termed a hormone than a vitamin. Vitamin D helps maintain serum calcium within a normal range and increases osteoblast (bone-building cell) formation. Vitamin D is also essential for the immune system and may help prevent several cancers, some autoimmune diseases, and hypertension. Vitamin D deficiency is frequently of more concern than calcium in regards to bone health, and it can result in decreased intestinal absorption of calcium. Since this process is affected by aging, people over the age of 65 are at risk for decreased bone density, as are individuals who are exposed to less sunshine because they either cover up or use sunscreen to decrease the risk of skin cancer. You can derive vitamin D from the sun, from foods that naturally small amounts of it, from vitamin D–fortified foods, and from oral supplements. In a natural setting, the majority of vitamin D formation occurs through sun exposure; therefore, 15–20 minutes of unprotected sun exposure (UVB; ideally from 10am to 2pm) each day is beneficial.

Good dietary sources of vitamin D include fatty fish (e.g., mackerel, salmon, sardines) and fish liver oil. Many grain and dairy products are also fortified with Vitamin D. These are the current government guidelines for vitamin D intake:

General (<50 years of age)	400 IU/day
Postmenopausal (>51 years)	400–800 IU/day
Osteoporosis	800 IU/day
Northern Latitude/ Low exposure/Darker Skin	800–1000 IU/day, higher amounts especially in fall and winter

Many in the scientific and medical community now believe that these guidelines are woefully outdated. More and more, healthcare providers are routinely recommending 1,000 to 2,000 IU of vitamin D per day.



Calcium Content of Selected Foods

Food	Amount per 3.5 oz. serving	Food	Amount per 3.5 oz. serving
Kelp	1,093 mg	Brazil nuts	186 mg
Cheddar cheese	750 mg	Soy milk	150 mg
Tofu	406 mg	Sunflower seeds	120 mg
Collard leaves	250 mg	Yogurt	120 mg
Kale	249 mg	Whole milk	118 mg
Almonds	234 mg	Broccoli	103 mg
Brewer's yeast	210 mg	Cottage cheese	94 mg

* Choose organic forms of food when possible, as these are generally higher in minerals and do not contain potential chemical residues.

Those who have insufficiencies or deficiencies (as determined by blood tests) will need higher amounts, at least until blood levels are increased.

One of the most important factors for bone health is hormone status. A woman can lose an average of 7 to 10 percent of her bone density within the first three to five years of becoming postmenopausal. The key factor that makes women more susceptible to this decrease in bone density is the normal postmenopausal decline in hormones, especially estrogen. While replacing estrogen with HRT has been shown to improve bone density and lower the risk of fracture, not all women want to take HRT, should take HRT, or need to take HRT. The individual benefit and risk is an important conversation for each woman to have with her menopause practitioner.

Femmenessence is another option to support the body's own production of hormones as well as improve metabolic function and enhance the absorption of key vitamins and minerals such as calcium. Enhancing the body's ability to absorb vitamins and minerals while increasing hormone levels provides the functionality required to support bone health.

Other lifestyle habits key to long-term bone health including regular exercise—especially weight-bearing exercise (e.g., walking, running, treadmill, weights). Consuming seven or fewer alcoholic drinks per week, not smoking, and eating a whole-foods diet high in whole grains, vegetables, and vegetable proteins while avoiding excessive animal proteins is also important.

Some women will be able to prevent osteoporosis and stabilize low bone density with these lifestyle and nutrient interventions alone. Other women, whose risk of a fracture is significant or who have already had a postmenopausal fracture, will need to discuss conventional medicine options in addition to lifestyle habits and nutritional/botanical supplementation.

Chapter Four

Summary

Perimenopausal and menopausal women have unique healthcare needs. One of those is being able to spend adequate time with your healthcare practitioner. However, just because you may have a good doctor, he or she may not be a good menopause doctor. Whether you see a gynecologist, family doctor, doctor specializing in internal medicine, nurse practitioner, physician's assistant, naturopathic physician, chiropractor, or acupuncturist, I recommend inquiring about his or her experience and expertise with menopause. All practitioners I've mentioned can prescribe all of the hormone options with the exception of chiropractors and acupuncturists. However, that does not mean they are all educated adequately in prescribing hormones—especially compounded hormones.

The optimal menopause practitioner is one who conducts a thorough history and physical, knows what lab tests are appropriate and when, and can assess your risks for diseases such as osteoporosis and heart disease. It is also important that your healthcare provider is familiar and comfortable with the spectrum of treatment options for menopause management, including diet, exercise, stress management, nutritional supplementation, botanical therapies, the wide array of hormonal options, and non-hormonal pharmaceuticals. This type of practitioner, with these tools in hand, is in the best position to help you with the symptoms you are struggling with. They can also help you prevent conditions such as osteoporosis and heart disease, as well as manage your menopausal symptoms in the context of other chronic health problems.

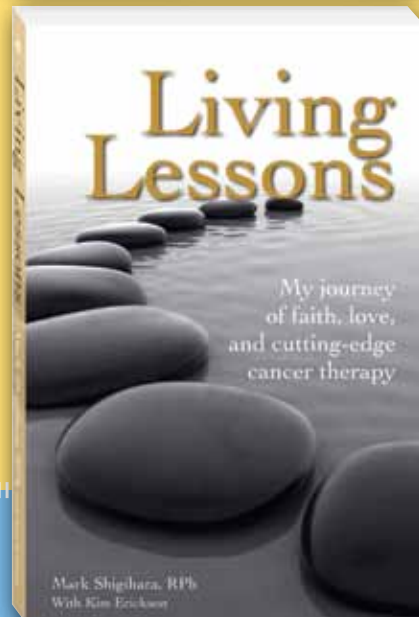
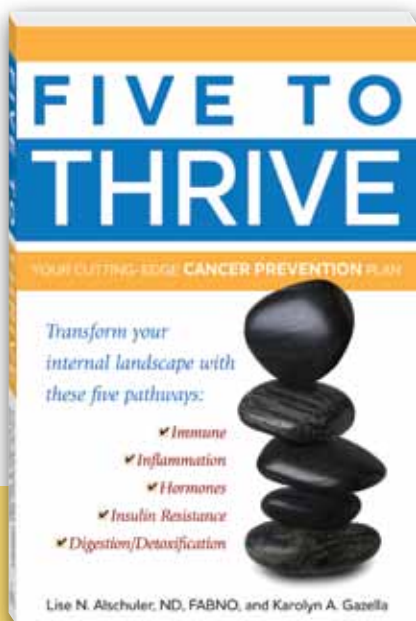
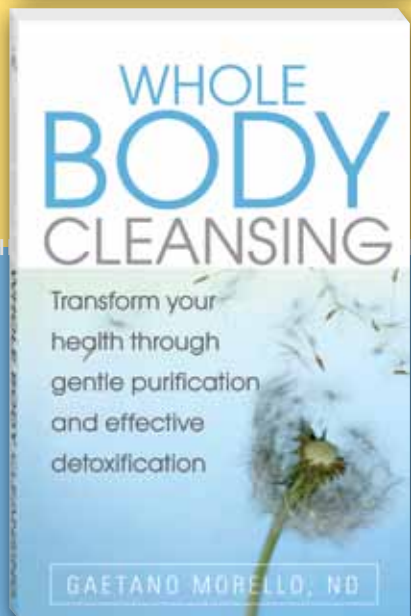
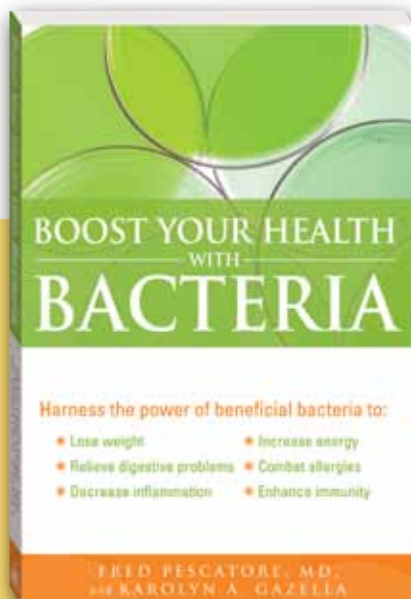
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MENOPAUSE

THRIVING THROUGH THE CHANGE WITH DIET, EXERCISE, AND SUPPLEMENTS

Menopause is a natural life stage, but the symptoms that come with it can take a toll on a woman's health and wellbeing. What's more, diet, lifestyle, and environmental factors can worsen the symptoms. Luckily, as the number of women entering menopause increases, so does the number of treatment options available to them—but the choices are not always simple or clear-cut. With the balanced and well-researched information in this booklet, women and their healthcare practitioners can make the best choices to manage symptoms and achieve optimal health.

ABOUT THE AUTHOR OF THIS BOOKLET



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