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March/April 2004

NEW APPROACHES TO MENOPAUSE AND THE SHIFT AWAY FROM HORMONE REPLACEMENT THERAPY

Nita Bishop, N.D.

February 2002: The Women's Health Initiative, a federally sponsored study of 16,608 postmenopausal women ages 50-79 who were projected to be followed for 5 years was cut short due to unexpected statistics: increased risk of breast cancer, thickening of the endometrial lining in the uterus, a 29% increased risk for heart disease, a 26% higher risk for invasive breast cancer, a 41% increased risk for stroke or blood clots. The estrogen only arm of the study is continuing.

Recently a consensus of the study was released from experts at an NIH workshop in Bethesda, Maryland which states, "if you use hormone replacement treatment for hot flashes, the only acceptable use is for short-term relief of severe menopausal symptoms. Otherwise, don't."

February 2003: A reanalysis of data previously released from the Women's Health Initiative, headed by Sylvia Wassertheil-Smoller, professor of epidemiology at Albert Einstein College of Medicine in New York stated, "There is no doubt in my mind that the use of the estrogen-progestin combination should not even be considered as a strategy for protecting a woman's health.

March 2003: A study from the Baylor College of Medicine using estrogen and progestin published results stating that these combinations were bad for a

woman's physical health. The estrogen/progestin combination specifically increased the incidence of breast cancer, heart disease and stroke.

April 2003: In the *Mayo Clinic Women's HealthSource Newsletter*, the following recommendation was made, "Estrogen is still the most effective treatment for hot flashes and is appropriate for most women with bothersome menopausal symptoms."

May 2003: More data from the same Baylor study was published suggesting these combinations do nothing for memory, sleeping or mental outlook and

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actually do more harm than good. Jennifer Hays, a psychologist who directed the analysis stated, "The average woman will not experience an improvement in her quality of life by taking this estrogen/progestin pill."

June 2003: Another impressive reversal: A new study was released which indicates that women who commence hormone therapy after the age of 65 may increase their chances of getting Alzheimer's disease.

Is anyone out there confused?

Recent studies appear to indicate that hormone replacement therapy (HRT), once considered the "gold standard" of treatment may in fact do more physical harm than good. It is difficult to understand how such a disconnect could have occurred between science and marketing, but in the case of HRT, it did. Menopause like time marches on. Every day 4,000 women enter

menopause. By 2020, sixty million women will be in or through menopause. Menopause, defined as having no menses for 12 consecutive months, is a process that usually occurs around the late 40s or early 50s. Contrary to popular belief, the levels of hormones in a woman's blood are very high (not low) during menopause. Mostly importantly, it should be understood that menopause does not only bring with it just physical change, but significant mental and emotional changes are also involved. This is well illustrated by Dr. Christiane Northrup in *The Wisdom of Menopause* where menopause is described as a "re-wiring of the brain". Dr. Northrup states that changes, and even upheavals in emotions and psyche are an integral process of menopause. Unfortunately, many times we cover this important time in a woman's life with medication.

Doctor as Teacher

Women who are looking for treatment alternatives need to be knowledgeable regarding the spectrum of options available. Likewise, physicians need to educate patients to make informed decisions regarding these treatment options. It is important for the health professional to identify the various metabolic alterations that may be associated with menopause. These are varied and include: osteoporosis, coronary artery disease, risk for Alzheimer's dementia, colon cancer, macular degeneration, joint aches, dry skin, thinning hair, changes in memory, heart palpitations, aching joints (menopausal arthritis) and decreased libido. Fatigue is also an issue since the *adrenals back up estrogen production at menopause*. The adrenals form the three major hormone precursors, DHEA, cortisone and aldosterone. In the process of adrenocortical

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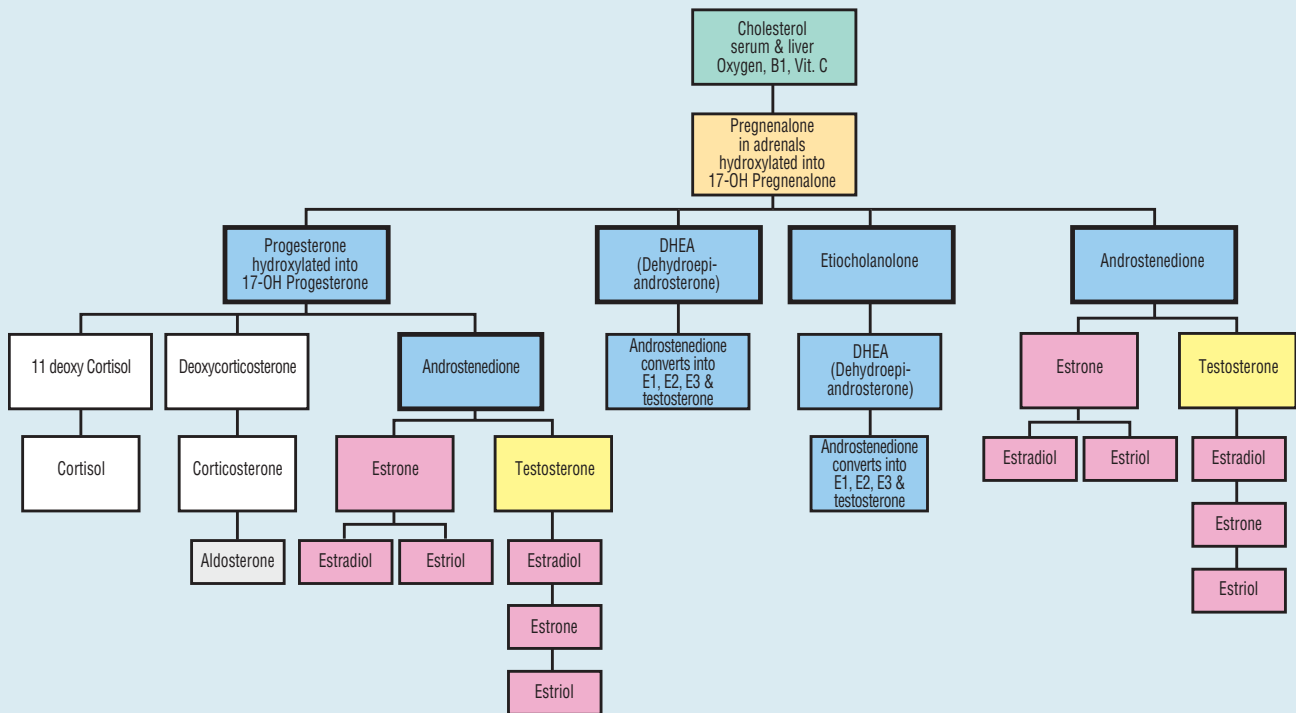
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Chart 1 - Adrenal Steroid Metabolism



Data courtesy of Martin Milner, N.D.

steroid biosynthesis, adipose tissues produce estrone via a conversion from androstenedione which is synthesized in the adrenal cortices and ovaries. In many females who present with symptoms of subtle hypothyroidism, underlying hypoadrenalism may actually be the true cause of the problems. If the adrenals are exhausted, the hormonal cascade is imbalanced, and such side effects as premature menopause may ensue.

Practitioners who are trained in natural therapies, botanical medicines and nutrition can be of great assistance to the patient. There are a wide variety of therapeutic choices including natural tri-estrogen formulas (contain the 3 naturally occurring estrogens: estriol, estradiol and estrone, and are typically made by compounding pharmacies), botanical alternatives such as phytoestrogens including isoflavones, black cohosh, red clover, and dong quai, medicines for anxiety,

nervousness and depression, sage, vitamin E, wild yam creams, wheat germ oil, biofeedback, acupuncture and more. These remedies are commonly used, but information on dosage, and interactions with other medications is not always well understood or well monitored by practitioners. There is little question that herbal alternatives do improve symptoms, but research is continuing to help us more fully understand how these herbs and other compounds are functioning. These days educated women are making their own informed choices.

Hot Flashes (flashes) and Night Sweats:

Recently, a headline in an Associated Press newspaper article read, "Live with hot flashes if you can". The problem with using estrogen to decrease hot flash symptoms is that it may produce paradoxical benefits, i.e. although estrogen reduces hot flashes, there is a corresponding increase in developing breast cancer,

heart disease, stroke, and serious blood clots. Advances in the knowledge of the physiology of hot flashes are leading to a wider variety of treatment options.

About 75% of postmenopausal women experience hot flashes. From a physiological sense, a hot flash is the body's way of cooling down. Somewhere between declining estrogen levels and hot flashes, a series of complex biological reactions takes place. A review of the literature illustrates there are many questions about hot flashes that remain unanswered. According to Fredi Kronenberg, Columbia University, the data indicate that hot flashes may start much earlier and continue far longer than is commonly recognized by physicians or acknowledged in textbooks of gynecology. Hot flashes can be caused by either estrogen or progesterone deficiency, or both. Estrogen may involve other yet to be documented autonomic response factors. Unfortunately, measurement of the hot flash symptoms is complicated, making it difficult to study. Many doctors believe that hot flashes result from a dysfunction in the hypothalamus, the body's thermoregulatory center. This gland is responsible for maintaining core body temperature within a regulated normal range. Research shows that there are disturbances in a number of circulating hormones after a hot flash. Lower estrogen levels lead to alterations in a number of chemical messengers, including a decrease in your body's own natural painkillers (endorphins) and a decrease in a byproduct of estrogen processing (catecholesterogen). These changes may in turn cause a cascade of other changes in the levels of certain chemicals (neurotransmitters) in the brain. This includes a decrease in the blood level of serotonin, a mood regulator in the hypothalamus. These changes in

norepinephrine and serotonin levels may cause your hypothalamus to narrow the normal range of your core body temperature and shift it downward. Consequently, just a tiny elevation in your core body temperature above this lower range can trigger perspiration and blood vessel dilation, culminating in the classic signs of a hot flash.

Men can experience hot flashes too as they go through their own menopausal symptoms. Night sweats can cause considerable sleep disruption, and can lead to sleep deprivation that can often be mistaken for insomnia. Night sweats can also be correlated to adrenal fatigue. Some researchers have been concerned that black cohosh might have estrogen-like effects on breast and uterine tissues, but it appears safe for women to use for up to 6 months to relieve symptoms of hot flashes. Currently, the U.S. government is funding a 12 month study on the use of black cohosh for the treatment of menopausal symptoms, following up on years of German research. Although taking vitamin E (800 IU per day) provides precursor material for female hormone production, this author's clinical observations find it results in minor, if any decrease in hot flashes. However, combined with other remedies it may be more effective. Although sage is known as a cooling and drying herb, and using this oil in aromatherapy application is somewhat effective, this herb does not alleviate vaginal dryness. An estrogen cream applied directly to the labia may be used for vaginal dryness. *Tribulus terrestris*, an Indian/Ayurvedic herb can stimulate vaginal secretions. Postmenopausal women can take Tribulus continuously during the month, but premenopausal women should only take it during the follicular phase (days 5 - 14). There is mixed evidence

on the effectiveness of soy protein for reducing hot flashes. Soy contains isoflavones, which have many beneficial effects including reducing many menopausal symptoms, reducing the risk of breast cancer, (in those that don't have cancer) osteoporosis, and endometrial cancer. If a patient is hypothyroid, soy may inhibit thyroid hormone synthesis and mineral absorption. The safety of using soy in women with a history of breast or uterine cancer is controversial and not well researched. Some studies have reported potential estrogenic effects of soy on breast cancer cells in vitro, while other studies have not found such effects.

Besides isoflavones, other flavone-containing products such as hesperidin, rutin, etc. may also be beneficial. Hesperidin has been reported to help in regulating estrogen levels and decreasing related pain, inflammation and swelling. In a clinical study, 94 women suffering from hot flashes and other menopausal symptoms were given a formula containing 900 mg of hesperidin, 300 mg of hesperidin methylchalcone and 1200 mg of vitamin C daily. At the end of 1 month, symptoms of hot flashes were relieved in 53% of the patients and reduced in 34% of the patients. (Note: The above material is pertinent to physiologically induced hot flushes and should not be applied to tamoxifen induced hot flashes since the hesperidin blocks the same receptor sites that tamoxifen occupies in breast cancer chemotherapeutic treatment). Phytoestrogen-containing foods such as oats, barley, alfalfa, almonds and lentils can also modify symptoms. Of course family history must always be taken into consideration when determining the risks for breast cancer, heart disease osteoporosis and Alzheimer's disease. If patients are experiencing hot flashes, it is important to rule out

hyperthyroidism, anxiety, carcinoid syndrome, pheochromocytoma and niacin flushes.

Cardiovascular concerns:

A woman is 10-12 times more likely to die of cardiovascular disease than breast cancer, but many times this information is not emphasized. Only 3% of women think they will die of CVD when in reality the statistics show that 45% will die of CVD. Nonetheless, 45% of women think they will die of breast cancer and only 3% actually do. For African-American women, the risk is two-fold higher than for Caucasian women. Fortunately, alterations in diet and lifestyle make this a preventable disease. Doctors try to minimize the risk by recommending blood pressure checks at least every 2 years and cholesterol tests beginning age 45 and repeated every 5 years. A large study with over 84,000 women, the Nurses Health Study, showed the lowest rates of CVD occurred in the group that did not smoke, were not over or underweight, exercised 30 minutes a day, had increased fiber intake, fish oil, and folic acid and had a high ratio of polyunsaturated fatty acids (PUFAs) to saturated fats, with a low intake of trans-fatty acids.

In a study involving 39,876 women and lasting over 5 years, the women who ate 7 servings of fruit and vegetables had 68% reduction in the incidence of CVD.

Osteoporosis:

Refer to January 2000 NutriNEWS article "Nutritional Advances: Menopause and Osteoporosis"

Because a variety of hormones interact to govern bone remodeling and mineral metabolism, HRT was considered the first line approach for prevention of menopausal osteoporosis. Now other options are being

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STAND TALL: AGING NEED NOT SHORTEN YOUR LIFESPAN OR YOUR HEIGHT

Dr. Ronald Klatz

Osteoporosis is the most common bone disease that affects humans. It is characterized by reduced bone mass and a deterioration in the skeletal framework, which lead to increased risks for both fractures and gravity-related compressions of the vertebrae (the bones that compose the spine), both of which can result with age-related loss of height.

Osteoporosis is a costly disease, affecting 44 million American men and women, at a cost of \$17 billion to the nation's healthcare system. Often referred to as a "silent disease," osteoporosis often progresses without symptoms until a fracture occurs, most commonly in the hip (300,000 annually), spine (500,000 annually), wrist (200,000 annually), and other locations (300,000 annually). After experiencing a fracture, disability, stooped posture, severe and/or chronic pain, depression, and premature death may result.

At present, osteoporosis has no cure, and medications treat symptoms and slow the progression of the disease, but do not help the body with rebuilding its bones. As a result, prevention becomes our best resort. Basics include:

- Eating a healthful, well balanced diet
- Weight-bearing exercise
- Don't smoke* Don't drink excessively
- Regular diagnosis of bone mineral density (BMD)

In addition, sufficient daily intake of the mineral calcium, and vitamin D - a necessary bone-building cofactor - are paramount.

Calcium is essential for the maintenance of many body functions, including the transmission of nerve impulses, the regulation of muscle contraction and relaxation, blood clotting, maintaining acid-alkaline balance in the body, and assisting with various metabolic activities. At a daily intake of 1000 to 1300 mg, calcium helps to maintain strong bones and teeth. Some researchers say menopausal women need a bit more, 1500mg. It is not recommended to take more

than 2000 mg on a long-term basis because doing so creates an increased risk of kidney stones.

In today's 24/7/365 fast-food society, many of us fail to get enough calcium from the foods we consume, and the human body cannot produce calcium. Even after we reach our full skeletal length, we lose calcium every day when skin, nails, hair, and sweat are shed, as well as through urine and feces. This lost calcium must be replaced daily, otherwise the body takes calcium from existing bone, resulting in osteoporosis.

Women who are post-menopausal are at greater risk of osteoporosis because they lose the bone-protecting effect of the hormone estrogen. As estrogen declines, the body looks to bone to take away its calcium (resorb it) and use it for other purposes in the body. In the first few years of menopause, women lose bone two to four times faster than they did before menopause. By age 65, some women have lost half of their skeletal mass. Additionally, as we age, our gastrointestinal (GI) system does not work as efficiently, and by age 65, intestinal calcium absorption has declined to less than 50% of that in adolescence. But again, fortunately we can take some proactive measures to assist our bone health, through calcium supplementation.

When it comes to calcium supplements, there are many different calcium compounds. Each contains different amounts of elemental calcium and each also differs in their absorbability, both of which affect how much of the calcium supplement makes it across the gut barrier and into the bloodstream. Also, some forms of calcium are better tolerated by sensitive individuals. Speak with your doctor before starting a calcium supplement, since calcium supplements can reduce the absorption of the antibiotic tetracycline and the mineral iron, and affect the efficacy of some medications as well.

Certain vitamins and minerals boost the body's use of calcium. Important adjuncts to calcium in that they facilitate the metabolism and utilization of calcium include:

- Vitamin D is essential for the body to absorb and process calcium. You can get Vitamin D via the skin from sun exposure (5-15 minutes a day) or from dietary sources. Experts recommend 400 to 800 IUs per day.
- Minerals such as magnesium and phosphorus
- Hydrochloric acid (glutamic acid HCl)

After a woman turns 50, she has a 50% chance that she will experience an osteoporosis-related fracture at some time in her life. You are never too young to maintain healthy calcium uptake. Remember when mom sat you at the kitchen table to drink your milk, usually several times a day, and usually begrudgingly you did? Mom was right. One 8-ounce glass of low-fat milk contains about 300 mg of calcium. Calcium-rich foods include egg yolk, fish or sardines (eaten with bones), yogurt, soybeans, green leafy vegetables (such as turnip greens, mustard greens, broccoli and kale), roots, tubers, seeds, soups and stews made from bones, blackstrap molasses, almonds, figs and beans.

While this issue of *Nutri-News* has a theme of Women's Health, we would be remiss if we did not convey that men do get osteoporosis. Men are less dependent on estrogen and have more bone mass to begin with, however their osteoporosis risk increases when testosterone production decreases (as occurs in aging, in men being treated for prostate cancer, or in men who have had testicular surgery.)

Postmenopausal osteoporosis that causes hip fracture will cause:

- * half of elderly white women to become long-term disabled
- * a quarter to require long-term assistive care
- * one-fifth will die as a direct consequence of the fracture.

New findings, released in May 2003, from the Beth Israel Deaconess Medical Center (Harvard University, Boston MA, USA), found that women with low bone mass in their later years are at higher risk of developing Alzheimer's disease. The researchers submitted that this relationship originates from the decline in estrogen

production at menopause, and that lifetime estrogen levels may become a new marker for osteoporosis risk in women. For men, the researchers found no relationship between bone mass and memory decline. Remember, bones are constantly being dissolved and remade throughout life. Osteoporosis results when bone degradation occurs at a faster rate than bone building. To tip the cycle to favor the latter, follow a basic and simple osteoporosis-fighting regimen that includes a quality supplement that includes a form of calcium that your body best absorbs and tolerates, Vitamin D/sunlight, magnesium, phosphorus, and hydrochloric acid. By doing so, you can stand tall as you celebrate your 100th birthday.

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considered. Over 50% of postmenopausal women will incur an osteoporosis-related fracture. Smoking plays a role as do certain drugs such as corticosteroids, thyroxine, anti-convulsants, heparin, lithium and tamoxifen. Historically a woman who has exercised in pre and post puberty has the largest increases in bone density. Since peak bone mass occurs at about age 35, exercise in adulthood will still result in mild increases in BMD (bone mineral density), but these gains will be lost if exercise ceases. The recommendation is usually made for 1200 mg of elemental calcium daily. Dairy, eggs and liver are good sources. Eight ounces of milk, yogurt, or cooked greens or 1 oz of firm cheese all supply 300 mg of calcium. However, dairy products alone do not supply enough magnesium, a vital mineral for bones. Recommended intake ratios of calcium to magnesium are 2:1 but this increases to 3:1 in menopausal women. Eating whole grains, nuts, legumes and dark green vegetables, meat and fish as well as supplementing with magnesium will prevent the magnesium deficiency commonly observed in many Americans. Also don't forget the importance of vitamin D in increasing calcium absorption. Copper, manganese, zinc, boron and silica are minerals that are also associated with bone and are deposited into the collagen-protein matrix. It is also an important consideration that a patient has enough hydrochloric acid (pH of 3 or lower) in their stomach to absorb the calcium. Taking antacids or acid stopping medications will cause hypochlorhydria and will decrease calcium absorption.

What's wrong with estrogen?

The conventional dogma for the use of HRT is that if you have a uterus you should take estrogen and progesterone together. The logic is that when patients

are given estrogen in the absence of progesterone (or progestins) it can lead to estrogen dominance and a number of unwanted side effects, including an increase in the risk for breast cancer. Balancing a hyper-estrogenic state in the body with progesterone has been thought to be important. Many hormones are synthesized from cholesterol in the liver. Phase I liver metabolism of fat soluble hormones, involving cytochrome P-450 results in modifications in fat-soluble toxins into water-soluble intermediates. The 2, 4, and 16 hydroxyestrone metabolites of estrogen molecules are produced in estrogen conjugation. Various toxins (ex: alcohol, pesticides) can influence the production of the carcinogenic 4 OH and 16 OH estrogen molecules, increasing the risk of breast and cervical cancer. Consequently, a shift toward the production of these metabolites is not desirable. Indole-3-Carbinol, a natural product derived from cruciferous vegetables shifts the metabolism away from the 4 and 16-hydroxyestrone to the more desirable 2-hydroxyestrone metabolite.

Do we underrate progesterone?

In the normally functioning female body, there is always more progesterone than estrogen, whether pre or post menopausal. Progesterone serves as a precursor in the steroid hormone pathway and is therefore profoundly important. There is sometimes confusion between the terms "progesterone" and "progestin." Progesterone is a vital hormone found naturally occurring in the body. Progesterones are particularly beneficial to women during the perimenopausal years in which a woman is just beginning to enter menopause. This is the stage during which we see FSH and LH levels become and remain

elevated. Although the progesterone levels drop rapidly, progesterone is still being produced after menopause. It is important to note that in the absence of adequate levels of progesterone, estrogen will not function optimally. Additionally progesterone, in the presence of estrogen may play a protective role in preventing tumor formation. Progesterone appears to make estrogen receptors on cell membranes more sensitive to estrogen and may also protect the uterus from the deleterious estrogenic effects of unopposed estrogen.

Natural progesterone has been found to be beneficial for preventing breast cancer, preventing osteoporosis, normalizing libido, improving lipid metabolism, increasing fertility and improving sleep patterns. Progesterone is thermogenic and increases the basal metabolic rate (vs. estrogen which lowers the basal metabolic rate) There are many natural botanically-based progesterone products available today. Chaste tree (*Vitex agnus-castus*) as mentioned earlier increases the output of progesterone and consequently balances the hypothalamic/pituitary hormonal axis. It stimulates the pituitary gland and the secretion of leutenizing hormone, which in turn increases the output of progesterone. This helps to regulate estrogen production and overall hormonal balance.

Natural vs. Synthetic Progesterone

When you start with a natural progesterone and alter its chemical structure (typically so it can be patented), you make a synthetic progestin. Progestins can be found in Prempro and Provara, two hormone replacement products available with a prescription. However, when you alter progesterone to synthesize progestin, there may be complications that could arise

that are not recognized by conventional medicine. In fact, the 2002 PDR states, "The effect of prolonged use of progestins on the pituitary, ovarian, adrenal, hepatic or uterine functions is unknown." Progestins can mimic the body's progesterone closely enough to bind progesterone receptor sites, but they do not deliver the full range of messages that a natural progesterone molecule would. Physiologically, progestin suppresses natural hormone production and can stress the liver. It takes 6-8 weeks for the body to clear progestins (vs 6-12 hours for progesterone). Additionally, progestins undermine the body's steroidal pathways and adrenal function and can therefore affect a patient's energy and vitality. Besides fatigue, the documented side effects include depression, anxiety and nervousness, migraines, nausea, edema, strokes and coronary artery spasms. Consequently, many physicians are moving to the use of plant-based oral micronized progesterone (OMP) in creams or oral forms.

Phytoestrogens - Red clover, black cohosh and soy isoflavones

Phytoestrogens (plant-based estrogens) may have been misnamed. Since plants do not have a liver – plants do not produce estrogen. However, these estrogen-like compounds do occupy receptor sites on the cell that estrogen would normally occupy, giving the equivalent of a somewhat weaker dose of estrogen to the cell. They affect the cell receptors and function like estrogen and may impart some of the beneficial effects of estrogen with fewer of the side effects. Consequently, phytoestrogens will often help to relieve hot flashes and night sweats. Red clover, black cohosh and isoflavones derived from soy all show considerable estrogenic effects, including the ability to bind to estrogen receptors in a similar manner

to estrogen. Many people don't realize that red clover contains ten times the amount of phytoestrogens that soy contains. While one study stated red clover showed no clear demonstrable benefit for menopausal symptoms, another study showed it does play a role in decreasing cardiovascular symptoms by alleviating reduced arterial elasticity in menopausal women. It is important to note that for women who already have risk factors for breast and uterine cancer there is controversy surrounding the safety of supplementing with phytoestrogens. Some investigators have reported *in vitro* data to support that certain phytoestrogens found in soy may increase the growth of breast cancer cells, while other investigators have not reported such a connection. Normally, phytoestrogens are 1/200th to 1/400th the strength of conventional hormone replacement therapy. One herb of note, Dong Quai (*Angelica sinensis*), is considered a supreme female herb because it tones the blood, promotes circulation and stimulates the uterus. Like soy isoflavones, Dong Quai can have estrogen-like effects and its use in patients with a history of estrogen-sensitive cancer had not been studied. Licorice (*Glycyrrhiza glabra*) is an important herb for menopause since it offers additional adrenal support. It is frequently used in menopausal formulas to help stabilize hormonal imbalances perhaps due to its phytosterol content. Using deglycyrrhized licorice will eliminate blood pressure elevations that may be observed with the use of licorice.

Yam or scam?

Historically, the giant yam was once the original source for commercial hormones for the U.S. drug industry and the precursor for the birth control pill. Diosgenin is an isolated steroidal saponin that can be

found in the wild yam. These yams are different from sweet potatoes and the steroidal saponins must be activated in the laboratory using enzymes and microbial transformation to make the wild yam active (wild yam's don't contain naturally occurring estrogen or progesterone). Many women report normalization of hormonal functioning when using wild yam preparations. However, in a year-long trial with 102 women, those using progesterone cream had no improvement - or a reduction in hot flashes. There is a concern that progesterone creams will increase breast cancer long term just as the use of estrogen plus progesterone does. Progesterone creams do not have FDA approval for continuous use. It is the experience of this writer that Yam/*Dioscorea villosa's* effectiveness is debatable and sometimes paradoxical.

What about libido?

In terms of estrogen, recent studies have revealed minimal effect with estradiol in augmentation of sexual desire. However, in women who have had their ovaries surgically removed supplementation with testosterone has shown a demonstrable increase in the levels of sexual desire, arousal and fantasies. Some herbs have received attention as well. Herbs with steroidal saponins, including *Tribulus terrestris*, wild yam, and false unicorn are effective in estrogen modulation, possibly by interacting with hypothalamic estrogen receptors, allaying effects of estrogen withdrawal and encouraging better production from the ovaries. In one study of 202 women, consisting of approximately equal numbers of premenopausal and postmenopausal females, 65% noted improvement in satisfaction with sex life with a South American herb, Muira puama (*Ptychopetalum olacoides*), (175 mg) and *Ginkgo*

biloba (16 mg). *Tribulus terrestris*, as previously mentioned also impacts libido. Demulcents such as a comfrey root sitz bath or plantain ointment applied externally eases vaginal dryness. Internally, vaginal lubrication can be increased with Motherwort tincture or freshly ground flax seeds.

Treat the Liver

Hormonal changes in a woman's body can also be caused by alterations in liver function, including exposure to xenobiotics (foreign chemicals/pesticides). Until recently, the only hormones the body was exposed to were made endogenously, or were derived from plant phytohormones. In the last 60 years, however, 87,000 man-made chemicals have been introduced into the food, water and environment. Many of these chemicals are known to disrupt hormone biochemistry. The liver works overtime to process these xenobiotic compounds, and a liver that is not functioning optimally will have difficulty eliminating and detoxifying these compounds. Stress can also affect liver function and steroid hormone balance due to increased cortisol levels. Herbs that support the liver and assist in estrogen conjugation are especially important around menopause and include: burdock (*Arctium lappa*), red root (*Ceanothus spp.*), and cleavers (*Galium aparine*). Eliminate stimulants from the diet that trigger hot flashes including methylxanthines derived from coffee and chocolate, spices, acidic foods, hot drinks, alcohol, and white sugar. Avoid hot weather, hot tubs and saunas, tobacco, marijuana, intense exercise, or intense anger. A comprehensive detoxification protocol

supplementing fiber, lignans from flax, and liver-promoting herbs may be necessary to clear the excess hormones from the system, but should only be done under the supervision of a qualified health professional. Supporting a healthy female reproductive tract is a process that should continue past childbearing years. Yoga postures or exercises such as kegals will tone the pelvic area and increase circulation. Spinal and pelvic manipulation and sitz baths will also increase circulation to the female organs. Yogic exercises will positively affect glandular activity. Tai Chi warm up exercises will help to exercise the pelvic area. Eating whole, fresh, pesticide-free organic foods is important since research has shown the vitamins and minerals may be higher than in regular foods. Menopause is not a disorder - it is a natural phase of life that is accompanied by identifiable risk factors. It is not just a physical event; it is also a mental and emotionally life changing event. Even in the best of health, eating the best diet, the body shifts, skin wrinkles and other changes occur over the years. In nature we see these same cycles of change; all of life, trees, flowers, the animals go through these cycles. It is important to be well informed about the many integrative treatment options available to you. Make informed decisions based on the values, priorities and concerns that are most important to you.

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