"*Integrating the Nutrition-Health connection*" Vol.3, #6, Nov-Dec 1996

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Menopause:

Hormone Replacement Therapy: an Oxymoron?

Is hormone replacement therapeutic? This appears to be very controversial these days. In fact, in April of this year, The Journal of NIH Research (a publication of the National Institutes of Health) featured a special section on, "Controversies in Science: Hormone Replacement Therapy" (The Journal of NIH Research. 1996;8(4):40-44). Hormone replacement therapy (HRT) is hormonal replacement to delay menopause, which involves administration of estrogen and sometimes synthetic progesterone. On the, "Pro" side, Janet Stanford from the Fred Hutchinson Cancer Research Center in Seattle spoke in favor of HRT, saying that even though estrogen raised the risk for endometrial cancer, the issue of raised risk for breast cancer was controversial, and that benefits outweighed risks for postmenopausal women. The benefits she listed were: 1. decreased symptoms, and 2. decreased risk for coronary heart disease and osteoporosis. Graham A Colditz, Associate Professor of Medicine at Brigham and Women's Hospital and Harvard Medical School, presented the con side with a magnitude of evidence which demonstrates a significant increase in mortality and morbidity from breast cancer attributable to HRT, and argues that, "use of postmenopausal estrogens should not be considered a first-line approach...". Colditz also notes that failure of European studies to show decreased risk with added progesterone could be due to the synthetic quality of the progesterone (more on natural progesterone on p. 5).

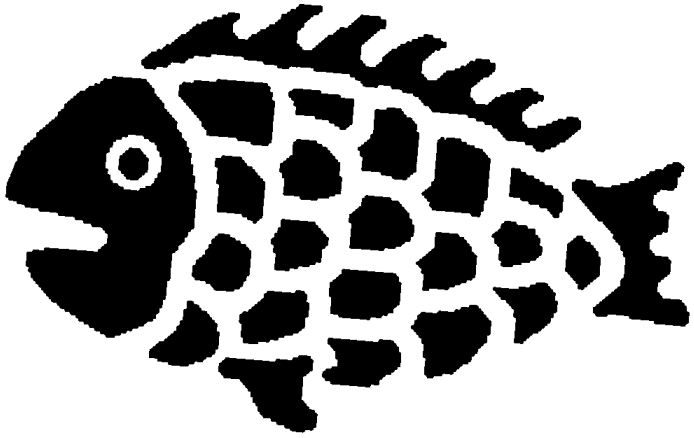
As for the claimed benefit of decreased menopausal symptoms with HRT, it is known that estrogen decreases hot flashes and vaginal dryness, but that it can also cause side effects such as weight gain, bloating, moodiness and irritability. It is interesting to note that these side effects mimic the PMS symptoms which appear in women who are in estrogen dominance when the progesterone falls so rapidly before menstruation (both hormones fall, but the body still produces more estrogen than progesterone) - there are many who believe that progesterone is the forgotten hormone, and that balance is the key. "Estrogen, if unopposed by progesterone, tends to irritate the nervous system. Progesterone, on the other hand, is associated with tranquility" (Dr. Christiane Northrup, MD. Women's Bodies, Women's Wisdom. 1995, Judy Piatkus Publishers, Ltd. London, England). Synthetic progesterone has side effects, whereas natural progesterone appears to have benefits without side effects (see p. 5)

As for the second claim, does estrogen reduce risk for heart disease and osteoporosis? Celia Wright (Menopause the natural way. Positive Health. April/May 1996;(11):12-15) points out that the estrogen contained in birth control pills is associated with increased risk of clotting and salt retention, which can lead to hypertension, heart attacks, and stroke. Graham A Colditz (con side of HRT noted above) would argue that even if estrogen does decrease risk for heart disease, it increases breast cancer so much that it should not be looked at as a, "first line approach". As for osteoporosis, even though estrogen may slow bone loss some by inhibiting the osteoclasts that break bone down, it may be progesterone that is the key hormone, because it has a positive effect on the osteoblasts, which build bone (Lee, J. MD. Natural Progesterone: The multiple roles of a remarkable hormone. BLL Publ. Sebastopol Ca. 1993). (See below for more on natural progesterone and osteoporosis).

"This is serious news. Millions of women are taking estrogen in the belief that it will keep them young, when it seems there is a real danger that it might not even keep them alive" Celia Wright (Menopause the natural way. Positive Health. April/May 1996;(11):12-15)

Endocrine Disruption in the Environment

Breast cancer cases in the US increased by 53% just between 1950 and 1989. New research demonstrates a 30 year parallel rise of pesticide use and breast cancer in the US. Pesticides contain xenoestrogens, a chemical substance which mimics estrogen when it's stored in the human body. Xenoestrogens are stored in body fat and accumulate in areas of the body where fat content is high - for example, the breasts. Unlike the "phytoestrogens" in plants which have a beneficial effect on hormonal regulation, xenoestrogens interfere with the normal process of hormonal regulation in women's bodies and accumulate over time. Xenoestrogens are being implicated in disorders ranging from infertility and endometriosis to ovarian cancer and breast cancer. (Sojourner, March 1994).



Some scientists have attributed recent sex abnormalities in animals to pollution by these xenoestrogens. In Britain, for instance, male trout produced female proteins; Great Lakes salmon grew enlarged thyroids, and in polluted spots on both U.S. coasts, male gulls were feminized and females developed an extra oviduct. This all reflects the basis for the emerging science of endocrine disruption... "Scientists have theorized that these abnormalities all resulted from exposures to chemicals that mimic or counteract hormones in the body" (New theory suggests sex in danger. The Osteopath. Summer 1995; 1(3):24).

Louis Gillette, the zoologist who traced the Lake Apopka alligator decline to pesticide residues, is one of those scientists. "It's clear that there are compounds that we are releasing that are endocrine disruptors" (ibid, p. 24). Louis is among a growing group of scientists who have suggested that hormone like chemicals could be related to the surge of disorders in human reproductive organs - from declining sperm counts to surging breast and prostate cancers - in the industrialized world since World War II. Theo Colborn, a senior scientist for the World Wildlife Fund, has suggested that endocrine disruptors could be the cause not only of increases of prostate cancer, but testicular cancer and uterine disorders, and the reported 20 to 50 per cent drop of sperm counts in several Western Nations (ibid, p. 24).

Menopause

Menopause refers to a women's last menses. Menopause usually occurs in a woman's late 40's to early 50's, but can vary widely between each individual. Menstrual cycles become less frequent. Physiologically, the ovaries, as they age, are unable to respond to Follicle-stimulating hormone (FSH) and Luteinizing hormone (LH) stimulation. As a result, estrogen production decreases, and there is no "corpeus luteum" to produce progesterone. The span of time before the last period, which can last for a few months to several years, is known as, "perimenopause".

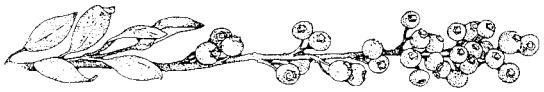
Signs and Symptoms of Menopause:

- irregular periods; eventual ceasing of menstruation
- hot flashes
- memory loss
- irritability/mood swings
- nausea
- depression
- anxiety
- vaginal dryness and pain
- water retention
- change in sleep patterns
- low sex drive
- heart palpitations
- night sweats
- nausea
- insomnia
- inability to concentrate
- incontinence
- weight gain

Physiology of Menopause:

In four years, when the post-war baby boom bulge reaches the zenith of middle age, 19 million women - 14% of the population - will be in peak menopause years. 75-80% of these women will suffer one or more symptoms; only 10-35% will seek professional help. "Meno" refers to monthly, and "pause" means to stop. Even though a woman's periods may cease, her body doesn't just stop making estrogen completely. It continues to produce estrogen even after menopause, but at much lowered, more consistent levels. After menopause, the ovaries continue to produce some estrogen as well as androgens (male hormones). Androgens play an important role in sexuality and health in general. They promote muscle strength, vaginal elasticity, and sex drive. Even women in their eighties continue to produce small amounts of androgens.

Estrogen is also produced from the adrenal glands, and the adrenals will try to "take up the slack" when estrogen production from the ovaries declines. The adrenals produce mineralcorticoids, glucocorticoids, and gonadocorticoids (sex hormones). One of the sex hormone gonadocorticoids, dehydroepiandosterone (DHEA), is an androgen that is a precursor for androstenedione, and ultimately estradiol. "Maintaining healthy adrenals may be one of the best ways to ensure continued estrogen production and a smoother transition" (Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989, p. 30).



The Timing of Menopause

There are many factors which influence the timing of menopause. Some women menstruate even well into their 60's, and the mean age of menopause has increased 4 years over the past century.

Some of the influencing factors include:

Lifestyle factors:

Nutrition and Exercise - active, well-nourished women experience later menopause.

Smoking - smokers experience earlier menopause; central nervous system activation may interfere with hormones.

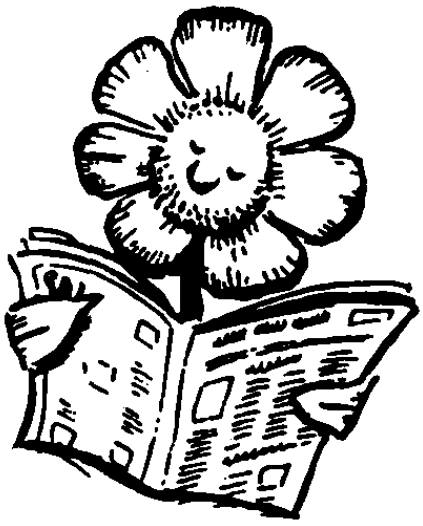
Nature vs. Nurture: Women tend to follow the patterns set by their mothers, however it is not known if this is genetic or environmental influence.

Trauma: can trigger premature menopause (before age 40). Prolonged stress can halt sex hormones.

Continuous low body weight: will bring on early menopause; if the point of anorexia is reached, the ovaries may even shut down prematurely. **Excess body weight**, on the other hand, can delay menopause. Since estradial is produced in fatty tissues from androstenedione, extra fat increases the production of this hormone.

Surgery: If the ovaries are surgically removed (oophorectomy or ovariectomy), menopause begins immediately.

Disorders (especially of the endocrine system): Cancer of the breast/uterus, fibroids, and diabetes are all conditions which can delay menopause. (Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989, p. 19).



News Flash on Hot Flashes:

In the normal menstrual cycle, the hormone Follicle-stimulating hormone (FSH) acts on the follicle to develop into an egg, with resulting release of estrogen. This causes Luteinizing hormone (LH) to be released, with resulting ovulation. When the egg has been released, the remainder of the follicle, called the, "corpeus luteum", produces progesterone and estrogen. As a women approaches menopause, the follicles fail to react to stimulation by FSH and LH. Consequently, the body keeps producing more and more of these hormones,, hoping for a response. One of the most plausible explanations for hot flashes is that the high level of these hormones causes blood vessels to dilate, raising temperature. Release of FSH and LH is controlled at the level of the hypothalamus, the area of the brain which is responsible for temperature regulation. Also, it is believed that estrogen/progesterone may help maintain capillary tone.

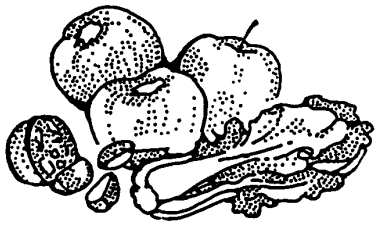
Natural Progesterone: *Natural progesterone is a term for the progesterone found in plant sources (actually precursors) that mimics the structure of progesterone in the body. Wild yam, for instance, is a high source of diosgenin, which is the precursor to natural progesterone. Progestin, on the other hand, is a term for synthetic progesterone sometimes prescribed in conjunction with estrogen for HRT. The molecular structure is somewhat altered (because the structure of natural progesterone cannot be patented by drug companies), and may be responsible for the side effects attributed to this synthetic variety. It has been likened by Dr. John Lee, who has researched and written a book on natural progesterone, to a cook who needs eggs for a recipe and is given cheese - the effects just aren't the same!*

The decision to replace, or not to replace, and with what, remains an individual decision. As Linda Ojeda points out, it's a decision which should not be made casually (Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989, p. 107). Two excellent reference books are **"Menopause without Medicine"**, by Linda Ojeda, PhD (Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989), and, **"HRT, Yes or No?"**, by Betty Kamen (Kamen B. HRT, Yes or No?, Nutrition Encounter, Novato, Ca. 1993). Aside from raising the risk for breast cancer, estrogen replacement is suspected of also raising the risk for uterine and endometrial cancer. In 1984, the NIH Concensus Development Conference issued an official statement stating that ERT places women at high risk for endometrial cancer. (What your doctor won't tell you about menopause and osteoporosis, Alleger, I., reviewing "Hormone replacement therapy: yes or no? by Betty Kamen PhD", Townsend Letter for Doctors, June 1994, p. 5). "Natural progesterone decreases the risk for breast cancer, and helps to reverse osteoporosis, and is very effective in treating PMS... It is interesting to observe that in a certain island culture where yams containing progesterone precursors are a major staple of the local diet, libido is high but birth rate is relatively low. ...These people appear to be extremely happy!" (ibid, p. 5).

In an excellent review section of progesterone and estrogen therapy found in, "The Yeast Connection and the Woman", by William Crook, MD (Professional Books Inc. Jackson, Tenn. 1995), the author discusses some of the leading authorities, including Betty Kamen, Dr. Christiane Northrup, and Dr. John R. Lee, MD, among others. Dr. Crook points out one of the current theories that natural progesterone builds bone mass, and cites observations by Dr. Lee and Jerilynn Prior, MD, as reported in Betty Kamen's book, which corroborate the theory. While estrogen may have an effect on osteoclasts to slow bone loss, progesterone has an effect on the osteoblasts, which can build bone (Lee, J. MD. Natural Progesterone: The multiple roles of a remarkable hormone. BLL Publ. Sebastopol Ca. 1993).

"...a growing number of doctors believe that if natural products were used, medical risks and side effects would be considerably lessened. Research using hormones from natural sources have the same benefits as synthetics but fewer side effects. A significant finding showed that the adverse effects of the synthetic progestins on blood-fats and cholesterol levels were eliminated with natural progesterone" (Hargrove J et al., Menopausal Hormone Replacement Therapy with Continuous Daily Oral Micronized Estradiol and Progesterone. Obstetrics and Gynecology. 1989;73:606, as cited in: Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989, p. 107).

Help for Menopause:



GLANDULARS: "In many cases, these symptoms (menopausal) result from a sudden drop in ovary function, and they can be remedied by supplementing the diet with raw female glandulars" (Raw glandular supplementation: a nutritional approach, Fitzgerald, N. 1983. Nutri books, Denver, Colo.).

VITAMIN E: is reported to alleviate many of the symptoms of menopause, from vaginal dryness and hot flashes, to breast tenderness and nervousness. "Vitamin E is a hormone normalizer... appears to have a stabilizing effect on estrogen levels, increasing the hormone output in women who are deficient and lowering if in those who are prone to excess" (Ojeda, Linda, PhD. Menopause without Medicine. Hunter House Publ., Alameda Ca. 1989). Dr. M. Werbach, MD, cites several trials from the 40's and early 50's, which found that alpha tocopherol given in doses of between 20 and 100 mg from one week to several months reduced the vasomotor symptoms (such as hot flashes) and other menopausal complaints of most of the women being treated" (Werbach, MR, MD. Nutritional influences on illness: menopausal symptoms. Int J of Alt & Comp Med, July 1994;19). Improvement included proliferation of new blood vessels in the vaginal wall. In one of the studies, symptoms recurred when vitamin E supplementation was resumed.

BIOFLAVONOIDS and VITAMIN C (Clinical Trial): Thirty six patients had surgical menopause and 58 had undergone physiological menopause. The subjects received a supplement containing a hesperidin bioflavonoid combination (200 mg) with 200 mg of vitamin C in each tablet (6 daily) in comparison with an estrogenic substance (and controlled placebo). "The bioflavonoids were markedly superior to the other preparation's relief of the hot flashes. The apparent benefit may be due to the bioflavonoids and/or vitamin C. It is believed that estrogen's presence creates a certain degree of capillary tone which prevents excessive vasodilation. With menopause, this capillary tone is not maintained. Bioflavonoids appear to restore the endothelium to this normal structure and help reduce the hot flashes and vasodilation". (Non-hormonal control of vaso-motor flushing in menopausal patients, Smith, CJ, MD. Chicago Medicine, March 7, 1964). Also, bioflavonoids are high in the phytoestrogens that can relieve symptoms.

PLANT HELP: Dong quai is a Chinese herb high in phytoestrogens; it relieves, "hot flashes, vaginal dryness, and depression (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY, p. 241). "Scientific investigation has shown that dong quai produces a balancing effect on estrogen activity and a tonic effect on the uterus (Murray, M.T., N.D. Natural Alternatives to Over-the-Counter and Prescription Drugs. 1994. William Morrow and Company, Inc. NY, NY). Red raspberry and squaw vine are helpful in treating menopause, and licorice stimulates estrogen production (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY, p. 241). Soy foods (i.e. soybeans and tofu), are high in phytoestrogens.

BLACK CURRANT SEED OIL (BCSO): Black currant seed oil not only balances essential fatty acids (required for healthy skin and hormone production), but it also produces prostaglandins which are antiinflammatory. BCSO is, "important for production of estrogen" (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY, p. 241).

WHEAT GERM OIL: Wheat germ oil is a good source of essential fatty acids; it is also high in vitamin E and octacosanol content. "Wheat germ has long been known for its many benefits", which include properties such as tissue oxygenation (Balch, J.F., M.D. and Balch, P.A., C.N.C. Prescription for Nutritional Healing. 1990. Avery Publishing, Garden City Park, NY, p. 44). Dr. Walter Schmidt, D.C. recommends cold processed wheat germ oil whenever the steroid hormone precursor factors are needed (Schmitt, W.H., D.C. Common Glandular Dysfunctions in the General Practice. 1981. Applied Kinesiology Study Program, Chapel Hill, NC). This is probably why wheat germ oil was utilized in post-World War II days to restore the menstrual periods of women who had been interned in war camps, suffering from poor nutrition and shock.

Please address any comments/questions to the editor:

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