

Managing the Aging Process After Menopause

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In the past, doctors advised post-menopausal women to take the hormones estrogen and progesterin to help relieve symptoms of menopause. This hormone replacement therapy (HRT) was thought to help strengthen bones and prevent heart disease. A few small studies also suggested that HRT might lower a woman's risk of developing Alzheimer's disease.

But when more thorough scientific studies were done, the results were surprising. HRT did help strengthen bones, but it also increased the risks of both heart disease and breast cancer. HRT also raised rather than lower a women's risk of developing Alzheimer's disease. In fact there is a growing body of evidence that suggests women should not take HRT to prevent diseases associated with aging, such as heart disease or Alzheimer's disease.

In July 2002, the NIH (National Institute of Health) stopped a large study on Hormone Replacement Therapy early because of a significant increase in breast cancer risk for women taking a certain type of hormone replacement treatment.

The women who participated in the study did not have a personal history of breast cancer. The study stopped by the NIH looked at one particular type of HRT: estrogen plus progesterin. The study was stopped because researchers found an increased risk with HRT for breast cancer, heart attacks, strokes, and blood clots.

The researchers found that over the period of a year, compared to a group of 10,000 women not taking HRT, in a group of 10,000 women taking estrogen plus progesterin: 8 more would develop invasive breast cancer: 7 more would have heart attacks: 8 more would have strokes: 8 more would have blood clots in their lungs. This translates into a relative risk increase for an individual woman taking estrogen plus progesterin of: 26% for breast cancer: 41% for strokes: 29% for heart attacks.

Researchers in another study found that women who had used estrogen with or without progesterin for 57 months (4 years and nine months) or more in the recent years before diagnosis had a 60% to 85% increased risk of breast cancer. They also found that the risk of getting lobular breast cancer (lobules are the glands in the breast that make milk) increased by about 300%, while the risk of non-lobular (mostly ductal) breast cancer increased by about 50%.

These numbers represent the relative increase in breast cancer risk with recent long-term HRT use. To understand what this might mean for you, it helps to think about the absolute risk increase. For example, let's say that for women between 40 and 59 years old, the average risk of getting either ductal or lobular breast cancer is about 4%. Looking at each type separately, there's a risk of about 0.4% risk of getting lobular carcinoma and about 4% risk of getting ductal carcinoma.

According to this study, with about 5 years or more of recent HRT use, the same group of women would have a 6% chance of getting ductal carcinoma (an increase of 50% over 4%) and a 1.2% chance of getting lobular carcinoma (a 300% increase over 0.4%).

So, although, hormone replacement therapy (HRT) is the most effective treatment for hot flashes and other symptoms of menopause, doctors usually advise women who have had breast cancer not to take hormone replacement therapy. This is because HRT contains estrogen, a hormone associated with the growth of certain types of cancer cells.

Long-term exposure to higher-than-average levels of synthetic estrogen is a significant risk factor for breast cancer. The higher levels of estrogen, whether coming from the body's own production or from external sources, such as hormone replacement therapy or phytochemicals is a matter of great research interest and also an issue in health and quality of life for the post-menopausal women. Such comparative studies in reasonably large number of women in different cultures would yield medically more meaningful data.

In 1997, it was reported in the British Medical Journal that an analysis of 22 studies shows that synthetic hormones do not prevent heart attacks. Another study concluded that synthetic hormones increase the risk of a blood clot four-fold. Although the risk of blood clots appears to decline after the first year of use, and cardiovascular benefits-if any-may increase after years of use, the overall consensus is that women should not take synthetic hormones for heart attack prevention. How could something so promising turn out so tragic? Maybe it would work in healthy women, they suggested. The most common argument was that the synthetic progestin canceled out the good effects of synthetic estrogen. Studies show that adding progesterone to estrogen replacement dampens the lipid-lowering effects of the estrogen. However, this argument doesn't hold up because although synthetic progesterone does reverse some of the beneficial effects of estrogen on lipids, it doesn't completely obliterate them. This has been confirmed in studies that show no difference in heart attack incidence when progestin is added to synthetic estrogen. Also, it is unlikely that its lipid effects account for estrogen's heart benefits.

There is no need for scientists to scramble for an explanation, just look at research more comprehensively and look at it holistically. And in this quest, I think it is necessary also to evaluate the symptom of fatigue.

Fatigue is a real symptom in breast cancer treatment—and that's a big part of the problem. It indicates an important underlying process. A breast cancer patient undergoing treatment gets tired from exertion. If she gets enough sleep she will usually feel better the next day. It's a daily lack of energy, a kind of weakness or inertia that pervades your whole body. It includes a loss of interest in people. Physical exhaustion blends with low spirits, and that is the general idea of "fatigue". Fatigue is not very precise but it does have cause-and-effect.

Contrary to the notion that, "If you're in the midst of breast cancer treatment, your body is in a war against cancer. It needs all its resources to fight the disease, so it shuts down your energy for other activities that would take away your strength from the battle.

Fatigue is the result." is the hard and cold possibility that the radiation or chemotherapy is actually generating so many free radicals that deplete the mDNA and that precipitates

fatigue or the cancer is associated with free radical damage that is also depleting m DNA. Phytoestrogens are part of a group of substances known as phytochemicals-beneficial substances from plants. One of the ways phytochemicals may protect against heart disease is by scavenging free radicals. Free radicals oxidize fat. People with heart disease have abnormally high amounts of oxidized fat in their arteries. The antioxidant protection of phytochemicals also decreases DNA damage to mitochondria. This is important because mitochondria are the power source for the heart. When they break down, heart muscle suffers.

Antioxidant reserves are low after a heart attack indicating a plausible sudden increase just prior to a heart attack and should be replaced. A study in rats shows that vitamin E supplements improve cardiac function after a heart attack. So does curcumin, a phytochemical from a root similar to ginger. Lycopene, a carotenoid that gives tomatoes their red color, is also heart- protective.

Phytochemicals can be classified into categories. Flavonoids are a type of phytochemical that has been shown to lower the risk of heart attack, as well as lower mortality from heart disease. This protection is above and beyond that provided by antioxidants C and E. 17b-estradiol is a synthetic form of estrogen made from plants. 17b-estradiol improves heart function, lowers cholesterol and elevates HDL, the "good cholesterol." 17b-estradiol estrogens also have a more favorable effect on blood sugar than Premarin. This is important, as disruptions in glucose tolerance have been linked to heart disease.

Soybeans and other plants appear to protect against heart disease without the side effects of synthetic estrogens, which carry with them a four-fold increased risk of blood clots and a 30% increased risk of breast cancer. Instead of creating life- threatening conditions, phytoestrogens and other plant substances appear to protect against them.

The American diet is rich in n-6 polyunsaturated fat, present in oils such as corn and safflower. The latter fat type, when combined with a lack of antioxidant vitamin E, has adverse effects on arteries. In Israel, where n-6 polyunsaturated fat in the diet is even higher than in the U.S., there is high incidence of cardiovascular disease and cancer in women. Quercetin and catechins can reverse this effect by conserving vitamin E. Tea contains phytochemicals known as polyphenols that protect against heart disease. In a study from Harvard Medical School, drinking one or more cups of tea a day slashed heart attack risk in half. It has been demonstrated that the antioxidant power of single phytochemicals such as equol (from soy) and coumestrol (from clover and alfalfa sprouts) is as strong, or stronger, than 17b-estradiol. Several plant substances, including a flavonoid in apples, appear to have both the estrogenic and the antioxidant power of 17b-estradiol. Apples were a main source of flavonoids in two studies showing that flavonoids reduce heart disease in humans.

The heart-protective effects of flavonoids are apparent in a study on doxorubicin ("dox"). Dox is used as chemotherapy in breast cancer, but it's toxic to the heart. Researchers in the Netherlands have shown that flavonoids protect mice from dox cardiotoxicity almost completely.

There are over 4,000 flavonoids. They are found in tea, grapes, onions citrus fruit, and many other plant products. Two of them, quercetin (onions, red wine, broccoli) and

catechin (tea) greatly reduce free radicals created by diets high in poly and monounsaturated fats.

The most well studied phytoestrogens are from soy, genistein and daidzein. Genistein possesses strong antioxidant action, and lowers cholesterol. The best study to date on soy and heart disease was done on monkeys. It found that soy greatly reduced atherosclerosis. Soy also decreased lipid peroxidation, improved insulin sensitivity, and improved lipid profiles.

New research on hibiscus sabdariffa flower (also known as Indian sorrel or Florida cranberry) extracts show that the flower contains flavonoids, polyphenolic compounds and anthocyanins which are strong anti-oxidants and may help to combat heart disease just like red wine or tea.

While data is accumulating on synthetic estrogens, natural estrogens are safe and available, one thing is clear - plant-derived forms of synthetic estrogen will reduce heart attack risk. And the contest is between phytoestrogens and synthetic estrogens to replace the female body's own estrogen.

What has been overlooked in medical science is to look in the direction of enabling the body to produce its own estrogen at a higher level than in the post menopausal stage - say at least 50% of the level in the prime of youth benchmarked at around 26-28 years. There is a real possibility of identifying plant antioxidants that help the post-menopausal female body to produce more estrogen to improve health and quality of life and prevent heart attacks or cancers.

Estrogen is not one hormone. It is the name of a group of hormones. There are three principle forms of estrogen found in the human body estrone, estradiol and estriol, also known as E1, E2 and E3 respectively. There is also a group of compounds called phytoestrogens, generally found in food, which can have "estrogen like" effects in the body. Estradiol (E2) is the primary estrogen produced by the ovaries. Estrone (E1) is formed from estradiol. It is a weak estrogen and is the most abundant estrogen found in the body after menopause. Estriol (E3) is produced in large amounts during pregnancy and is a breakdown product of estradiol. Estriol is also a weak estrogen and may have anti-cancer effects. Before menopause estradiol is the predominant estrogen. After menopause estradiol levels drop more than estrone so that estrone is the predominant estrogen in post-menopausal women.

Natural estrogen produced by the female body is a powerful antioxidant with anti-aging properties that protects the body by preventing the depletion of mDNA or scavenging free radicals that deplete mDNA, including mDNA in heart muscle or cause cancers in the body. The common symptoms of menopause, including tiredness and muscle pains, vaginal muscle atrophy may partly or largely be due to the decrease of mitochondria in cells throughout the body as estrogen levels drop while synthetic estrogens may work to deplete mDNA in heart muscle or may be producing free radicals that deplete mDNA or cause cancers and their effects are seen when used for more than two or three years. And this prescription may be paradoxically tragic because it is administered to women who have almost lost all the antioxidative protection of their natural estrogen.

Currently phytoestrogens have one edge over synthetic estrogens on one extremely favorable account - they are antioxidants and perhaps they ought to be used in combination of two or three plus flavonoids while other synthetic estrogens must be evaluated for the mDNA depletion activity in the heart muscle or free radical generating activity in the body. I think that is an essential safety protocol because post-menopausal women are a risk group for free radical damage and therefore more susceptible to vaginal muscle atrophy or vaginal yeast infections or cancers caused by free radicals or immunotoxic chemicals and drugs or heart attacks caused by depletion of mDNA in the heart muscles. The fact that premature menopause can occur due to chemotherapy, radiotherapy or free radical damage to the ovarian follicles adds greater importance to such a protocol in drug development for use in post-menopausal women.

Biologically, menopause is not a medical problem and it is not entirely correct to say that “she was diagnosed with menopause”. It is not a medical problem that needs “treatment” although it is associated with sleep disorders but sound medical advice and support helps. Menopause is a natural aging process and must be managed in that perspective. There are always more sleeping problems with age. Menopause, however, is a very common time for women to begin or to experience worsening sleep difficulties. We do not know why menopause causes a jump in more sleep disturbances and it may just be that hot flashes associated with menopause tend to wake women up frequently during the night. Evidence that estrogen plays a role in sleep disturbances comes from the fact that perimenopausal women who presumably have declining estrogen levels, have a greater degree of sleep disruption than do younger premenopausal women. The following problems may alert you to a sleep disorder:

- restless sleep • morning headaches • memory lapses • irritability • general lethargy/fatigue • slight disorientation • personality changes • sexual arousal dysfunction • obesity (losing weight can become difficult but obesity may also be a cause)

This is different from difficulty in falling asleep. Sleep disorders, especially hot flashes between 2 – 5 am may disrupt melatonin secretion. Melatonin is a brain hormone that is secreted by the pineal gland. It is low during the day and peaks in the middle of the night. Exposure to light and dark controls its secretion rather than when sleep occurs. Melatonin regulates body temperature, the sleep cycle, hormone activity and other circadian functions run by the body's internal biological clock. At night, higher levels of melatonin are released to induce sleepiness; levels drop during early morning hours and throughout the day to promote alertness. Disruptions in this normal secretion pattern have been linked to various types of sleep disturbances. It has been well documented to be lower than normal in subjects with insomnia and administration of it may improve sleep problems in some people. Melatonin levels are lower in menopausal women who have insomnia and higher in menopausal women with depression and hyperprolactinemia. The hormone is a marker for circadian rhythm disturbance (as is cortisol) but not necessarily something that needs to be replaced.

Melatonin is a potent natural anti-oxidant and can also be used as a cancer preventive. Inevitably, melatonin levels decrease with aging and therefore it may be used as an anti-aging aid as well. Melatonin is also one of the hormones that controls the timing and

release of female reproductive hormones. As a result, melatonin helps determine when menstruation begins, the frequency and duration of menstrual cycles, and when menstruation ends (menopause). There is evidence to suggest that it may help strengthen the immune system.

The declining levels of estrogen and melatonin, both being powerful anti-oxidants are part of nature's cruel enigma in the aging process in women. They are part of nature's tools for youth, beauty and health and their decline in the body paves the aging process and robs them of youthful beauty and an energetic life and creates a health risk.

Herbs and aromas used in traditional medicine to promote restful sleep and phytochemicals that promotes relaxation together with essential minerals that helps promote nighttime sleep and supports the body's rejuvenation and repair of tissues and cells or that have some form restorative effect on the endocrine system are worthwhile considerations for research towards developing a nutraceutical approach to better manage the process of menopause and help women to enjoy a longer middle age that is active and productive.

Any approaches to help women better manage the pre and early stages of menopause ought to evaluate their anti-oxidant intake, avoid or minimize immunotoxic or free radical generating medication and must include a regime of light exercises, 5 – 10 minutes aerobics routine and 5 – 10 minutes light resistance exercises. Menopause is part of the natural aging process and that perspective must be taken into account for doctors to play a more effective role in post-menopausal health.