Menopause - Osteoporosis And The ERT Fairy Tale

By Lita Lee, Ph.D.
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This article is dedicated to all the women who are taking estrogen because they were told that it prevents osteoporosis and that the side effects are minimal. The information for this article comes mainly from the work of Dr. Ray Peat. I have also used information given in articles and seminars by Dr. John Lee, M.D., and no relation to me! Peat and Lee pioneered in gathering experimental data proving that progesterone, not estrogen, prevents and reverses osteoporosis.

What is Osteoporosis?

Osteoporosis means holey bones! What is bone tissue and why does it become holey as women approach menopause? Bone is a living tissue - mineralized cartilage - that renews itself every two to seven years depending on the type. There are two kinds of cells that work to make new bone tissue and dissolve old bone. Osteoblasts are the bone-makers. They mineralize the cartilage and that’s what makes bones strong. When its time to make new bone tissue, along come the osteoclasts. They dissolve the aged bone tissue, leaving little spaces. The osteoblasts jump in and fill up these little spaces with fresh, new bone! Sounds easy doesn’t it?

Bone making requires a balanced pH and many nutrients such as calcium balanced with phosphorus and magnesium, vitamin D in its hormonal form; vitamins K, A, E, C; minerals such as boron, sodium zinc, copper, organic silica and strontium; essential fatty acids; AND the proper hormonal balance. It is the hormonal balance that we will discuss in this article. When this delicate balance of pH, nutrients and hormones is disrupted, old bone is not replaced by new bone. This is osteoporosis.

How much bone loss occurs? Lee says that osteoporosis is epidemic in the United States to the tune of $10 billion a year. It is not uncommon for American women to have lost 30% of their bone mass by the time they reach menopause. Thereafter, they lose 1-1/2% bone mass yearly. Further, says Lee, it is not uncommon to see 50% bone loss in a 65-year old woman. This woman has a great risk of a hip fracture just by miss-stepping a little without falling down. Of those women who fracture their hips, a large percentage lose their independence of living and end up in a nursing home. Twenty-five percent of these die within two years.

What Causes Menopause?

Menopause is not a decrease in estrogen. It is caused by estrogen dominance and decreasing progesterone, which increases as we age. Is estrogen ever necessary? No way. Says Dr. Ray Peat, "Estrogen can be produced in so many different tissues, there’s no deficiency condition that has ever been defined factually. Menopause is exhaustion of the nerves that regulate the pituitary, caused by overexposure to estrogen. Thus, menopause is the result of prolonged exposure to estrogen. In addition to the estrogen produced by many different tissues, other estrogenic substances and xenoestrogens, which are not measured, exacerbate the estrogen dominance condition. These include soy products and other phyto-(plant) estrogens (such as black cohosh, sage, pennyroyal, etc.), all unsaturated oils, and synthetic estrogens in commercial meat and environmental estrogens, such as pesticides and fluoride."
The Menopause-Osteoporosis-Estrogen Connection

Doctors first thought that the increased risk of osteoporosis in menopausal women was due to a decrease in estrogen, hence estrogen replacement therapy (ERT) grew and became popular. How did this practice get started? According to Dr. John Lee, doctors studied the bone density and the estrogen levels in women five years prior to and five years after menopause. They found increased bone loss and decreased estrogen. They did not measure the level of progesterone. Had they done this, they would have found that in comparison to decreasing estrogen levels, progesterone drops even further. Thus, even though the estrogen level falls as menopause progresses, the woman becomes more estrogen dominant due to progesterone deficiency. There is approximately a five-year period prior to menopause during which the woman still has her menses while progesterone decreases. It is during this time that osteoporosis progresses and bone loss increases. Thus, progesterone regulates both menses and bone formation.

Dr. J.C. Prior, an endocrinologist from Vancouver, British Columbia, measured both the estrogen and progesterone levels in female marathon runners who had osteoporosis. Some of these women had anovulatory cycles - menses but no ovulation and others had amenorrhea - no ovulation, or menses at all. She found that when ovulation stopped, the progesterone level fell and osteoporosis began, even though these women still had adequate estrogen. Thus, Prior showed that it is the lack of progesterone, not estrogen that causes osteoporosis.

Progesterone stimulates osteoblastic (bone making) activity whereas thyroid hormone stimulates both osteoblastic and osteoclastic (bone-dissolving) activity, according to Peat. Remember, in order to make new bone, the old bone must be dissolved so that new bone can be made.

One of the toxic drug therapies for osteoporosis provides graphic evidence that bone making must be balanced with bone dissolving. Some doctors give their patients a drug, which destroys the osteoclasts. They would do this for only three months so as not to destroy them all. Sure enough, bone density increased by 5% after 3 years, yet the patient was more susceptible to hip fractures than untreated controls. What happened? The osteoclasts, having been destroyed, could not dissolve the old bone, so it accumulated at the expense of new, strong bone. The treated group had twice as many fractures as the untreated group (Lee).

Another therapy used is calcitonin, a hormone made by the thyroid gland. Doctors gave calcitonin from the salmon pituitary to certain patients to stimulate bone formation, but after three months, the patient formed antibodies against this hormone and the newly formed bone dissolved. Lee says it is common sense that calcitonin will not reverse osteoporosis. His evidence? There are thousands of women who have had thyroidectomies who are given only thyroid hormone and no calcitonin. These women have the same rate of osteoporosis as those who have their thyroid gland intact.
How to Reverse Osteoporosis
and Other Menopausal Symptoms, Including Hot Flashes

Nutrition and Enzyme Support

We have talked about the importance of balanced hormones, osteoblasts and osteoclasts in preventing osteoporosis. But we still need the building materials with which to construct the building - your skeleton! We have already listed the nutrients most important in the bone making process. How do we get these? Can we just put all these things in a bottle and take several tabs a day? If this worked, then we would not have an osteoporosis epidemic in this country.

Back to food! Natural, whole, unprocessed, organic foods contain just about all the building materials required to build bones. All the minerals and vitamins you need may be found in whole fruits, fruit juices, organic, cultured and raw dairy, green, leafy vegetables, whole grains, and so on. The problem is, most people eat processed foods, which have been stripped of their nutrients. So they have no building materials with which to build their skeleton.

Next, suppose you get this food but can’t digest it? Whatever you can’t digest becomes a toxin, which can cause many health problems that you may not correlate with bad digestion, such as acne and other skin problems, hives and rashes, colon problems, lung problems, constipation or diarrhea, and so on. The simplest and least expensive way to correct this situation is to eat whole organic foods and to take food enzymes to enhance their predigestion in your stomach! Digested food does not cause allergies or any other symptoms. In fact, your body is driven by digested food.

Secondly, certain enzymes are deficient when female problems occur. Protease, the enzyme that digests protein is very important in calcium metabolism, and is needed to optimize both protein-bound calcium and to provide the optimum acidity required to carry ionic calcium. Many women who have PMS are protease deficient. In menopause, there is often a lipase deficiency. Why? Digested fat is required in the production of hormones. In addition to eating whole foods and optimizing their digestion with food enzymes, many women benefit from taking extra protease and/or lipase enzymes.

There are dietary risks to increased osteoporosis. These include: high phosphorus foods such as soda pop (Coke, Pepsi etc.) and excessive consumption of yeast. Many people believe that animal protein, especially meat, can cause osteoporosis but, it’s not the protein in the meat, it’s the phosphorus, which must be balanced with calcium.

In the United States, many people eat lots of meat and consume processed foods (refined sugars and carbohydrates), which have very little calcium. Excess sugar causes calcium loss and upsets the delicate ration of calcium to phosphorus. In addition to estrogen other drugs that increase risk to osteoporosis include: Lasex (causes the greatest calcium loss of all diuretics), fluoride (proven toxic to bones), and corticosteroids among other drugs.

Reversing Osteoporosis with Progesterone

In the past, x-rays were the only method to determine bone loss, but this technique has a 30% error. More recently, new methods of measuring bone density were developed which are 98% accurate. These are the dual photon absorptiometry (DPA) and the dual energy x-ray absorptiometry (DEXA). Lee measured the increase in bone density among 100 patients who were given progesterone therapy. Over the three-year test period, bone density increased by 15.4% average whereas the expected average bone loss per year
was 1.5%. His results were independent of age and estrogen therapy. In other words, some patients were taking estrogen and some were not.

**Hot Flash Relief**

According to Peat, the typical menopausal symptoms of osteoporosis and hot flashes coincide with loss of the protective steroids, pregnenolone and progesterone. Thyroid hormone is required for the production of both, as well as DHEA. Progesterone opposes both estrogen and cortisol. Pregnenolone lowers cortisol. Hot flashes are associated with unopposed estrogen, and increased adrenalin and cortisol. Symptoms worsen as the levels of adrenalin and cortisol rise. Decreased progesterone causes a rise in certain pituitary hormones: follicle stimulating hormone (FSH) and prolactin. Peat calls these the menopausal hormones. Pregnenolone, the precursor of progesterone, and GABA, an amino acid secreted by nerve terminals in the spinal cord and certain areas of the brain, are the main inhibitors of these hormones.

What causes progesterone to fall with aging? The production of progesterone from cholesterol is dependent on adequate cholesterol, adequate thyroid function plus vitamin A and certain enzymes. The worst hot flashes occur in the hypothyroid woman with a high lifetime estrogen level. This woman may have had early onset menses, as early as age nine. When menses begins at such an early age, there is a characteristic body type says Peat. Their legs stop growing at the onset of menses so they have 9-year old legs the rest of their life. They may have small breasts as well. However, the major characteristic is broad hips.

These women have the worst time at menopause and will complain of night sweats and a pounding heart. Hot flashes usually increase at night because darkness exacerbates any stress, causes adrenalin and cortisol to rise and calcium to decrease. Hot flashes decrease during the day as the blood sugar rises. This situation is worse during the winter because of fewer hours of sunlight.

In addition, hypothyroid, estrogen dominant women cannot retain sodium, which is why many of these women crave salt and have edema (fluid retention). Other common symptoms of mineral deficiency include motion sickness and tingling or numbness in the arms or legs. Sea salt is a natural diuretic and is essential for mobilizing blood sugar, which lowers adrenalin, thus preventing hypertension and hardening of the arteries. Instead of eating salt, many patients are told to avoid salt and take a diuretic plus potassium. I recommend non-iodized, organic sea salt instead of commercial table salt because sea salt contains 48 minerals whereas table salt only sodium chloride.

Peat suggests a salty snack, or salty fruit juice before bed to help keep blood sugar up and cortisol down as the night progresses. In summary, hot flashes may be controlled by the correct use of natural progesterone and a good thyroid glandular, plus a diet of whole foods and food enzyme therapy. Progesterone decreases hot flashes by opposing both estrogen and cortisol. Thyroid converts cholesterol to pregnenolone, progesterone and DHEA in the presence of vitamin A and enzymes.

**Estrogen Fairy Tales**

Because an estimated 15%-18% of postmenopausal women (about 3 million) currently take estrogen in the United States, the question of whether it is useful or dangerous is more than a philosophical one. I have read many articles in mainstream media publications that testify about estrogen’s great usefulness in restoring youth, preventing hot flashes, and protecting from heart disease. In these same articles, it is claimed that the risks of estrogen, such as cancer, gallbladder disease and clots, are so minimal that they’re not worthy of consideration. I wonder if the authors of these articles have read the hundreds of
medical research articles that describe the many dangerous side effects of estrogen unopposed by adequate progesterone and thyroid hormones?

An article entitled “Estrogen therapy may prevent Alzheimer’s” from the Los Angeles Times appeared in the November 10, 1993 Eugene Register-Guard. An 11-year study of 8,879 women in a Southern California retirement community showed that those who took estrogen were 40% less likely to get Alzheimer’s disease than women who did not take ERT. This would be good news if it were true, since nearly 4 million Americans have Alzheimer’s disease. In this same article it says that the absence of estrogen produces hot flashes, mood swings, vaginal itching and increased urinary tract infections and that estrogen therapy not only eases these symptoms but also prevents osteoporosis and reduces risk to cardiovascular disease. It’s no wonder that women are confused, when articles like this appear in many popular publications. Let’s explore some estrogen fairy tales.

Does Estrogen Prevent Hot Flashes?

Many women use ERT because they say it stops their hot flashes, even though they experience some of the many symptoms of estrogen dominance including weight gain, fat deposition, dark spots on their skin, migraines, and increased tendency to gallbladder disease and blood clots not to mention increased risk to cancer.

Why does estrogen diminish hot flashes? Peat says that estrogen acts like amphetamine or cocaine. Estrogen is metabolized into a cocaine-like derivative, catechol-estrogen, the product responsible for this “speeding up” effect. It increases excitation in the brain, and tones and speeds up everything, including the nervous system. It tightens the blood vessels. It’s like a continuous state of excitation and generalized energy. A hot flash occurs during an adrenal “relaxation” or “let down” phase after the adrenalin increases leading to increased cortisol. During this letdown phase, when adrenalin decreases, cortisol increases and a hot flash occurs. Estrogen works by keeping adrenalin up so there is never any adrenalin let down. Most people think that estrogen is made only in the ovaries but this is not true. Estrogen can be made in nearly every cell of the body, but it is especially prevalent in damaged or aging tissue, especially fat cells, and breast cancer cells. This can happen in men as well as women. In both, androgens (specifically androstenedione, an adrenal hormone) can be converted to estrogen. Also, in women both the conversion of androgens and progesterone to estrogen can occur if thyroid function is inadequate.

Is Estrogen Cardioprotective?

Women are told that ERT can prevent heart disease but excess estrogen is cardiotoxic. Stampfer et. al, found that postmenopausal estrogen use for more than a few months may elevate the incidence of vascular disease.

Wilson et. al, found that no benefits from estrogen use were observed in a study of 1,234 postmenopausal women, aged 50-83 years. Disadvantages included premature vascular disease and stroke, breast pathology, increased clotting and increased risk to tumors including cancer.

Does Estrogen Prevent Alzheimer’s Disease?

The most common condition associated with Alzheimer’s disease is heavy metal poisoning, including aluminum and mercury. Gajdusec, a researcher of brain diseases, found that in degenerative brain diseases, there are many damaged areas, which contain aluminum. In other areas, he found heavy metals, including iron. If no heavy metals were present, he found calcium. The mitochondria are poisoned by...
abnormal deposition of any metal, whether aluminum, mercury, iron or calcium. All trigger lipid peroxidation.

Peat believes (not proven) that iron toxicity is the first trigger of Alzheimer’s disease, then excess estrogen and excess cortisone. Why iron? The body bio-concentrates iron. Inorganic iron is added to ALL processed foods, as required by the FDA.

**Are the Benefits of Estrogen Worth the Risks?**

What benefits? We looked and couldn’t find any. What risks? So, if estrogen therapy has no benefits, but lots of risks, why on earth would anyone take it?

(Fill in your answer here ________________________________).

**How Progesterone is Absorbed**

There is controversy about how progesterone is absorbed. Most articles I have read say that progesterone is best absorbed transdermally. Not so, says Peat, who has done a lifetime of research on progesterone and female problems. He says that progesterone is best absorbed orally, next vaginally and third transdermally (anywhere on the skin). When I asked for a reference he told me a story. “A Doctor I know did not believe the oral absorption route so he decided to do an experiment. He took 1/4-teaspoon of progesterone in natural vitamin E oil and then took periodic blood samples. He found that the progesterone rose immediately, and peaked at about 1-1/2 hours at about 20 ng/dl, which corresponds to the high luteal phase level. Thereafter, it tapered off.”

Peat says that progesterone is absorbed 100% orally but only 10-20% transdermally. Only fat-soluble progesterone is absorbed, orally or transdermally. If the powdered form is taken, it cycles through the liver several times and then back through the blood and out the kidneys.

Progesterone dissolved in natural vitamin E travels on chylomicron droplets, which are not lost via the liver and kidneys. Instead the chylomicron holds progesterone until it comes into contact with a red blood cell or a protein molecule. Progesterone is then released and enters the red blood cell or the blood protein, especially albumin. Red blood cells carry about two times more progesterone than the serum. So, studies that toss the RBC’s is the majority of what’s in the blood. This explains the absorption controversy.

Don’t think that any fat will dissolve progesterone. Most formulas are suspensions of progesterone crystals in some kind of fat, such as corn oil or synthetic vitamin E. The undissolved progesterone is a waste. This is a major reason why some women do not get the relief that they need. They simply are not getting enough.

Peat developed a formula containing 10% progesterone dissolved in natural vitamin E. Please note that synthetic vitamin E will only dissolve one percent progesterone. Peat’s formula is crystal-clear amber oil, which is stable indefinitely. Three drops of this oil contains about 10 mg of progesterone, the minimum
### Symptoms of Estrogen Dominance

- Early menses (< age 13)
- Early menopause
- Body shape: short legs, broad hips
- PMS, including heavy bleeding, cramps, migraines, edema
- Breast, uterine, ovarian pathology (tumors, fibroids, cystic ovaries, and so on), occurs even in children fed meat & dairy containing synthetic estrogen. Carcinogenic-especially in female organs.
- Increased fat storage
- Tissue damage, called fibromyalgia = edema + low blood sugar + inflammation
- Bruising & pigmentation on face (proof that progesterone is converting to estrogen)
- Triples rate of gallbladder disease in women on ERT
- Aging of skin, makes skin thinner (skin atrophy), decreases cell size, eliminates dendritic branches. Also true of cortisone.
- Promotes osteoporosis
- Cardiotoxic- increases vascular problems, clots
- Causes hypoxia (oxygen deprivation)
- Promotes production of prolactin (like cortisone), lutenizing hormone (LH) & follicle stimulating hormone.

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maintenance dose, according to Peat. In severe cases, Peat advises to take 3 drops every two hours five times daily for 10 days and then reducing the dose to maintenance.

Progesterone tastes bitter and some women confuse this with the taste of rancid oils. Women who are lipase deficient and have gallbladder problems may not be able to tolerate progesterone orally because it can irritate an unhealthy gallbladder. In this case, the woman should put progesterone on her food.

**Caution: Avoid Synthetic Progestins**

Please do not confuse natural progesterone with synthetic progestins. If you read the *Physician’s Desk Reference (PDR)* on each synthetic progestin, you will find a whole page of side effects, including depression, acne, weight gain, birth defects and so on. This should tell you how very different from the natural substance is the chemical mimic. So why do drugs companies make them? Because, they can only patent synthetic drugs, not natural substances. It has to do with money, not health. Of all the synthetic progestins, Provera has the most toxic side effects, according to Lee.
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