Estrogen Dominance in Pre-menopausal Women

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There are two periods in a women's life that her progesterone level is low - at puberty and again at peri-menopause (the few years right before menopause). Between puberty and peri-menopause, the production of progesterone can go astray, leading to estrogen dominance as mentioned earlier. Between this period, estrogen dominance can also be the result of excessive external estrogen intake (from diet and environment) or internal estrogen production (from obesity, birth control pills, or ovarian tumor).

Two common causes are:

A. Anovulation (lack of ovulation). Ovulation is the time of the month where an ovarian follicle releases an ovum (egg). Under normal condition, the released egg makes it way from the ovary to the uterus in preparation for fertilization. This usually happens from day 12 to day 14 of the menstrual cycle. After the egg is released, the empty follicle becomes the corpus luteum. This is the main factory where the production of progesterone takes place.

When the follicles become dysfunctional, no eggs are released. This is called anovulation. If a woman is not ovulating, there would not be a corpus luteum and therefore no increased progesterone production. **Laboratory measurement would show both a low estrogen and a low progesterone level.** Many still have a seemingly normal menstrual cycle even if there is no ovulation. The lack of progesterone, however, leads to relative estrogen dominance and symptoms like PMS, mood swings, cramps, and tender breast. **Anovulation is commonly caused by exposure of female embryos to environmental estrogen (also called xenobiotic or xenoestrogen) such as pesticides, plastic, and pollution. It is often related to a poor diet and stress.**

B. Luteal insufficiency. More frequent than anovulation, the egg is produced but the corpus luteum malfunctions. It just does not make enough progesterone. **Laboratory measurements would show a high estrogen but low progesterone,** and **typical symptoms of estrogen dominance would arise.** Without adequate progesterone, the chance of achieving pregnancy is reduced. Don't forget that progesterone is what keeps the womb going and it nourishes the fetus.

Estrogen Dominance in Menopausal Women

The predominant reason why menopausal women developed estrogen dominance is because **they are being prescribed unopposed estrogen such as Premarin as part of their hormone replacement therapy (HRT) program.** Despite decades of research clearly showing that HRT significantly increased breast cancer, millions of women worldwide are on unopposed estrogen for treatment of menopausal symptoms.

Obesity is another cause. During menopause, the amount of estrogen produced from the ovaries decreases, but not as drastic when it comes to another hormone that the ovaries produce called androstenedione (a male hormone). Fat cells can convert androstenedione into estrogen. **The amount of conversion in some people is enough to maintain a reasonable estrogen level in the body well into the 70s.** The result of excessive estrogen and absolute deficiency in progesterone is clear - estrogen dominance.

We mentioned above our body is essentially soaked in a sea of estrogen. Where does the estrogen comes from? Let us take a closer look.

Causes of Estrogen Dominance

Our body normally functions in perfect homeostasis. With the advent of society and industrial state in the past 70 years, our body has been subjected to **unprecedented insults from environmental estrogen-like hormones.** In less than one hundred years, we have managed to turn our diet from whole fruits and whole food to fast and processed food. In the past, cattle were raised on grass and natural organic feed and chickens were allowed to run free. This is in stark contrast to the commercialization of cattle and poultry farms of today where animals are in cages most of the time. Worse yet, feeds laced with pesticides and hormones, both of which have estrogen-like activities, are routinely given to animals, which in turn is passed to humans.

Women in non-industrialized cultures whose diets are whole food based and are untainted with modern processed foods and pesticides seldom suffer a deficiency in progesterone and the signs of estrogen dominance manifested as menopausal symptoms.

12 of the most common reasons:

1. Commercially raised cattle and poultry. These animals are **fed estrogen-like hormones** as well as growth hormone that are passed onto humans. It takes 60 pounds of grain, feed, and hay to produce one pound of edible beef. On the other hand, it only takes one pound of feed to produce one pound of edible fish. Deep-sea fish such as halibut, sardines, cod, and mackerel are good to consume. Young ones are often less contaminated than older fish, and smaller fish are better shielded from contamination than larger fish like sharks and swordfish. Avoid all coastal fish and shellfish, which are high in contaminants. Fish are far superior to beef or chicken in terms of hormone load. It is interesting to note that one-half of all antibiotics in the United States are used in livestock - 25 million pounds a year. These **antibiotics can contribute to hormone disruptor exposure.** The use of antibiotics is especially prevalent in poultry farms. It only takes 6 weeks now to grow a chicken to full size (down from four months in 1940). Up to 80,000 birds may be packed into one warehouse. **Feeds used contain a myriad of hormone-disrupting toxins including pesticides, antibiotics, and drugs to combat disease when so many animals are packed closely together.**

2. Commercially grown fruits and vegetables containing pesticides. If you eat in any developed countries, you are taking in pesticides from fruits and vegetables, many of which are known hormone disruptors. Approximately 5 billion pounds of pesticides, herbicides, fungicides, and other biocides are being added to the world each year. In the past 100 years, several hundred billions pounds of pesticides have been released into the environment. **Pesticides that are banned in the US, such as DDT, are being used in some other countries freely. Illegal pesticides are being used on crops that we eat everyday. It is estimated that a person eats illegal pesticides 75 times a year just by following USDA's recommendation of five servings of fruits and vegetables a day if these are purchased in regular supermarkets. Vegetables grown in developing foreign countries such as South America and Africa find their way back to our dinner table in this global community. Pesticide residues have chemical structures that are similar to estrogen. These are eventually passed onto humans**. Produce with the most pesticides reported in *A Shopper's Guide to Pesticdes in Produce* include **strawberries (contain vinclozolin, a known endocrine disruptor), bell peppers, peaches, apples, apricots, and spinach.** Foods with the least amount of pesticides include avocados, corn, onions, sweet potatoes, bananas, green onions, broccoli, and cauliflower. If you are eating non-organic fruits and vegetables, peel and wash them well with diluted vinegar. This will help to reduce pesticides on the surface. Needless to say, this will not help to rid of the pesticides inside. Discard the outer leaves of leafy vegetables, and trim fat from meat and skin from poultry and fish that tend to collect residues.

3. Exposure to xenoestrogen. When a female embryo develops in the womb, 500,000 to 800,000 follicles are created in the embryo, each enclosing an immature ovum. **These fragile ovarian follicles are extremely sensitive to the toxicity of environmental pollutants**. When the mother is exposed to toxic chemicals that resemble estrogen in its molecular structure, she may experience no apparent damage outwardly. However the baby is more vulnerable to these toxins that may damage

its ovarian follicles and make them dysfunctional. **This will not be apparent until the baby reaches puberty some 10 to 15 years later,** when symptoms of incomplete ovulation or insufficient progesterone production can be noted.

Petrochemical compounds found in general consumer products such as creams, lotions, soaps, shampoos, perfume, hair spray and room deodorizers. Such compounds often have chemical structures similar to estrogen and indeed act like estrogen. Other sources of xenoestrogen include car exhaust, petrochemically derived pesticides, herbicides, and fungicides; solvents and adhesives such as that those found in nail polish, paint removers, and glues; dry-cleaning chemicals; practically all plastics, industrial waste such as PCBs and dioxins, synthetic estrogens from urine of women taking HRT and birth control pills that is flushed down the toilet and eventually found its way into the food chain and back into the body. They are fat soluble and non-biodegradable.

4. Industrial solvents. A common source of industrial xenoestrogens often overlooked is a family of chemicals called solvents. These chemicals **enter the body through the skin, and accumulated quickly in the lipid-rich tissues such as myelin (nerve sheath) and adipose (fat).** Some common organic solvents include alcohol like methanol, aldehydes like acetaldehyde, glycol like ethylene glycol, and ketones like acetone. They are commonly found in cosmetics, fingernail polish and fingernail polish remover, glues, paints, varnishes, and other types of finishes, cleaning products, carpet, fiberboard, and other processed woods. Pesticides and herbicides such as lawn and garden sprays, indoor insect sprays are also sources of minute amounts of xenoestrogens. While the amount may be small in each, the additive effect from years of chronic exposure can lead to estrogen dominance.

5. Hormone Replacement Therapy (HRT). **HRT with estrogen alone without sufficient opposing progesterone such as the drug Premarin should be banned.** This increases the level of estrogen in the body. Premarin, a estrogen only drug commonly used in the past 40 years, is the mainstay of estrogen replacement therapy (ERT). It is a patented, chemicalized hormonal substitute that is not the same as what you have in your body. It contains 48% estrone and only a small amount of progesterone which is insufficient to have an opposing effect. The indiscriminate and over-prescription of Premarin to many who may not need it is the problem. Symptoms include water retention, breast swelling, fibrocysts in the breast, depression, headache, gallbladder problems, and heavy period. The excessive estrogen from ERT also lead to increased chances of DNA damage, setting a stage for endometrial and breast cancer.

6. Over production of estrogen. Excessive estrogen can arise from ovarian cysts or tumors.

7. Stress. **Stress causes adrenal gland exhaustion and reduced progesterone output**. This tilts the estrogen to progesterone ratios in favor of estrogen. Excessive estrogen in turn causes insomnia and anxiety, which further taxes the adrenal gland. This leads to a further reduction in progesterone output and even more estrogen dominance. After a few years in this type of vicious cycle, the adrenal glands become exhausted. This dysfunction leads to blood sugar imbalance, hormonal imbalances, and chronic fatigue.

8. Obesity. Fat has an enzyme that converts adrenal steroids to estrogen. The higher the fat intake, the higher the conversion of fat to estrogen. Overeating is the norm in developed countries. A population from such countries, especially in the Western hemisphere where a large part of the dietary calorie is derived from fat, has a much higher incidence of menopausal symptoms. Studies have shown that estrogen and progesterone levels fell in women who switched from a typical high-fat, refined-carbohydrate diet to a low-fat, high-fiber and plant-based diet even though they did not adjust their total calorie intake. Plants contain over 5,000 known sterols that have progestogenic effects. People who eat more wholesome foods have a far lower incidence of menopausal symptoms because their pre- and post-menopause levels of estrogen do not drop as significantly.

9. Liver diseases. Liver diseases such as cirrhosis from excessive alcohol intake **reduce the breakdown of estrogen**. Taking drugs that can impair liver function may also contribute to a higher level of estrogen.

10. Deficiency of Vitamin B6 and Magnesium. **Both of these are necessary for the neutralization of estrogen in the liver.** Too much estrogen also tends to create deficiency of zinc, magnesium and the B vitamins. These are all important constituents of hormonal balance.

11. Increased sugar, fast food and processed food. Intake of these leads to a **depletion of magnesium**.

12. Increase in coffee consumption. **Caffeine intake from all sources was linked with higher estrogen levels** regardless of age, body mass index (BMI), caloric intake, smoking, alcohol, and cholesterol intake. **Studies have shown that women who consumed at least 500 milligrams of caffeine daily, the equivalent of four or five cups of coffee, had nearly 70% more estrogen during the early follicular phase than women who consume no more than 100 mg of caffeine daily, or less than one cup of coffee. Tea is not much better as it contains about half the amount of caffeine as compared to coffee.** The exception is herbal tea like chamomile which contains no caffeine.

Here are some typical complaints from patients having estrogen dominance:

- My breasts are swollen and getting bigger.
- I can't put on my rings on my fingers.
- I am more impatient now than ever.
- People tell me I am too bossy.
- I am getting cramps again like when I was younger.
- I just cannot have my period.
- I miss my periods regularly.
- My periods come irregularly.
- I get scared when I see large clots during my period.
- I have Pre-Menstrual Syndrome (PMS).
- When I get a hug, my breast hurts.
- I have fibroids.
- I have endometriosis.
- I cannot fit into my shoes.
- I have a cyst in my breast.
- I feel tired all the time.