Menopause can be a difficult transition in a woman’s life. Menopause usually occurs between ages 48 and 52. The onset of hot flashes, extreme mood swings, insomnia, hair loss, uncontrollable weight gain, skin changes, vaginal dryness, decreased sex drive, the fear of osteoporosis, breast cancer, and heart disease are all a part of American women’s experience.

Menopause is a normal transition experienced by women. Women are transitioning out of the reproductive phase of their lives into a very productive and meaningful stage of their life.

It is a time when the fear of pregnancy no longer has to limit their sex life. Children are independent, and a woman can pursue interest outside the home without the burden of overwhelming family obligations. Also, women have the opportunity to focus on their personal development instead of child development.

However, for many women this transition is filled with physical and emotional problems. Why is this normal transition so difficult for so many women? Menopause is a transitional stage in a woman’s life. Hormone production can be irregular and imbalanced. An imbalance of hormones can be exaggerated by an American diet (high in fat and carbohydrates and low in fiber), a stressful lifestyle, and one’s environment. Women in other countries, who do not share our habits, do not experience menopausal symptoms.

This newsletter will look critically at menopause. We will identify fact from fiction to understand the role that hormones play in producing the symptoms of menopause.

Menopause is Not an Estrogen Deficiency Problem

Menopause occurs when a woman permanently stops ovulating, or producing an egg that can be fertilized and used for reproduction. Menopause is diagnosed when a woman no longer has a monthly cycle for a year and has an elevated blood level of FSH. FSH is elevated when a woman stops ovulating or producing an egg. FSH does not reflect the amount of estrogen a woman has in her body.

Measuring FSH level is what most doctors use to diagnose menopause. The FSH test does not measure estrogen levels, it only confirms that a woman has stopped ovulating.

Estrogen is made from a variety of sources. The ovary is only one of many sources of estrogen. Estrogen is available, because hormones made by the adrenal gland can be converted into estrogen in fat and other tissue.

Estrogen is also available through food sources such as soy and flax seed. We are exposed to many chemical substances in the environment that behave like powerful estrogens.

With the abundance of sources of estrogen available in the environment and the other sources available in the body, it seems unlikely that estrogen deficiency is the problem.

When accurate estrogen levels are obtained from the saliva, we find that most menopausal women have normal or even elevated levels of estrogen in the tissue. Blood levels of estrogen in menopause are usually low, because the estrogen is produced in the tissue and not transported from the ovary by the blood. (see Salivary Testing)

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Inside This Issue
Saliva Testing
Do I Need Hormones?
Saliva Testing

Saliva testing is the most accurate test to determine steroid hormones (i.e. progesterone, estrogen, DHEA, cortisol, and testosterone) levels. Saliva testing is much more accurate and useful than any blood test when attempting to determine who needs hormone replacement.

Steroid hormones are fat soluble. This means that they dissolve in fat or oil and not water. Oil and water do not mix. The body makes carrier proteins that can dissolve in water, that attach to the fat soluble hormones. This allows the fat soluble hormone to travel in the watery bloodstream to their target tissues.

Steroid hormones that are attached to carrier proteins in the blood are inactive. They are unable to enter the cells, because they are surrounded by a water soluble carrier protein.

If we measure the amount of hormone in the blood, more than 99% is wrapped with a carrier protein. Protein-wrapped hormone is inactive and unable to have an effect on tissues. It is unable to deliver its message to the breast, uterus, ovaries, and brain. Therefore, blood testing does not reflect the levels of active unwrapped hormone that are available to the body, which is found in saliva. Salivary testing reflects the amount of unwrapped active hormone, which determine symptoms of perimenopause and menopause.

There are a number of factors that determine how much hormone, especially estrogen, is unwrapped and active in the body. Increased weight, insulin, stress, low fiber, and high fat diets can all increase the amount of estrogen that is unwrapped. If too much estrogen is unwrapped, estrogen will produce symptoms associated with too much estrogen even though the total amount of estrogen in the blood is normal.

Exercise, high fiber diets, eating the healthy fats, eliminating stress, and avoiding external estrogens decreases the amount of active estrogen in the body.

Without salivary testing it is impossible to determine active hormones levels because there are so many variables. Not only can salivary testing measure estrogen levels, it can also determine the active amounts of progesterone, DHEA, testosterone, and cortisol. All of these hormones levels may be altered by menopause.

Hormone replacement therapy is prescribed by many physicians without utilizing an accurate test that confirms that the therapy is needed. However, millions of women have been placed on hormone replacement therapy, despite significant short- and long-term side effects. Better and safer results can be achieved by using saliva testing and working with a compound pharmacist to customize your hormone replacement.

Saliva testing is available in several labs across the country. Most non-HMO insurance companies are now covering the cost of the test. Medicare pays for saliva testing. If your insurance company does not pay, the cost is approximately $150.

Low Estrogen or Low Progesterone

As we discussed earlier, FSH levels are commonly used by doctors to diagnose menopause. FSH is elevated when ovulation or egg production ceases. The hormone that is directly dependent upon ovulation is progesterone. While estrogen can be produced from a variety of sources within the body as well as externally, progesterone is only produced after ovulation.

Estrogen and progesterone are produced together throughout the reproductive years and function best when they are produced in their normal balance.

Estrogen is produced prior to ovulation to replenish the inner lining of the uterus that was lost during the menstrual cycle. Progesterone causes the uterine lining and the breast to further develop to prepare for a possible pregnancy.

Estrogen and progesterone also effect other organs like the brain, the endocrine system, the immune system, etc. When these hormones are present in the normal levels they balance each other’s activity and do not cause any symptoms.

During and after menopause ovulation ceases and so does the production of progesterone. Progesterone cannot be made from other hormones and it is not available in the environment in any significant amount.

During menopause women may have normal or even elevated tissue levels of estrogen while progesterone levels are low or immeasurable. An imbalance of these two hormones is more likely to be the cause of menopausal symptoms than solely an estrogen deficiency.

Progesterone

Why is progesterone so important? Progesterone does more than just balance estrogen. Progesterone is vitally important in the normal function of several organ systems in the body. The functions of progesterone include using fat for energy, decreasing water retention, eliminating depression and anxiety, improving mental function, increasing sex drive, and increasing the effectiveness of other hormones like thyroid hormone, testosterone and estrogen.
A deficiency of progesterone can explain most of symptoms of menopause. Hot flashes are a response to withdrawal from estrogen and progesterone. Progesterone levels fall, because women no longer ovulate after menopause. Estrogen levels do not fall in balance with progesterone, because women are exposed to estrogen from other sources outside the ovary. Adding progesterone restores balance and safely relieves symptoms. Adding more estrogen may relieve hot flashes, but it increases the imbalance and causes side effects which include bleeding, weight gain, stroke, and increased risk of breast cancer, etc.

Mood swings can also be traced to progesterone deficiency or an estrogen excess. Progesterone has a calming sedative effect on the brain. It attaches to a receptor in the brain that decreases anxiety and elevates mood. This receptor in the brain is called the GABA receptor. This same GABA receptor allows antidepressants and anti-anxiety drugs to produce their effect on the brain. Menopausal women on antidepressants may benefit from the antidepressant effects of progesterone which could eliminate the need for antidepressants.

Insomnia is another frequent complaint of women during menopause. Insomnia in this case is probably due to the lack of the calming effects of progesterone. Replacing progesterone usually improves insomnia. Many women complain of poor concentration and lapses in memory during menopause. Progesterone is involved with providing insulation to nerve cells. Myelin is like rubber around electrical wires. Myelin insulates nerve cells and improves conduction of nerve impulses. Decreased progesterone may interrupt the production of myelin and interfere with brain impulses.

Estrogen without the proper amount of progesterone can interfere with thyroid hormone function. Thyroid hormone is necessary to properly metabolize food and convert it into energy. If thyroid hormone is not functioning properly, women experience weight gain, fatigue, food cravings, and symptoms of low blood sugar.

Other disturbing symptoms include the loss of scalp hair and the growth of facial hair after menopause. Testosterone, the male hormone, can be produced by the ovary and the adrenal gland after menopause. The body uses testosterone to balance estrogen in the absence of progesterone. This results in male pattern baldness and facial hair growth. Replacing progesterone usually reverses the process, thereby initiating growth of scalp hair and stopping facial hair growth.

**Do I Need Estrogen?**

Menopause cannot be simply explained by lack of estrogen. While estrogen deficiency may play a role in some women’s experiences, in most cases it does not. The key to minimizing menopausal symptoms is a balance between estrogen and progesterone.

Most women in America are over their ideal body weight. It is well documented that overweight women produce too much estrogen. Estrogen is made in fat cells. Women who are overweight are at an increased risk of diseases that are known to be caused by elevated estrogen. Uterine cancer and breast cancer are more common in women who are overweight.

Estrogen also increases weight gain and makes it more difficult to lose weight. Women, who are overweight should not take standard estrogen replacement unless a saliva test indicates an imbalance.

Women who are not at risk for osteoporosis should not take estrogen replacement. Estrogen has two FDA-approved indications. One is the relief of hot flashes, the other is the prevention of osteoporosis in women who are at high risk. However, we contend that no one should take estrogen without saliva testing. Studies show that weight-bearing exercise decreases bone loss more than estrogen.

If a woman is experiencing hot flashes, restoring balance with progesterone can alleviate the symptoms, if saliva testing indicates a progesterone deficiency. Also, using weaker estrogens, like estriol or the estrogens found in soy, can restore balance by blocking the effect of stronger estrogens.

Not all women are at high risk for osteoporosis. Women of North European decent with a thin frame, sedentary lifestyle, history of smoking, and prolonged steroid use are at risk for osteoporosis. Women not in this high-risk group do not need estrogen bone to maintain normal bone health.

People of color are at very low risk for osteoporosis and should not take estrogen for osteoporosis prevention. Although in some cases very thin fair-skinned women of color may be at risk.