

WOMEN'S ENDOCRINE HEALTH

What Is Women's Endocrine Health?

The power of prevention is important throughout all the years of a woman's life. It is the purpose of this website to help women understand their bodies and to encourage them to experience life to its fullest. Maintaining a healthy and strong body while engaging in healthy activities will prolong life and improve its quality. Each phase of a woman's life is filled with opportunities to develop a healthy lifestyle and harness the power to prevent endocrine disorders, the Power of Prevention.

Childhood

Childhood is a time of rapid growth and development to learn healthy living habits and priorities. It can, however, be a great challenge to instill appropriate values during this age. Parents are responsible for teaching children healthy eating and making physical activity part of daily life. Selecting the right food and keeping junk food out of the house encourages healthy eating. Setting a good example for our children is the best way for them to learn from us.

Young girls are very impressionable. They respond not only to their families, but, also more increasingly to media aimed directly at them such as commercials on TV, radio and print magazines. Young girls receive so many conflicting messages even when they are in elementary school. In many places, young girls emulate the teenagers in their area and seem to grow up too quickly. As a result, the mixed signals they receive about body image emerge into anorexia and obesity at this time in life.

The focus on body image is already apparent in lay publications aimed at youngsters and pre-teens. While a great fashion sense can encourage pre-teens to avoid obesity, many young women "over-react" to these messages and eating disorders become apparent at this time of life. Since adequate nutrition is critical for development and function of the menstrual cycle and also for bone development, malnutrition at this time may lead to irreversible problems later in life (i.e., osteoporosis).

ADOLESCENCE

As girls develop, they become very influential and secure with the changes occurring in their body and how they are preserved. Eating disorders such as anorexia, bulimia, and obesity become more common, even epidemic. There are endocrine problems, which may be genetically based (i.e., "hard-wired in") but only become apparent at the time of

expected puberty. Other disorders that may affect growth and development also become more frequent at this time. Learning how to prevent endocrine disorders during this age is pivotal.

YOUNG WOMEN

At this time of life, young women are establishing households, careers, and families. A healthy lifestyle should include exercise even in the face of increasingly time-consuming responsibilities. Work and social pressures often lead to excess food and alcohol consumption. Young women need to remember to take care of their own bodies despite these pressures.

MIDDLE AGE

Many women enter middle age sedentary, obese, and prone to the development of chronic disease, which may be made worse by poor physical fitness. While AACE hopes that as young girls, women have developed healthy eating habits and engaged in regular physical exercise, it's not too late to change and develop these needed lifestyle components in middle age.

OLD AGE

Since the average woman lives longer these days, (average age 79 in the US) we all hope to age gracefully. If we developed healthy habits from the start, we can hope to have avoided osteoporosis, diabetes, and heart disease. Continuing to eat a healthy meal plan, exercising, and maintaining mind-stimulating activities help us to remain active and vigorous in our later years.

Insist on a full evaluation, which should consist of history, including a detailed inventory of current medications of tobacco and alcohol use, and physical exam as well as blood tests for hormone levels. Effective treatment follows proper diagnosis.

Signs & Symptoms

ADOLESCENCE

During adolescence, teenagers are always concerned about breast development, beginning menstrual cycles, and even shaving their legs. These may or may not be signs of endocrine disorders.

What happens if a girl doesn't develop breasts or hair or have periods when expected?

There is a wide variation in the time of expected puberty. If a girl has not developed breasts and axillary and pubic hair by the age of 14 and has not by age 16, she should undergo medical evaluation. Although in some cases, this may simply reflect either a family trait or a harmless deviation from “normal,” this may be the first sign of a number of medical conditions, including thyroid, adrenal, pituitary or ovarian disorders. At times, undernutrition or excessive exercise may delay the onset of puberty (see below).

Also, adrenal disease may be a consideration for girls who fail to begin menstruating or have irregular periods, excess facial and body hair, and acne. An early rapid growth spurt followed by a premature end to the growing period can cause short stature. Sometimes these symptoms can seem to have the same presentation as PCOS.

MIDDLE AGE

TYPE 2 DIABETES

Type 2 diabetes, hypertension and hypercholesterolemia are the most important and common risk factors for heart attacks in women. Women who have insulin resistance are at particular risk. Women with type 2 diabetes have an extremely high risk of heart disease and the symptoms of heart disease may be different from the typical symptoms. They may not have chest pain but merely fatigue, weakness during exercise, or other vague symptoms. Women with diabetes should be regularly tested for silent heart disease and should follow strict guidelines to control blood sugars, cholesterol, and blood pressure. Certain medications may be prescribed to reduce the risk of heart disease or reduce the risk of a second heart attack in a woman who has already had one. These may include statin drugs, aspirin, ACE inhibitors or Angiotensin blockers, and beta blockers. It is very important for women with diabetes to let their physicians know about any symptoms they might be having.

Conditions

CHILDHOOD

OBESITY

What is the definition of obesity?

Obesity is defined as a body mass index (BMI) of over 30. Overweight is defined as a BMI of over 25. BMI is defined as weight in kilograms divided by height in meters squared ($BMI = \text{kg}/\text{m}^2$). The “correct weight for height” is expressed through this measurement.

Isn't “baby-fat” ok when a girl is young?

Studies have shown that obese children often grow up to be obese adults. In fact, in the population of women with gestational diabetes (abnormal blood sugar during pregnancy) babies are often overly large and these large babies grow to be obese adults with greater risk of insulin

resistance and diabetes themselves. The concern about obesity actually begins even before birth.

What are the health risks of obesity in this age group?

When childhood obesity continues into adulthood, it is a major risk factor for heart attacks, stroke, cancer, and diabetes. But even in childhood, being overweight can contribute to problems with the joints, sleep apnea, asthma and especially type 2 diabetes, which is now seen much more commonly in childhood than in the past. Insulin resistance is worsened by obesity and contributes to the risk of diabetes, hypertension (high blood pressure), and polycystic ovary syndrome (see below). Children may also face serious psychological issues and problems with social interaction due to obesity.

THYROID DISORDERS

Other endocrine disorders can be seen in young girls. In childhood, an underactive thyroid often becomes apparent with failure to grow normally. It can also cause fatigue, poor concentration and difficulty with learning, constipation, muscle pains or weakness, and intolerance to the cold. In girls, thyroid disease can cause failure to menstruate, early onset of menses, or irregular menses.

Congenital hypothyroidism is usually caused by improper development or actual absence of the gland. This is a very serious condition, which can lead to mental retardation. Fortunately, all babies in the US have a test for thyroid disease when they are born and parents are notified immediately if there is a problem. Prompt treatment with thyroid pills will allow perfectly normal growth and development.

Overactivity of the thyroid can cause weight loss, irritability and poor school performance, change in sleep habits, shakiness, muscle weakness, menstrual problems and palpitations.

A goiter or enlargement of the thyroid may or may not be present when the thyroid does not work correctly.

Since thyroid disease is often hereditary, children in families with a high frequency of thyroid disease should be checked with a simple blood test as should all children with any of the symptoms listed above.

Also, keep in mind that thyroid malfunction is 5-10 times more likely in females than males.

ADRENAL DISEASE

Adrenal hyperplasia refers to a series of conditions, which are genetic and lead to improper production of adrenal hormones. Usually, this is apparent at birth sometimes with abnormal development of the genital tissues. In some cases, the symptoms do not become apparent until adolescence. Endocrinologists are able to test for this condition and medical therapy is quite successful.

Cushing's disease may occur in childhood and adolescence but is extremely rare, as are tumors of the adrenal glands.

Addison's disease (adrenal insufficiency) is also rare in childhood and adolescence but is more common in people with type 1 diabetes and other autoimmune disease. If your doctor suspects this condition, there are easy blood tests to determine its presence and treatment is very successful.

PITUITARY PROBLEMS

Pituitary problems are rare in childhood and adolescence. Pituitary tumors and tumors called craniopharyngiomas, which grow near the pituitary gland, can affect growth, development, menstruation, and cause secondary failure of the thyroid and adrenal glands..

GROWTH RETARDATION

There is a wide range of normal height in this country, particularly since we are a diverse community with people from all over the world. Since the major influence on height is genetic, it's unfortunate that youngsters compare themselves with friends who may have different growth potential. If a girl had been growing normally for her own pattern of growth and that growth slows, it is proper to search for a cause. This may include thyroid disease, pituitary problems, growth hormone deficiency, problems with the absorption of food from a variety of causes, or even a sign of a young onset of an eating disorder. Turner's syndrome and its variants may also be present with short stature, and it is important to find this disease since growth hormone therapy early in life can improve the final adult height. (See below) An endocrinologist specializing in growth problems can perform the appropriate tests and prescribe treatment if a deficiency is found.

ADOLESCENCE

TURNER'S SYNDROME

What is Turner's syndrome?

Turner's syndrome is the most common condition, which causes a failure of development of normal ovaries, often in conjunction with other abnormalities of the skeletal system, kidneys and sometimes heart and aorta. It is caused by specific mutations or changes in the genetic material (DNA), which allows normal development of these structures. Girls with Turner's syndrome are not able to produce estrogen nor can they ovulate (produce eggs for procreation). Growth is often limited. It is important to identify girls with this condition as early in life as possible in order to make sure there are no associated health issues, as well as to assess the possible need for growth hormone treatment to optimize height potential. At the time of expected puberty, estrogen and progesterone must be added to provide menses and bone health. If a woman with Turner's syndrome is interested in fertility, the option of ovum donation exists.

POLYCYSTIC OVARIAN SYNDROME

What is PCOS?

Polycystic ovarian syndrome is a condition, which results in abnormal function of the ovaries with irregular, infrequent ovulation, and menses frequently with the production of excess androgen (testosterone) from the ovaries. This may result in acne, excess facial or body hair, and/or loss of scalp hair. Women with PCOS may have some difficulty in becoming pregnant, but medical therapy is often quite successful.

Why is PCOS so important and why are we reading more and more about it?

PCOS is associated strongly with a condition called insulin resistance. As a result, women with this condition are at greater risk than the average person for diabetes, hypertension, lipid disorders, heart attack and stroke. When a diagnosis of PCOS is made, teenagers must not only be treated with appropriate medication (which may include estrogen, progesterone, anti-androgens, and insulin sensitizers), but should be strongly counseled regarding healthy living to avoid obesity and sedentary behavior. Regular medical check-ups and blood sugar, blood pressure, cholesterol and triglycerides testing should be encouraged.

AACE Position Statement on Metabolic and Cardiovascular Consequences of Polycystic Ovary Syndrome

DIABETES IN YOUNG AND TEENAGE GIRLS

There are two types of diabetes, type 1 and type 2. Type 1 diabetes is a genetically-based autoimmune disorder that leads to complete insulin deficiency, is not preventable and treatable only with insulin (see diabetes section in website). The complications of both type 1 and type 2 diabetes are serious but often preventable: blindness, kidney failure, amputation, heart attack and stroke. Practicing good blood sugar control, frequent testing of blood sugar along with healthy eating and good physical activity can reduce the risk of complications of diabetes even in type 1 diabetes.

Type 2 diabetes is also genetically-based and is caused by the combination of insulin resistance and relative deficiency of the pancreatic cells, which make insulin. This disease is strongly affected by diet, weight, and physical activity. The "power of prevention" in this disorder is so important that it can literally change the course of a person's life.

OSTEOPOROSIS & THE MENSTRUAL SYSTEM

What does the menstrual system have to do with bones?

The menstrual cycle is a finely tuned system with its "clock signal," which regulates timing in a part of the brain called the hypothalamus. This organ, in turn, sends a signal to the pituitary gland, which makes other signals (hormones) that allow the ovaries to release eggs ("ovulate"). The hormones necessary to allow the uterus to have regular periods are

then made. Bone development depends on having enough estrogen from the ovaries, among other things.

What does nutrition have to do with hormones?

Without good nutrition, the hypothalamus doesn't work properly and the functions referred to above can't occur. This leads to lack of periods (amenorrhea) as well as the direct effects of a lack of nutrients.

YOUNG WOMEN

PREGNANCY AND INFERTILITY

Conception may be easy or more difficult for different women. As women marry later and defer pregnancy for professional or social reasons, it may be more difficult to conceive. If couples have unprotected intercourse for more than a year without conception, evaluation of both "male and female factors" should be undertaken. If a woman is ovulating regularly, there are a number of issues, which can be addressed by her gynecologist or reproductive endocrinologist.

Failure to ovulate may be caused by PCOS, hypothalamic amenorrhea, ovarian failure (menopause), thyroid, adrenal or pituitary disease. Testing can determine the cause and treatment is often available.

It should be emphasized that avoiding excessive dieting and weight loss and over-exercising will improve hypothalamic amenorrhea and improve chances for conception.

Women are usually the most conscientious about their own health during pregnancy, knowing how important it is for the developing child. Now is the time to "lock in" all those healthy habits and remember that even after delivery, babies need healthy moms all their lives.

GESTATIONAL DIABETES

This common condition refers to an inability to "handle" food properly as a result of the hormones of pregnancy working against the normal effect of insulin, and allowing the sugar in the blood to rise to dangerous levels. It occurs more commonly in women with a family history of diabetes as well as women from certain ethnic groups and is worsened by obesity. Often it can be treated by careful diet alone; but, in many cases, treatment with insulin injections will be necessary to protect the baby from the bad effects of the mom's high blood sugar. These include high birth weights and the need for CEs as well as low blood sugar in the baby at birth (hypoglycemia), which can cause seizures. Expectant mothers may be asked to check their own blood sugars after meals with a finger-prick to make sure that therapy is working correctly.

Gestational diabetes is also a strong predictor of type 2 diabetes later in life. This gives a woman a "heads-up" to engage in healthy eating, regular exercise and keeping

her weight in the normal range, since all of these things have been shown to actually prevent or delay the onset of diabetes and all of its complications.

TYPE 1 DIABETES AND PREGNANCY

Women with type 1 diabetes must be certain that their blood sugars are very "tightly" controlled even prior to conception; since the result of early fetal exposure to high blood sugars is birth defects. These are a result of the mother's high blood sugar during very early pregnancy (even before mom knows she is pregnant) and can be prevented by good blood sugar control. Women with type 1 diabetes must perform frequent glucose monitoring to make certain that their insulin doses are constantly adjusted, to maintain normal or near normal blood sugars throughout the whole pregnancy to avoid overweight and developmentally immature babies with serious metabolic risks.

THYROID DISEASE AND PREGNANCY

Since thyroid disorders may affect as many as 6% of women in the reproductive age group, it is not surprising that they may influence the course of pregnancy. Having either an underactive or overactive thyroid may reduce the chances of conception and cause complications of pregnancy once achieved.

Untreated hyperthyroidism can cause preterm labor, preeclampsia, heart failure, fetal death, small for gestational age and "thyroid storm."

Hypothyroidism has been associated with an increased risk of miscarriage, placental abruption, low IQ, impaired psychomotor development and preterm delivery.

AACE believes that all women who are pregnant or about to become pregnant should be tested for thyroid problems. Other authorities feel that such testing is only necessary for women with a higher risk than the general population to develop these conditions. If you have any doubt, you should discuss this important issue with your doctor.

MIDDLE AGE

INSULIN RESISTANCE

This refers to a condition in which the tissues that normally respond to the hormone insulin to activate many chemical processes in cells do not respond properly. The tissues involved are the liver, fat cells (adipose tissue) and muscles. If the pancreas, which makes insulin can make extra insulin to compensate for the insulin resistance, the blood sugar level remains normal but insulin resistance itself is linked to an excess risk of not only diabetes, but also high blood pressure, certain lipid abnormalities and problems with the function of blood vessels, which can lead to heart attack and stroke. If the pancreas fails to compensate, blood sugar levels rise and type 2 diabetes and the risk of its complications results.

Insulin resistance is typically a disorder of middle age, but because of the increase in obesity and lack of exercise, it is now seen in younger and younger women. There is a genetic tendency to have insulin resistance; and, it is extremely common in women with PCOS, non-Caucasian women, and women with a family history of diabetes, high blood pressure, heart attack, and stroke. National statistics indicate that by age 50, 35% of American women have insulin resistance and by age 60, 50% have it.

MENOPAUSE

Menopause refers to the normal failure of ovaries to produce estrogen. This can occur normally any time after the age of 35, but usually in the mid to late forties and as late as age 55. Many women “sail through” menopause with few symptoms, but hot flashes of variable severity may require treatment with estrogen. Some women (those who have had breast cancer) should not take estrogen or substances that behave like estrogen in the body (certain herbs or “natural hormones” can have the same effect as prescription estrogen on the breast). For other women, estrogen can dramatically improve the quality of their lives. Current guidelines suggest that estrogen should be given in the lowest dose and for the shortest time possible to control symptoms.

If menopause occurs after the age of thirty-five, it is said to be normal. Some women experience failure of the ovaries to produce estrogen at a much younger age. This is called premature ovarian failure. In some people, this is linked with other hormonal, autoimmune or genetic disorders and in some it may be hereditary. Simple blood tests can distinguish premature ovarian failure from other causes of periods stopping at a young age. (see above).

Many women experience a time when periods still occur, but hot flashes may have started and periods may become different or more irregular. This is called the “perimenopause” and simply reflects the fact that the ovaries often lose their function gradually.

It is also important to understand that some symptoms are related directly to loss of estrogen, including hot flashes, poor sleep as a result of night sweats, vaginal dryness, difficult intercourse and dryness and irritation of the urinary outflow tract (urethra). These symptoms can be expected to be improved with estrogen. Other symptoms, such as fatigue, dry skin, poor memory, moodiness or depression, decreased libido, hair loss, etc, occur as part of aging in some women, are not caused by lack of estrogen and will not be cured by replacement.

Since most women spend a third of their lives in menopause, it is important to understand the changes that occur in the body and what we can do to stay fit and healthy.

OSTEOPOROSIS

What is osteoporosis?

Osteoporosis means less bone mass and more fragile bones that are more likely to break.

Why is proper nutrition needed to form strong bones?

Bones are living tissue made of a “matrix” or core, which is made of protein that is mineralized with calcium to harden it. In order to form strong bones, we need the right nourishment to make the protein and obtain the calcium and vitamin D necessary to mineralize the bones.

Prevention

CHILDHOOD

OBESITY

How can we keep our children from advertising aimed at them, which may promote unhealthy habits?

By always being involved in children’s lives, we can discuss how we feel about this advertising with them to let them know that some things they see and hear may not be good for them. By buying only healthy food and encouraging enjoyment of it, we reduce the “pull” of junk food, and at the same time allow children to see that eating well and having strong healthy bodies is better than over-dieting and being too thin. We should also be encouraging exercise as fun and enjoyable (and hopefully pursuing activities together with our children) to make sure that they are physically fit but not over exercising or developing an obsession with an overly thin body image.

How can parents and children together cope with powerful media forces?

Mothers and fathers need to instill a strong sense of self worth into their daughters as they enter school and begin to have a concept of their own bodies. As nutrition and physical fitness are taught, the youngster must have a supportive foundation so she will be comfortable with differences in body size and shape, which become apparent in grade school. Just as girls may be fair or dark, have blue eyes or brown, curly or straight hair; there will be girls who are slight and small and others who are larger in overall size. While boys who are small may be stigmatized, in today’s world, larger girls may be teased or feel that they can’t wear the latest fashions. They must be encouraged to eat well, exercise and find “the right style.”

Obesity begins in childhood all around the country. Without driving girls to inappropriate diets, we can provide early in life correct foods, opportunities for exercise that is fun, and strong adult role models. Good health begins at home and children should be taught to eat moderate quantities of healthy food, keeping junk food to a minimum. We can encourage an appreciation of the flavors of fresh fruit and

vegetables, lean protein sources, moderate quantities of complex carbohydrates, and low saturated fats. We must limit our children's exposure to commercials that promote for high sugar and fat food. Learning how to shop for and prepare food in today's busy world is a worthy goal. Even young girls and boys can begin to participate.

To avoid over-dieting, the goal of avoiding obesity in childhood should be focused entirely on health and not on body size and shape itself. Physical activity is a key component to prevent obesity.

How can playtime be a health intervention?

We hope that our daughters will all grow up with a fondness for physical activity and that it becomes a regular part of their lives. By encouraging physically active playtime activities in young girls and supporting them in efforts to remain physically fit as teenagers, we hope that enjoyment of exercise will persist into adulthood. While leisure activities, which challenge the mind (reading and computer skills) certainly should be encouraged as well, we must make sure that girls (and boys) don't spend too much time with them and allow enough time for physically active fun! Girls should be encouraged to find activities they personally enjoy, and understand that not everyone likes competitive sports. Opportunities for both leisurely solo or group activities, family-centered sports, and competitive sports are available for all girls. It is up to us to make sure that they take advantage of them!

Dangerous health consequences that may pose "unintended" consequences of an obsessive avoidance of obesity may include smoking and drug use.

How can we help our daughters to avoid the pressure to smoke?

Children learn so much by example. Parents should not smoke. If they do, they should point out to their children how dangerous it actually is, and how they themselves may be having trouble trying to quit.

Mothers need to remind their daughters that, not only is smoking not fashionable, it is an unhealthy way to lose weight or reduce appetite. Since smoking may be a peer pressure issue, we must give our children the strength to say no to their friends.

OSTEOPOROSIS

You wouldn't think that children need to watch out for endocrine conditions such as bone mass like older women; however, children need to develop a strong foundation as youngsters to help them remain healthy as they grow.

Why should people worry about "diseases of old age" in children?

Bone development occurs all through life. If adequate bone formation does not occur in children, they will not have enough bone mass at the "peak" of life in young adulthood. As we age, bone mass inevitably declines;

so if the peak bone mass is not sufficient, there will be less bone to start with and less and less over time. Young girls who don't make enough bone become women with a greater likelihood of fractures.

ADOLESCENCE

How does participation in organized sports influence health and endocrine function?

A part of the brain called the hypothalamus is the "computer" that regulates the development and timing of the menstrual cycle. The hypothalamus may be affected by a number of factors: inadequate weight, malnutrition, emotional stress and excessive physical activity. This is called hypothalamic amenorrhea and may occur in girls too young to have ever had a period, and stop periods that have already started. The result of this condition is a lack of estrogen and resultant bone weakening (osteoporosis).

Since this problem may be a result of excess exercise, a girl's activities may need to be evaluated. Exercise should be encouraged but over-exercise leading to loss of periods should be discouraged and discussed. Counseling for eating disorders and/or emotional stress may often be necessary

How can we help teenage girls avoid both anorexia and obesity?

Parents, family members, teachers, coaches and mentors must regularly discuss healthy nutrition, encourage adequate but not excessive exercise and most importantly be supportive of teenage girls having a strong sense of self-worth. We as a society must bear some of the guilt for many of the difficulties experienced by women of this age. While we can't change the world, if we recognize the strong influences on our daughters, we may be able to counteract the dangerous ones.

TEENAGE SENSE OF IMMORTALITY

The inability to imagine life in the future may often limit their "buying in" to diet, exercise, or even medication recommendations, not only for endocrine disorders, but also for other common chronic conditions, including asthma, etc.

Risky behavior, including the use of drugs, alcohol, smoking, driving while distracted or under the influence of alcohol or drugs, and unprotected sex are all examples of teenagers difficulty in imagining themselves growing old, getting sick, injured or even killed. Adults must encourage teens with firm counsel and kind support to allow them to learn and live healthy lives.

MIDDLE AGE

INSULIN RESISTANCE

Insulin resistance can be improved by careful diet, weight loss and EXERCISE. These important lifestyle factors may make the difference between having a heart attack

or stroke or developing diabetes.

TYPE 2 DIABETES

What is the most common threat to middle-aged women that can be strongly influenced by their own behavior?

Type 2 diabetes, which affects as many as 20 million Americans, commonly develops in the 40s or later (although it often develops earlier, especially in the obese). Since the major risk of diabetes is the silent development of complications, including blindness, kidney failure, limb amputation and heart attack, AACE urges all middle-aged women to be tested for diabetes with a simple blood test. All women should be tested by the age of 30 if they are members of a high-risk group due to: non-Caucasian ethnicity, family history, obesity, history of gestational diabetes or large baby, PCOS, hypertension, vascular disease, heart disease, or lipid disorder. Studies have shown that early detection and aggressive control of diabetes can prevent complications later in life.

Likewise, at this time of life, hypertension and hypercholesterolemia should be detected and treated.

HYPOTHYROIDISM

Hypothyroidism becomes more common with aging, and women are affected with thyroid disease at least 5-10 more times than men. All women should be tested by age 50 and even at a younger age if there is a family history of thyroid disease.

Other problems which are more common in middle age, including arthritis, may limit activities. AACE urges women to remain physically fit in middle age. In fact, studies have shown that 45 minutes of brisk walking every day reduces the chance of a heart attack in middle-aged women.

OSTEOPOROSIS

Weight-bearing exercise can help to prevent and treat osteoporosis. Bone density measurements are suggested at the time of menopause (or sooner if there is a medical condition that is known to contribute to bone loss). If bone density is low, tests should be done to make sure that there are no causes other than menopause and aging. Several treatments are available. Women should discuss with their physician, which options are best for them.

Treatment

MENOPAUSE

Estrogen therapy may affect the heart differently depending on the time in a woman's life when it is given: the younger and closer to her last menstrual period, the more favorable effect. When administered later in life, estrogen may increase the risk of heart disease.

Estrogen's effect on bone is positive. It can prevent and treat osteoporosis, but there are other medications, which can do the same.

Estrogen may stimulate breast cancers to grow. In large studies, the rate of breast cancer in women who take estrogen together with progesterone (because the latter is needed to protect the uterus) is slightly higher than women who do not use hormone replacement therapy. Women who do not require progesterone do not have a higher rate of breast cancer.

There are many types of estrogen and progesterone available.

Each woman should discuss the risks and benefits of hormone replacement therapy with her physician.

OSTEOPOROSIS

A decrease in the amount and strength of bone increases the risk of fractures. There are many conditions which may impact bone health, but the most common are estrogen deficiency and aging.

Inadequate vitamin D intake has recently been found to be more common than originally supposed. As women age, vitamin D absorption from the intestine may decrease. It is important to ingest at least 800-1200 units of vitamin D a day after menopause, from both food and supplements. Calcium supplements are also required.

Written by Rhoda H. Cobin, MD, MACE

