FROM THE PARISH NURSE….

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The Parish Nurse found this article on *Mayo Clinic Family Health Book* and its worth reading.

Osteoporosis

Signs and Symptoms

- Back pain
- Loss of height over time, with an accompanying stooped posture
- A fracture of the vertebrae, wrists, or hips

Most cases of osteoporosis are the result of an acceleration of the normal changes our bodies undergo as we age. Unfortunately, 1 of every 4 women older than 45 years and 9 of 10 women older than 75 years have varying degrees of osteoporosis. These women have primary osteoporosis, which gradually depletes the store of calcium in the bones; this form usually becomes more evident after the onset of menopause. Men start with a larger reserve of bone minerals, and so their loss of bone density due to osteoporosis becomes evident later in life and to a lesser degree. A calcium-poor diet, smoking, a sedentary lifestyle, early menopause, and being underweight all heighten the risk of osteoporosis.

The term osteoporosis is from the Greek *osteo*n for "bone" and *porus* for "pore" or "passage." Osteoporosis literally makes your bones more porous. The percentage of calcium stored in your bones decreases over time, causing your skeleton to weaken and leading, in some cases, to fractures. This demineralization has various causes.

Osteoporosis also can accompany endocrine disorders such as acromegaly and Cushing's syndrome or can result from excessive use of drugs such as corticosteroids. In such cases, the problem is termed secondary osteoporosis. The treatment must be directed at curing the principal ailment or not using the offending drug.

Diagnosis

Your physician may observe osteoporotic bone in a routine X-ray of your spine before you even know you have the disease. In many cases, however, the first symptom of osteoporosis is a fracture. A hip or wrist may break with a minor fall or accident (although in some cases spontaneous hip fractures precipitate the fall). In an X-ray of an osteoporotic bone, the bone's shape is the same as that of a normal bone (unless the bone is fractured) but it is less dense. This image is less distinct, which suggests a weaker bone.

If your physician suspects you have osteoporosis, appropriate blood or urine tests will exclude other causes for a loss of bone density. One or several X-ray like tests, including CT or photon absorptiometry, will define the degree of bone density loss.

How Serious Is Osteoporosis?

Fractures are the key consequence of osteoporosis. Although the fractures tend to heal normally, they often occur with very little or no unusual stress, and further fractures may occur once healing has taken place.

Osteoporosis also affects your lifestyle. For many people, living with osteoporosis means adopting more sensible dietary and exercise programs to minimize future bone loss. It also means taking a commonsense approach to daily activities to avoid putting your bones at risk.

The vertebral fractures characteristic of osteoporosis rarely require surgical treatment. Called compression fractures, they may cause minimal discomfort if they are minor; if they are more extensive, you may have a painful episode of backache. Commonly, the pain begins abruptly, centers in you back (but may radiate around the trunk), is aggravated by movement and relieved by heat, and gradually subsides over the next 1 or 2 months. Over a period of years, however, a sequence of spinal compression fractures can lead to dowager's hump (also called widow's hump) and an increasingly bent-over posture.

Osteoporosis can be crippling when your bones are weakened severely. The disorder also is associated with perhaps 40,000 deaths annually, largely from complications of surgery or immobilization after hip fractures.

Treatment

Exercise

A regular, reasonable exercise program is a crucial part of the battle against osteoporosis. Weight-bearing exercise (that is, exercise such as walking rather than swimming) may help the bones to regain calcium. In addition, exercise can improve your musculature, which may help avoid future falls and fractures.

Select your exercise carefully. Start out slowly and increase gradually. Appropriate exercises include walking, riding a stationary bicycle, and working out on a rowing machine. Paradoxically, the serious female competitive runner is often vulnerable to osteoporosis because of a decrease in estrogen production and scanty or absent menstrual periods that may accompany extreme leanness.

Prevention

Although there is little agreement among researchers as to whether you can fully prevent osteoporosis, there is an emerging consensus that the more calcium a woman has stored in her skeleton before menopause, the less her risk of developing significant osteoporosis. To the end, a young woman should adopt dietary and exercise programs that foster deposition of calcium in her bones.

Eat foods high in calcium, including dairy products, leafy green vegetables, beans, nuts, and whole-grain cereals. Many physicians advise you to take a calcium supplement if your dietary calcium intake is deficient. The value of this advice has yet to be proved adequately, but a calcium intake of approximately 1,000 milligrams per day from diet or supplements may help you maintain maximal calcium status. For an elderly woman with osteoporosis, the same strategies apply.

Weight-bearing exercise is important to women younger than 40 who are concerned about the risk of developing osteoporosis. Effective preventive exercises include jogging, walking, tennis, bicycling, dancing, rope jumping, cross-country skiing, and almost any activity that combines movement with stress on your limbs, including weight training.

In general, adopting an exercise program that serves the basic goals for cardiovascular fitness will help you avoid bone loss.

Even though exercise, adequate consumption of calcium, and appropriate supplementation with estrogen and vitamin D are the most important elements in preventing osteoporosis, additional precautions maybe beneficial. Limit caffeine consumption to no more than three cups of coffee per day. Avoid very large amounts of fiber in your diet because dietary fiber binds the calcium in your intestine and may interfere with absorption. Avoid consuming very large amounts of protein. Avoid excess alcohol, and stop smoking.

Medication

When you begin menopause, your physician may recommend estrogen replacement therapy. This course of medication will replace the supply of estrogen as your ovaries cease to supply it, enabling your skeleton to slow its rate of absorption and retain calcium stores. Estrogen is the best treatment for prevention and improvement of osteoporosis. If your uterus is present, your physician also may prescribe progesterone to prevent the lining of your uterus (endometrium) from being overstimulated. You do not need progesterone if you have had a hysterectomy. Estrogen is available now in many forms, including oral tablets and an estrogen patch for the skin. Ask your physician which is best for you. In addition, your physician may recommend supplementary calcium.

Surgery

If a fracture occurs, you may need an emergency operation to set a broken wrist, hip, or other bone. Physical therapy is a key part of the recovery from any fracture.

Litin, S. C., & Nanda, S. (2018). Mayo Clinic family health book. Rochester, MN: Mayo Clinic.