

## Risks of Developing Osteoporosis

### **Who is at Greatest Risk?**

Certain people are more likely to develop osteoporosis than others. Factors that increase your likelihood of developing osteoporosis are called "risk factors." If you have several risk factors, that does not mean you will definitely develop osteoporosis or get a fracture, but rather your *chances* of this happening are increased. On the other hand, some individuals who do not appear to be at risk might end up with a fracture caused by osteoporosis. Several risk factors have been identified.

### **SEX**

Women are about four times more likely to develop osteoporosis than men. One reason is that women generally have thinner, lighter bones throughout life than men; another reason is the rapid loss of bone that occurs at menopause and thereafter. Also, women have a longer life span than men.

### **AGE**

The longer you live, the higher the likelihood of developing osteoporosis. Age has been associated with osteoporosis because after peak bone mass is reached, it gradually begins to decline. The more years that pass, the greater the loss of bone. As a rough estimate, we lose 10% of our bone mass per decade of life after the age of thirty.

### **THIN, SMALL FRAMED BODY**

Petite women are at greater risk because they have less bone to lose than larger, big-boned women. Women who are thin have a greater risk of fractures than obese women. (This is not to suggest that being overweight is a good idea. Obese women may have other equally serious medical problems, such as diabetes or high blood pressure. Both overweight and underweight individuals should try to attain their desirable weight.)

### **EARLY MENOPAUSE**

Estrogen seems to protect against bone loss. Women with regular menstrual periods are exposed to healthy levels of estrogen from puberty to menopause. Around the time of menopause, however, the amount of estrogen produced sharply declines. Early menopause or surgically induced menopause (caused by surgical removal of the ovaries) can increase a woman's likelihood of developing osteoporosis because the protective effect of estrogen is lost at an earlier age. Prolonged or intermittent decreased estrogen production in younger women also increases the risk for osteoporosis. Anorexia/bulimia and excessive exercise are conditions that may be associated with premenopausal estrogen deficiency, menstrual disturbances, and bone loss.

### **LACK OF CALCIUM**

Studies have linked an inadequate amount of calcium in the diet to osteoporosis. Calcium is needed to build strong bones during childhood and early adulthood, and to prevent losses thereafter.

## **RACE**

Caucasians and Asians are at higher risk of developing osteoporosis than blacks. Blacks in the United States have heavier bones than whites. The incidence of hip fractures is about twice as high in white women as in black women. Women of any race may develop osteoporosis.

## **LACK OF PHYSICAL ACTIVITY**

Individuals who are inactive, immobilized, or bedridden for a long time are at a higher risk for osteoporosis. Weight bearing exercises such as walking, running, tennis, and other exercises that cause muscles to work against the force of gravity play an important role in preventing bone loss. Therefore, resumption of physical activity is an important factor in building bone and preventing further bone loss.

## **HEREDITY**

Susceptibility to fracture may be, in part, hereditary. Young women whose mothers have a history of vertebral fractures also seem to have reduced bone mass.

## **CIGARETTE SMOKING**

The precise mechanism through which smoking hastens bone loss is unclear. Some studies indicate that women who smoke have lower levels of serum estrogen in their body compared with nonsmokers, and smoking is believed to bring about menopause earlier than usual.

## **ALCOHOL AND/OR CAFFEINE**

Excessive intake of alcohol has been linked to osteoporosis. Alcoholics are also more prone to fractures, perhaps because of their predisposition to falls and because of generally poor intake of calcium and vitamin D. A high intake of caffeine-containing foods, such as coffee, is thought to increase the amount of calcium eliminated in the urine.

## **CERTAIN MEDICATIONS**

When taken for a long time, high doses of glucocorticoids, a group of antiinflammatory medications used to treat a variety of conditions (such as asthma, arthritis, and certain cancers), can lead to a loss of bone tissue. High doses of antiseizure drugs taken for a long time can result in less calcium being available to the bones. Individuals receiving thyroid hormone must be monitored by their doctor because if these hormone levels are elevated, bone loss can result.

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**Thank you for learning about osteoporosis!** If you have any questions, please talk them over with your doctor.

**A DEXA bone density examination can be performed in 15-30 minutes and may show osteoporosis 6 years before it shows up on a regular xray!**