



WOMEN'S HEALTH INITIATIVE

FACT SHEET — *Osteoporosis*

What is Osteoporosis?

Osteoporosis is a disease that weakens bones, resulting in an increased loss of bone mass and bone strength, which in turn makes them more susceptible to sudden and unexpected fractures. Often the disease progresses without any symptoms or pain and is not discovered until weakened bones cause painful fractures.

Facts and Figures

According to the National Osteoporosis Foundation:

- ◆ Twenty-eight million Americans, 80 percent of them women, are at risk for osteoporosis.
 - ◆ One-third of women in their 70s will develop osteoporosis.
 - ◆ Two-thirds of women in their 80s will develop osteoporosis.
 - ◆ Seven percent of a woman's bone mass is lost after menopause.
 - ◆ Of the women who suffer a bone fracture after age 85, 25 percent will die within a year. Death is usually due to fat or blood clots originating at the site of the fracture.
- According to the Older Women's League, a woman's frequency of hip fracture is equal to the combined risk of developing breast, uterine and ovarian cancer.

Risk Factors for Osteoporosis

- ◆ **Gender** — Women over the age of 50 are at the greatest risk. Women experience rapid bone loss during and five to 10 years after menopause. Menopause decreases the production of estrogen, a hormone that protects against excess bone loss.
- ◆ **Age and Race** — A woman's risk for osteoporosis increases as she ages. Caucasian and Asian women are at the most risk.
- ◆ **Bone Structure and Body Weight** — Thin, petite women are at a greater risk for developing the disease because they have less bone to lose than people with more body weight and larger frames.
- ◆ **Family History** — If a woman's parents or grandparents have had any signs of osteoporosis, such as a fractured hip after a minor fall, she may have a greater risk for developing the disease.
- ◆ **Nutrition** — If a woman's body lacks sufficient amounts of calcium and vitamin D, she is more likely to develop osteoporosis.
- ◆ **Lifestyle** — People that live a sedentary lifestyle are at a greater risk for the disease because exercising and activity place weight on the bones, helping to prevent deterioration.
- ◆ **Medications** — Some medications, such as corticosteroids and anti-convulsants, result in side effects that may damage bone and lead to osteoporosis.
- ◆ **Smoking** — Cigarette smoking plays a very significant role in increasing the risk of osteoporosis, by decreasing the blood circulation to bone.
- ◆ **Menopause** — Estrogen produced by the ovaries helps prevent bone mineral loss in a woman. When she reaches menopause her estrogen level decreases and no longer protects bone mineral.
- ◆ **Anorexia or Bulimia** — Women who have suffered from an eating disorder are at risk because their bones have not had the weight bearing needed to help prevent bone loss.



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How A Woman Can Prevent Osteoporosis

◆ **Diet** — To maintain strong, healthy bones, a diet rich in calcium is needed throughout a woman's life. The need for calcium becomes greater as a woman ages. The U.S. Recommended Daily Allowance for calcium is 1,000 milligrams per day. Post-menopausal women who are not taking estrogen should get 1,500 milligrams a day. Leading experts suggest the following foods as a source for calcium:

Food	Serving	Calcium Content
Skim or 1 percent fat milk	8 oz	300 mg.
Sardines (with bones)	3 oz	371 mg.
Canned salmon	3 oz	167 mg.
Fresh broccoli (cooked and drained)	1 cup	172 mg.
Frozen collard greens (cooked and drained)	1 cup	357 mg.
Tofu	4 oz	154 mg.

◆ **Vitamin D** — Vitamin D is also important because it enables the body to absorb calcium. The recommended daily allowance of vitamin D is 200 immunizing units. Vitamin D can be easily obtained by getting five to 15 minutes of sunlight a few times a week or by consuming fortified milk.

◆ **Exercise** — Exercise helps a woman reduce the degree of bone loss. This can be done by establishing a regular exercise program. Exercises that make a woman's muscles work against gravity (such as walking, jogging, aerobics and weight lifting) are best for strengthening bones.

How Does a Woman Know if She Has Osteoporosis?

Painless and accurate medical tests can provide information about a woman's bone health. Bone Mineral Testing, or bone measurements, use X-rays at very small amounts of radiation to determine the bone density of the spine, hip, wrist or heel. A woman's physician can provide more information about these tests.

How is Osteoporosis Pharmacologically Treated?

All available **FDA approved** therapies along with Calcium and Vitamin D preserve bone by preventing further breakdown. Today's options include;

◆ **Biophosphonates:** Fosamax and Actonel. Both medications build bone and prevent vertebral and non-vertebral fracture. Both are poorly absorbed and must be taken on an empty stomach.

◆ **Calcitonin:** Miacalcin. Available via injection or as an intranasal spray, Calcitonin is systematically absorbed to build bone and prevent vertebral fracture. Calcitonin also has some analgesic effects.

◆ **Selective Estrogen Receptor Modulator (SERMS):** Evista/Raloxifene. Evista builds bone and prevents vertebral fracture. Evista also lowers LDL and total cholesterol levels, and may lower risk of invasive breast cancer.

◆ **Hormone Replacement Therapy:** Estrogen pills or patch. Estrogen builds bone and appears to reduce vertebral fracture. Estrogen also reduces menopausal symptoms, and lowers cholesterol.

No one medication is for everyone, each has its own risks and benefits. Your physician will review with you which medication fits your profile and instruct you on exactly how the medication should be taken and monitored.

Future Treatment

A hormone called parathyroid hormone could soon be available, via injection, as a treatment that promotes bone formation and fracture reduction.

The American Osteopathic Association (AOA) urges women to contact their osteopathic family physician for advice on preserving good health for an active lifestyle. Osteopathic physicians (D.O.s), physicians treating people, not just symptoms, are especially well qualified to assist in preventive healthcare since they are fully trained licensed physicians who have additional training that focuses on the body's structure and function, and its ability to heal itself. For more information visit the AOA's Web site at www.aoa-net.org.