



**National Institutes of Health
Osteoporosis and Related
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National Resource Center**

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The NIH Osteoporosis and Related Bone Diseases ~ National Resource Center is supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases with contributions from the National Institute on Aging, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, the National Institute of Dental and Craniofacial Research, the National Institute of Diabetes and Digestive and Kidney Diseases, the NIH Office of Research on Women's Health, and the HHS Office on Women's Health.

The National Institutes of Health (NIH) is a component of the U.S. Department of Health and Human Services (HHS).



What People With Inflammatory Bowel Disease Need to Know About Osteoporosis

What Is Inflammatory Bowel Disease?

Crohn's disease and ulcerative colitis are inflammatory bowel diseases that affect nearly 1 million Americans. Crohn's disease tends to affect the small intestine, although any part of the digestive tract may be involved. Ulcerative colitis usually causes an inflammation in all or part of the large intestine. People with inflammatory bowel disease (IBD) often have diarrhea, abdominal pain, fever, and weight loss.

The causes of Crohn's disease and ulcerative colitis are unknown. It is sometimes difficult to distinguish one disease from the other, and there is no cure for either condition. Medications are often prescribed to control the symptoms of IBD; in some cases, surgical removal of the involved intestine may be necessary.

What Is Osteoporosis?

Osteoporosis is a condition in which the bones become less dense and more likely to fracture. Fractures from osteoporosis can result in significant pain and disability. Osteoporosis is a major health threat for an estimated 44 million Americans, 68 percent of whom are women. Although postmenopausal Caucasian women have the highest risk for the disease, men and certain ethnic populations are also at risk.

Risk factors for developing osteoporosis include:

- thinness or small frame
- family history of the disease
- being postmenopausal and particularly having had early menopause
- abnormal absence of menstrual periods (amenorrhea)
- prolonged use of certain medications, such as those used to treat lupus, asthma, thyroid deficiencies, and seizures
- low calcium intake
- lack of physical activity
- smoking
- excessive alcohol intake.

Osteoporosis often can be prevented. It is known as a silent disease because if undetected, bone loss can progress for many years without symptoms until a fracture occurs. Osteoporosis has been called a childhood disease with old age consequences because building healthy bones in youth helps prevent osteoporosis and fractures later in life. However, it is never too late to adopt new habits for healthy bones.

The Link Between Inflammatory Bowel Disease and Osteoporosis

The Crohn's and Colitis Foundation of America reports that 30 to 60 percent of people with IBD may have low bone density, which puts them at significant risk for osteoporosis. People with IBD are often treated with medications known as glucocorticoids (such as prednisone or cortisone) to reduce the inflammation caused by their disease. Over time, these drugs interfere with the development and maintenance of healthy bones. Bone loss increases with the amount and length of glucocorticoid therapy.

In addition, people with severe inflammation of the small bowel or those who have parts of the small bowel surgically removed may have difficulty absorbing calcium and vitamin D. This is an additional concern for bone health.

Osteoporosis Management Strategies

To protect and promote bone health, people with IBD should eat a diet rich in calcium and vitamin D and participate in an appropriate exercise program. Not smoking and avoiding excessive use of alcohol are also important. In some cases, medication to prevent further bone loss may be recommended, especially for those on long-term glucocorticoid therapy.

Nutrition: A well-balanced diet rich in calcium and vitamin D is important for healthy bones. Good sources of calcium include low-fat dairy products; dark green, leafy vegetables; and calcium-fortified foods and beverages. Supplements can help ensure that you get adequate amounts of calcium each day, especially in people with a proven milk allergy. The Institute of Medicine recommends a daily calcium intake of 1,000 mg (milligrams) for adults, increasing to 1,200 mg for those age 50 and older.

Vitamin D plays an important role in calcium absorption and bone health. It is synthesized in the skin through exposure to sunlight. Although many people obtain enough vitamin D by getting about 15 minutes of sunlight exposure each day, others, especially those who are older or housebound – may need vitamin D supplements to achieve the recommended intake of 400 to 600 IU (International Units) each day.

Exercise: Like muscle, bone is living tissue that responds to exercise by becoming stronger. The best activity for your bones is weight-bearing exercise that forces one to work against gravity. Some examples include walking, climbing stairs, dancing, and weight training. These and other types of exercise also strengthen muscles that support bone, enhance balance and flexibility, and preserve joint mobility, all of which help reduce the likelihood of falling and breaking a bone, especially among older people.

Healthy lifestyle: Smoking is bad for bones as well as the heart and lungs. Women who smoke tend to go through menopause earlier, resulting in earlier reduction in levels of the bone-preserving hormone estrogen and triggering earlier bone loss. In addition, smokers may absorb less calcium from their diets. Alcohol also can have a negative effect on bone health. Those who drink heavily are more prone to bone loss and fracture, because of both poor nutrition and increased risk of falling.

Bone density test: A bone mineral density (BMD) test measures bone density in various parts of the body. This safe and painless test can detect osteoporosis before a fracture occurs and can predict one's chances of fracturing in the future. Adults with IBD should talk to their doctors about whether they might be candidates for a BMD test. This test can help determine whether medication should be considered and can be used to monitor the effects of an osteoporosis treatment program.

Medication: Like Crohn's disease and ulcerative colitis, osteoporosis is a disease with no cure. However, medications are available to prevent and treat osteoporosis. The Food and Drug Administration has approved several medications (alendronate, risedronate, ibandronate, zoledronic acid, raloxifene, calcitonin, teriparatide, and estrogen/hormone therapy) for preventing and/or

treating osteoporosis in postmenopausal women. Alendronate and risedronate are also approved for use in men. For people with or at risk for glucocorticoid-induced osteoporosis, alendronate has been approved to treat this condition and risedronate has been approved to treat and prevent it.

Resources

For more information on osteoporosis, contact the National Institutes of Health Osteoporosis and Related Bone Diseases ~ National Resource Center at 800-624-2663 or NIAMSBoneInfo@mail.nih.gov.

For more information on Crohn's disease and ulcerative colitis, contact the National Digestive Diseases Information Clearinghouse at 800-891-5389 or nddic@info.niddk.nih.gov.

Reviewed January 2009

For Your Information

This publication contains information about medications used to treat the health conditions discussed here. When this fact sheet was printed, we included the most up-to-date (accurate) information available. Occasionally, new information on medication is released.

For updates and for any questions about any medications you are taking, please contact the Food and Drug Administration at 888-INFO-FDA (888-463-6332, a toll-free call) or visit its Web site at www.fda.gov.

For updates and questions about statistics, please contact the Centers for Disease Control and Prevention's National Center for Health Statistics toll free at 800-232-4636 or visit its Web site at www.cdc.gov/nchs.

Recognizing the National Bone and Joint Decade: 2002-2011