



# What People With Inflammatory Bowel Disease Need to Know About Osteoporosis

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## What Is Inflammatory Bowel Disease?

Crohn's disease and ulcerative colitis are inflammatory bowel diseases that affect nearly one 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 cause(s) 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 and, 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 pain and disability. Osteoporosis is a major health threat for an estimated 44 million Americans. While 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:

- being thin or having a small frame
- having a family history of the disease

- for women, being postmenopausal, having an early menopause, or not having menstrual periods (amenorrhea)
- using certain medications, such as glucocorticoids
- not getting enough calcium
- not getting enough physical activity
- smoking and
- drinking too much alcohol.

Osteoporosis is a disease that often can be prevented. However, if undetected, it can progress for many years without symptoms until a fracture occurs.

## **The Inflammatory Bowel Disease – Osteoporosis Link**

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 and/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 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. Also, supplements can help ensure that the calcium requirement is met each day. According to the National Academy of Sciences, adults under 50 years of age need 1,000 mg of calcium each day, while those over 50 need 1,200 mg.

Vitamin D helps the body to absorb calcium. It is synthesized in the skin through exposure to sunlight. While many people are able to obtain enough vitamin D by getting about 15 minutes of sunlight exposure each day, others – especially those who are older or housebound, live in northern climates, and use sunscreen – may be deficient in this vitamin. They may need vitamin D supplements to ensure an adequate daily intake.

**Exercise:** Like muscle, bone is living tissue that responds to exercise by becoming stronger. The best exercise for bones is weight-bearing exercise that forces one to work against gravity. Some examples include walking, stair-climbing, 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 can also negatively affect bone health. Those who drink heavily are more prone to bone loss and fracture, both because of poor nutrition as well as increased risk of falling.

**Bone Density Test:** Specialized tests known as bone mineral density (BMD) tests measure bone density in various sites of the body. These tests can usually detect osteoporosis before a fracture occurs and 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 bone density test. The test can help determine whether medication should be considered. A bone density test can also be used to monitor the effects of an osteoporosis treatment program.

**Medication:** There are medications available for the prevention and treatment of osteoporosis. Several medications (alendronate, risedronate, ibandronate, raloxifene, calcitonin, teriparatide and estrogen/hormone therapy) are approved by the Food and Drug Administration (FDA) for preventing and/or treating osteoporosis in postmenopausal women. Alendronate and risedronate are also approved for use in men. For people on glucocorticoid therapy, alendronate (for treatment) and risedronate (for prevention and treatment) are approved for glucocorticoid-induced osteoporosis.

## Resources

**For more information on osteoporosis**, contact the NIH Osteoporosis and Related Bone Diseases ~ National Resource Center at 1-800-624-2663 or NIAMSBONEINFO@mail.nih.gov.

**For more information on Crohn's disease and ulcerative colitis**, contact the National Digestive Diseases Information Clearinghouse at 1-800-891-5389 or nddic@info.niddk.nih.gov.

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### **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 U.S. Food and Drug Administration at 1-888-INFO-FDA (1-888-463-6332, a toll-free call) or visit their Web site at [www.fda.gov](http://www.fda.gov).

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