



What People Recovering from Alcoholism Need to Know About Osteoporosis

National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center

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Alcoholism and Recovery

According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA), approximately 17 million adults ages 18 and older have an alcohol use disorder. Alcoholism is a disease characterized by a dependency on alcohol. Because alcohol affects almost every organ in the body, chronic heavy drinking is associated with many serious health problems, including pancreatitis, liver disease, heart disease, cancer, and osteoporosis.

Maintaining sobriety is undoubtedly the most important health goal for individuals recovering from alcoholism. However, attention to other aspects of health, including bone health, can help increase the likelihood of a healthy future, free from the devastating consequences of osteoporosis and fracture.

What Is Osteoporosis?

Osteoporosis is a condition in which bones become less dense and more likely to fracture. Fractures from osteoporosis can result in significant pain and disability. In the United States, more than 53 million people either already have osteoporosis or are at high risk due to low bone mass.

Risk factors for developing osteoporosis include:

- thinness or small frame
- 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 one's 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 Alcohol and Osteoporosis

Alcohol negatively affects bone health for several reasons. To begin with, excessive alcohol interferes with the balance of calcium, an essential nutrient for healthy bones. Calcium balance may be further disrupted by alcohol's ability to interfere with the production of vitamin D, a vitamin essential for calcium absorption.

In addition, chronic heavy drinking can cause hormone deficiencies in men and women. Men with alcoholism may produce less testosterone, a hormone linked to the production of osteoblasts (the cells that stimulate bone formation). In women, chronic alcohol exposure can trigger irregular menstrual cycles, a factor that reduces estrogen levels, increasing the risk for osteoporosis. Also, cortisol levels may be elevated in people with alcoholism. Cortisol is known to decrease bone formation and increase bone breakdown.

Because of the effects of alcohol on balance and gait, people with alcoholism tend to fall more frequently than those without the disorder. Heavy alcohol consumption has been linked to an increase in the risk of fracture, including the most serious kind—hip fracture. Vertebral fractures are also more common in those who abuse alcohol.

Osteoporosis Management Strategies

The most effective strategy for alcohol-induced bone loss is abstinence. People with alcoholism who abstain from drinking tend to have a rapid recovery of osteoblastic (bone-building) activity. Some studies have even found that lost bone can be partially restored when alcohol abuse ends.

Nutrition. Because of the negative nutritional effects of chronic alcohol use, people recovering from alcoholism should make healthy nutritional habits a top priority. As far as bone health is concerned, a well-balanced diet rich in calcium and vitamin D is critical. 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 men and women up to age 50. Women over age 50 and men over age 70 should increase their intake to 1,200 mg daily.

Vitamin D plays an important role in calcium absorption and bone health. Food sources of vitamin D include egg yolks, saltwater fish, and liver. Many people, especially those who are older or housebound, may need vitamin D supplements to achieve the recommended intake of 600 to 800 IU (International Units) each day.

Exercise. Like muscle, bone is living tissue that responds to exercise by becoming stronger. The best exercise for your bones is weight-bearing exercise that forces you to work against gravity. Some examples include walking, climbing stairs, weight training, and dancing. Regular exercise, such as walking, may help prevent bone loss and will provide many other health benefits.

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.

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. The BMD test can help determine whether medication should be considered. Individuals in recovery are encouraged to talk to their health care providers about whether they might be candidates for a BMD test.

Medication. Several medications are available for the prevention and/or treatment of osteoporosis, including: bisphosphonates; estrogen agonists/antagonists (also called selective estrogen receptor modulators or SERMS); calcitonin; parathyroid hormone; estrogen therapy; hormone therapy; and a RANK ligand (RANKL) inhibitor.

Resources

For more information on osteoporosis, contact the:

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If you need more information about available resources in your language or another language, please visit our website or contact the NIH Osteoporosis and Related Bone Diseases ~ National Resource Center.

For more information on alcoholism, contact the:

**National Institute on Alcohol Abuse
and Alcoholism**

Website: www.niaaa.nih.gov

For Your Information

This publication contains information about medications used to treat the health condition discussed here. When this publication was developed, 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 toll free at 888-INFO-FDA (463-6332) or visit its website at www.fda.gov. For additional information on specific medications, visit Drugs@FDA at www.accessdata.fda.gov/scripts/cder/drugsatfda. Drugs@FDA is a searchable catalog of FDA-approved drug products.

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