

## Bone Health

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Bones provide the strength and support people need to move. They also store calcium, magnesium, phosphorus and other substances that are important for the body's health. Throughout our lives, the cells in our bones constantly break down old bone mass and build new bone to replace it. As we age, however, the body's ability to rebuild bone lessens, which can lead to increased risk for fracture in older adults.

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### Q . **How do my bones change as I grow older?**

A . In early middle age, our bones naturally become thinner. This happens in both men and women, and continues throughout the rest of life. This is called senescent (or age-related) bone loss. During menopause, the sudden loss of the female hormone estrogen increases the rate at which a woman's bones thin. This is called menopausal bone loss. As men age, decreased hormone levels can also cause bone thinning. Moderate thinning of the bones is called "osteopenia," and thinning that is severe enough to raise the risk of fracture is called "osteoporosis."

### Q . **What are common conditions and diseases that affect bone health in older adults?**

A . Men with prostate cancer who have treatments that lower testosterone, and women who have had their ovaries removed before menopause have a higher chance of bone thinning. Problems with certain glands, such as the thyroid, parathyroid and adrenal glands, as well as liver and kidney problems, and diseases such as multiple myeloma, can cause bone thinning. Poor health habits, such as low calcium in the diet, low vitamin D levels in your body, little exercise and cigarette smoking can contribute to bone loss. Some medications, such as glucocorticoid steroid medicines, can also cause bone thinning. Bone thinning can also occur if your body is unable to absorb nutrients properly, which can occur with a variety of conditions.

### Q . **How is bone thinning detected?**

A . Osteopenia and osteoporosis are detected with a radiology test called bone densitometry. Unfortunately, severe bone thinning (osteoporosis) is often not detected until an older person fractures a bone. Diseases that cause bone thinning, or worsen it, may be detected using specific blood and urine tests.

**Q . If my doctor tells me my bones are too thin, what can I do to help strengthen them?**

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**Q . What medications might my health care provider prescribe for thinning bones?**

**A .** Along with calcium, people with osteoporosis are usually prescribed a medicine to lessen bone thinning, which may help prevent fractures. In post-menopausal women, your doctor may prescribe estrogen or an estrogen-like medication. In some men, testosterone may be prescribed. There are other prescription medications (such as bisphosphonates and calcitonin) that lessen bone thinning and may prevent certain types of fractures. If another ailment or disease is found that is causing bone thinning, the specific treatment will depend on the disease. You should discuss these choices with your health care provider.

**Q . Should I take calcium and vitamin D?**

**A .** People who do not get enough calcium in their diet should take calcium supplements. The recommended amount of calcium for older people is 1200 mg or more per day. Although your skin manufactures vitamin D when in the sun, older adults are not able to make as much vitamin D as younger people. Also, older people often do not get enough sunlight to make the recommended daily amount of vitamin D, which is 400 IU per day if you are over age 50, and 600 IU per day if you are over age 70. Too much vitamin D can be toxic, however, so you should review your intake with a physician or other healthcare provider.

**Q . How can I maintain good bone health as I become older?**

**A .** Brisk walking and other weight bearing exercises not only slow down bone thinning, but also may lower the risk for a fracture because exercise also improves balance and muscle strength. Calcium and vitamin D (either in your diet or through supplements) are also important for bone health. Stopping smoking improves bone health, in addition to many other benefits to your body and your overall health. The sooner in life you begin making these healthy choices, the stronger your bones will be.

**Q . Where can I find additional information on bone health?**

**A .** You may call or write to the following organizations for more information:

NIH Osteoporosis and Related Bone Diseases National Resource Center (NIH-ORBD-NRC)  
1232 22nd Street, NW  
Washington, DC 20037-1292  
Phone: (800) 624-BONE (2663) (toll-free), or (202) 223-0344  
TTY: (202) 466-4315                      FAX: (202) 293-2356  
Email: [orbdnrc@nof.org](mailto:orbdnrc@nof.org)  
Website: [www.osteoporosis.org](http://www.osteoporosis.org)



National Osteoporosis Foundation (NOF)  
1232 22nd Street, NW  
Washington, DC 20037-1292  
Phone: (202) 223-2226  
Fax: (202) 223-2237  
Website: [www.nof.org](http://www.nof.org)

National Arthritis and Musculoskeletal and Skin Diseases Information Clearinghouse  
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)  
National Institutes of Health  
1 AMS Circle  
Bethesda, MD 20892-3675  
Phone: (877) 22-NIAMS (226-4267) (toll-free) or (301) 495-4484  
TTY: (301) 565-2966  
Fax: (301) 881-2731  
Email: [NIAMSInfo@mail.nih.gov](mailto:NIAMSInfo@mail.nih.gov)  
Website: [www.nih.gov/niams](http://www.nih.gov/niams)

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