



**National Institutes of Health
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What People With Rheumatoid Arthritis Need to Know About Osteoporosis

What Is Rheumatoid Arthritis?

Rheumatoid arthritis is an autoimmune disease, a disorder in which the body attacks its own healthy cells and tissues. When someone has rheumatoid arthritis, the membranes around his or her joints become inflamed and release enzymes that cause the surrounding cartilage and bone to wear away. In severe cases, other tissues and body organs also can be affected.

Individuals with rheumatoid arthritis often experience pain, swelling, and stiffness in their joints, especially those in the hands and feet. Motion can be limited in the affected joints, curtailing one's ability to accomplish even the most basic everyday tasks. About one-quarter of those with rheumatoid arthritis develop nodules (bumps) that grow under the skin, usually close to the joints. Fatigue, anemia (low red blood cell count), neck pain, and dry eyes and mouth can also occur in individuals with the disease.

According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases, it is estimated that about 2.1 million people in the United States have rheumatoid arthritis. The disease occurs in all racial and ethnic groups, but affects two to three times as many women as men. Rheumatoid arthritis is more commonly found in older individuals, although the disease typically begins in middle age. Children and young adults can also be affected.

What Is Juvenile Rheumatoid Arthritis?

Juvenile rheumatoid arthritis occurs in children 16 years of age or younger. Children with severe juvenile rheumatoid arthritis may be candidates for glucocorticoid medication,

the use of which has been linked to bone loss in children as well as adults. Physical activity can be challenging in children with juvenile rheumatoid arthritis, since it may cause pain. Incorporating physical activities recommended by the child's doctor and a diet rich in calcium and vitamin D are especially important, so that these children can build adequate bone mass and reduce the risk of future fracture.

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. It is a major health threat for an estimated 44 million Americans, 68 percent of whom are women.

Risk factors for developing osteoporosis include:

- thinness or small frame
- family history of the disease
- being postmenopausal or having had early menopause
- abnormal absence of menstrual periods (amenorrhea)
- prolonged use of certain medications, such as glucocorticoids
- low calcium intake
- physical inactivity
- smoking
- excessive alcohol intake.

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

The Rheumatoid Arthritis – Osteoporosis Link

Studies have found an increased risk of bone loss and fracture in individuals with rheumatoid arthritis. People with rheumatoid arthritis are at increased risk for osteoporosis for many reasons. To begin with, the glucocorticoid medications often prescribed for the treatment of rheumatoid arthritis can trigger significant bone loss. In addition, pain and loss of joint function caused by the disease can result in inactivity, further increasing osteoporosis risk. Studies also show that bone loss in rheumatoid arthritis may occur as a direct result of the disease. The bone loss is most pronounced in areas immediately surrounding the affected joints. Of concern is the fact that women, a group already at increased osteoporosis risk, are two to three times more likely than men to have rheumatoid arthritis as well.

Osteoporosis Management Strategies

Strategies for preventing and treating osteoporosis in people with rheumatoid arthritis are not significantly different from the strategies for those who do not have the disease.

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.

Vitamin D plays an important role in calcium absorption and bone health. It is synthesized in the skin through exposure to sunlight. While many people are able to obtain enough vitamin D naturally, older individuals are often deficient in this vitamin. This is partly because they spend limited time outdoors. Such individuals may require vitamin D supplements in order to ensure an adequate daily intake.

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, lifting weights, and dancing.

Exercising can be challenging for people with rheumatoid arthritis, and it needs to be balanced with rest when the disease is active. However, regular exercises such as walking can help prevent bone loss and, by enhancing balance and flexibility, can also reduce the likelihood of falling and breaking a bone. Exercise is also important for preserving joint mobility.

Healthy lifestyle: Smoking is bad for bones as well as the heart and lungs. Women who smoke tend to go through menopause earlier, triggering earlier bone loss. In addition, people who smoke 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, because of both poor nutrition and an 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 detect osteoporosis before a fracture occurs and predict one's chances of fracturing in the future. A person with rheumatoid arthritis, particularly someone who has been receiving glucocorticoid therapy for 2 months or more, should talk to his or her doctor about whether a bone density test is appropriate.

Medication: Like rheumatoid arthritis, osteoporosis has no cure. However, there are medications available to prevent and treat osteoporosis. Several medications (alendronate, risedronate, ibandronate, raloxifene, calcitonin, teriparatide, and estrogen/hormone therapy) are approved by the Food and Drug Administration (FDA) to prevent and treat osteoporosis in postmenopausal women. Alendronate is also approved for use in men. For women and men with rheumatoid arthritis who are on glucocorticoid therapy and who have glucocorticoid-induced osteoporosis, alendronate (for treatment) and risedronate (for prevention and treatment) are approved.

Resources

For additional information on osteoporosis, visit the National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center Web site at www.niams.nih.gov/bone or call 1-800-624-2663.

For additional information on rheumatoid arthritis, visit the National Institute of Arthritis and Musculoskeletal and Skin Diseases Web site at www.niams.nih.gov or call 1-877-22-NIAMS (a toll-free call).

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For Your Information

This publication contains information about medications used to treat the health condition 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.