



Osteoporosis and Arthritis: Two Common but Different Conditions

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Many people confuse osteoporosis and some types of arthritis. This fact sheet discusses the similarities and differences between these conditions.

Osteoporosis

Osteoporosis is a condition in which the bones become less dense and more likely to fracture. Osteoporosis is a major health threat for an estimated 44 million Americans, 68 percent of whom are women. In osteoporosis, there is a loss of bone tissue that leaves bones less dense and more likely to fracture. It can result in a loss of height, severe back pain, and change in one's posture. Osteoporosis can impair a person's ability to walk and can cause prolonged or permanent disability.

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 is known as a silent disease because it can progress undetected for many years without symptoms until a fracture occurs. Osteoporosis is diagnosed by a bone mineral density test, which is a safe and painless way to detect low bone density.

Although there is no cure for the disease, the Food and Drug Administration has approved several medications to prevent and treat osteoporosis. In addition, a diet rich in calcium and vitamin D, regular weight-bearing exercise, and a healthy lifestyle can prevent or lessen the effects of the disease.

Arthritis

Arthritis is a general term for conditions that affect the joints and surrounding tissues. Joints are places in the body where bones come together, such as the knees, wrists, fingers, toes, and hips. The two most common types of arthritis are osteoarthritis and rheumatoid arthritis.

- **Osteoarthritis (OA)** is a painful, degenerative joint disease that often involves the hips, knees, neck, lower back, or small joints of the hands. OA usually develops in joints that are injured by repeated overuse from performing a particular task or playing a favorite sport or from carrying around excess body weight. Eventually this injury or repeated impact thins or wears away the cartilage that cushions the ends of the bones in the joint. As a result, the bones rub together, causing a grating sensation. Joint flexibility is reduced, bony spurs develop, and the joint swells. Usually, the first symptom of OA is pain that worsens following exercise or immobility. Treatment usually includes analgesics, topical creams, or nonsteroidal anti-inflammatory drugs (known as NSAIDs); appropriate exercises or physical therapy; joint splinting; or joint replacement surgery for seriously damaged larger joints, such as the knee or hip.
- **Rheumatoid arthritis (RA)** is an autoimmune inflammatory disease that usually involves various joints in the fingers, thumbs, wrists, elbows, shoulders, knees, feet, and ankles. An autoimmune disease is one in which the body releases enzymes that attack its own healthy tissues. In RA, these enzymes destroy the linings of joints. This causes pain, swelling, stiffness, malformation, and reduced movement and function. People with RA also may have systemic symptoms, such as fatigue, fever, weight loss, eye inflammation, anemia, subcutaneous nodules (bumps under the skin), or pleurisy (a lung inflammation).

Although osteoporosis and osteoarthritis are two very different medical conditions with little in common, the similarity of their names causes great confusion. These conditions develop differently, have different symptoms, are diagnosed differently, and are treated differently. Studies show that people with OA are *less likely than average* to develop osteoporosis. On the other hand, people with RA may be *more likely* to develop osteoporosis. This is especially true because some medications used to treat RA can contribute to osteoporosis.

Osteoporosis and arthritis do share many coping strategies. With either or both of these conditions, many people benefit from exercise programs that may include physical therapy and rehabilitation. In general, exercises that emphasize stretching, strengthening, posture, and range of motion are appropriate. Examples include low-impact aerobics, swimming, tai chi, and low-stress yoga. However, people with osteoporosis must take care to avoid activities that include bending forward from the waist, twisting the spine, or lifting heavy weights. People with arthritis must compensate for limited movement in affected joints. Always check with your doctor to determine whether a certain exercise or exercise program is safe for your specific medical situation.

Most people with arthritis will use pain management strategies at some time. This is not always true for people with osteoporosis. Usually, people with osteoporosis need pain relief when they are recovering from a fracture. In cases of severe osteoporosis with multiple spine fractures, pain control also may become part of daily life. Regardless of the cause, pain management strategies are similar for people with osteoporosis, OA, and RA. These strategies are included in the following chart.

This table provides an overview of some of the similarities and differences among osteoporosis, OA, and RA. Some individuals with these conditions may have a different experience or may require a different medical approach to manage their disorder(s).

Similarities and Differences Among Osteoporosis, Osteoarthritis, and Rheumatoid Arthritis			
	Osteoporosis	Osteoarthritis	Rheumatoid Arthritis
Risk Factors			
Age-related	√	√	
Menopause	√		
Family history	√	√	√
Use of certain medications (e.g., glucocorticoids, seizure medications)	√		
Calcium deficiency or inadequate vitamin D	√		
Inactivity	√		
Overuse of joints		√	

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	Osteoporosis	Osteoarthritis	Rheumatoid Arthritis
Smoking	√		
Excessive alcohol	√		
Anorexia nervosa	√		
Excessive weight		√	
Physical Effects			
Affects entire skeleton	√		
Affects joints		√	√
Is an autoimmune disease			√
Bony spurs		√	√
Enlarged or malformed joints		√	√
Height loss	√	√	
Treatment Options			
Raloxifene	√		
Bisphosphonates (e.g., alendronate, risedronate, ibandronate, and zoledronic acid.)	√		
Calcitonin	√		
Teriparatide	√		
Estrogen	√		
Calcium and vitamin D	√		
Weight management		√	
Glucocorticoids			√
NSAIDs	√	√	√
Methotrexate			√
Disease-modifying antirheumatic drugs, biologic response modifiers, tumor necrosis factor inhibitors.			√

Similarities and Differences Among Osteoporosis, Osteoarthritis, and Rheumatoid Arthritis

	Osteoporosis	Osteoarthritis	Rheumatoid Arthritis
Pain Management			
Pain medication (e.g., NSAIDS, narcotics, muscle relaxants)	√	√	√
Rehabilitation	√	√	√
Support groups	√	√	√
Exercises: postural	√	√	√
Exercises: isometric, isotonic, isokinetic	√	√	√
Joint splinting		√	√
Physical therapy	√	√	√
Passive exercises		√	√
Hip fracture surgical repair (may include hip replacement depending on type of fracture)	√		
Joint replacement surgery (usually for pain, malformation, or impaired mobility)		√	√
Heat and cold	√	√	√
Massage therapy	√	√	√
Acupuncture	√	√	√
Psychological approaches (e.g., relaxation, visualization, biofeedback)	√	√	√
Tai chi	√	√	√
Low-stress yoga	√	√	√

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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 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