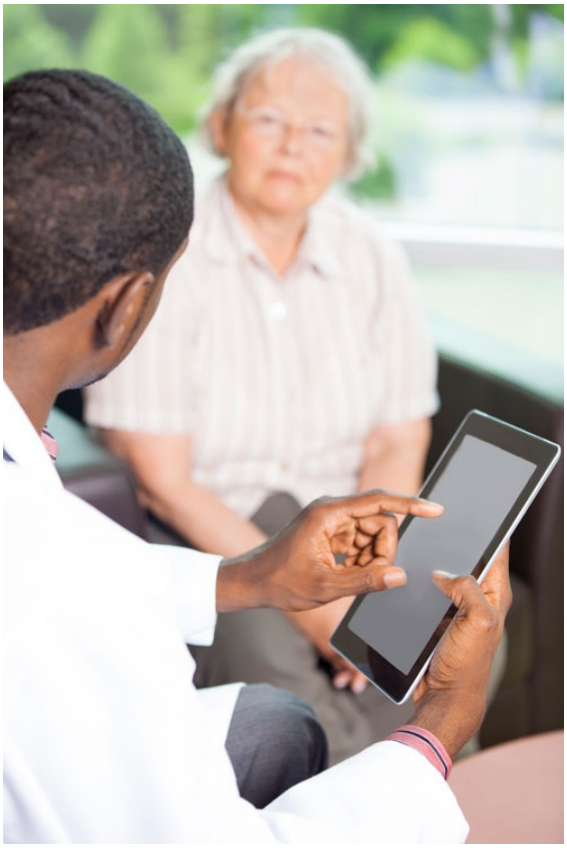
RadiologyInfo.org
For patients

Arthritis



Arthritis is inflammation of one or more joints in the body. The two most common types are osteoarthritis (also known as degenerative joint disease) and rheumatoid arthritis (RA). Osteoarthritis may occur with aging, or following trauma or another injury to a joint. RA is an autoimmune disease that often occurs in younger adults where the body's own defenses attack the joint lining.

Your doctor will likely conduct a complete physical and may perform blood tests to look for inflammation to help diagnose your condition. Additional tests may include bone x-ray, CT, MRI, or ultrasound. Treatment will depend on the type, severity and location of the arthritis and may include medication, therapy or surgery.

What is arthritis?

Arthritis (http://www.radiologyinfo.org) means inflammation (http://www.radiologyinfo.org) of one or more joints in the body. A joint is an area where two or more bones make contact and move against each other. The underlying cause varies with specific types of arthritis. There are over 100 forms of arthritis with the two most common being osteoarthritis and rheumatoid arthritis. Osteoarthritis (http://www.radiologyinfo.org) , also known as degenerative joint disease, is caused in part by degeneration of parts of the joint such as cartilage and increases with age. The increasing wear and breakdown on parts of the affected joint can result in reactive inflammation. Rheumatoid arthritis (RA) (http://www.radiologyinfo.org) , on the other hand, is an autoimmune disease (http://www.radiologyinfo.org) where the body's own defenses attack the normal joint lining. In this type of arthritis, inflammation in the joint lining and within the bones leads to joint damage, especially to the cartilage. Other relatively common causes of arthritis include injuries, abnormal limb alignment, infections, autoimmune conditions other than rheumatoid arthritis and abnormal deposits in the joints, such as in gout.

Some type of arthritis affects over 40 million people in the United States. More than half of those people have degenerative joint disease. Almost 60 percent of those affected by arthritis are women. While arthritis mainly occurs in adults, children can be at risk of certain types of arthritis such as those caused from injury and autoimmune diseases. Although any joint in the body can be affected, particular forms of arthritis have a tendency to occur in certain parts of the body. For example, rheumatoid arthritis commonly affects the wrists and knuckles, feet, neck, and larger joints in the limbs while degenerative joint disease may affect the thumb bases, finger joints, knees, hips, shoulders, and lower spine. Other forms of arthritis target mostly the joints in the spine.

Symptoms of arthritis include:

- Joint pain, stiffness or swelling—which can occur in the mornings or after activities
- Limited range of motion in the joint or spine
- Tenderness and redness of skin around the joint

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- Joint catching or locking with movement

How is arthritis diagnosed and evaluated?

When diagnosing arthritis, your doctor will likely do a complete physical examination of your entire body, including your spine, joints, skin and eyes. You may undergo blood tests to detect markers of inflammation. In cases where an infection or gout is suspected, it may be useful to draw some fluid from a joint with a needle in order to analyze the contents of the material. In addition, your physician may order one or more of the following imaging tests:

- *Bone x-ray (radiography) (https://www.radiologyinfo.org/en/info/bonerad)* : A radiograph (x-ray) uses a low dose of radiation to create images of internal structures. X-rays show the bones and the way they interact with each other at the joints. They are useful to evaluate the amount of cartilage at the ends of the bones, deformities and underlying conditions in the bones that may lead to arthritis, and changes in the bones that may be damage from arthritis.
- *Body computed tomography (CT) (https://www.radiologyinfo.org/en/info/bodyct)* : CT scanning combines special x-ray equipment with sophisticated computers to produce multiple images of the inside of the body. For people with arthritis, CT is typically used for examining joints that are deep in the body and difficult to assess with conventional x-ray, especially in the spine or pelvis.
- *Musculoskeletal magnetic resonance imaging (MRI) (https://www.radiologyinfo.org/en/info/muscmr)* : MRI uses a powerful magnetic field, radio frequency pulses and a computer to produce detailed pictures of the body. The advantage of MRI is that it shows both the bones and the surrounding tissues – including cartilage, ligaments and the inner lining of the joints. MRI is frequently used to discover abnormalities in the soft tissue components of joints (which are invisible on x-ray) to determine whether treatment is effective and to look for disease complications.
- *Musculoskeletal ultrasound (https://www.radiologyinfo.org/en/info/musculous)* : Ultrasound uses a small transducer (http://www.radiologyinfo.org) (probe) and gel to create images of the body from high-frequency sound waves. It can provide detailed pictures of the joints and surrounding soft tissues, primarily those that are located near the surface of the skin.

How is arthritis treated?

Treatment for arthritis depends on the type, severity and location of the disorder. Common treatments include:

- Medication: Available prescription and non-prescription medications can reduce joint inflammation and pain.
- Therapy: Physical therapy and exercise can improve the range of motion and flexibility while improving muscle and bone strength. Other options include massage therapy, water therapy or orthotics.
- Surgery: Joint replacement (arthroplasty) or joint fusion surgery may be the best treatment option for some patients.

Which test, procedure or treatment is best for me?

- *Chronic Ankle Pain (https://www.radiologyinfo.org/en/info/acs-chronic-ankle-pain)*
- *Chronic Wrist Pain (https://www.radiologyinfo.org/en/info/acs-chronic-wrist-pain)*
- *Inflammatory Back Pain (https://www.radiologyinfo.org/en/info/acs-inflammatory-back-pain)*
- *Low Back Pain (https://www.radiologyinfo.org/en/info/acs-low-back-pain)*

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