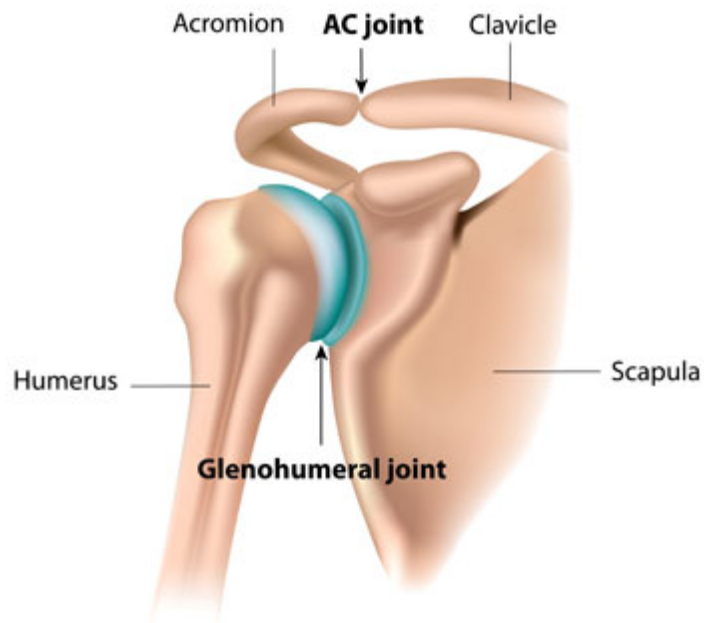


## Shoulder Osteoarthritis and Shoulder Replacement

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The bones and joints of the shoulder.

Your shoulder is made up of three bones: your upper arm bone (humerus), your shoulder blade (scapula), and your collarbone (clavicle).

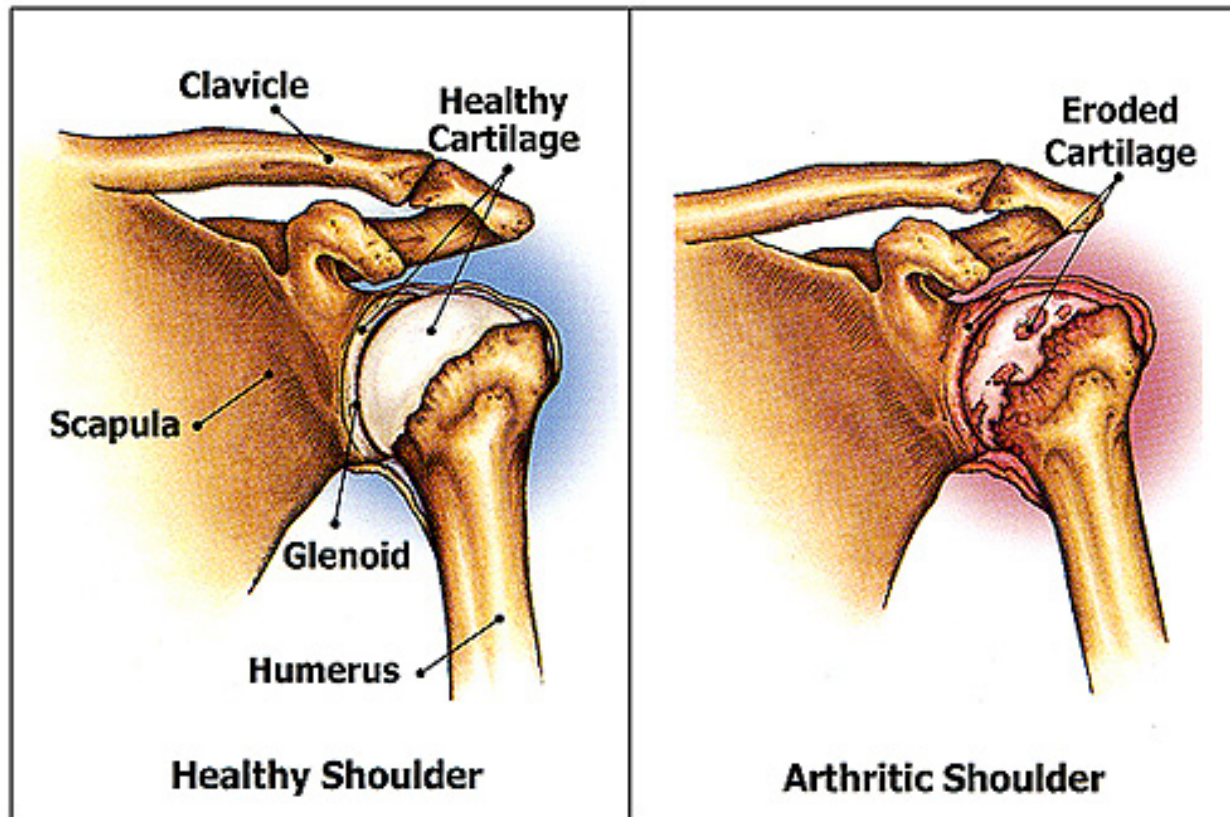
The head of your upper arm bone fits into a rounded socket in your shoulder blade. This socket is called the glenoid. A combination of muscles and tendons keeps your arm bone centered in your shoulder socket. These tissues are called the rotator cuff.

There are two joints in the shoulder, and both may be affected by arthritis. One joint is located where the clavicle meets the tip of the shoulder blade (acromion). This is called the acromioclavicular (AC) joint.

Where the head of the humerus fits into the scapula is called the glenohumeral joint.

### ***Osteoarthritis***

Osteoarthritis is a condition that destroys the smooth outer covering (articular cartilage) of bone. As the cartilage wears away, it becomes frayed and rough, and the protective space between the bones decreases. During movement, the bones of the joint rub against each other, causing pain.



(Left) An illustration of damaged cartilage in the glenohumeral joint. (Right) This x-ray of the shoulder shows osteoarthritis and decreased joint space (arrow).

### Symptoms

**Pain.** The most common symptom of arthritis of the shoulder is pain, which is aggravated by activity and progressively worsens.

- If the glenohumeral shoulder joint is affected, the pain is centered in the back of the shoulder and may intensify with changes in the weather. Patients complain of an ache deep in the joint.

**Limited range of motion.** Limited motion is another common symptom. It may become more difficult to lift your arm to comb your hair or reach up to a shelf. You may hear a grinding, clicking, or snapping sound (crepitus) as you move your shoulder.

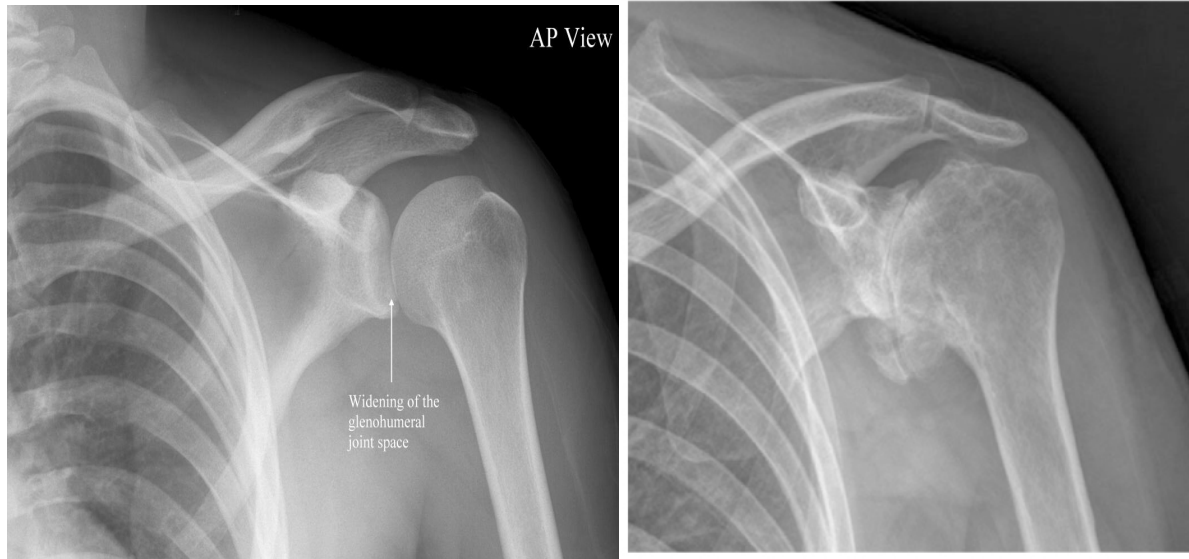
As the disease progresses, any movement of the shoulder causes pain. Night pain is common and sleeping may be difficult.

### Doctor Examination

After discussing your symptoms and medical history, we will examine your shoulder and likely order X-rays.

## X-Rays

X-rays of an arthritic shoulder will show a narrowing of the joint space, changes in the bone, and the formation of bone spurs (osteophytes).



## Treatment

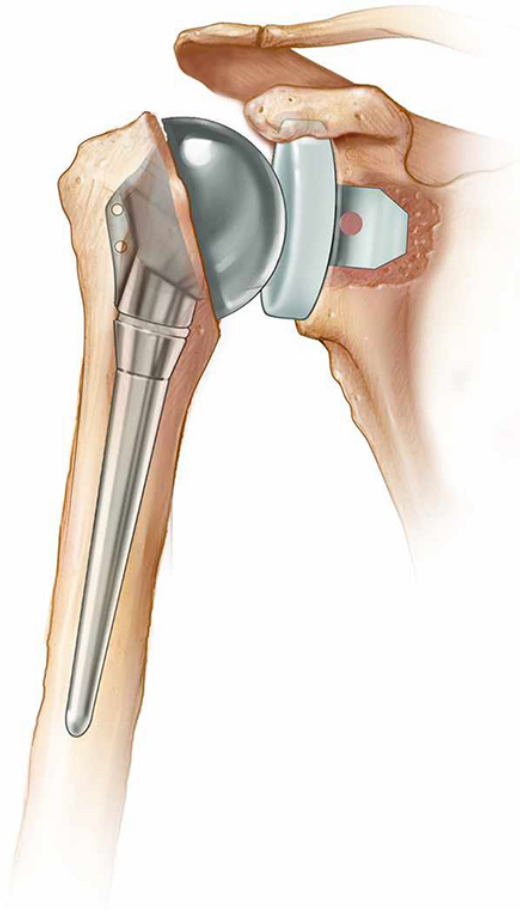
As with other arthritic conditions, initial treatment of arthritis of the shoulder is nonsurgical.

Although there is no cure for osteoarthritis, there are a number of treatment options that will help relieve pain and improve mobility.

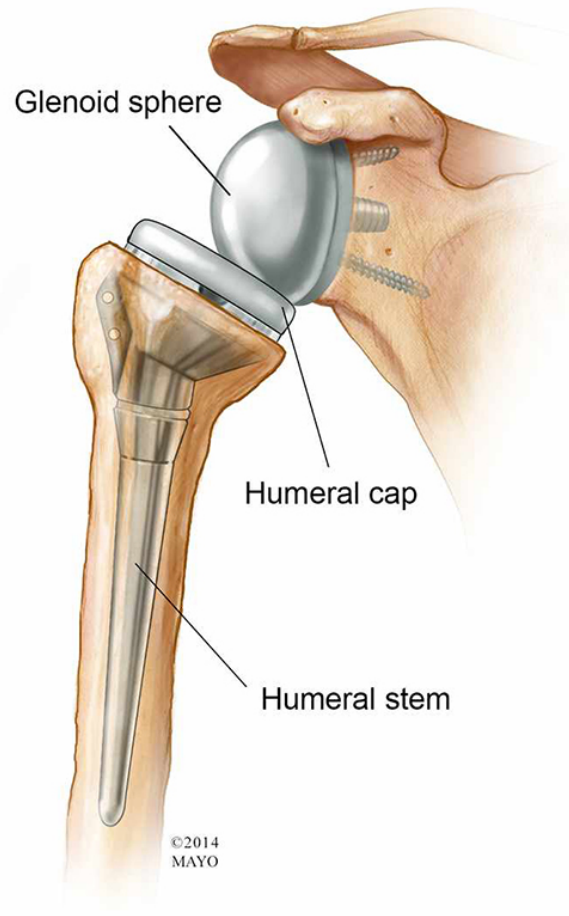
As with other arthritic conditions, early treatment of osteoarthritis of the hip is nonsurgical. We may recommend a range of treatment options, such as lifestyle modifications, physical therapy, medications or injections. When this non surgical treatment does not work anymore, then it may be time to consider a total shoulder replacement.

**Shoulder joint replacement (arthroplasty).** Advanced arthritis of the glenohumeral joint can be treated with shoulder replacement surgery, in which the damaged parts of the shoulder are removed and replaced with artificial components, called a prosthesis.

Total shoulder arthroplasty



Reverse shoulder arthroplasty



(Left) A conventional total shoulder replacement (arthroplasty) mimics the normal anatomy of the shoulder. (Right) In a reverse total shoulder replacement, the plastic cup inserts on the humerus, and the metal ball screws into the shoulder socket.

Replacement surgery options include:

- **Hemiarthroplasty.** Just the head of the humerus is replaced by an artificial component.
- **Total shoulder arthroplasty.** Both the head of the humerus and the glenoid are replaced. A special polyethylene "cup" is fitted into the glenoid, and a metal "ball" is attached to the top of the humerus.
- **Reverse total shoulder arthroplasty.** In a reverse total shoulder replacement, the socket and metal ball are opposite a conventional total shoulder arthroplasty. The metal ball is fixed to the glenoid and the polyethylene cup is fixed to the upper end of the humerus. A reverse total shoulder replacement works better for people

with cuff tear arthropathy because it relies on different muscles — not the rotator cuff — to move the arm.