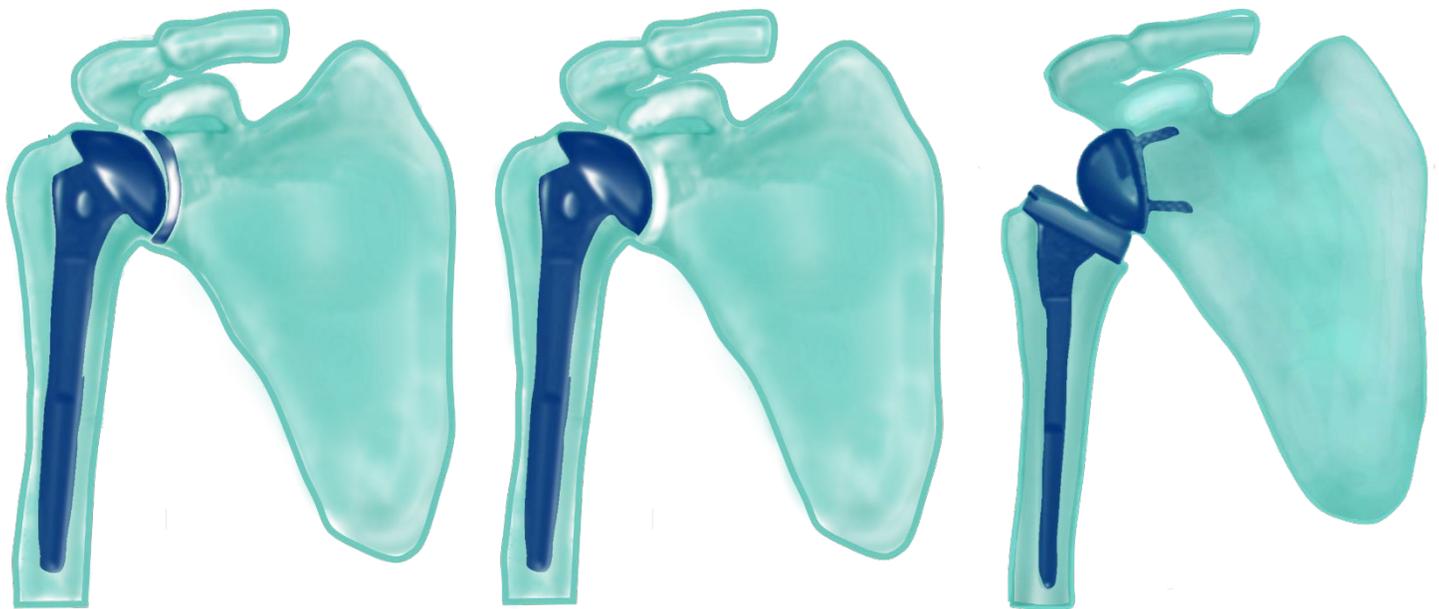




# Learn More about Shoulder Replacement Surgery



## About Shoulder Replacement

Orthopaedic surgeons continue to advance shoulder replacement with new prostheses and techniques to improve the quality of life for patients with degenerative joint disease (“arthritis”) and other disorders of the shoulder.

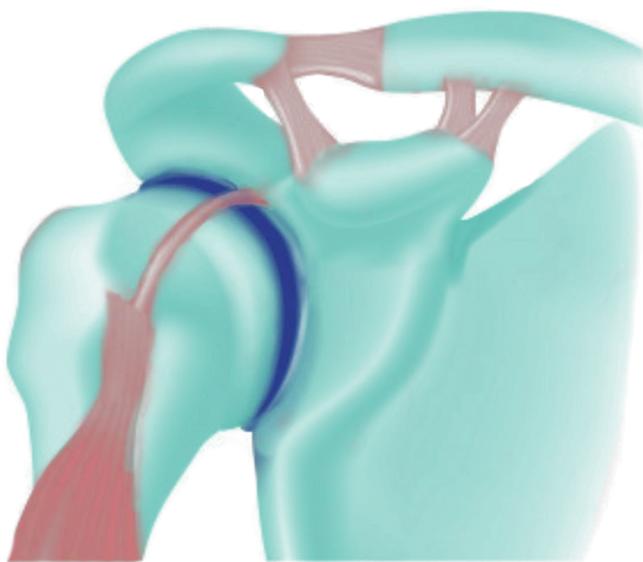
## Understanding Shoulder Anatomy

The shoulder is a ball-and-socket that permits the arm to be moved in many directions, especially overhead, and allows many of the most basic activities of daily living. Shoulder replacement, also called shoulder arthroplasty, involves replacing the ball and socket of the shoulder joint with a metal ball and plastic socket prosthesis.

The shoulder is comprised of three bones- the upper arm bone (humerus), the shoulder blade (scapula), and the collarbone (clavicle). These bones come together to make two joints that allow your arm to move in all directions.

The bones of the shoulder are held in place by muscles, tendons, and ligaments. Tendons are tough cords of tissue that attach the shoulder muscles to bone and assist the muscles in moving the shoulder. Ligaments attach shoulder bones to each other, providing stability.

The deltoid muscle is a thick triangular muscle covering the shoulder joint and is used to raise the arm from the side. The rotator cuff is composed of muscles whose tendons attach to the top of the humerus and provide mobility and strength to the shoulder. The glenoid socket and humeral head are both cushioned by surface cartilage, allowing the bones to move against each other smoothly.



NORMAL SHOULDER



ARTHRITIC SHOULDER

## What is Arthritis?

Arthritis is damage to the bone surfaces and cartilage resulting in stiffness, pain, rubbing noises (crepitus), muscle weakness, and loss of function.

## Non-Surgical Treatment First

Before patients with degenerative arthritis of their shoulder are considered candidates for surgery, they may be helped by non-surgical management. Our physicians will prescribe physiotherapy to maintain flexibility and range of motion. NSAIDS (non-steroidal anti-inflammatory drugs) such as ibuprofen, are often recommended to decrease inflammation and pain. Rarely, cortisone injections may be used to treat acute pain from arthritis, but do not have long-term effects. Multiple injections are not recommended.

## Indications for Surgery

Shoulder replacement can be extremely helpful to people suffering with severe pain, stiffness, and loss of motion due to osteoarthritis- a degenerative joint disease generally occurring in an older population. Osteoarthritis of the shoulder can be evaluated by X-ray, CT scan or MRI to reveal loss of joint space and bony changes.

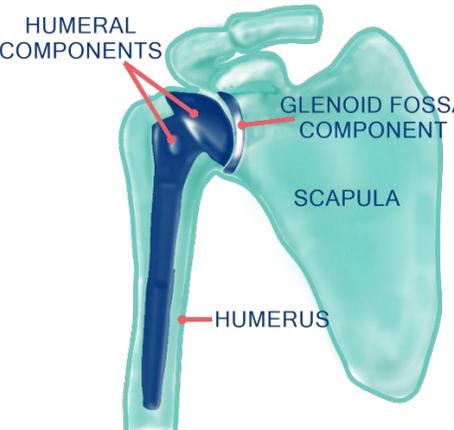
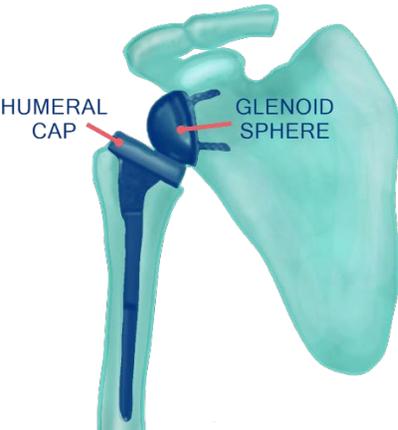
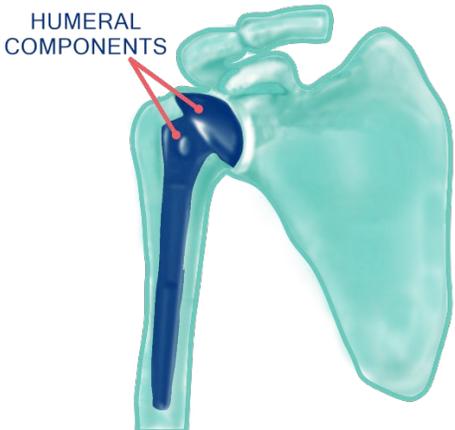
In addition, patients with complex shoulder or upper arm fractures resulting from trauma or osteonecrosis, a condition in which bone can crumble due to lack of blood supply, may also require a shoulder replacement.

The most common reasons for shoulder replacement surgery are:

1. Total shoulder replacement surgery for patients who have severe arthritis to relieve pain and stiffness and regain their mobility.
2. Reverse shoulder replacement surgery for patients who have severe arthritis and a large chronic rotator cuff tear that cannot be repaired or complications resulting from a shoulder fracture.
3. Revision shoulder replacement for patients who have previously undergone a shoulder replacement surgery that has failed.
4. Shoulder Hemiarthroplasty for patients who only need the ball part of their shoulder replaced.
5. Surface replacement for younger patients with arthritis.

# The Procedure: Shoulder Replacement

The goals of shoulder replacement surgery are to relieve pain and increase movement in the shoulder. The exact type of shoulder replacement surgery performed depends on the patient's specific diagnosis.

Total Shoulder Replacement	Reverse Total Shoulder Replacement	Shoulder Hemiarthroplasty
 <p>The diagram shows a shoulder joint with a metal ball and stem (humeral components) attached to the humerus, and a plastic socket (glenoid fossa component) attached to the scapula. Labels include: HUMERAL COMPONENTS, GLENOID FOSSA COMPONENT, SCAPULA, and HUMERUS.</p>	 <p>The diagram shows a shoulder joint where the humeral head is replaced by a concave cup (humeral cap) and the socket is replaced by a metal ball (glenoid sphere). Labels include: HUMERAL CAP and GLENOID SPHERE.</p>	 <p>The diagram shows a shoulder joint where only the head of the humerus is replaced with a metal ball. Label: HUMERAL COMPONENTS.</p>
<p>Total shoulder replacement involves replacement of the head of the upper arm bone (humerus) with a metal ball and stem prosthesis and the socket (glenoid) with a plastic prosthesis.</p>	<p>In a reverse total shoulder replacement, the orientation of the shoulder joint is reversed by replacing the socket (glenoid) with an artificial base plate and metal ball; and the humeral head with a shaft and concave cup. This design changes the biomechanics of the shoulder, enabling the new artificial joint to function when the rotator cuff is damaged.</p>	<p>A shoulder hemiarthroplasty involves replacement of only the head of the humerus.</p>

## More Facts about Shoulder Replacement Surgery:

- A total shoulder replacement is performed through an incision that is approximately five to six inches in length.
- A total shoulder replacement procedure can take up to two and a half hours to perform, depending on the severity of shoulder damage.
- The surgeon removes the part of the bones that are damaged and have lost cartilage.
- **The humeral component**, which is usually made of cobalt chromium-based alloys or titanium, replaces the head of the humerus which is the ball part of the joint.
- **The glenoid component**, which is made of high-density polyethylene (plastic) replaces the socket part of the joint.
- The surgeon sometimes uses bone cement to hold the parts in place.

## Expectations After Shoulder Replacement

An important factor in deciding whether to have shoulder replacement surgery is understanding what the procedure can and can't do.

More than 90% of individuals who undergo shoulder replacement experience a dramatic decrease in shoulder pain and a significant improvement in the ability to perform common activities of daily living.

Shoulder replacement will not allow you to do more than you could before you developed arthritis. It is important set reasonable goals for your shoulder replacement surgery to ensure you are not disappointed with the outcome.

Finally, the surgery is only the first step to a better life. Physiotherapy is needed to gain movement, strength, and function and ensure the best possible outcome.

**Failure to dedicate enough time and effort to your physiotherapy after surgery, will result in a poor clinical outcome.**