

Shoulder Replacement

Osteoarthritis is a chronic process of cartilage loss from a joint surface. Cartilage is a layer of cushioning that protects the ends of bone. As this cartilage breaks down, the bones begin to rub together and can result in pain, swelling and dysfunction.

The shoulder is a ball-and-socket joint. The ball (or head) of your upper arm bone fits into a shallow socket in your shoulder blade (the glenoid). It is the thinning of the cartilage off of the humerus and the glenoid bones that contributes to painful osteoarthritis of the shoulder.

In the early stage of arthritis there are several effective, non-operative approaches which may help reduce pain, including physical therapy, cortisone injections and activity modifications. If these interventions are unable to provide relief of pain and you are no longer able to do the activities you enjoy, you may want to consider shoulder replacement surgery. This surgery is a safe and effective procedure to relieve pain, restore function, and help you resume normal activities.

In shoulder replacement surgery, the damaged parts of the shoulder are either resurfaced or replaced with artificial components called a prosthesis. The treatment options are either replacement/resurfacing of just the head of the humerus bone (ball), or replacement/resurfacing of both the ball and the socket (glenoid).

The diagnosis is essentially determined by radiographs. X-ray images help to determine the extent of damage in your shoulder. They can show loss of the normal joint space between bones, flattening or irregularity in the shape of the bone, bone spurs, and loose pieces of cartilage or bone that may be floating inside the joint. With the confirmation of shoulder arthritis and failed conservative management, surgery may be a very good option for you.

There are several reasons why your doctor may recommend shoulder replacement surgery. People who benefit from surgery often have:

- Severe shoulder pain that interferes with everyday activities, such as reaching into a cabinet, dressing, toileting, and washing.
- Moderate to severe pain while resting. This pain may be severe enough to prevent a good night's sleep.
- Loss of motion and/or weakness in the shoulder.
- Failure to substantially improve with other treatments such as anti-inflammatory medications, cortisone injections, or physical therapy.

There are three primary shoulder replacement options: total shoulder replacement, stemmed hemiarthroplasty or resurfacing hemiarthroplasty (partial replacement), and reverse total shoulder replacement. Your surgeon will evaluate your situation carefully before making any decisions. He or she will discuss with you which type of replacement would best meet your health needs. The integrity of your rotator cuff tendons will play a role in determining which procedure is appropriate.

Total Shoulder Replacement:

The total shoulder replacement involves replacing the arthritic joint surfaces of both the humerus and glenoid with a metal ball attached to a stem (for the humerus), and a plastic socket (for the glenoid). They may be either cemented or "press fit" into the bone. If the bone is of good quality, your surgeon may choose to use a non-cemented (press-fit) humeral component. If the bone is soft, the humeral component may be implanted with bone cement. In most cases, an all-plastic glenoid component is implanted with bone cement.

Partial Shoulder Replacement (Hemiarthroplasty):

Shoulder hemiarthroplasty is a shoulder replacement in which the humerus is replaced with a prosthetic metal implant, while the glenoid is left intact. This metal implant has a stem which fits into the shaft of the humerus bone to help stabilize the component. Shoulder hemiarthroplasty is indicated in severe, persistent conditions of shoulder osteoarthritis in which only the humeral head is damaged.

Resurfacing hemiarthroplasty involves replacing the joint surface of the humeral head with a cap-like prosthesis and no stem. Resurfacing hemiarthroplasty preserves bone and avoids the risks of component wear and loosening that may occur with total shoulder replacement over time.

Reverse Total Shoulder Replacement:

Reverse total shoulder replacement is used for people who have a completely torn rotator cuff. For these individuals, a conventional total shoulder replacement can still leave them with pain and dysfunction. In reverse total shoulder replacement, the socket and metal ball are switched so the metal ball is attached to the humerus and a plastic socket is attached to the glenoid. This allows the patient to use the deltoid muscle instead of the torn rotator cuff to lift the arm.

Shoulder replacement is a highly beneficial surgical procedure intended to reduce pain and restore mobility in patients with shoulder arthritis. With appropriate activity modification, shoulder replacements can last for many years.