



Reverse Total Shoulder Replacement

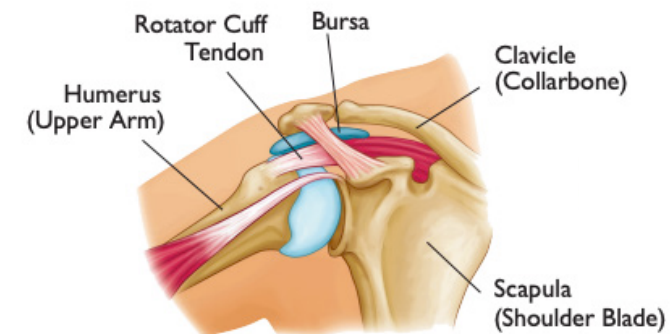
Why have a reverse shoulder replacement?

Reverse total shoulder arthroplasty is a joint replacement surgery for a variety of painful shoulder conditions where the rotator cuff tendons are badly damaged and beyond repair or there is severe destruction of the socket (glenoid bone). Severe rotator cuff problems can occur in association with arthritis, shoulder instability, certain fractures, failure of a previous joint replacement or failed rotator cuff repair surgery.

Reverse shoulder replacement surgery changes the mechanics of the shoulder transferring more load to the deltoid muscle and less load to the rotator cuff muscles for adequate function. The best clinical results for a reverse replacement are seen in patients who have some functioning rotator cuff tendons/muscles; however, very good results can be seen even with large rotator cuff tears.

In the reverse total shoulder the ball and socket are replaced, but they are reversed. The socket portion of your shoulder is replaced with a prosthetic metal ball that attaches to a metal baseplate secured to the socket/scapula. The humeral head (ball portion) of your shoulder is replaced with a plastic cup that is attached to the top of a metallic stem placed within the humerus (the upper arm bone).

NORMAL SHOULDER ANATOMY



Courtesy of OrthoInfo, American Academy of Orthopaedic Surgeons

How does the shoulder work?

The shoulder is made up of two joints, the acromioclavicular joint and the glenohumeral joint, muscles, ligaments and tendons.

- The acromioclavicular joint is where the acromion, part of the shoulder blade (scapula) and the collar bone (clavicle) meet.
- The glenohumeral joint is where the ball (humeral head) and the socket (the glenoid) meet.
- The rotator cuff connects the humerus to the scapula and is made up of the tendons of four muscles. Tendons attach muscle to bone. The deltoid muscle is the muscle that forms the rounded curve of the shoulder. Muscles in turn move bones by pulling on the tendons. The muscles of the rotator cuff keep the humerus tightly in the socket.
- The socket, or the glenoid, is shallow and flat. It is rimmed with soft tissue called the labrum that makes a deeper socket that molds to fit the humeral head.
- The joint capsule surrounds the shoulder joint. It is a fluid-filled sac that lubricates the joint. It is made up of ligaments. Ligaments are soft tissue that holds bone to bone. Shoulder injuries can occur to any part of the shoulder.

SHOULDER OSTEOARTHRITIS



Courtesy of DePuy Synthes

To speak with an orthopedic clinical specialist, call **314-514-3500**.

For more information, visit ortho.wustl.edu/TotalShoulder



Physicians

Orthopedics

How can surgery help?

In the reverse total shoulder, the ball and socket are replaced, but they are reversed. The socket portion of your shoulder is replaced with a prosthetic metal ball that attaches to a metal baseplate secured to the socket/scapula. The humeral head (ball portion) of your shoulder is replaced with a plastic cup that is attached to the top of a metallic stem placed within the humerus (the upper arm bone).

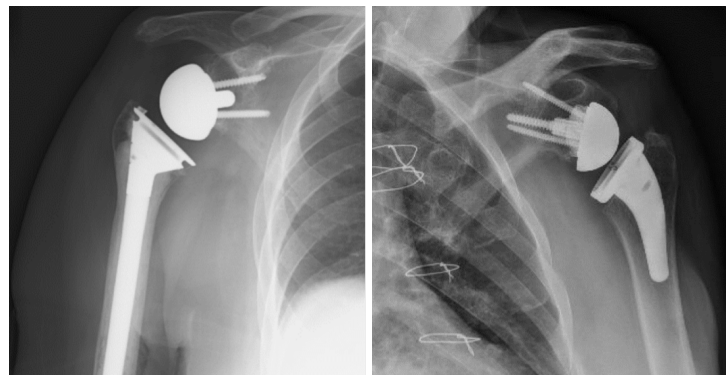
EXPECTED OUTCOMES

Reverse shoulder arthroplasty has been performed in the United States since 2004. Therefore, long-term outcomes and risks of long-term complications are not known at this time. This surgery is reliable for pain relief in over 90% of patients. While some patients have complete relief of pain, most experience mild activity related pain in the shoulder and down the arm. This is generally felt to be muscular pain and is usually mild. Most patients will also have an improvement in the ability to raise the arm overhead but this is somewhat dependent on the age of the patient, the strength of the deltoid muscle and the presence of some remaining rotator cuff tissue.

It is realistic to expect to be able to raise the arm above shoulder level, to reach the top of the head and the opposite shoulder in most patients. Your ability to rotate the arm outward is dependent on the presence of some intact rotator cuff tendon as well. The reverse also improves strength when lifting away from the body. After a reverse shoulder replacement, some patients will lose some motion reaching behind the back. Most patients will be able to reach their belt line or back pocket but some can go a little higher. For patients with shoulder dislocation problems, shoulder stability is reliably restored. However, the risk of early dislocation following a reverse shoulder replacement is slightly greater than a standard replacement and can occur in up to 2-3% of patients.

After recovery, most patients can be very active. You can golf, play tennis, swim, hunt, do light yard work and garden. We recommended that patients do not routinely lift more than 25 pounds overhead after surgery, but there are no lifting and push/pull restrictions below shoulder height. Patients with shoulder replacement can perform light and medium demand labor jobs; however, it is not designed for sustained heavy manual labor. You can lift lighter weights with higher repetitions. Long-term durability of the reverse replacement is not known; the more you take care of your shoulder the longer it will likely last.

REVERSE TOTAL SHOULDER REPLACEMENT



Getting ready for surgery

Schedule an appointment with your primary care provider and dentist if you haven't been evaluated within the last year. Complete your dental work before the shoulder surgery. To make sure it is safe for you to have anesthesia for your surgery, you will meet with our anesthesia specialists 2-3 weeks before surgery. Your surgeon may also recommend advanced imaging studies such as an MRI or CT scan of the shoulder to help with surgical planning. For more information, refer to the journey guide.

Postoperative recovery

After surgery your shoulder will be placed in a sling for 2-3 weeks. Depending on the surgeon's preference, the dressing can be removed in 1-2 weeks. You will begin your exercises the morning after surgery. These exercises will be done 3-4 times per day while in the hospital and at home. Supervised physical therapy may be recommended by your surgeon starting 3-6 weeks after the surgery.

Learn more

To help patients learn more about reverse total shoulder replacement, we've created videos and a Total Shoulder Replacement Journey Guide that has helpful information on surgery preparation and postoperative recovery. To access this information, scan the QR code with your phone's camera or visit ortho.wustl.edu/TotalShoulder.



TOTAL SHOULDER REPLACEMENT COMMON QUESTIONS AND ANSWERS

What restrictions will I have after surgery?

1. No weight bearing through the arm – this means do not push or pull with your operative arm to get out of the bed or up from a chair for 6 weeks.
2. Do not attempt to reach behind or up your back.
3. Don't lie on your surgical shoulder or roll on to that side.
4. Although we recommend that you wean from your sling within a couple of weeks and begin to use your arm, do not lift more than a cup of coffee with the operative arm for 6 weeks.
5. Please refrain from any dental, bladder or bowel procedures for 3 months following surgery. Once you are 3 months out from surgery you will need to be pre-medicated with antibiotics prior to any of these procedures for 2 years from the date of surgery.

How long does the surgery last?

About 1½-2 hours. Your surgeon will discuss whether you are a candidate for a same-day discharge, or if a one night hospital stay is the best option for you.

How long is the recovery?

Full recovery takes about 3-6 months.

When can I...?

Drive: You should wait until after your first postoperative visit, about 2 weeks from surgery. You should also be out of your sling and not taking pain medication during the day.

Return to work: If you have a light duty or desk job, you may return to work as soon after surgery as you feel comfortable. Physically demanding jobs may require 6 weeks to 6 months of recovery before returning to work.

Play tennis, golf or other active sports: around 4 to 6 months from surgery.

How often do I see my surgeon after surgery?

You will have 3-5 follow up appointments during the first 6 months after the surgery. Annual follow up appointments are very important. We will take X-rays to check the following:

- The amount of bone ingrowth.
- The position of the implant.

PROBLEMS FROM SURGERY

Although shoulder replacement can help with pain, there's also the chance that surgery will cause problems. These problems are called complications.

The list below includes some of the most common complications from this surgery. Fortunately, complications are very rare. Please note that this list includes some, but not all, of the possible side effects or complications. In some cases, such as infection, further surgery may be needed to treat the problem. Some complications will resolve or improve with time. There are also risks associated with general anesthesia that are dependent on your overall health.

- **Infection:** 1% risk, can occur early or late
- **Dislocation:** 2-3% risk, rare after the initial 6 weeks
- **Vascular (blood vessel) injury:** very rare
- **Hematoma/excessive swelling:** 5% risk
- **Nerve complication:** up to 10%, these are partial injuries from nerve irritation and resolve in 95% of cases over time
- **Blood clots in legs or lungs:** clots that cause symptoms are seen in 1-2% of cases despite steps taken to prevent these. Please let your surgeon know if you have a personal or family history of blood clots.
- **Persistent shoulder pain and stiffness**
- **Revision surgery:** Any time prosthetic components (man made parts) are put into a joint, there is always a very small chance that one or more of the parts may have a problem that requires another surgery in the future.