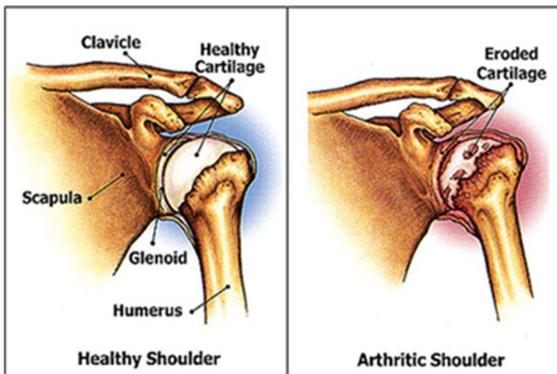


Reverse Total Shoulder Arthroplasty

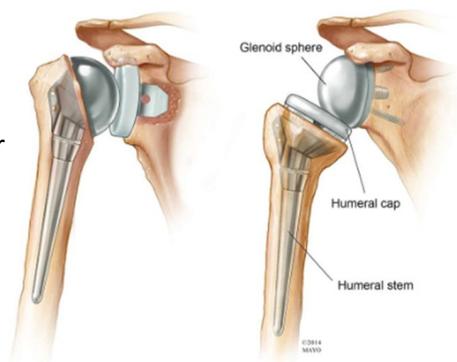
The shoulder is a ball and socket joint that enables you to raise, twist, bend and move your arms forward, to the sides and behind you. The head of the upper arm bone (humerus) is the ball and a circular depression (glenoid) in the shoulder blade (scapula) is the socket. A soft tissue rim (labrum) surrounds and deepens the socket. The head of the upper arm bone is coated with a smooth, durable, covering (articular cartilage). The surrounding muscles and tendons provide stability and support. They are also the structures that power movement.



In an arthritic shoulder, the normal cartilage is worn away and the bones rub against each other without the normal smooth gliding surfaces that glide with little friction and wear. The joint may also become irregular from bony spurs which are the body's attempt to "heal" the cartilage from injury. Pain is usually due to the irregular joint surfaces rubbing on one another and from the inflammation of this wear and tear

Many people know someone with an artificial knee or hip joint. Less common, but just as successful in relieving joint pain is a shoulder replacement (arthroplasty). Conventional shoulder replacement surgery replaces damaged joint surfaces with artificial parts (prostheses). Usually there are two components: the humeral component replaces the head of the upper arm bone, while the glenoid component replaces the socket (the glenoid depression).

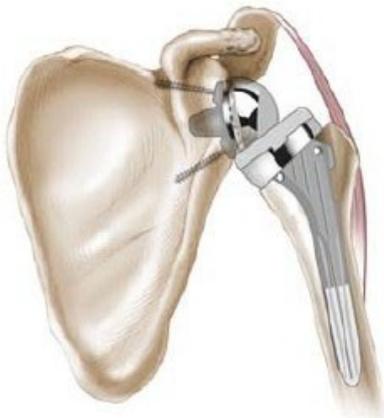
Total shoulder arthroplasty Reverse shoulder arthroplasty



In the case of certain types of arthritis there can also be loss of the rotator cuff tendons. These are tendons which encircle the humeral head (ball) like a "cuff" and help to keep the humeral head in the glenoid (socket) when the arm is elevated. These tendons also help to rotate the humerus on the glenoid so the arm can be raised. Without normal function of the rotator cuff the humeral head can get pulled upward out of the glenoid socket which makes it impossible to lift the arm. If a conventional shoulder replacement is used in this situation though there may be some pain relief, the humeral head usually remains upward out of the socket, and elevation of the arm is impossible.

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The Reverse Shoulder Replacement changes the orientation of the shoulder so that the normal socket (glenoid) now is replaced with an artificial ball, and the normal ball is replaced with an implant that has a socket into which the artificial ball rests. This type of replacement corrects the arthritis by replacing the worn-out joint surfaces with an artificial joint made of metal (cobalt chrome) and plastic (polyethylene). Reversing the ball and socket changes the mechanics of the shoulder in order to improve active range of motion and strength. This is because the force of the deltoid is increased by moving the center of rotation of the joint inward (medially) and downward (inferiorly). The result is the patient can raise his or her arm higher and sometimes even overhead.

While a blood transfusion is rare, it is occasionally necessary. This is an open procedure, meaning that we cannot use small incisions with an arthroscopy camera. Because of that the risk of blood loss is higher than for an arthroscopic procedure. That being said, blood transfusion is usually not required.

You may be discharged home on either the first or second postoperative day. You will need someone to assist you at home, so family should be aware that you will need help with simple daily living chores such as dressing, cooking, and feeding yourself. In some instances, it is necessary to go to a supervised rehabilitation facility for a period of time until you can begin effectively using your arm.

Complication rates from reverse total shoulder replacements tend to be higher than for traditional anatomic total shoulder replacement because we change the orientation of the natural joint. When total shoulder replacement is not an option, as in for patients with no remaining rotator cuff, the reverse can be an excellent option. Current complication rates run at about 15% but have decreased over past 10 years thanks to new technology and techniques. Complications can include the following:

- Infection
- Instability of the joint replacement
- Fracture of either the humerus or glenoid bone
- Nerve injury
- Loosening of the joint replacement
- Anesthesia problems
- Hematoma or blood clots

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General Post-Operative Instructions

1. You will wake up in the operating room with a sling and pillow in place. You'll be brought to the recovery room, but it is likely that you will not remember this process because the anesthesia medications that affect your memory will still be in effect. The anesthesia will wear off over the course of a few hours in the recovery room, but you will still need someone else to drive you home.
2. If you had a nerve block you will likely have numbness for an additional 2 to 18 hours depending on the type of block you had. It is important to begin taking the pain medication as soon as you can start to feel your fingers. This way you will be able to stay ahead of the pain. If the block is still in full effect before you go to bed, we suggest taking one dose of pain med prior to bed in case the block wears off in your sleep.
3. Apply ice to the shoulder making sure to keep a towel over your skin to protect it from the cold. There is no right or wrong answer in terms of how long ice should remain or come off. Skin protection is the most important thing to remember. Other than that, you can use ice as often and as long as it provides relief.
4. You should not remove the bandages until Dr. Damodar sees you in clinic.
5. If you have an occlusive plastic dressing, you can shower after 48 hours. You should not remove the plastic dressing. Do not scrub the dressing in the shower and be careful that it doesn't come off when you are drying yourself down. DO NOT submerge the incision/dressing in any form of standing water, i.e., bathtub, pool, hot tub, ocean/lake etc. These water activities cannot begin until the skin is completely healed (usually 2-3 weeks).
6. To wash your underarm (armpit) after surgery it is important to keep the repair protected. Instead of lifting the arm above your head, as usual, bend forward at the hips/waist and let your arm passively swing forward to about 90* away from your body. In this position you can use the other hand to access your underarm for washing.
7. Remove the sling on the first day after surgery to begin your gentle stretching program. Pendulum exercises for the shoulder should be done 3 times a day. The elbow, wrist, and hand active range of motion exercises should be done during these times as well. After exercises are completed put the sling back on. The sling should definitely be used during sleep to protect the shoulder repair when you are not consciously able to do so.
8. It is important to watch for signs of infection after surgery. These include temperature > 101.5F, chills/night sweats, nausea, and vomiting (which can sometimes be caused by pain medication), diarrhea, redness, or yellow/green drainage around the incisions. If any of these signs are present, contact Dr. Damodar's office immediately.
9. There is a variable amount of pain and swelling after surgery. This is completely normal. Unfortunately, there is no way to completely eliminate post-operative pain and discomfort. We work to create a combination of pain medications that will lessen pain so you can succeed with

physical therapy and progress with your normal function, but in the end, these are medications that reduce, not eliminate pain.

10. You will need to take prophylactic antibiotics before dental procedures, colonoscopies, or other invasive procedures. This consists of Amoxicillin (2 grams one hour prior to your procedure), or if you have a penicillin allergy you should take Clindamycin (600mg one hour prior to procedure). Your dentist or primary care doctor can prescribe this.
11. Please bring your physical therapy protocol handout to your therapist at your first appointment.
12. You should have a post-op appointment with Dr. Damodar 10-14 days after surgery. If for some reason you do not have this appointment.

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