# Reverse Total Shoulder Replacement

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**Reverse total shoulder replacement surgery has become the most common type of shoulder replacement for people with shoulder arthritis. It is extremely effective. Recent studies show that over 90% of these procedures last more than 10 years and 80% more than 20 years without the need for additional surgery. Read this article to learn more about what this procedure involves.**

**"More than 60% of all shoulder replacements are now done with a reverse prosthesis."**

Reverse total shoulder replacement has become the most common type of shoulder replacement for shoulder arthritis. The shoulder joint is a ball-and-socket joint. It consists of a ball at the top of the arm bone (humeral head) that fits into a socket (glenoid) in the shoulder blade (scapula).

With a traditional shoulder replacement, the humeral head is replaced with a metal ball of a similar size, and the glenoid is covered with a plastic insert. A reverse shoulder replacement repairs the shoulder joint in an opposite or inverse manner—it places a ball at the shoulder blade and a socket at the top end of the arm bone. This increases the shoulder's stability so that patients without a working rotator cuff can regain their motion and function.

## Why treatment is required

To fully benefit from a traditional total shoulder replacement, people must have a healthy rotator cuff to recover their movement and strength after surgery. For those with damaged rotator cuffs, however, a reverse total shoulder replacement is a better option as it helps create a more stable shoulder joint to compensate for the impaired rotator cuff. The rotator cuff is the system of muscles and tendons that wraps around and supports the shoulder by keeping the ball of the upper arm bone tightly compressed in the shoulder socket.

Because of the enhanced stability of the reverse design, even patients who do not have an intact rotator cuff can establish a good range of motion after surgery, which helps improve function and quality of life. In this video, Dr. Romeo discusses the principles and science behind reverse shoulder replacement.

A reverse shoulder replacement is recommended for:

- Shoulder arthritis with a damaged rotator cuff
- Shoulder arthritis in people over age 70
- Shoulder arthritis and a history of rotator cuff surgery
- A poor result (pain, weakness, instability, or loss of function) after traditional shoulder replacement
- When a shoulder replacement becomes loose
- After a severe shoulder fracture that affects the humerus (upper arm bone)
- Other complex problems that affect the rotator cuff and shoulder joint
- Failed repair of a massive rotator cuff tear
- Tumors that affect the shoulder joint area

## How treatment is performed

A reverse shoulder replacement has many similarities to a traditional shoulder replacement, including the

preoperative evaluation, position during surgery, the surgical incision, and the postoperative plan for the first few weeks. However, there is one big difference: the placement of the ball and socket is reversed!

A cut is made in the front of the shoulder and the shoulder joint is identified. A guide is used to cut away the damaged, arthritic part of the ball of the upper arm bone. Then, the shoulder socket is identified and a metal plate is attached to it with screws. The precise location of the metal baseplate is determined preoperatively with patient-specific planning and instrumentation. A ball-shaped implant (a glenosphere) is inserted onto the baseplate. Lastly, the socket implant is inserted into the humerus.

Proper alignment of the implants is critical to the success of the surgery, so Dr. Romeo will give you a specific requisition for a CT scan so he can use the images to virtually plan and design the procedure before your surgery.

## Outpatient surgery for a reverse total shoulder replacement

Over the past 10 years, Dr. Romeo has worked with his anesthesia colleagues and nursing staff to develop methods to perform shoulder replacements on an outpatient basis. This means going home on the same day as the surgery. These methods were first developed in a hospital setting to ensure patient safety as the transition to outpatient shoulder replacement surgeries began.

With advances in both surgical techniques and anesthesia, 50% or more of patients who are having shoulder replacements can go home on the day of surgery, and in fact, many of these patients can be treated in an ambulatory surgery center (ASC). Dr. Romeo will talk to you about this option if you are a good candidate for an outpatient procedure. He and his colleagues have identified criteria to decide who is best suited for outpatient or ASC care.

Regardless of where the surgery is performed, Dr. Romeo uses special protocols to ensure proper pain management, reduce the risk of infection, and lower blood loss during surgery. Additionally, he performs the procedure in less than two hours. All of these factors allow the procedure to be safely done in an ASC and for you to go home the same day.

## Risks and benefits

Reverse shoulder replacements first became available in the United States in 2003. In the beginning, they were used only for patients who had a bad rotator cuff and arthritis. Now, this design has been shown to work well with many conditions, including

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shoulder fractures, revision of prior shoulder replacement and rotator cuff surgery, and for patients over age 70 with arthritis, even if the rotator cuff is not torn. The many indications have meant that over 60% of all shoulder replacements are now done with the reverse prosthesis.

Many patients have the misconception that having a shoulder replacement will negatively affect the use of their arm. In fact, it is common for them to have more comfort, more movement, and more function after surgery.

## Physical therapy protocols

After the surgery, you are encouraged to move your fingers, hand, wrist, and elbow to help the joints remain soft and mobile and re-establish the full function of your hand. It is very important to do these simple exercises or the hand and fingers can get swollen, and that will slow down your recovery. In some cases, you will be taught pendulum exercises to initiate simple movements in your shoulder.

After four weeks of rest, physical therapy will begin.

## Pain Control

A regional nerve block is administered using 20–40 mL of local anesthetic to "freeze" the area being operated on. The nerve block is long-lasting and works for approximately 12–18 hours after surgery. The anesthesiologist uses ultrasound guidance for the safe and effective placement of the medication for the nerve block. Before going home, the arm is placed in a brace to protect the shoulder reconstruction.

As the nerve block gradually wears off, oral pain medications (pills or tablets) may be used to manage any discomfort. Dr. Romeo uses a variety of pain-control methods (multimodal analgesia), such as Tylenol Extra Strength (acetaminophen) and nonsteroidal anti-inflammatory drugs such as Naprosyn (naproxen) or Mobic (meloxicam). Cold therapy or ice at the surgical site also helps reduce swelling, pain, and the need for medications. Dr. Romeo recommends using ice or cold therapy three to four times a day for 20 minutes.

Dr. Romeo provides each patient with specific instructions to manage any post-op pain, including enhanced recovery after surgery (ERAS) protocols. Dr. Romeo has managed thousands of surgeries and has detailed pain management plans for all of his patients. He is also committed to managing their pain responsibly to minimize the risk of opioid addiction.

## Recovery time

For the first six weeks, no lifting or strenuous activities with your arm or shoulder are allowed so that your bone has time to grow into the metal surface of the prosthesis. During this time, the muscles and tendons near the prosthesis will recover from surgery and you will regain the movement and function of your hand and elbow necessary for daily activities.

If you have had prior surgery, your recovery period will be slightly longer. There is also an increased risk of infection and complications. Dr. Romeo uses proven protocols to lower your risk of postoperative complications. He participates and contributes to national and international conferences that establish the most effective treatment plans to avoid infection and postoperative complications, so you can rest assured that you will be treated with the most up-to-date methods supported by scientific evidence.

## Results

Recent studies have shown that more than 90% of these procedures last more than 10 years without the need for additional surgery, and 80% are still doing very well at 20 years. Patients are returning to many of life's activities without pain, including washing their hair or reaching overhead as well as recreational activities such as golf, tennis, pickleball, swimming, and fitness training.

Most patients gain a greater range of motion after the procedure and are able to return to activities that were not possible before the surgery. You can expect a significant pain reduction—perhaps even total elimination of shoulder pain. According to several studies, nearly 90% of patients with reverse shoulder replacement have reported dramatic reductions in pain. Many of those reports include Dr. Romeo's own patients.

If a reverse shoulder replacement is done as a revision surgery, this may impact your results. Old scar tissue may interfere with your range of motion. Some minor pain or discomfort could persist, even after successful revision reverse total shoulder replacement. Dr. Romeo and his staff will take time before surgery to discuss your expected results so that you understand what is possible with these more complex procedures.

## FAQs

### What if I have already had surgery on my shoulder?

You may be a candidate for reverse shoulder replacement! Dr. Romeo treats many patients who have had surgery elsewhere but the results did not match the expected outcome. Sometimes, this can be straightforward, such as treating a patient who has had one or more repairs of the rotator cuff and still has pain and cannot raise their arm. More complex cases include shoulder replacements that are too stiff or too loose and therefore dislocate; fractures that were repaired with a plate and screws but the shoulder still doesn't work well; or infection after prior surgery.

Dr. Romeo has developed treatment plans that can help even the most difficult shoulder problems. More than one-third of his cases are patients who have had previous surgery yet cannot live a comfortable, independent life. Combined with his comprehensive management plan is a thoughtful approach to pain management, reduction of pain medication use, and an integrated rehabilitation program to help patients achieve their best results.

**Want to learn more?** Find relevant videos, animations, and research material related to this procedure at **anthonyromeomd.com**. ➔

*For more information about relieving shoulder pain and restoring motion with reverse shoulder replacement surgery—even for complex cases or revision surgery—please request an appointment with Dr. Romeo.*

***Please visit our website to find out how to schedule your appointment.***