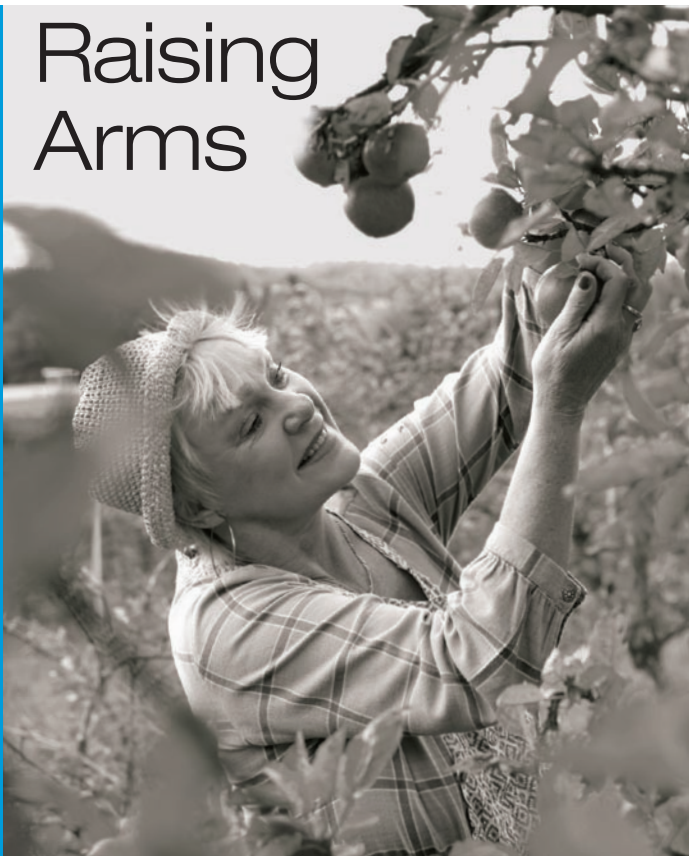


# Reversing Shoulders

## Raising Arms



Your guide to  
reverse shoulder  
replacement surgery



Regain your  
independence.



Most people take for granted daily activities such as getting dressed, brushing one's hair, or putting groceries away. If you have lost full use of your shoulder, then you know firsthand how devastating it is to have to rely on others for simple tasks. You may feel helpless as shoulder pain and loss of motion cause you to lose your independence.

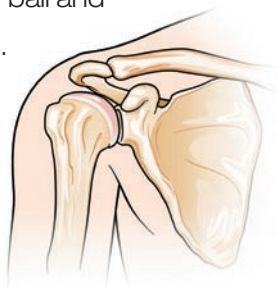
The good news is that there are treatment options that may reduce shoulder pain and allow you to regain your freedom. One option is reverse shoulder replacement surgery. While no one can guarantee a perfect outcome, the Zimmer Reverse Shoulder System provides a solution for those who suffer from severe shoulder pain and loss of strength and movement.

Of course, having reverse shoulder replacement is a serious decision that you should discuss with your doctor. This brochure may help answer some of your questions, and further information is available online at [zimmer.com](http://zimmer.com).



# The Healthy Shoulder

The shoulder is a ball and socket joint that is made up mainly of two bones. The ball portion of the joint is part of the upper arm bone (humerus). The socket portion is part of the shoulder blade. The ball fits into the socket and is held in place by a series of muscles known as the rotator cuff, allowing the shoulder to move. In a healthy shoulder, this movement of ball and socket is painless.



Healthy Shoulder

# Why Does My Shoulder Hurt?

Over time, wear and tear or injury to the shoulder can result in significant pain and loss of movement. Two common conditions that you may have been diagnosed with are:

- Rotator cuff arthropathy
- Osteoarthritis with cuff deficiency

## Rotator Cuff Arthropathy

The rotator cuff is the group of muscles and tendons that hold the shoulder together, providing strength and stability. Rotator cuff arthropathy is a combination of two types of damage – not only has the cartilage deteriorated, the rotator cuff tendon that connects the muscle to the bone has also been severely worn or torn. This not only contributes to the pain, it may significantly limit the shoulder's range of motion, making it impossible to perform many tasks requiring shoulder movement.

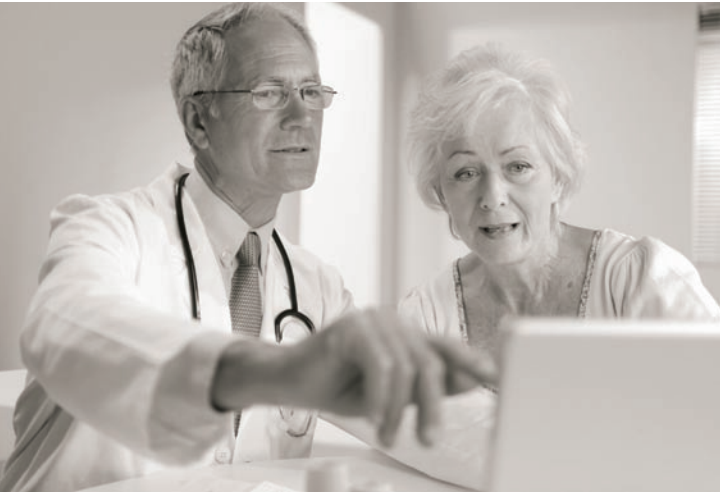
# Osteoarthritis with Cuff Deficiency

In a healthy shoulder joint, the surface of the ball and socket bones are covered with a protective tissue called cartilage. The cartilage prevents the bones from making direct contact and allows them to move smoothly over each other, without friction or wear on the bone surfaces.

When that cartilage deteriorates due to wear and tear, it is called osteoarthritis. As osteoarthritis worsens, the bones rub against each other until they, too, begin to deteriorate. Throughout this progression of osteoarthritis, the pain gets worse and worse. Unfortunately, there is no medication or treatment that will make damaged cartilage grow back.

# Treatments

Depending on the extent and cause of the shoulder damage, your orthopedic surgeon can recommend a variety of treatments, including oral medications, injections, physical therapy, and various surgical procedures. When those treatments are no longer effective, your doctor can help you determine if it's time to consider reverse shoulder replacement surgery.





# What is Reverse Shoulder Replacement?

Reverse shoulder replacement is considered as an alternative to traditional shoulder replacement when the rotator cuff is so damaged that it would not be able to support a traditional joint replacement.

In traditional shoulder replacement, the parts of the shoulder that have “worn out” are replaced with new parts that have the ability to function smoothly. The parts of the bones that rub together are replaced with metal and plastic parts.

The same is true with reverse shoulder replacement, except that the part of the arm bone and shoulder blade that serve as the ball and socket are reversed. In reverse shoulder surgery, the “ball” is attached to the shoulder blade, and the “socket” is attached to the upper arm. This enables your deltoid muscle to compensate for the damaged rotator cuff. Using the deltoid in this manner provides increased stability, strength, and range of motion to the shoulder joint.

# Zimmer's Reverse Shoulder Systems

Zimmer's Reverse Shoulder Systems are based on the proven principle of reversing the normal relationship between the shoulder blade and arm with the goal of increasing the role of the deltoid muscle.

This aids in the restoration of normal function for patients suffering from loss of rotator cuff function and severe osteoarthritis.



Rotator Cuff Arthropathy



Reverse Shoulder System

# How Will I Know If I Should Have Reverse Shoulder Replacement?

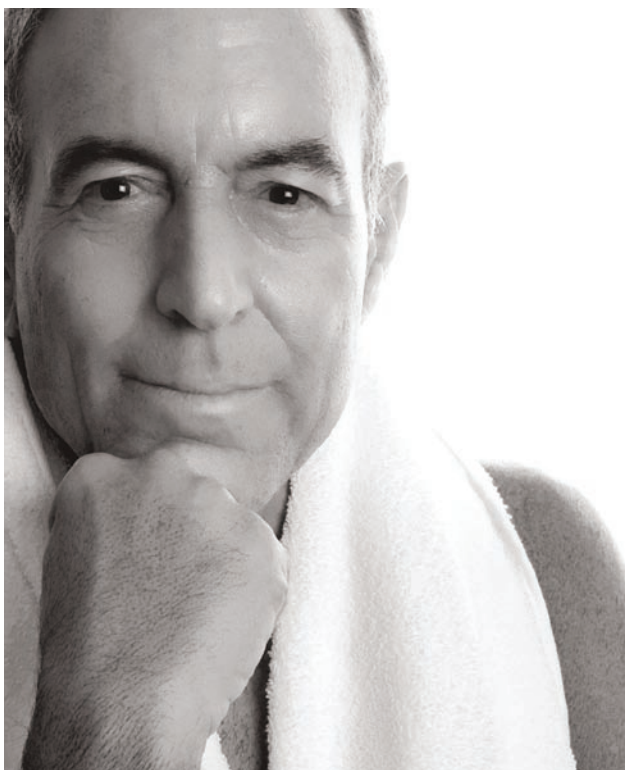
Your orthopedic surgeon will perform a very thorough examination of your shoulder. This will include a test of the muscles and tendons to determine how much strength and range of movement you have.

In addition, your surgeon will take X-rays, a CT scan (computed tomography), or an MRI (magnetic resonance imaging), which will be used to further assess the condition of your shoulder joint and determine if you are a candidate for reverse shoulder replacement surgery. Although reverse shoulder replacement surgery is a proven approach to restoring motion and reducing shoulder pain, it is a major surgical procedure and should be considered only when all other treatment options have failed.

## What Risks are Involved?

Like any surgery, it is important to understand the risks involved with reverse shoulder replacement. There are potential complications both during and after surgery. Generally, these include infection, blood clots, implant loosening, and nerve damage. Talk to your doctor about your specific situation.

Your results will depend on your personal circumstances. How long a shoulder replacement will last varies from patient to patient. It depends on many factors, such as physical conditions, activity level, body weight, and the surgical technique. Replacement joints are not as strong or durable as natural, healthy joints, and there is no guarantee that a prosthetic joint will last the rest of a patient's life. If you choose to have surgery, talk to your doctor about appropriate activities to take care of your new joint and how to make it last as long as possible. All shoulder replacements may need to be replaced at some point.



# What Is It Like To Have Shoulder Replacement Surgery?

**Before Surgery.** If you and your surgeon decide that reverse shoulder replacement is right for you, a surgery date will be scheduled. Several steps might be taken to prepare for surgery. For example, your surgeon might ask you to have your primary care physician perform a physical examination.

**During Surgery.** On the day of surgery, a small tube (intravenous line) will be inserted into your arm. This tube will be used to administer fluids, antibiotics, and other medication during your surgery. Then you will be taken to the operating room and given anesthesia. After the anesthesia takes effect, your shoulder will be scrubbed and sterilized with a special solution.

The surgery will begin with an incision over your shoulder that will expose the joint. When the bones are fully visible to the surgeon, special precision guides and instruments will be used to remove the damaged parts of the bones and shape the remaining bones to accept the implants.

The implants are then secured to the bones, either by using a special cement or by setting the implants so tightly into the bone that they are held in place just by the fit. It might also be necessary to adjust the ligaments that surround the joint, to achieve the best possible shoulder function. When the surgeon is satisfied with the fit and function of the implants, the incision will be closed.

A tube may be inserted into the wound to drain the fluids that naturally develop at the surgical site. A sterile bandage and ice pack will then be applied, and you will be taken to the recovery room, where you will be closely monitored. Your surgery will likely take between two and three hours.

**Immediately After Surgery.** As your anesthesia wears off, you will slowly regain consciousness. A nurse will be with you and may encourage you to cough or breathe deeply to help clear your lungs. You also will be given pain medication. When you are fully awake and stable, you will be taken to your hospital room. Your shoulder will remain swollen and tender for a few days and, initially, may appear bruised.





# What Can I Expect After Surgery?

When you are back in your hospital room, your nurses will check your bandages and give you pain medication as needed. Your arm will likely be in a sling or brace to help protect your shoulder and make you more comfortable. You may be asked to sit on the edge of your bed or even get out of bed and take a few steps.

Soon after your surgery, you will begin a gentle exercise program that will help you regain strength and range of movement in your shoulder. This program will be designed specifically for you and may begin with simple movements of your fingers, wrist, and elbow, building up to movement of your shoulder itself. You can expect to stay in the hospital from one to three days after surgery. Your bandages may be removed before you leave, but your stitches probably won't be taken out for 10 to 14 days.

At home, you will need to continue your exercises. Your therapy may continue for several weeks after surgery. Your doctor will tell you when you can begin to drive and perform other activities.

The goal of reverse shoulder replacement is to help restore your independence as you regain the ability to care for yourself.

To learn more about Zimmer's reverse shoulder implants, obtain helpful information for patients and caregivers, or for assistance in finding a surgeon familiar with our products and surgical techniques, **call toll free: 877-556-5164 or visit [zimmer.com](http://zimmer.com)**



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In order to send you the most relevant information  
below. Please choose your level of agreement.

1. My shoulder causes me difficulty in doing everyday activities.  
**Do not agree**      1      2      3      4
2. Joint replacement surgeries have a very high risk of complications.  
**Do not agree**      1      2      3      4
3. My pain is not severe enough to have the reverse shoulder replacement.  
**Do not agree**      1      2      3      4
4. My doctor has told me that I am not old enough to have the reverse shoulder replacement.  
**Do not agree**      1      2      3      4
5. I am a caregiver for someone and am concerned about the recovery during rehab from the reverse shoulder replacement.  
**Do not agree**      1      2      3      4
6. I am still looking for a surgeon whom I can trust to perform the reverse shoulder replacement.  
**Do not agree**      1      2      3      4

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everyday things, like lifting shopping bags.

5      6      7      **Completely agree**

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replacement surgery yet.

5      6      7      **Completely agree**

ough to have the surgery yet.

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erned about who will take care of them  
placement surgery.

5      6      7      **Completely agree**

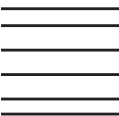
trust and feel comfortable with.

5      6      7      **Completely agree**

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