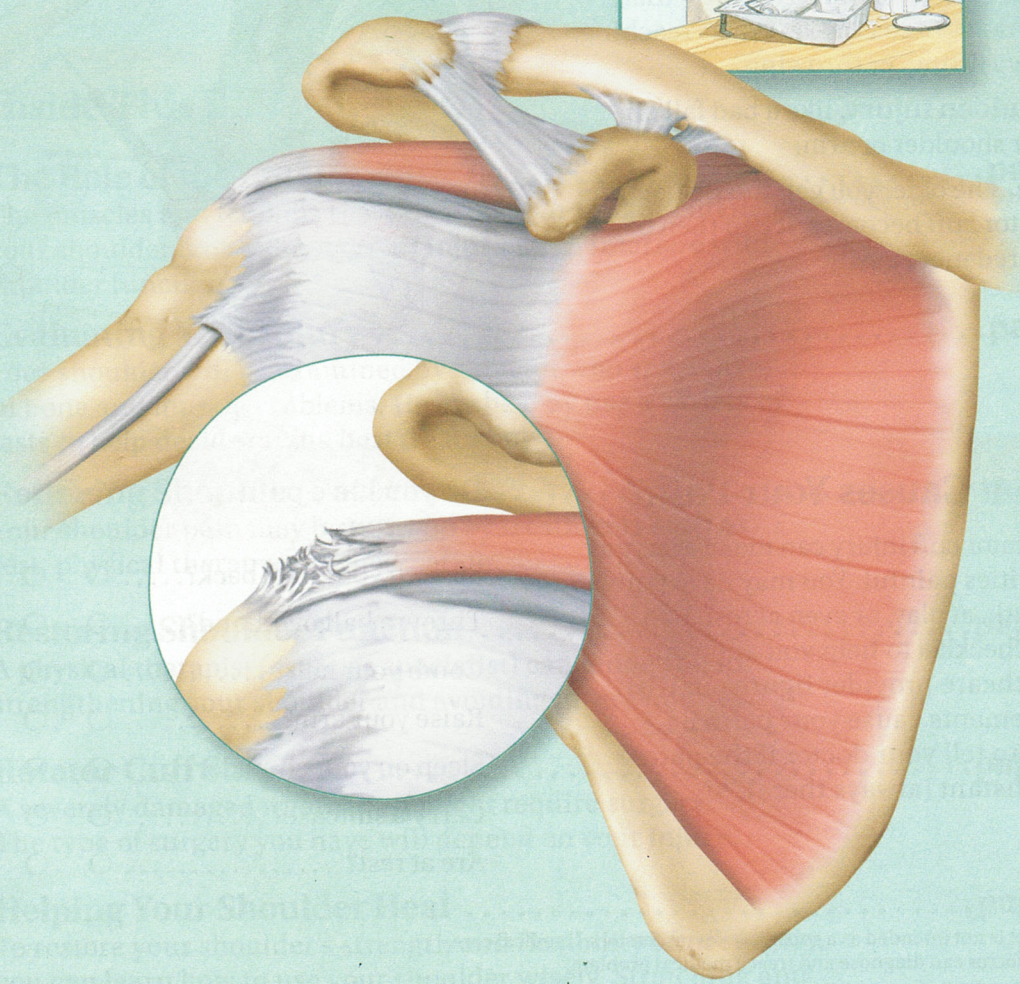
ROTATOR CUFF INJURIES

Restoring Your Shoulder's Function



Rotator Cuff Surgery

If your pain does not improve with other treatments, your doctor may suggest surgery. Rotator cuff surgery can help correct problems like impingement, calcium deposits, or tears. You may need to stay overnight in the hospital or surgery center, depending on your type of surgery.

Things to Do Before Surgery

- Stop taking anti-inflammatory medication, including aspirin, before surgery as directed.
- Tell your doctor about any prescription or over-the-counter medications, herbs, or supplements that you take. Ask if you should stop taking any of these before surgery.
- Don't eat or drink anything after midnight, the night before surgery. This includes water. If you have a medication you can't skip, take it with only a sip or two of water.
- Arrange for a family member or friend to give you a ride home.

The Day of Your Surgery

Arrive at the hospital or surgery center with enough time to check in. You will be given a gown to change into. Before surgery, a doctor will talk to you about the anesthesia that will be used to keep you pain-free during the surgery. You may be asked by several people to confirm which shoulder is being operated on. This is for your safety. Your injured shoulder may also be marked with a pen.

Risks and Complications

As with any surgery, complications may arise. These include but are not limited to:

- Infection
- Injury to nerves or blood vessels
- Risks from anesthesia

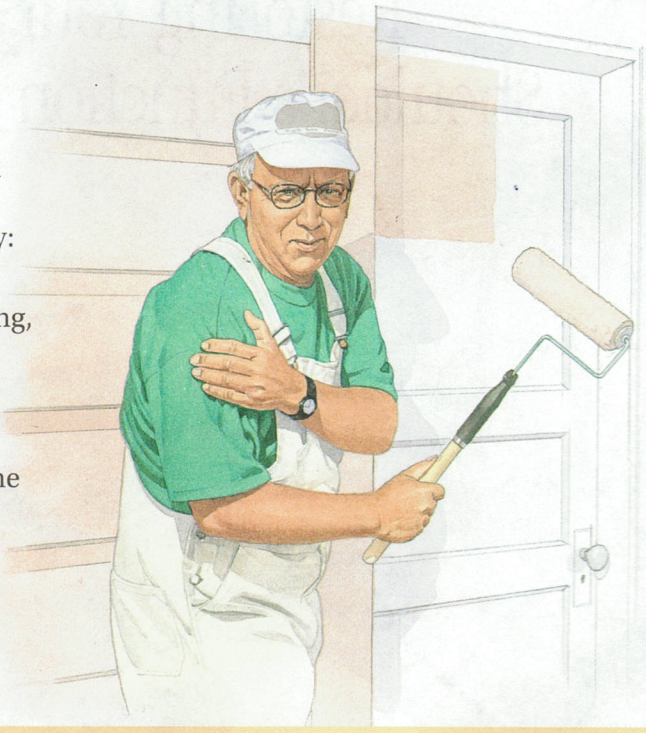
Regaining a Healthy Shoulder

Your healthcare provider has told you that you have an injured **rotator cuff.** The rotator cuff is a group of muscles and their tendons that help connect the upper arm to the shoulder blade. The rotator cuff stabilizes your shoulder as you work and play. An injury can cause pain and weakness in your shoulder. But your healthcare provider can help treat your injury and get you back on track. This booklet will help you understand your rotator cuff injury and how you can help it heal.

Why Does Your Shoulder Hurt?

Your shoulder hurts because tissues in the shoulder are swollen or damaged. This damage may have been caused by:

- **Repetitive movements** (ones that you do over and over) such as reaching, heavy lifting, or throwing.
- **A sudden injury,** like a bad fall on your shoulder or arm.
- **Age.** The older you get, the weaker the rotator cuff becomes. It can then be injured more easily.



What Causes Your Pain?

A rotator cuff injury can make everyday activities painful. You may have pain at work, at play, or even at rest. Use this checklist to help you and your healthcare provider figure out what movements cause your pain. Be sure to tell your doctor if the pain is constant (always there).

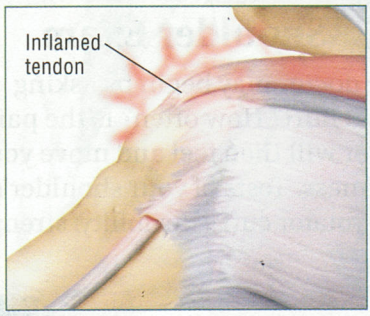
Do you have pain when you:	Yes	No
Scratch your mid-back?	❍	❍
Throw a ball overhand?	❍	❍
Comb your hair?	❍	❍
Raise your arm?	❍	❍
Sleep on your shoulder?	❍	❍
Carry a suitcase?	❍	❍
Are at rest?	❍	❍

When Your Cuff's Had Enough

Damage to your rotator cuff muscles or tendons can be caused by the wear and tear of daily activities or sports, or by a sudden injury. This damage can cause weakness and pain in your shoulder. Even simple tasks can become hard to do. Your healthcare provider will tell you which of the following conditions matches your shoulder problem.

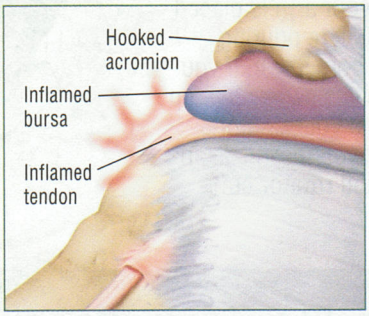
❑ Overuse Tendinitis

Repetitive activities like throwing or reaching overhead can strain your rotator cuff tendons. This can cause the cuff to become **inflamed** (irritated and swollen) or frayed from overuse.



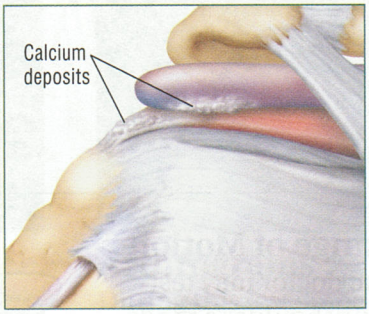
❑ Impingement Syndrome

Impingement (pinching) can happen when the bursa or tendons become swollen. This can reduce space between the bursa and the acromion, squeezing the soft tissues painfully against the bone. In some cases, a naturally hooked acromion further reduces space and irritates the bursa.



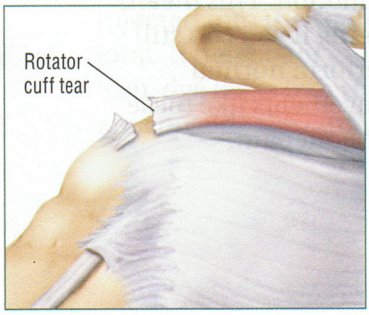
❑ Calcific Tendinitis and Calcific Bursitis

A sudden or chronic injury or inflammation can cause calcium deposits to form in your rotator cuff. When deposits form within the tendons of the cuff, it's called **calcific tendinitis.** When deposits build up in the bursa, it's called **calcific bursitis.** These hard deposits irritate the soft tissues of the joint.



❑ Partial and/or Complete Tears

Tears of the rotator cuff muscles or tendons can be caused by severe tendinitis or a sudden injury. In some cases, only a small bit of tendon will tear (partial tear). Or, the tendon may tear all the way through (complete tear). This can result in pain and may cause shoulder weakness.



The Role of the Rotator Cuff

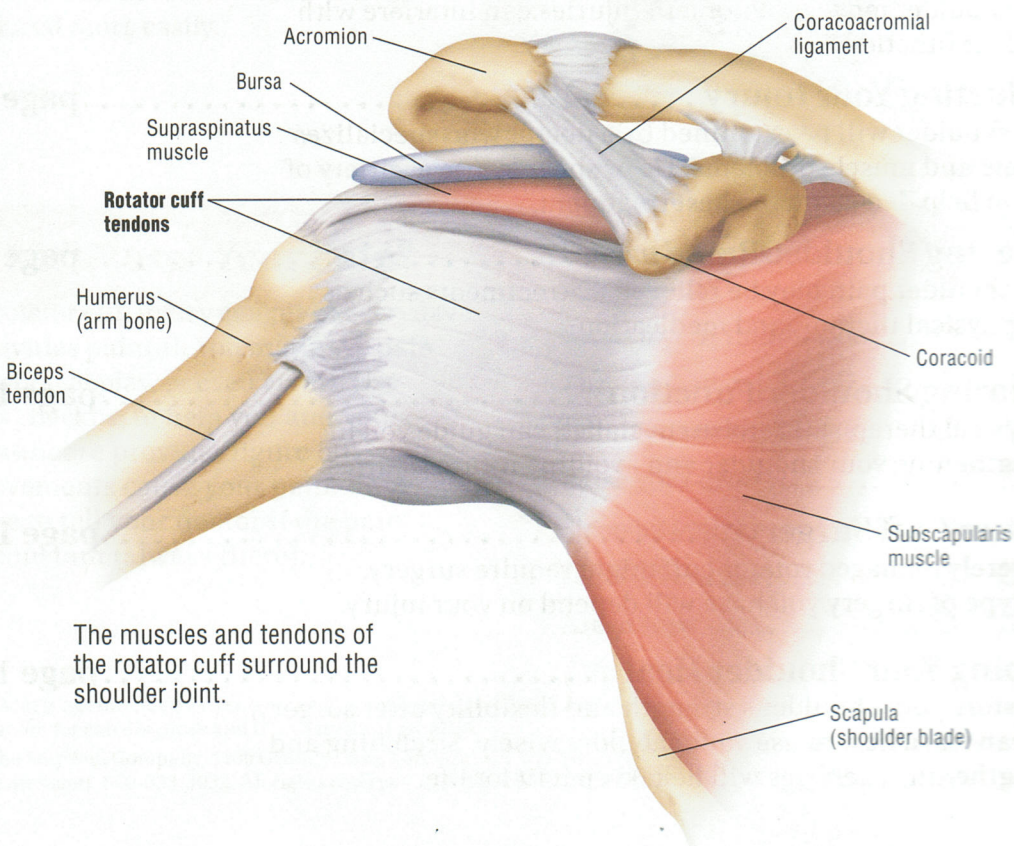
When your rotator cuff is healthy, your shoulder lets you do a lot of things. This includes reaching, throwing, pushing, pulling, and lifting. A healthy shoulder feels strong and stable. It can move your arm up, down, around, across, and back as needed. When your rotator cuff is damaged, though, even simple movements can be painful.

Foundations of a Healthy Cuff

The rotator cuff is made up of muscles and tendons that support the shoulder joint. The joint is a ball joint formed by the head of the **humerus** (arm bone) fitting into the socket of the **scapula** (shoulder blade). The rotator cuff controls the shoulder's movement and helps keep it stable.

- The **coracoid** and **acromion** are two parts of the scapula.
- The **bursa** is a fluid-filled sac that cushions the rotator cuff.
- **Tendons** are tough cords of connective tissue that attach the rotator cuff muscles to the humerus.
- The rotator cuff consists of four muscles: The **supraspinatus** runs over the top of the humeral head. The **subscapularis** runs across the front of the humeral head. The **infraspinatus** and **teres minor** both run across the back of the humeral head.

Front View of Shoulder



The muscles and tendons of the rotator cuff surround the shoulder joint.

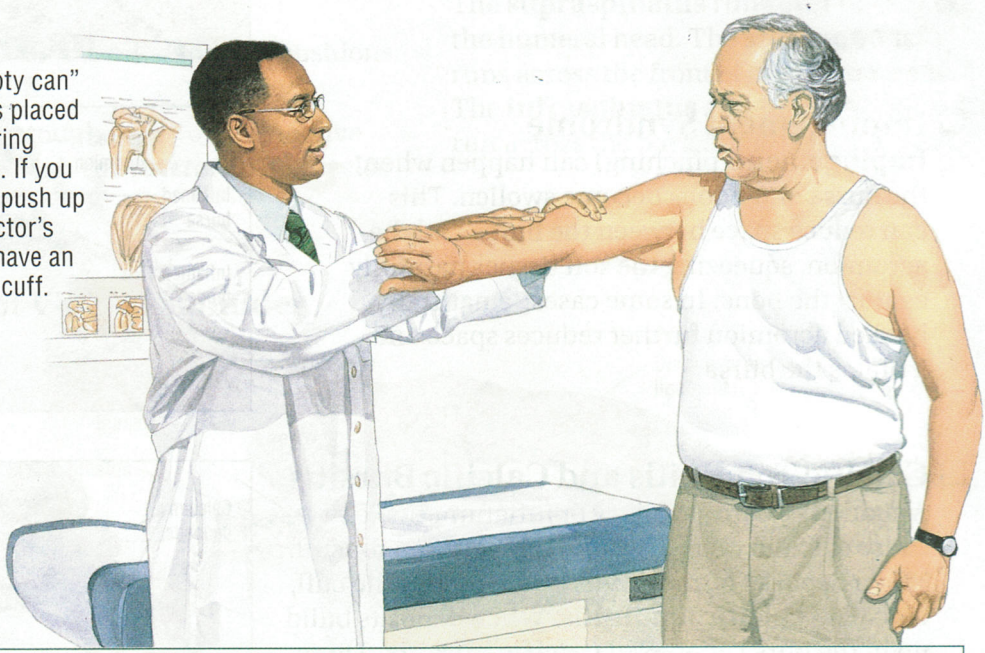
Evaluating Your Injury

The first step toward healing your injured rotator cuff is an exam by an **orthopaedist** (bone and joint doctor). The doctor will ask about your shoulder problem. He or she may also ask about other health problems. An examination of the shoulder and a range of tests may be used to learn more about your injury. Then, you and your doctor can talk about the course of treatment that will be best for you.

Your Shoulder Exam

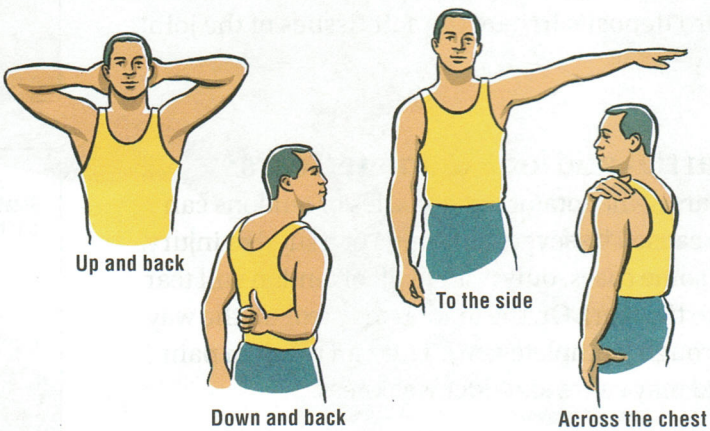
Your doctor may begin by asking about your shoulder pain. Where does it hurt? How often? Is the pain affecting work or daily life? The doctor will then feel and move your shoulder to check for signs of weakness. Tests of your shoulder's movement tell the doctor about your rotator cuff's flexibility, strength, and stability.

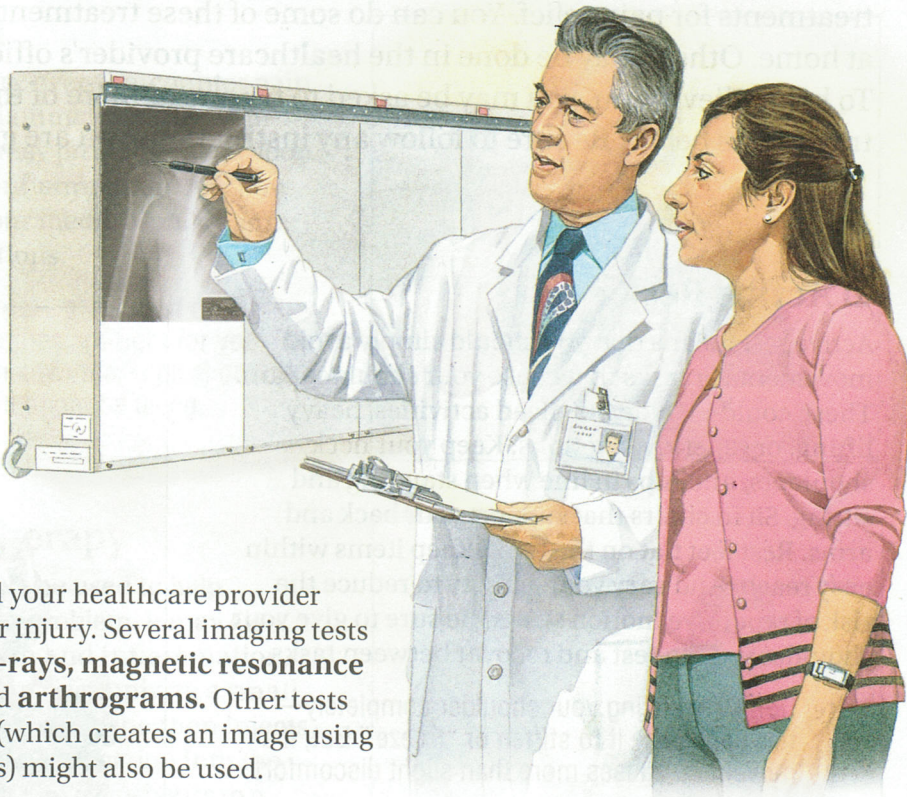
During the "empty can" test, your arm is placed as if you're pouring soda from a can. If you feel pain as you push up against your doctor's hand, you may have an irritated rotator cuff.



Range of Motion

The doctor may test your shoulder's range of motion. This means seeing if you can still perform normal movements like these without pain.



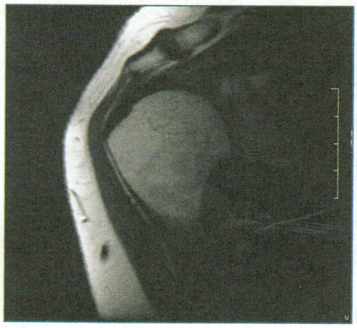


Imaging Tests

Imaging tests can tell your healthcare provider even more about your injury. Several imaging tests are used, including **x-rays, magnetic resonance imaging (MRI),** and **arthrograms.** Other tests such as **ultrasound** (which creates an image using painless sound waves) might also be used.

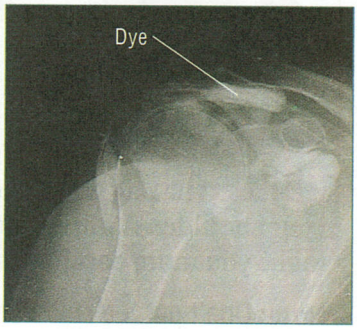
X-rays

These images can reveal problems with the bones in the shoulder, such as a hooked acromion. These problems can affect your rotator cuff.



Magnetic Resonance Imaging (MRI)

This test creates images to provide views of the soft tissues of the shoulder joint. MRI can reveal inflammation, tears, and calcium deposits.



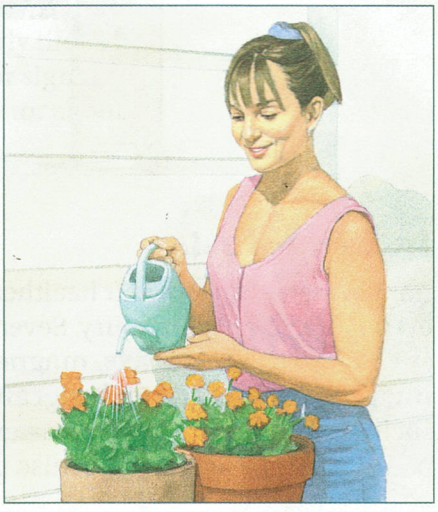
Arthrograms

During this test, a special contrast fluid (dye) is injected into the shoulder joint. If the rotator cuff is torn, dye leaks into the area outside the cuff.

Relieving Shoulder Pain

Your healthcare provider might suggest several nonsurgical treatments for pain relief. You can do some of these treatments at home. Others may be done in the healthcare provider's office. To help relieve pain, you may be asked to try one or more of the treatments below. Be sure to follow any instructions you are given.

❑ Active Rest



Active rest means that you should simply avoid movements or tasks that cause your shoulder pain. These could include overhead activities, heavy lifting, or repetitive motions. Keep your neck, shoulders, and hips in line when standing and sitting. Sit in chairs that support your back and arms. Rest feet flat on the floor. Keep items within easy reach. And vary your activity to reduce the risk of repetitive motion stress. Be sure to give your shoulder time to rest and recover between tasks.

Note: Don't stop using your shoulder completely—this can cause it to stiffen or "freeze." But, if a movement causes more than slight discomfort, don't do it.

❑ Ice

Ice reduces inflammation and relieves pain. Apply an ice pack for about 15 minutes, 2 or 3 times a day. You can also use a bag of frozen peas instead of an ice pack. The bag will mold nicely to the shape of your shoulder. A pillow placed under your arm may make you more comfortable.

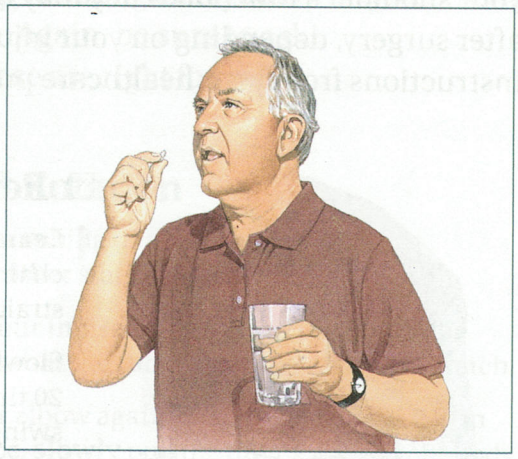
Note: Don't put the cold item directly on your skin. Place it on top of your shirt or wrap it in a thin towel or washcloth.

❑ Heat

Heat may soothe aching muscles, but it won't reduce inflammation. You can use a heating pad or take a warm shower or bath. Do this for 10 to 15 minutes.

Note: Avoid heat when pain is constant. Heat is best when used for warming up before an activity. You can also alternate ice and heat.

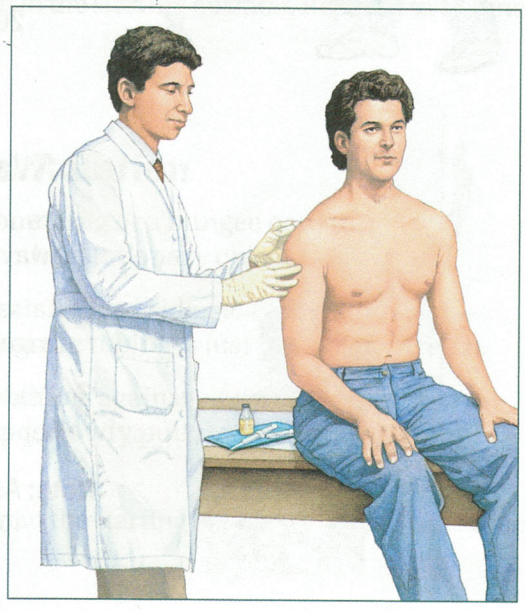
❑ Medication



You may be told to try over-the-counter pain relievers or anti-inflammatories. Or, your healthcare provider may prescribe medication to relieve pain and inflammation. Ask how and when to take your medication. Be sure to follow all instructions.

Note: Ask your healthcare provider if over-the-counter medications are right for you. Be sure to mention any other topical or oral medications you might be using.

❑ Injection Therapy



Injection therapy may be used to help diagnose or treat your problem. It may also be used to reduce pain and inflammation. The doctor may begin by numbing a small spot on the shoulder. He or she then injects an anti-inflammatory medication into the shoulder. It can take from a few hours to a couple of days before the injection helps.

Note: Talk to your healthcare provider about the possible risks and benefits of injection therapy.

Other Treatments

Your healthcare provider may perform other types of treatments to help relieve your pain. These treatments can include the following:

- **Electrical stimulation** can help reduce pain and swelling. Your healthcare provider will attach small pads to the shoulder. A mild electric current then flows into your shoulder. You may feel tingling, but not pain.
- **Ultrasound** can help reduce pain. First a slick gel or medicated cream is applied to the shoulder. Then your healthcare provider will place a small device over the area. The device uses sound waves to reduce inflammation and pain. This treatment is pain-free.

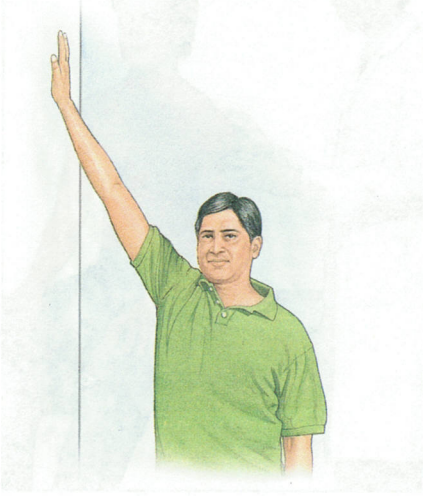
Restoring Shoulder Function

Shoulder exercises such as these are designed to help restore your shoulder's function. They may be assigned before or after surgery, depending on your injury. Follow all exercise instructions from your healthcare provider carefully.

❑ Pendulum Exercise

1. Lean over with your good arm supported on a table or chair. Relax the arm on the injured side, letting it hang straight down.
2. Slowly move the relaxed arm in a small circle. Rotate 20 times. Reverse direction and repeat. Then, slowly swing the arm back and forth. Next, swing it side to side.

Note: Do this exercise 3 times a day. Do each arm movement 20 times in each direction.



❑ Wall Walk

1. Stand with your injured shoulder about 2 feet away from a wall.
2. Raise your arm to shoulder level and gently "walk" your fingers up the wall as high as you comfortably can.
3. Hold for 10 seconds. Then walk the fingers back down. Repeat 3 to 5 times.

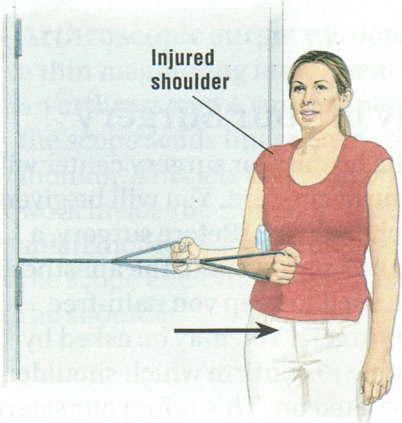
Note: Ask your healthcare provider if it's safe for you to do this stretch.

❑ Pretzel Twists

1. Reach the injured arm over your good shoulder, keeping your arm level. Use the back of your good hand to **gently** press your injured arm toward your shoulder. Repeat 1 to 3 times, holding for 10 to 15 seconds.
2. Reach behind your head with your good arm, holding a towel. Grasp the towel behind your back with your injured arm. **Gently** pull up with your good hand. Repeat 1 to 3 times, holding for 10 to 15 seconds.
3. Place your hands together behind your body. **Gently** use your good hand to lift your injured arm up and back. Repeat 1 to 3 times, holding for 10 to 15 seconds.

Restoring Shoulder Strength

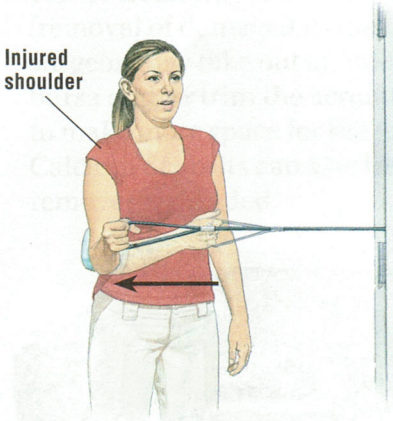
Exercises such as these might be assigned by your healthcare provider or physical therapist. They can help to strengthen your shoulder and protect it from future injuries. Again, be sure to ask your healthcare provider if exercises like these are right for you.



Hold a towel under your elbow to help keep your arm against your side.

❑ Internal Rotation

1. Attach rubber tubing or a bungee cord to a doorjamb or other stationary object.
2. Stand with your injured side *toward* the door—far enough away that the tubing is just starting to stretch.
3. Keeping your elbow against your side and your arm in an "L" shape, **slowly** pull the tubing across your body.
4. **Slowly** return to the starting position. Repeat 5 to 15 times.



❑ External Rotation

1. Attach rubber tubing or a bungee cord to a doorjamb or other stationary object.
2. Stand with your injured side *away* from the door—far enough that the tubing is just starting to stretch.
3. Keeping your elbow against your side and your arm in an "L" shape, **slowly** pull the tubing away from your body.
4. **Slowly** return to the starting position. Repeat 5 to 15 times.

❑ Scapular Stabilization

1. Lean over with your good arm supported on a table or chair. Relax the arm on the injured side, letting it hang straight down. Form your hand into a loose fist.
2. Keep your shoulder down and your arm straight. Lift your arm up and away from your body until it points straight out.
3. Hold for 5 seconds, then slowly lower your arm back to its starting position. Repeat 10 times.

Note: If your elbow starts to feel tired or sore, you can change your arm position. Flex the elbow gently inward, so the arm no longer makes a straight line.

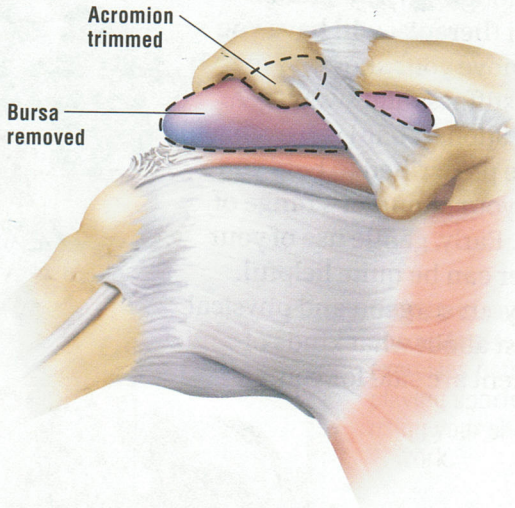
Repairing the Shoulder

Your surgeon will decide the best kind of surgery for you. The surgery will depend on the type, size, and location of your rotator cuff injury. There are two different ways that the surgery can be performed:

- **Arthroscopic surgery** is done with a thin magnifying instrument called an arthroscope. A small camera on the scope sends images to a video monitor. This lets the surgeon see and work inside the shoulder joint. Only small incisions are needed to insert the scope and other instruments into the shoulder.
- **Open surgery** is done by making a single, larger incision on the shoulder. This lets the surgeon make repairs with a direct view of the tendons and muscles of the rotator cuff.

Making More Space

Impingement or calcium deposits can be treated by **debridement** (removal of damaged tissue). The surgeon may take out an inflamed bursa and/or trim the acromion to make more space for the joint. Calcium deposits can also be removed, if needed.



Tendon Trim and Repair

If you have a torn rotator cuff tendon, the surgeon will debride the end of the damaged tendon. The tendon will be reattached to the humerus with anchors, tacks, or sutures (stitches). These remain in place and don't need to be removed.