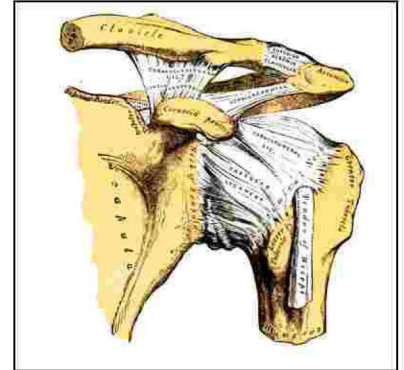




Frozen Shoulder

If you're having trouble lifting your arm above your head, reaching across your body or behind your back, and have limited motion in your shoulder, it may be an early symptom of frozen shoulder. Chronic idiopathic adhesive capsulitis is a condition of the shoulder with several unusual characteristics:

- Its cause is unknown.
- It does not occur in other joints or parts of the body.
- Range of motion is limited globally, that is all planes of motion are affected by loss of motion.
- It is usually a self-limited syndrome, when untreated, passing through three distinct phases of three to four months each:
 - The *freezing* phase
 - The *frozen* phase
 - The *thawing* phase
- In most cases the shoulder and its tissues recover completely with time, although there may be some residual restriction in shoulder motion in some cases.
- It may involve the opposite shoulder, but rarely recurs in the same shoulder.
- X-rays are usually normal
- Frozen shoulder is not associated with arthritis or malignancies.
- Affects more women than men.
- Usual onset begins between ages 40 and 65.
- Affects approximately 10% to 20% of diabetics.
- Other predisposing factors include: - A period of enforced immobility, resulting from trauma, overuse injuries or surgery. - Hyperthyroidism. - Cardiovascular disease - Clinical depression. - Parkinson's disease.



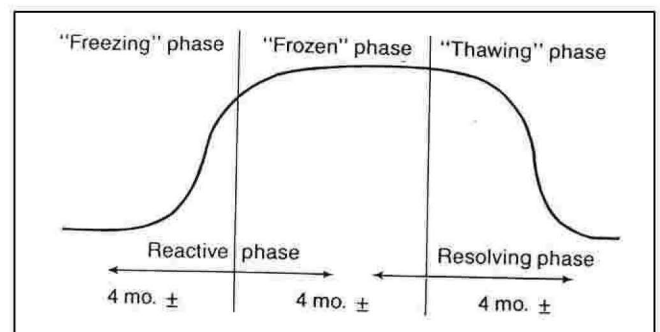
Frozen shoulder develops slowly, and in three stages.

Freezing Phase

The freezing phase is a reactive phase. For patients with an acutely and globally painful shoulder, physical therapy and stretching can cause additional discomfort and stiffening. Resting from painful activities and analgesics may help with pain control.

Frozen Phase

In the frozen phase, the shoulder becomes tighter, the pain becomes less and the patient is more comfortable. The patient is encouraged to use the shoulder actively and if comfortable, do gentle stretching exercises.



Thawing Phase

In this phase, patients report that the motion of the shoulder is gradually returning. The pain is continuing to decrease. At this time, gentle passive stretching can be increased as long as motion improves and the stretching does not aggravate the pain.

Diagnosis and treatment

The doctor will test the range of motion in your arm and may ask for an X-ray to rule out any underlying condition. Treatment is geared to relieving the discomfort and restoring motion and function to the shoulder.

Treatment includes:

- Medications (such as aspirin, aleve or ibuprofen) to reduce the inflammation and relieve the pain.
- Range of motion exercises
- Heat or ice therapies.
- Corticosteroid (cortisone) injections.
- Range of motion exercises, such as those described below, done several times a day.

Range of Motion and Stretching Exercises

The following range of motion exercises are usually helpful to keep the shoulder moving and help prevent further tightening. When performing these exercises, do them slowly and hold the arm at the end-point of the range of motion for a few seconds. Release the stretch slowly and repeat. Do not force motion through pain. Follow the instructions for each exercise as described in the illustrations. Usually, the pendulum exercise, tabletop slides and supine neutral external rotation stretches are the easiest to do and the most pain free. After 7 to 10 days, if the shoulder is improving and the exercises do not worsen the pain, the remaining exercises can be gradually added. Add one new exercise every 5 or 6 days in the following order: wall climbing or supine passive forward flexion, internal rotation behind the back, supine external rotation with abduction, and horizontal adduction stretches. As the shoulder motion improves further, you can add the standing external rotation, external rotation in the corner and internal rotation in abduction stretches. If the exercises seem to make the pain worse or tighten the shoulder further, stop doing the exercises.

Adapted from:

The American Academy of Orthopedic Surgeons, AAOS Online Service, 2003.
Rowe,CR, Leffert, RD: "Idiopathic Chronic Adhesive Capsulitis". *The Shoulder*. Ed. Carter R. Rowe, Churchill Livingstone, New York, 1988.

Pendulum Exercise

- Bend over at the waist so that the arm falls away from the body and dangles in a relaxed way.
- Use your body to initiate a circular motion. Be sure to feel that the arm is moving at the 'ball-and-socket joint' of the shoulder
- Make small circles while keeping the shoulder relaxed
- Do this for 2 to 3 minutes at a time.



Table-top Arm Slides

- Sit in a chair adjacent to a smooth table top
- Lift the involved arm with the uninvolved arm and place the hand and forearm on the table.
- Using your body, bend forward at the waist allowing the hand and arm to slide forward. Again using the body, return to the upright position with the arm passively following.
- Hold 5 to 10 seconds



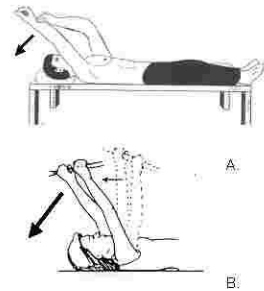
Supine Neutral External Rotation

- Lie on your back.
- Keep the arm and elbow tight against your side.
- Keep the elbow at a 90 degree angle.
- Push the stick into the hand of the involved arm to make the arm rotate away from the body.
- Hold 5 to 10 seconds



Supine Passive Forward Flexion

- Lie on your back
- Using a stick (figure A.), or helping with the uninvolved arm (figure B.), raise the involved arm up and then backward (as if to reach overhead)
- Hold 5 to 10 seconds



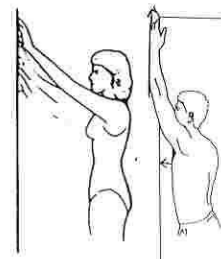
Internal Rotation Behind-the-Back Stretch

- Sitting in a chair or standing, place the hand of the affected arm behind your back at the waistline.
- Use your opposite hand to help the other hand first across to the opposite buttock, then lifting the hand higher toward the shoulder blade of the opposite shoulder
- Hold 5 to 10 seconds



Wall slide

- Stand facing a wall, using both hands, place the hands on the wall.
- Slide the hands up the wall, allowing the hands and arms to go upward.
- As you are able to stretch the hand and arm higher, you should move your body closer to the wall.
- Hold the stretch for 15 to 20 seconds.



Shoulder Shrugs and Scapular Retraction

- Shrug shoulders upward as illustrated in figure 1.
- Pinch shoulder blades backward and together, as illustrated in figure 2.
- Do 10 repetitions

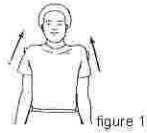


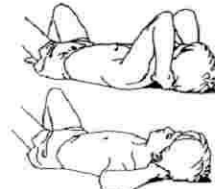
figure 1



figure 2

Supine External Rotation with Abduction

- Lie on your back.
- Assisting with your uninvolved arm, place your hands behind your head as shown in the top illustration.
- Slowly lower your elbows to stretch the shoulders toward the surface you are lying on.
- Hold 5 to 10 seconds



Horizontal Adduction Stretch

- Lying on your back, hold the elbow of the affected arm with your opposite hand.
- Gently stretch the elbow toward the opposite shoulder.
- Later, this stretch can be done standing.
- Hold 5 to 10 seconds.



Standing Neutral External Rotation

- Hold a door handle or frame with the hand of the involved arm.
- While keeping the involved arm firmly against your side and the elbow at a right (90 degree) angle,
- Rotate your body away from the door to produce outward rotation at the shoulder.
- Hold 5 to 10 seconds



External Rotation in Corner

- Standing facing a corner, position the arms as illustrated with the elbows at shoulder level.
- Lean your body gently forward toward the corner until a stretch is felt.
- Hold this position gently for 15 to 20 seconds



Internal Rotation in Abduction

- Lie on your side with the arm positioned as shown.
- Keeping the elbow at a right angle, rotate the arm as if to touch the thumb to the table.
- Apply a gentle stretch with the opposite arm.
- Hold 10 to 15 seconds.

