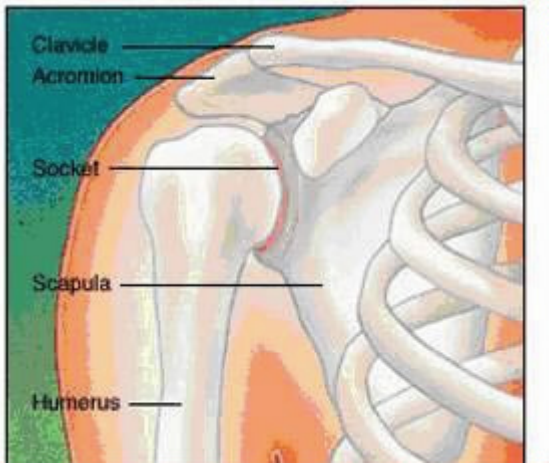
Frozen Shoulder - Adhesive Capsulitis

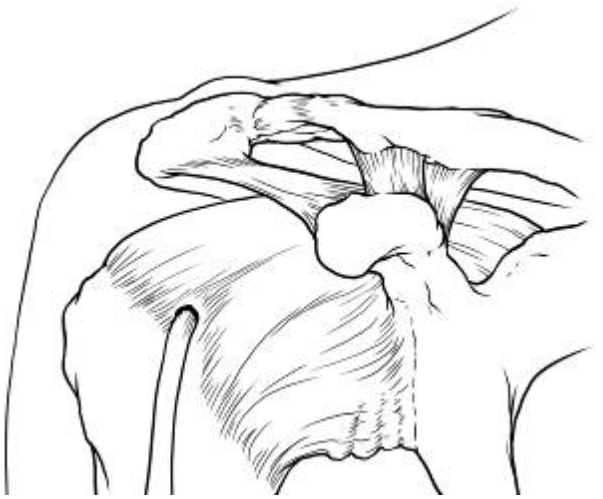
Alan M. Reznik, M.D.
The Orthopaedic Group, LLC

An Inflamed Shoulder Capsule



A "Frozen shoulder," is the common term used for the medical condition called adhesive capsulitis. It is an inflammatory condition characterized by stiffness, pain and progressive loss of shoulder motion. It can be very "sneaky." Many patients don't notice the slow steady loss of motion. Sometimes the injury that starts the process is not even noticed or recalled. Then, with time, the motion is so restricted it prevents some activities of daily living. The pain, loss of motion and inability to reach behind the back or over head and get dressed often prompts an office consultation.

Your shoulder is a ball-and-socket joint. The round end of your upper arm bone (humerus) fits into a shallow groove on your shoulder blade (scapula) much like a golf ball rest on a tee. The muscles, ligaments and joint lining help increase the stability of this inherently unstable joint. The joint lining is made of connective tissue and is called the shoulder capsule. It surrounds the joint and plays an important role in stability while allowing movement. When the capsule becomes inflamed and the joint stiffens it can slowly "freeze."



Capsule of a normal shoulder
Note the redundancy of the lining that allows for motion.

When frozen shoulder occurs, the inflammation progressed and scar tissue may cause bands of tissue (adhesions) to develop between your tendons, bones and ligaments. The shoulder bones are unable to move freely within the joint. This loss can resolve with simple stretching or be progressive and slowly over time, decrease useful motion can. As a result, pain and significant loss of movement worsens. It can be a vicious cycle of pain - loss of motion- pain- more loss of motion and so on. In some cases, mobility may decrease so much that performing everyday activities such as combing your hair, brushing your teeth or reaching is difficult or even impossible.

Patients at risk of frozen shoulder include women over the age of 40 (frozen shoulders are twice as common in women as men), people with jobs that require repetitive motion, patients that have experienced prolonged immobility of their shoulder-perhaps due to trauma or hospitalization, and people with overuse injuries. It also can occur after the inflammation as a result of shoulder surgery, which is why early motion after shoulder surgery is so important. Diabetics are much more likely to have problems with their shoulders than others. In very rare cases a frozen shoulder can be the first “symptom” of new diabetes. Elevated blood sugars seem to affect the lining of the joint and make it more likely to freeze even after only minor trauma. Still, often, there is no known exact cause.

Treatment Options for Frozen Shoulder

The first treatment for frozen shoulder includes medications to reduce the inflammation and physical therapy. Physical therapy is key in stretching the joint lining and helping to restore motion and function. Sometimes muscle relaxers or medications that reduce nerve sensitivity are also used. Frequently a steroid injection is required to stop the inflammatory cycle that keeps the shoulder from improving.

If these treatments are not successful or if the condition is ignored too long, surgery may be required to restore motion. Surgery for a frozen shoulder involves manipulating the joint to release the scar tissue, removing the scar tissue and removing the adhesions from inside your shoulder. If there is an underlying condition at the root of the frozen shoulder like a rotator cuff tear, ligament injury or bone spurs, these can be treated at the same time to prevent recurrence of the shoulder problem. Dr Reznik performs this surgery through a fiber-optic scope using small incisions on an out-patient basis followed by starting ROM as soon as possible after the surgery and progressive physical therapy. This procedure has been shown to be very effective in restoring motion with a low risk of complications.

Recovery Plan: Post surgical instructions

Day 1: The Day of Surgery

Maintain dressing, add 4x4 bandages if needed for drainage through dressing. Apply ice pack for 20 minute periods throughout the day. You will start exercises in the recovery room. Remember: The key to keeping your motion is early movement! Use the good arm to help keep the injured arm moving.

Move your fingers and wrist often. Expect some swelling. If the color of your arm or hand changes, or sensation changes notify the physician. Start pendulum and wall walk (see list) exercises tonight.

** Most patients find sleeping semi-upright the first few weeks after shoulder surgery is much more comfortable than sleeping flat.

Post Op Day 1: The same as day of surgery. **Exercise**: You will begin simple exercises the day of surgery. They should be done every day for the first week post-op, to maintain blood flow and help to prevent blood clots. Once a day, in the shower, begin to flex and extend your elbow. (See list) Continue gripping exercises, and be sure to move your wrist and fingers frequently.

**Your arm sling is for comfort only, use it only as needed and when in a crowded place (this will warn people to avoid your injured area). Do your elbow, wrist, and hand exercises at least three other times each day – 15 Reps. Some patients like to do them during commercial breaks when watching TV.

DAY 2 (48 hours post-operatively): Continue same activities including using ice for 20 min. periods as needed. Take your dressing off. Shower today; supporting the affected arm with the opposite hand. You may wash under the arm, but do not use a large amount of soap. Too much soap may dry out the skin and cause a rash. Move the arm freely in the shower. It is good to move it under the water. Don't be afraid to do this, it will aid in your recovery. After your shower, dry the shoulder well and place Band-aids over incisions. Physical therapy usually begins today.

Physical Therapy: **It is vital to your recovery of good shoulder function. A graduated activity and exercise program to increase muscle strength and motion is part of the post operative care.**

Your physical therapy will begin 3-4 days after surgery. The physical therapist will guide you in your shoulder rehabilitation program.

It is very important for you to start therapy when recommended.

To avoid complications, postoperative follow up appointments with your physician are also required to monitor your progress.

DAY 4 – 10: Change Band-aids daily or as needed. Do not use creams or antibiotic gels on the wounds the wounds. They heal faster when they can dry out and the scab can contract to close them. Maintain sling use for comfort. Continue with exercises as

directed. Add **biceps curls** and increase the circle size when doing the **Pendulum** exercises. Ask your therapist for a home shoulder pulley set and start pulley exercises daily.

DAY 7 – 10: Visit with the doctor. Further instructions will be given to continue your rehabilitation and recovery. Depending on what type of surgery you had and you own recovery rate, physical therapy will start 3 days after surgery.

General Instructions for Adhesive Capsulitis (Frozen Shoulder) Patients

You may resume a regular diet when you return home. Start with tea or broth and advance slowly with crackers or toast, then a non-spicy sandwich. If you become nauseated, return to clear liquids. You can also try Tum's, Zantac or Pepcid AC to help settle your stomach.

After surgery you are encouraged to deep breathe and cough frequently (at lease 3-4 times per day). This will reduce mucous from building up in your lungs, and will reduce the risk of developing pneumonia.

*****It is important to move arm and shoulder immediately after surgery to prevent refreezing" ******

Diet: You may resume a **regular diet** when you return home. Most patients start with tea or broth adding crackers or toast, then a non-spicy sandwich. If you become nauseated, check to see if one of your medications is upsetting your stomach, most narcotics can. If your stomach feels acidy, try **Tums, Zantac** or **Pepcid AC** to settle it and drink some clear liquids.

Lungs: After surgery you are encouraged to **deep breathe** and cough frequently (at lease 3-4 times per day). This will reduce mucous from building up in your lungs, and will reduce the risk of developing a post anesthetic pneumonia.

Pain Control: Take medication as prescribed by Dr Reznik. Please call our office with any questions regarding your medication. Moving the affected shoulder immediately after

surgery is important to prevent "refreezing" of the joint. If pain is preventing movement, please call our office.

Driving: Patient cannot drive until they are off all pain medications, completely out of the sling, and can easily place hands at 12:00 position on the steering wheel and can move hands freely from the 9:00 – 3:00 position.

Blood Clots: Patients at high risk for blood clots include:

- Those with long car or train commutes;
- May be overweight: BMI>30*; **BMI or Body Mass index is a number calculated from a person's weight and height. BMI provides a reliable indicator of body health for most people and is used to screen for weight categories that may lead to health problems*
- Have a history of having cancer;
- Females on birth control pills;
- Males over the age of 40.

<u>These patients should be taking 1 aspirin per day for 6 weeks after surgery unless allergic to aspirin.</u>

Sling: Patients are to wear the sling as needed for comfort. It is recommended that patients wear the sling when going out. This will help to alert others to avoid the affected arm during this healing period. Move fingers and wrist often. Expect some swelling.

Dressing: The dressing is to remain clean and dry. After 48 hours you may remove the dressing but keep the small steri strips on. You may shower today and replace the dressing with Band-Aids.

Driving: Patient cannot drive until they are off all pain medications, completely out of the sling, and can easily place hands at 12:00 position on the steering wheel and can move hands freely from the 9:00 – 3:00 position.

Returning to Work: Patients with sedentary or low demand work can usually return to work within 7-10 days. They will still have restrictions on lifting (less than 5 pounds) repetitive and overhead use on the surgical side. **Medium work** that requires some light lifting will need at least 3-4 weeks. Patients with **slightly higher demand** jobs or infrequent repetitive arm use will need at least 6-8 weeks. **Heavy laborers** (patients with repetitive work, overhead work of any kind, such as manufacturing or construction work) may need a minimum of 3-4 months and possibly a work conditioning program prior to returning to work.

Airline Flights: Patients may fly 2-3 weeks after surgery on short flights (up to 2 hours) but should wait 6-8 weeks for longer flights. You should get up and walk frequently to avoid blood clots and take an aspirin (unless allergic) if you must fly.

Physical Therapy Reminder: Vital to your recovery of good shoulder function is a graduated activity and exercise program to increase muscle strength and motion. Your physical therapy will begin 3-4 days after surgery. The physical therapist will guide you in your shoulder rehabilitation program. It is very important for you to start therapy when recommended. To avoid complications, postoperative follow up appointments with your physician are also required to monitor your progress.

You will begin simple exercises the day of surgery. They should be done every day for the first week post-op, to maintain blood flow and help to prevent blood clots.

EXERCISES: Do as many times you can each day after surgery (at least three times a day.)

Hand Squeezes or Grip Strengthening: Using a small soft rubber ball or soft sponge, squeeze your hand. When in the shower, you can use a sponge filled with water. Do this for 3-5 sets of 10-20 repetitions each day. If this is too easy, later in the rehab course you can use a grip strengthener.

Wrist Range of Motion: Roll your wrist in circles for 30 seconds after each round of grip exercises.

Elbow Range of Motion: Turning your palm inward, towards your stomach, flex and extend the elbow as comfort allows. This rubbing you belly motion will decrease pain and prevent elbow stiffness.

Pendulum Exercise: Holding the side of a table with your good arm, bend over at the waist, and let the affected arm hang down. Swing the arm back and forth like a pendulum. Then swing in small circles and slowly make them larger. Do this for a minute or two at a time, rest, then repeat for a total of 5 minutes, 3 times per day

Biceps Curls: Curl the arm up and down 12 times; rest for one minute and repeat for a total of 3 sets of 12. When comfortable try it holding a very small can to start, in a few days you can increase can size only as comfort allows. This exercise should not be painful. If painful, decrease or eliminate the weight.

Wall Walking: Stand facing a blank wall with your feet about 12 inches away. "Walk" the fingers of the affected hand up the wall as high as comfort allows. Mark the spot and try to go higher next time. Do at least 10 repetitions, 3 times per day. When more comfortable and stronger (not before three weeks) do these exercise sideways, with the affected side facing the wall. Do not let the hand drop down from the wall- walk your fingers down as well as up. Dropping the arm will strain the repair and be painful. If having weakness on the way down, feel free to use the other arm to help.