

Frozen Shoulder

Description

Frozen shoulder (adhesive capsulitis) is a disorder characterized by pain and loss of motion or stiffness in the shoulder. It affects about two percent of the general population. It is more common in women between the ages of 40 years to 70 years old. The causes of frozen shoulder are not fully understood. The process involves thickening and contracture of the capsule surrounding the shoulder joint. The diagnosis of frozen shoulder is based on a history of the patient's symptoms and their physical examination. Dr. Norberg will often order an x-ray of the shoulder to rule out arthritis, which also causes stiffness and pain in the shoulder. MRI (magnetic resonance imaging) is rarely used to confirm the diagnosis, but may be ordered if a rotator cuff tear is suspected.

Risk Factors/Prevention

Frozen shoulder occurs much more commonly in individuals with diabetes, affecting 20 percent of patients. Hypothyroidism, hyperthyroidism, Parkinson's disease, cardiac disease and chest surgery are other problems associated with an increased risk of frozen shoulder. Frozen shoulder can occasionally develop after a shoulder is injured or immobilized for a period of time. After a shoulder injury, attempts to prevent frozen shoulder include early stretches during the recovery period.

Symptoms

Pain due to frozen shoulder is usually dull or aching, but can be sharp and worsened with attempted motion. The pain is usually located over the outer shoulder area and sometimes the upper arm. The hallmark of the disorder is restricted motion or stiffness in the shoulder. Both active motion (when the patient moves their own shoulder) and passive motion (when someone else moves the shoulder for the patient) are restricted.

Some physicians have described the normal course of a frozen shoulder as having three stages:

- Stage one: In the "freezing" stage, the patient develops a slow onset of pain. As the pain worsens, the shoulder loses motion. The stage may last from six weeks to nine months.
- Stage two: In the "frozen" stage, the patient will have gradual improvement in their pain, but the stiffness remains. This stage generally lasts four to nine months.
- Stage three: In the "thawing" stage, shoulder motion slowly returns toward normal. This stage generally lasts 5 to 26 months.

A typical frozen shoulder will run its course over 18-24 months. Most people will have little or no permanent loss of motion, however patients with diabetes generally have a longer course and poorer outcome.

Treatment Options

Treatment is aimed at pain control and restoration of motion. The first goal is pain control. This can be achieved with anti-inflammatory medications. Ibuprofen or Aleve are examples of over-the-counter anti-inflammatory medications, which are taken by mouth. Often, Dr. Norberg will offer a corticosteroid injection. This is a procedure done in clinic under ultrasound, and can reduce the amount of pain, especially if the patient is having difficulty sleeping. Narcotic medications are best avoided.

To restore motion, physical therapy is often ordered. Two to four visits with a physical therapist are generally recommended to institute an independent home exercise program. Therapy includes stretching exercises for the shoulder. Sometimes heat is used to help decrease pain.

Treatment Options: Hydroplasty

Another option for treatment is a hydroplasty procedure. A hydroplasty consists of a corticosteroid and anesthetic (numbing) injection, followed by a saline injection into the shoulder joint. The amount of saline used for the injection is much greater than the typical volume in the shoulder joint. The purpose of the injection is to stretch out the joint capsule, and in many cases “pop” or tear the joint capsule. This procedure is performed by Dr. Norberg at our Edina or West Health physical therapy office. Following the injection, range-of-motion exercises are started immediately with a physical therapist. The hydroplasty injection must be scheduled on a Monday, and the patient will then attend physical therapy every day (Monday through Friday) that week and the following week. The physical therapist will then adjust the therapy frequency depending on the patient’s progress. A hydroplasty is done to increase motion and decrease pain early on, and potentially avoid the long 18 to 24 month course that the disease takes naturally.

There is no published data studying the effectiveness of a hydroplasty procedure, so we do not have statistics on patient outcomes at this time. However, some of our physical therapists and physicians at Twin Cities Orthopedics have reported many successful patient outcomes. This treatment option is less invasive than surgery, so we typically recommend trying this prior to proceeding with surgery, or in patients who would like to attempt to shorten the course of their frozen shoulder.

Treatment Options: Surgical

Surgery is rarely required for frozen shoulder, because most patients will do well with time and therapy alone. In the rare cases in which surgery is indicated, the procedure is an arthroscopy or “scope” with careful release or cutting of the joint capsule. After the capsule is released, the shoulder is then stretched out or “manipulated” while the patient is under anesthesia. The patient will then go to physical therapy several times a week for the first few weeks after surgery. Sometimes we will also have patients use a continuous passive motion or “CPM” device that will stretch out the shoulder for several hours a day, beginning the day of surgery.

Research on the Horizon/ What’s New?

We are currently writing a protocol for a hydroplasty study at Twin Cities Orthopedics with Dr. Norberg and his team, and also several physical therapists at our Edina and West Health locations. The purpose of our study is to evaluate results of the hydroplasty procedure in comparison to a regimen of physical therapy and cortisone injection only. We would like to determine if the hydroplasty procedure makes a difference in patient outcomes. We will be looking for volunteers for the study in the near future.

Although the cause of frozen shoulder is not known, it likely has several causes. Further research is needed to determine its exact cause. If the cause is determined, better preventative measures or treatments could possibly be developed. Most patients affected by frozen shoulder do get better with time. Many orthopedic surgeons have reported the results of various physical therapy regimens as well as surgery. Further research will determine which treatments work best, or if treatment changes the normal course of the disease.

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