

Frozen Shoulder



Overview

Adhesive capsulitis, or “Frozen Shoulder” is generally a self-limited process that improves with time and conservative treatment. Nonetheless, it can be a perplexing problem leaving patients frustrated by loss of function and the length of time necessary for recovery. The onset of frozen shoulder is often marked by an awareness of pain associated with decreased shoulder motion. This may be characterized by inability to reach behind the back, for example, when fastening a garment or when reaching into a back trouser pocket. Pain is sharp at the extremes of arm motion and sleep is almost always interrupted by pain. The surrounding muscle groups of the neck and shoulder blade frequently become overworked, stiff and tender.



Incidence

Frozen Shoulder affects 2 to 3 percent of the population and occurs most commonly between the ages of 40 and 60. It affects women in 70% of the cases. Fifteen percent of patients will eventually develop bilateral disease. A history of a minor strain or injury before onset may be noted; however, it is unclear whether this is an independent event or merely an early awareness of the pain associated with the onset of adhesive capsulitis. Fortunately, frozen shoulder is only infrequently associated with underlying shoulder problems such as bursitis or rotator cuff injury. In general, resolution of the joint contracture does not uncover a secondary shoulder problem that then requires treatment, nor does frozen shoulder recur in the same shoulder.

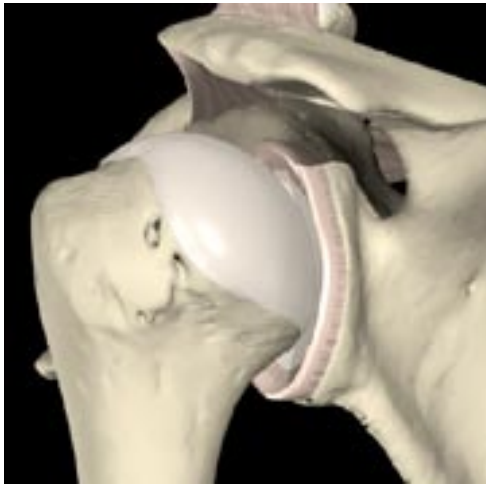


Predisposing factors

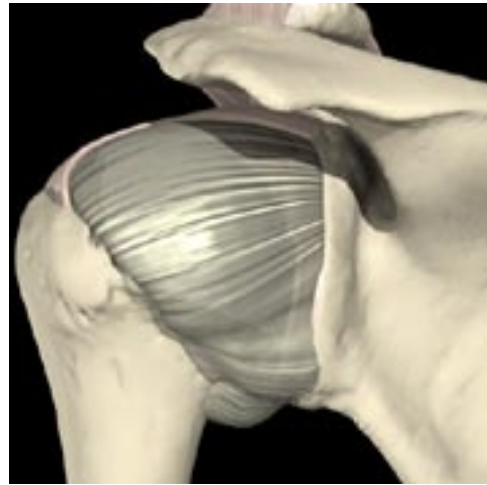
Ten to 20% of diabetic individuals at some point suffer adhesive capsulitis. Diabetic frozen shoulder tends to develop into a more severe and resistant contracture, and are far more likely to require surgical treatment. Other predisposing factors include a period of shoulder immobilization, hyperthyroidism, Parkinson’s disease and clinical depression. The reasons for the association of these varied conditions with frozen shoulder remains unclear.

Pathology

Though some theories suggest an underlying inflammatory basis, the precise cause of adhesive capsulitis, remains elusive. We do know however, that the capsule surrounding the shoulder joint thickens and contracts much like a shirt that is washed in scalding water. The tightened, shrunken capsule binds the shoulder joint and restricts arm motion. Severe pain occurs when the shoulder reaches the end of its limited motion stretching the tightened inflamed capsule.



Shoulder Joint



Shoulder Joint and Capsule

Three stages of development

The natural history of adhesive capsulitis (its clinical course) is divided into three stages:

- Stage One: progressive loss of motion with increasing pain, particularly at night lasting approximately 2 to 9 months.
- Stage Two: Though range of motion is markedly limited pain begins to lessen and ROM begins to again increase. This stage lasts, on average, 4 to 12 months.
- Stage Three: Gradual restoration of motion and resolution of pain over the next 12 to 42 months.

For the majority of patients, adhesive capsulitis is a self-limiting process, with a gradual and spontaneous increase in range of motion. Approximately 7 to 15 percent of patients, however, will suffer permanently motion loss. Diabetics, as noted previously, for reasons that are unclear, present with more profound loss of motion, and are more resistant to improvement with conservative treatments. In these individuals, manipulation and possible capsular release may be appropriate.

Management

With the exception of diabetic frozen shoulder, the great majority of individuals with adhesive capsulitis will note significant, if not complete resolution of stiffness and pain within four years of the onset of symptoms. Studies have demonstrated little if any difference in eventual therapeutic outcome despite treatment differences. Comparisons between formal physical therapy, shoulder manipulation and simple home exercises have consistently failed to reveal differences in eventual range of motion or patient comfort. Prompt professional intervention, rather than benign neglect does, however, shorten disability and improve quality of life by achieving motion and relieving pain in the near term. Simply put, for many individuals, four years can be a long time to wait.

Arthroscopic Treatment

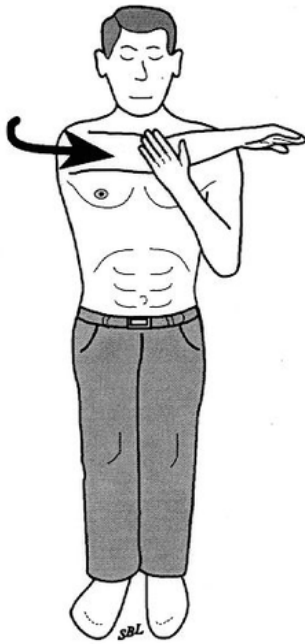


In those individuals who do not improve with conservative care and who wish relief from the pain and limitation of adhesive capsulitis manipulation and arthroscopic capsular release can produce more rapid improvement. Under anesthesia the shoulder is taken through a complete range of motion, separating the contracted capsule. In profound contractures, a short arthroscopic procedure to surgically divide any remaining contractures or contracted capsule may be necessary to achieve full motion. The goal of the surgery is a more rapid restoration of motion and relief of pain.. Both are followed by a course of physical therapy.

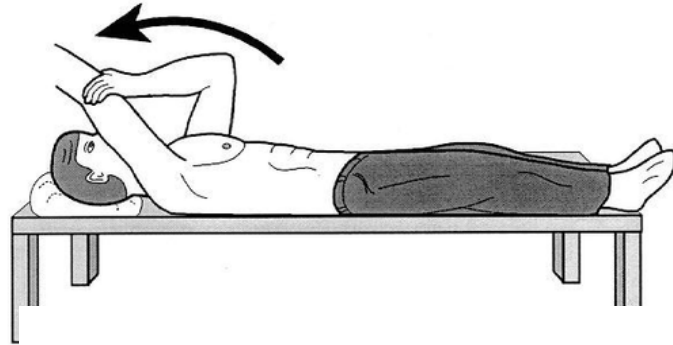
Exercise Guide



The great majority of patients, it must be remember, will dramatically improve with conservative treatment. On the other hand, too vigorous or forceful exercise program may paradoxically lead to increased pain and even further shoulder restriction. Exercise, whether at home or in a therapy unit should be gradual, and progressive and *gently* challenging. Regular exercises to restore your normal shoulder motion and flexibility and a gradual return to everyday work and recreational activities are important for your full recovery. Exercise from 10 to 15 minutes 2 or 3 times a day during your early recovery.



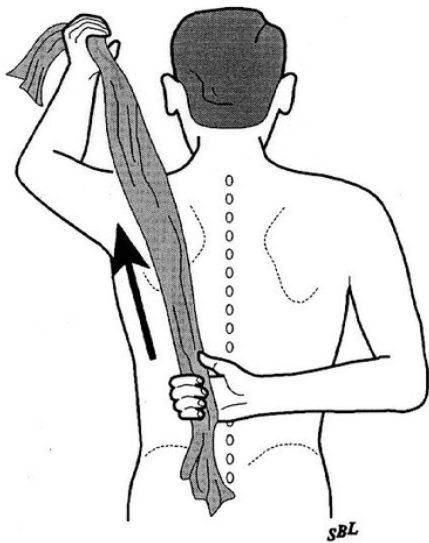
Matsen Fig. 2-37



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Matsen Fig. 2-33



Matsen Fig. 2-36

Switch hands and repeat



Matsen Fig. 2-34