

Physical Therapist's Guide to Frozen Shoulder (Adhesive Capsulitis)

Often called a stiff or “frozen shoulder,” adhesive capsulitis occurs in about 2% to 5% of the general population. It affects women more than men and typically occurs in people who are over the age of 45. Of the people who have had adhesive capsulitis in one shoulder, 20% to 30% will get it in the other shoulder.

What is Frozen Shoulder (Adhesive Capsulitis)?

Adhesive capsulitis is the stiffening of the shoulder due to scar tissue, which results in painful movement and loss of motion. The actual cause of adhesive capsulitis is a matter for debate. Some believe it is caused by inflammation, such as when the lining of a joint becomes inflamed (synovitis), or by autoimmune reactions, where the body launches an "attack" against its own substances and tissues. Other possible causes include:

- Reactions after an injury or surgery
- Pain from other conditions—such as arthritis, a rotator cuff tear, bursitis, or tendinitis—that has caused you to stop moving your shoulder
- Immobilization of your arm, such as in a sling, after surgery or fracture

Often, however, there is no known reason why adhesive capsulitis starts.



Frozen Shoulder:

How Does it Feel?

Most people with adhesive capsulitis have worsening pain and then a loss of range of movement. Adhesive capsulitis can be broken down into 4 stages, and your physical therapist can help determine what stage you are in:

Stage 1 - "Pre-Freezing"

During this stage, it may be difficult to identify your problem as adhesive capsulitis. You've had symptoms for 1 to 3 months, and they're getting worse. There is pain with active movement and passive motion (movements that a physical therapist does for you). The shoulder usually aches when you're not using it, but pain increases and becomes "sharp" with movement. You'll have a mild reduction in motion during this period, and you'll protect the shoulder by using it less. The movement loss is most noticeable in "external rotation" (this is when you rotate your arm away from your body), but you might start to lose motion when you raise your arm (called "flexion and abduction") or reach behind your back (called "internal rotation"). You'll have pain during the day and at night.

Stage 2 – "Freezing"

By this stage, you've had symptoms for 3 to 9 months, most likely with a progressive loss of shoulder movement and an increase in pain (especially at night). The shoulder still has some range of movement, but this is limited by both pain and stiffness.

Stage 3 – "Frozen"

Your symptoms have persisted for 9 to 14 months, and you have greatly decreased range of shoulder movement. During the early part of this stage, there is still a substantial amount of pain. Toward the end of this stage, however, pain decreases, with the pain usually occurring only when you move your shoulder as far you can move it.

Stage 4 – "Thawing"

You've had symptoms for 12 to 15 months, and there is a big decrease in pain, especially at night. You still have a limited range of movement, but your ability to complete your daily activities involving overhead motion is improving at a rapid rate.

How Is It Diagnosed?

Often, physical therapists don't see patients with adhesive capsulitis until well into the freezing phase or early in the frozen phase. Your physical therapist will perform a thorough evaluation, including an extensive health history, to rule out other diagnoses. Your therapist will look for a specific pattern in your decreased range of motion; it's called a "capsular pattern" and is typical with adhesive capsulitis. In addition, your therapist will consider other conditions you might have—such as diabetes, thyroid disorders, and autoimmune disorders—that are associated with adhesive capsulitis.

How Can a Physical Therapist Help?

Your physical therapist's overall goal is to restore your movement so that you can perform your activities and life roles. Once the evaluation process has identified the stage of your condition, your therapist will create an exercise program tailored to your needs. Exercise has been found to be most effective for those who are in stage 2 or higher.

Stages 1 and 2

Your physical therapist will help you maintain as much range of motion as possible and will help reduce the pain. Your therapist may use a combination of stretching and manual therapy techniques to increase your range of motion. The therapist also may decide to use treatments such as heat and ice to help relax the muscles prior to other forms of treatment. The therapist will give you a home exercise program designed to help reduce the loss of motion.

Stage 3

The focus of treatment will be on the return of motion, with your therapist using more aggressive stretching and manual therapy techniques. You may begin some strengthening exercises as well, and your home exercise program will change to include these exercises.

Stage 4

In the final stage, your therapist will focus on the return of "normal" shoulder body mechanics and your return to normal, everyday, pain-free activities. The therapist will continue to use stretching, strength training, and a variety of manual therapy techniques.

Sometimes, conservative care cannot reduce the pain. If this happens to you, your physical therapist may refer you for an injection of anti-inflammatory and pain-relieving medication into the joint space. Research has shown that although these injections don't provide longer-term benefit for range of motion and don't shorten the duration of the condition, they do offer short-term benefit in reducing pain.

Can this Injury or Condition be Prevented?

The cause of adhesive capsulitis is debatable, with no definitive cause, so there is no known method of prevention. The onset is usually gradual, with the disease process needing to "run its course."

Real Life Experiences

Cheryl L. is a 47-year-old woman whose physical therapist has diagnosed her with adhesive capsulitis. She has no history of trauma and reports a slow onset of pain that increased over the past 6 months. She says that it significantly affects her sleep.

Her pain is accompanied by a loss of range of movement that has now progressed to the point where she can't lift her arm to shoulder level. Her therapist provides heat treatments to relax her muscles and designs a home exercise program to help stall the loss of motion. He monitors Cheryl periodically, encouraging her to continue with the home exercises despite the pain. Treatment in the physical therapy clinic consists of stretches performed by the therapist, who also mobilizes the joint to help maintain its current range of motion. At this stage, the therapist focuses the manual therapy not on *increasing* range of motion but on mobilizing the joint to reduce pain and reduce the amount of range of motion that is lost.

When Cheryl progresses into stage 3 ("frozen"), her visits to the physical therapist are increased. The therapist uses stretching and manual therapy techniques to improve her range of motion. After 4 weeks of treatment, Cheryl reports minimal pain, and her range of motion is beginning to increase rapidly. Her therapy is reduced to weekly visits and then to twice monthly visits. Fourteen months after the onset of her condition, her range of motion returns to normal, and her pain has stopped. Cheryl's progress is rapid, and the therapist credits this to her full participation in her exercise program.

This story was based on a real-life case. Your case may be different. Your physical therapist will tailor a treatment program to your specific case.

What Kind of Physical Therapist Do I Need?

All physical therapists are prepared through education and experience to treat people who have frozen shoulder, or adhesive capsulitis. You may want to consider:

- A physical therapist who is experienced in treating people with orthopedic, or musculoskeletal, problems.
- A physical therapist who is a board-certified clinical specialist or who completed a residency or fellowship in orthopaedic physical therapy. This therapist has advanced knowledge, experience, and skills that may apply to your condition.

You can find physical therapists who have these and other credentials by using [Find a PT](#), the online tool built by the American Physical Therapy Association [www.APTA.org] to help you search for physical therapists with specific clinical expertise in your geographic area.

General tips when you're looking for a physical therapist:

- Get recommendations from family and friends or from other health care providers.
- When you contact a physical therapy clinic for an appointment, ask about the physical therapist's experience in helping people with frozen shoulder.
- During your first visit with the physical therapist, be prepared to describe your symptoms in as much detail as possible, and say what makes your symptoms worse.

Further Reading

The American Physical Therapy Association (APTA) believes that consumers should have access to information that could help them make health care decisions and also prepare them for their visit with their health care provider.

The following articles provide some of the best scientific evidence related to physical therapy treatment of adhesive capsulitis. The articles report recent research and give an overview of the standards of practice for treatment of Adhesive Capsulitis both in the United States and internationally. The article titles are linked either to a PubMed abstract of the article or to free full text, so that you can read it or print out a copy to bring with you to your health care provider.

Rill BK, Fleckenstein CM, Levy MS, et al. Predictors of outcome after nonoperative and operative treatment of adhesive capsulitis. *Am J Sports Med.* 2011;39:567–574. [Article Summary on PubMed.](#)

Neviaser AS, Hannafin JA. Adhesive capsulitis: a review of current treatment. *Am J Sports Med.* 2010;38:2346–2356. [Article Summary on PubMed.](#)

Jewell DV, Riddle DL, Thacker LR. Interventions associated with an increased or decreased likelihood of pain reduction and improved function in patients with adhesive capsulitis: a retrospective cohort study. *Phys Ther.* 2009;89:419-429. [Free Article.](#)

Kelley MJ, McClure PW, Leggin BG. Frozen shoulder: evidence and a proposed model guiding rehabilitation. *J Ortho Sports Phys Ther.* 2009;39:135-148. [Article Summary on PubMed.](#)

Levine WN, Kashyap CP, Bak SF, et al. Nonoperative management of idiopathic adhesive capsulitis. *J Shoulder Elbow Surg.* 2007;16:569–573. [Article Summary on PubMed.](#)

Sheridan MA, Hannafin JA. Upper extremity: emphasis on frozen shoulder. *Orthop Clin North Am.* 2006;37:531–539. [Article Summary on PubMed.](#)

Diercks RL, Stevens M. Gentle thawing of the frozen shoulder: a prospective study of supervised neglect versus intensive physical therapy in seventy-seven patients with frozen shoulder syndrome followed up for two years. *J Shoulder Elbow Surg.* 2004;13:499–502. [Article Summary on PubMed.](#)