

## Tenosynovitis Flexors of the hands

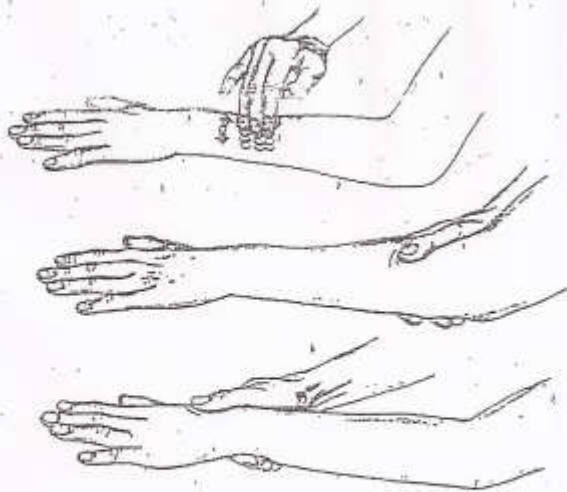
**Treatment or Prevention:** The old adage, "An ounce of prevention is worth a pound of cure," and the recent adage (in fact it is my statement) "It is easy to treat Golfer's or Tennis elbow, but it is difficult to prevent its recurrence"; are most apropos when trying to prevent the debilitating effects of Golfer's Elbow. If the symptoms of Golfer's Elbow are not prevented or treated in their earliest stages, they may produce such debilitating pain that only a complete life style change will relieve their symptoms. Whilst local steroid injections help you to overcome the acute painful phase, your role in the management is equally important. This leaflet will give you a guide about how to manage the "Tenosynovitis of the flexor muscles of the hands" or what is known as "Golfer's elbow" both on the short and long terms.

**Short-Term Pain Relievers:** These steps will help to provide you with short-term pain relief:



1. Protection. By gently limiting the pull of the flexor tendons on the medial epicondyle, healing will occur more quickly. This is best accomplished with the use of a elbow brace or stap. Braces will help to reduce pain, inflammation, swelling, and healing time! Not only are they effective in the treatment of Golfer's Elbow, but they are also recommend for preventing reoccurrence of this problem.
2. Rest. This means to stop doing those activities that cause your elbow to hurt. Avoid any activity that requires frequent bending of the fingers, hand, or wrist.
3. Ice. Apply ice to the elbow for 10-15 minutes every few hours. This will help to reduce inflammation, swelling, and pain. If the ice becomes uncomfortable, discontinue its use immediately. Ice, and later heat, can be combined with compression.
4. Once the inflammation has subsided, mild and comfortable moist heat may be applied to the strained forearm muscles and elbow. This will bring more blood to the area, and speed up healing. Use moist heat for 20 minutes every few hours. If the heat is uncomfortable, stop it immediately. Sometimes combining moist heat treatments, followed by ice packs, will not only hasten healing, but will help to reduce pain (try after the first 72 hours).
5. When the pain subsides, you should try a gradual return to "modified" activities with the use of a brace which will protect, support, and stabilize the muscles and tendons of the forearm.

## Massage

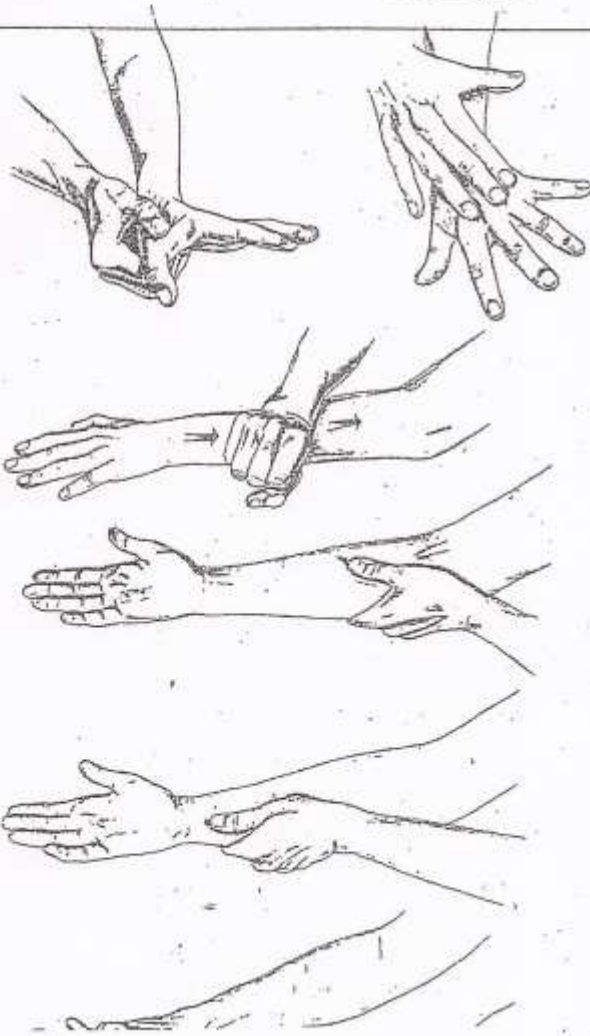


\*Take a small amount of the oil or lotion in the palm of your hand and spread it on your arm.

\*Begin at the elbow and, using your thumb, work across the muscles, spreading the fibers. This opens up the muscle, increasing blood supply and oxygenation and breaking up scar tissue.

\*Repeat this stroke at least three times, or more if you like. Work down into the hand.

\*Turn the arm over and repeat the same stroke on the inner arm muscles. After you have used your thumb to spread the muscle fibers open, press firmly into the muscle on the massaged forearm, and glide it upward as shown. This will flush blood and oxygen back toward your heart.

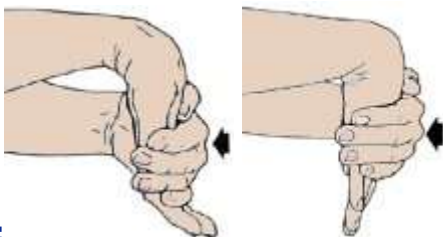


\*Then use your finger pads to massage around the elbow with small cross-fiber strokes. A cross-fiber stroke is performed by pressing down into the muscle tissue and slowly gliding the finger pads back and forth in a "sawing" motion. This is where you may find old scar tissue and the "ropy" muscles that are produced from a constant isometric contraction such as when holding your instruments in a pinch-grip for a period of time.

\*These strokes can hurt, so go slowly. If your arms are really painful to touch, it is best to see a professional to help you get started.

**Long-Term Pain Relievers:** The following remedies will help to provide you with long-term pain relief:

1. The use of elbow support or strap, especially in the early stages of "return to full activities," will help to prevent a reoccurrence of Golfer's Elbow symptoms. Braces should allow normal movements, but help to prevent those excessive and abnormal movements that will strain, inflame, and tear the tendons that attach to the elbow.
2. You need to modify your activities in order to reduce stress on the elbow. Tasks associated with Golfer's Elbow need to be identified and modified to reduce the risks of initiating episodes of this painful condition. Besides resting your hand, wrist, and arm frequently, here are some simple, yet effective precautions, you can take to help reduce your chances of suffering Golfer's Elbow pain:
  1. If you are doing a job that involves a lot of PC work:
    - Use wrist support and mouse pad. Make sure your hands and wrist joints are in the neutral position (180°).
    - Use splints at night.
  2. If you frequently use a hammer:
    - Do not keep your arm fully extended when hammering. Bend the elbow. This will reduce the pull of the tendons on the lateral epicondyle of the elbow.
    - Use a hammer that fits your hand comfortably. If the hand-grip diameter is too narrow or thick, you will tighten your grip excessively. After many hours of gripping too hard, the flexor muscles in the forearm will pull excessively on the elbow. This may lead to an episode of Golfer's Elbow.
  2. If you are a house painter, use a brush that fits your hand comfortably, and one that is not excessively heavy. Also, use smooth painting strokes....try to avoid jerky hand and wrist motions. This will reduce the chances of Golfer's Elbow occurring.
  3. Swinging a golf club and a tennis racket requires the use of the flexor muscles of the forearm. These muscles can easily become over-used or abused and produce the symptoms of Golfer's Elbow. The following suggestions may help prevent these activities from causing Golfer's Elbow:
    - Try not to fully extend your arm when performing these activities. Keep the elbow bent, even if it is only a small amount.
    - Use smooth movements rather than jerky ones.
    - Rest your hand often.
  4. If you lift and carry heavy objects with your hands:
    - Do stretching and strengthening exercises before you begin work. (See the next paragraph for some examples of these exercises).
    - Try to keep your elbows bent when lifting. Keeping your arms fully extended when lifting heavy loads will strain the forearm muscles at their attachment to the elbow.
3. Stretching and strengthening exercises for the flexor muscles of the hand, wrist, and forearm are important to help prevent further episodes of Tennis Elbow. If the muscles are strong, they will have less tendency to succumb to an injury...strong muscles can fight off stress better than weaker muscles. Exercise should begin only after healing has occurred **to the point that the exercises do not increase pain.** Use good judgement when exercising: start slow, do not overdo, and stop immediately if pain begins.



### Exercises:

**Stretching the flexor muscles** (those muscles that flex the fingers and wrist): While the arm is held straight out and the palm is up, push the palm backward to stretch. This stretching exercise is held for 10 seconds and repeated several times. Repeat this exercise 5 times a day. If this exercise is painful to do, stop **immediately**.

## Neural stretch



The Ulnar nerve runs very close to the medial epicondyle (bony bit on the inside of the elbow). This may become trapped by scar tissue. A neural stretch as shown above may be beneficial in treating this. Adopt the position as shown. The stretch can be increased by placing something under the elbow to raise it up, which increases the amount the upper arm is lifted relative to the shoulder (abducted), or pressing the hand further back.

Hold the stretch for only 5 seconds, repeat 5 times and aim to stretch at least 3 times a day.

# More Stretching Exercise

exercise 5-10 times every 2 hours.

The positions are performed to the point where slight tension is produced, this usually feels as a slight "pull" and possibly the beginnings of pins and needles. When this point is reached you should stop in order to ease the symptoms, before repeating the exercises again.

It is preferable to "under perform" the movements rather than perform them too vigorously and increase the symptoms.

Starting Position.



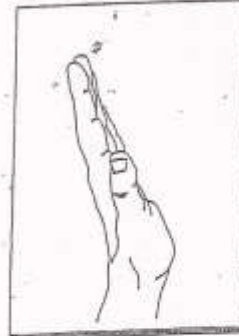
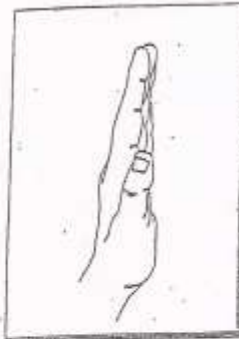
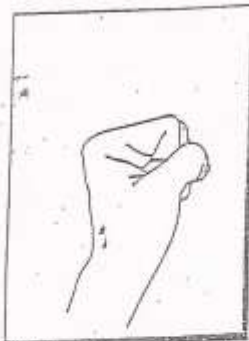
Step 1:  
Make a fist.



Step 2:  
Touch your fingertips to the base of your palm, keeping the thumb straight.



Step 3:  
Gently make a hook.  
Don't force your fingers with your other hand if something is painful.



# Strengthening Exercises

## Static Exercises

It is important these exercises are done without any pain. If you feel pain, stop and wait until such time as they can be performed without pain. Repeat the exercises daily. Assess any effect on the elbow after as well as the next day.

Rest the forearm on a flat surface such as a table or bench. Start with the wrist in a flexed position. Use the other hand to resist as you attempt to extend the wrist. There shouldn't be any movement at the wrist. Start at around 30% of your maximum force. Hold this contraction for 5-10 seconds and then rest. Repeat 5-10 times. Gradually increase the duration of the static contraction until you can manage 10 contractions of 10 seconds without pain.

Move the wrist into an extended position as shown. Again use the other hand to resist as you attempt to further extend your wrist. Hold for 5-10 seconds and repeat 5-10 times. Gradually increase as above.

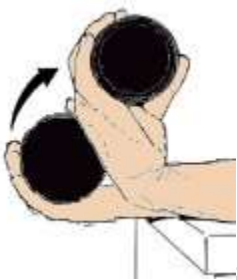
## Dynamic Exercises

When the above exercises can be completed comfortably without pain then you can move on to dynamic exercises. When this happens may be from 4 days onwards. Do not rush. If the injury becomes painful take a step back. Dynamic exercises can be performed using a light weight (about 1 kg). Perform wrist extension exercises first to ensure these are pain-free. After this, you can try wrist

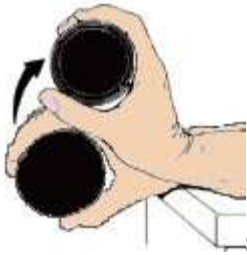
flexion which specifically works the muscles involved in golfers elbow.

**Strengthening exercises** may begin once the symptoms of Golfer's Elbow have subsided. If pain begins during or after performing these exercises, stop **immediately**. The following two exercises should be performed twice a day, after the stretching exercises have been performed.

The easiest way to perform these strengthening exercises is to sit in a chair with your elbow supported on the arm of the chair, and the wrist hanging over the arm. Use a light weight object, such as a soup can, when performing these strengthening exercises. Repeat the exercises 10 to 20 times, twice a day, but do not push yourself to the point of pain. If these exercises cause no pain, gradually increase the number of repetitions to between 30 and 50 each time that you do these exercises.



**Strengthening wrist flexor muscles:** Hold the can in the hand with the palm facing up. Pull the wrist up, hold for 2 seconds and then slowly lower the wrist to the original position.



**Strengthening the extensor muscles:** Hold the can in the hand with the palm facing down. Extend the wrist, or bend it upward, so that it is pulled back. Hold this position for 2 seconds and then slowly lower the wrist to the o

Link to “youtube videos”:

Massage:

<http://www.youtube.com/watch?v=qsgKfcUYzx8>

Exercise:

<http://www.youtube.com/watch?v=Kuj8YLAHZVg>

Rubber bar:

<http://www.youtube.com/watch?v=A2QQaVfeI4U>