

EPICONDYLITIS, LATERAL (Tennis Elbow)



■ ■ ■ Description

Lateral epicondylitis (tennis elbow) is the most common painful condition of the elbow. Inflammation and pain occur on the outer side of the elbow where muscles and tendons attach to the bone. The structures involved are the muscles or tendons of the forearm that bring your wrist back (extend the wrist). This occurs not only in tennis players but also in anyone who performs repeated resisted motions of the wrist. Without proper intervention, this may develop into a chronic, recurrent problem.

■ ■ ■ Common Signs and Symptoms

- Pain and tenderness on the outer side of the elbow
- Pain or weakness with gripping activities
- Pain with twisting motions of the wrist (playing tennis, using a screwdriver, opening a door or a jar)
- Pain with lifting objects, including a coffee cup

■ ■ ■ Causes

- Chronic repetitive stress and strain to the muscles and tendons that attach the forearm muscles to the elbow
- Sudden change in activity level or intensity
- Incorrect grip
- Incorrect grip size of racquet (often too large)
- Incorrect hitting position or technique (usually backhand; leading with the elbow)
- Using a racket that is too heavy

■ ■ ■ Risk Increases With

- Sports or occupations that require repetitive and strenuous forearm and wrist movements (tennis, squash, racquetball, carpentry)
- Sports that require strenuous or repetitive forearm movement (tennis, racquetball, “lead arm” in golf)
- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before practice or play
- Resumption of activity before healing and rehabilitation and conditioning are complete

■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Wrist and forearm flexibility
 - Muscle strength and endurance
 - Cardiovascular fitness
- Ensure proper equipment fit.
- Maintain proper technique and have a coach correct improper technique.
- Wear a tennis elbow (counterforce) brace.

■ ■ ■ Expected Outcome

- Acute cases, in which symptoms are present less than 4 weeks, are usually resolvable in 2 to 6 weeks.
- Chronic (repetitive) cases, in which symptoms have been present for more than 8 weeks, may require 3 to 6 months to resolve and often require referral to a physical therapist or athletic trainer.

■ ■ ■ Possible Complications

- Frequent recurrence of symptoms, resulting in a chronic problem; appropriately addressing the problem the first time decreases frequency of recurrence
- Chronic inflammation, scarring tendon degeneration, and partial tendon tear, requiring surgery
- Delayed healing or resolution of symptoms

■ ■ ■ General Treatment Considerations

Initial treatment consists of medications and ice to relieve pain, stretching and strengthening exercises, and modification of the activity that initially caused the problem. These can all be carried out at home for acute cases. Chronic cases often require referral to a physical therapist or athletic trainer for further evaluation and treatment. A counterforce (tennis elbow) brace may be recommended to reduce the forces to the

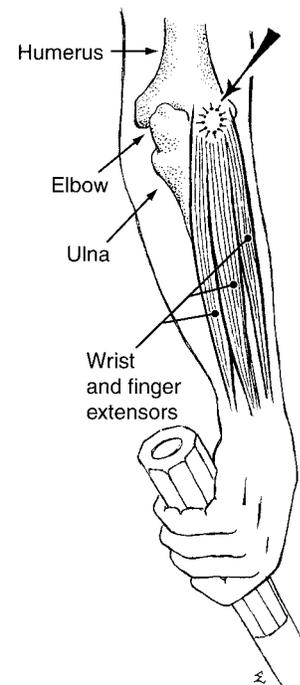


Figure 1

From Economou SG, Economou TS: Instructions for Surgery Patients. Philadelphia, WB Saunders, 1998, p. 589.

damaged tendon. A splint to immobilize the wrist may be useful early. If symptoms persist, an injection of cortisone and anesthetics or surgical intervention may be required.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Cortisone injections reduce inflammation. However, this is done only in extreme cases; there is a limit to the number of times cortisone may be given due to the fact that it weakens muscle and tendon tissue. Cortisone may also cause skin and subcutaneous fat atrophy (shrinkage and thinning) and

skin depigmentation (lighter skin). Anesthetics temporarily relieve pain.

■ ■ ■ Heat and Cold

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

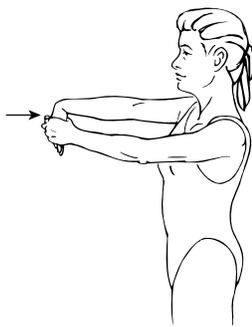
■ ■ ■ Notify Our Office If

- Symptoms get worse or do not improve in 2 weeks despite treatment

> RANGE OF MOTION AND STRETCHING EXERCISES • Epicondylitis, Lateral (Tennis Elbow)

These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



RANGE OF MOTION • Wrist Flexion

1. Hold your _____ wrist as shown with the fingers pointing down toward the floor.
2. Pull down on the wrist until you feel a stretch.
3. Hold this position for _____ seconds. Repeat exercise _____ times, _____ times per day.
4. This exercise should be done with the elbow **bent to 90 degrees / straight**. (Physician, physical therapist, or athletic trainer should circle one of these.)



RANGE OF MOTION • Wrist Extension

1. Place the palm of your _____ hand flat on the top of a table as shown. Your fingers should be pointing backward.
2. Press down, bending your wrist and straightening your elbow until you feel a stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION • Wrist Extension

1. Hold your _____ wrist as shown with the fingers pointing away from the floor.
2. Pull up on the wrist until you feel a stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.
5. This exercise should be done with the elbow **bent to 90 degrees / straight**. (Physician, physical therapist, or athletic trainer should circle one of these.)



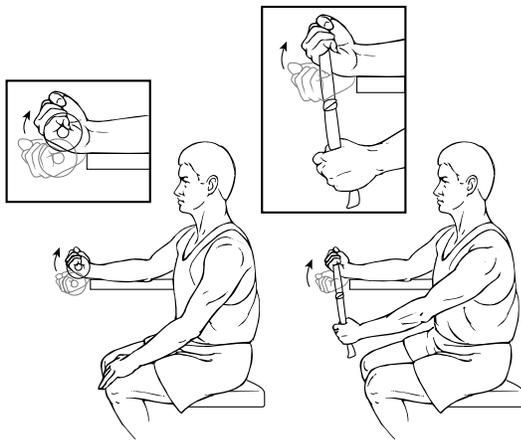
RANGE OF MOTION • Wrist Flexion

1. Place the back of your _____ hand flat on the top of a table as shown. Your shoulder should be turned in and your fingers facing away from your body.
2. Press down, bending your wrist and straightening your elbow until you feel a stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

> **STRENGTHENING EXERCISES** • Epicondylitis, Lateral (Tennis Elbow)

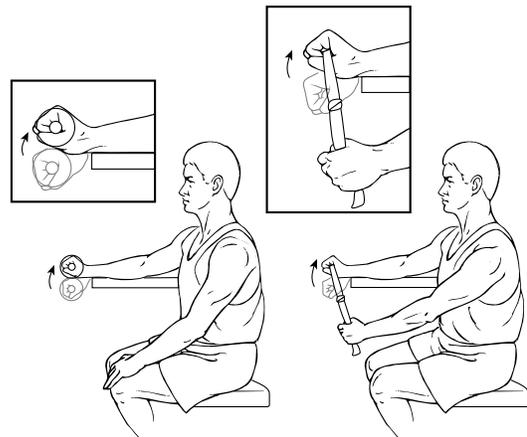
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.



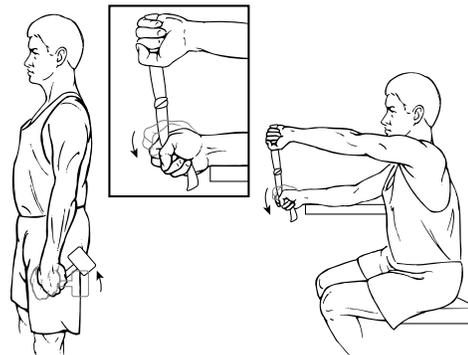
STRENGTH • Wrist Flexors

1. Sit or stand with your forearm supported as shown.
2. Using a _____ pound weight or a piece of rubber band/tubing, bend your wrist slowly upward toward you.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



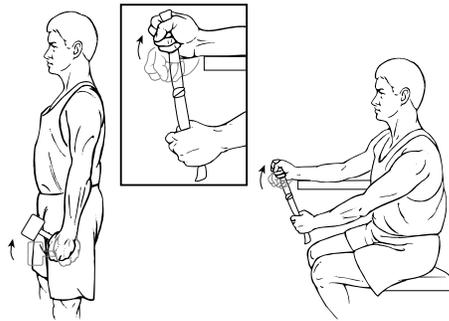
STRENGTH • Wrist Extensors

1. Sit or stand with your forearm supported as shown.
2. Using a _____ pound weight or a piece of rubber band/tubing, bend your wrist slowly upward toward you.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



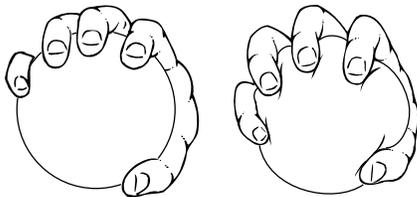
STRENGTH • Wrist, Ulnar Deviation

1. Stand with a _____ oz. hammer in your hand as shown, or sit holding on to the rubber band/tubing with your arm supported as shown.
2. Raise your hand upward behind you or pull down on the rubber tubing.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Wrist, Radial Deviation

1. Stand with a _____ oz. hammer in your hand as shown, or sit holding on to the rubber band/tubing with your arm supported as shown.
2. Raise your hand upward in front of you or pull up on the rubber tubing.
3. Hold this position for _____ seconds and then *slowly* lower the wrist back to the starting position.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Grip

1. Hold a wad of putty, soft modeling clay, a large sponge, a soft rubber ball, or a soft tennis ball in your hand as shown.
2. Squeeze as hard as you can.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.



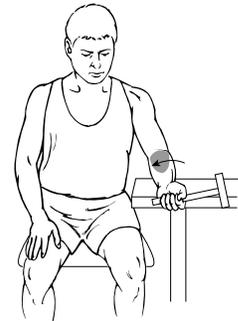
STRENGTH • Elbow Extension, Isometric

1. With your involved/injured arm on top and the palm of your hand facing you, assume the position shown.
2. While resisting with the bottom hand, try to straighten the elbow of your involved/injured arm.
3. Do not allow your elbow to move.
4. Hold this position for _____ seconds, then relax.
5. Repeat exercise _____ times, _____ times per day.



STRENGTH • Supination

1. Sit with your forearm supported on a table and the hand over the edge and your palm facing the floor.
2. Hold a _____ oz. hammer or a stick with a weight on the end in your hand as shown.
3. Turn your palm and hand toward you to a “thumbs-up” position.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



STRENGTH • Pronation

1. Sit with your forearm supported on a table and the hand over the edge and your palm facing up toward the ceiling.
2. Hold a _____ oz. hammer or a stick with a weight on the end in your hand as shown.
3. Turn your palm and hand toward you to a “thumbs-up” position.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions