

Tennis Elbow

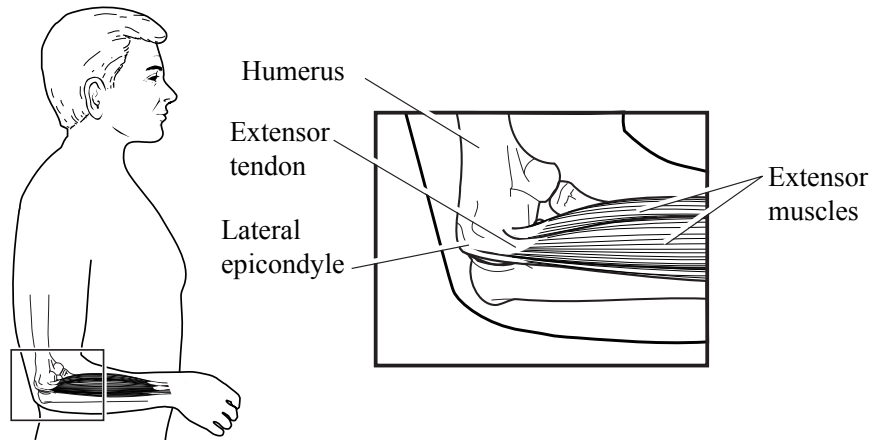
Lateral Epicondylitis



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

Tennis elbow causes pain on the outside of the elbow where the tendon attaches to the upper bone of the arm called the **humerus**. This tendon is called the **extensor tendon**. It attaches at a place on the bone called the **lateral epicondyle**. The tendon holds the extensor muscles that help to move and control your wrist.



With tennis elbow, also called **lateral epicondylitis**, the tendon starts to detach from the bone and is strained as the wrist is used. Small tears can occur in the tendon. **Pain happens when you lift, grip, or grasp with the wrist**. The pain may spread into your lower arm and wrist. This condition can get worse over time and may not improve without treatment.

Causes

This condition can occur with overuse and repeated motions of the arm and wrist, such as:

- Tennis or other racquet sports where the grip is too large, putting strain on the muscle and tendon
- Repeated grip or grasp motions, such as painting, plumbing, carpentry, weaving, using a computer mouse, or using cleaning, gardening, or cutting tools
- Injury to the tendon

Treatment

Treatment is done to ease pain and swelling to allow healing. Early treatment may include:

- Avoiding activities that cause pain for 6 to 9 weeks
- Taking NSAIDs (nonsteroidal anti-inflammatory drugs), such as naproxen (Aleve) or ibuprofen (Advil or Motrin) to ease pain and swelling. Follow directions on the package,
- Changing grips or how you do an activity to ease the problem
- Exercises to improve strength, flexibility and increase blood flow to promote tendon healing.

If needed, treatment may also include:

- **Corticosteroid injection** into the tendon to ease pain and improve movement and grip strength.
- Use of a splint, brace, or band worn on the lower arm during activities or sleep to rest the tendon.
 - Wrist extension splint or brace: Limits motion of the wrist and can be helpful during lifting.
 - Counterforce brace: A band or strap worn just below the elbow to reduce tension on the muscles and support to the tendon, easing pain.

Surgery may be needed if these treatments are not successful and pain lasts more than 6 months. Recovery from surgery can take 4 to 6 months. You will need occupational therapy to help you improve your motion and strength.

Home exercise program

Exercises can help improve your strength and flexibility, while improving blood flow to your tendons and muscles to reduce pain and improve healing. Your program should include:

- Heat to elbow before exercise
- Massage
- Stretching, range of motion, and gradually added strengthening exercises
- Ice to elbow after exercise

Talk to your doctor or your therapist if you have any questions about your exercise program.

Use Heat Before Exercise

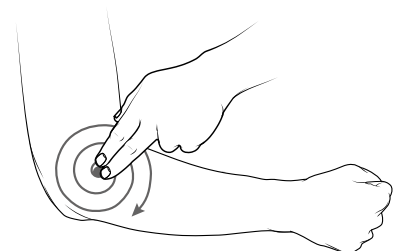
Heat can increase blood flow and improve muscle relaxation and stretch.

- Apply a warm, damp towel or heating pad set on medium to your elbow.
- Use a cloth layer between your skin and the heat source to prevent burns.
- **Use the heat for 10 to 15 minutes before exercise.**

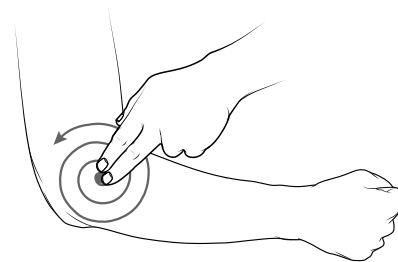
Massage Your Elbow

Massaging the skin and tissues of your elbow can improve blood flow, help with muscle relaxation, and lessen scar tissue from forming. **Do this 2 or 3 times each day after doing your exercises.**

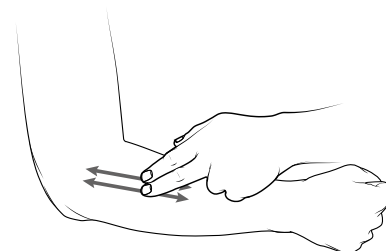
- Rest your elbow on the arm of a chair, on a table, or across your belly.
- Use 2 fingers from your other hand and massage with firm pressure around the elbow for 5 minutes.
 - Move your fingers in a clockwise direction around the elbow.



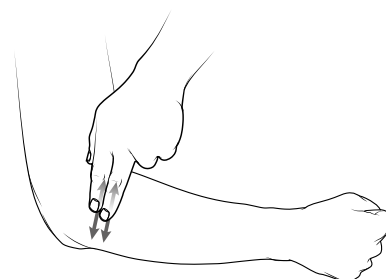
- ▶ Move your fingers in a counter clockwise direction.



- ▶ Move your fingers back and forth along the length of the muscle.



- ▶ Move your fingers up and down across the muscle.

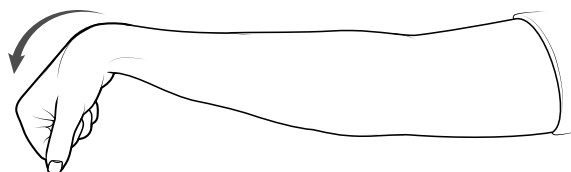
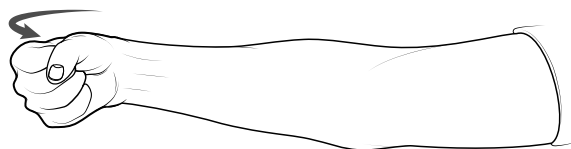
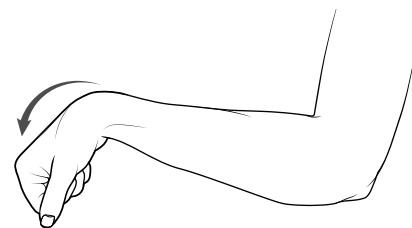
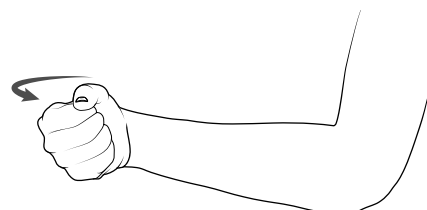


Stretching and Range of Motion Exercises

For these exercises, feel the stretch, but you should avoid pain. **Gently hold each exercise for a count of 15 before resting.**

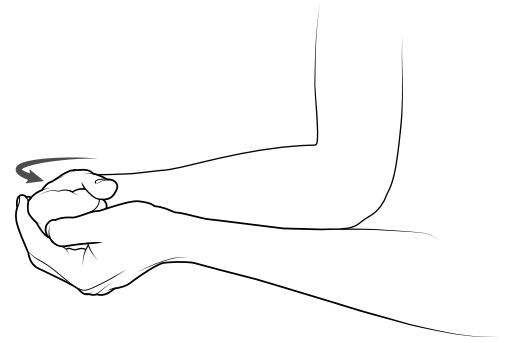
Active stretching:

- With your elbow bent, bend your wrist in toward your body. Hold and then straighten your wrist out.
- With your elbow bent and your palm down, bend your wrist down towards the floor. Hold and then bring your wrist up and relax.
- With your lower arm out and your elbow straight, bend your wrist in towards your body. Hold and then straighten your wrist and relax.
- With your elbow straight and your palm down, bend your wrist down towards the floor.

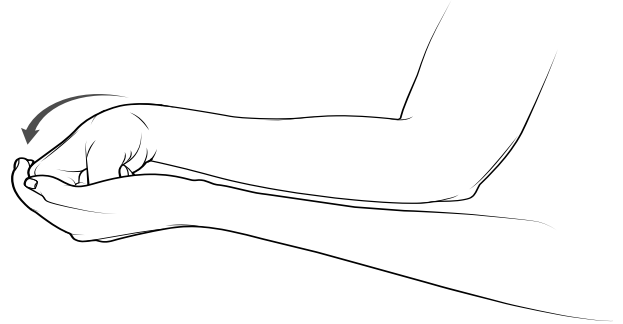


Passive stretching:

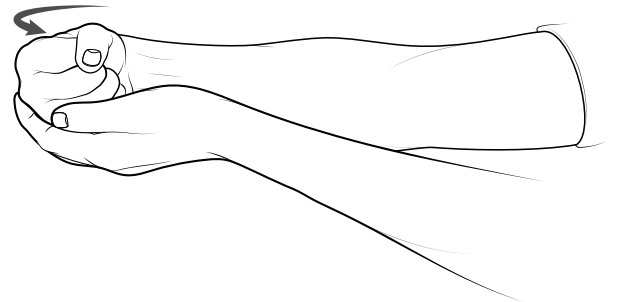
- With your elbow bent, use your other hand to bend your hand at the wrist towards your body. Hold and then relax.



- With your elbow bent and your palm down, use your other hand to bend your wrist down towards the floor. Hold and then relax.



- With your lower arm out and your elbow straight, use your other hand to bend your wrist toward your body. Hold and then relax.



- With your elbow straight and your palm down, use your other hand to bend your wrist down, towards the floor. Hold and then relax.

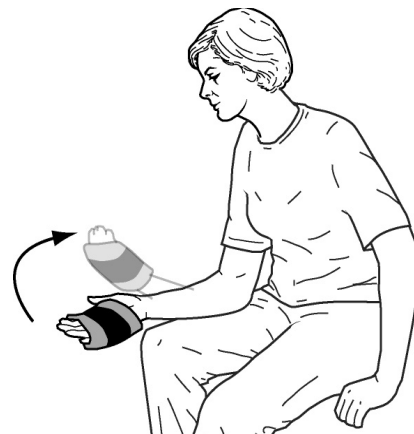


Strengthening Exercises

Add these exercises **when you have no pain when you do the Stretching and Range of Motion Exercises**. Repeat each exercise 10 to 15 times. Do the exercises slowly and smoothly and you should not have pain.

Wrist flexion - palm up:

- With elbow bent 90 degrees, rest your lower arm on your leg or a table. Turn your hand, so you palm is facing the ceiling. Bend your wrist up as much as you can. Hold for 5 seconds, and then slowly bend your wrist down. Repeat.
- Add weights as directed by your therapist.



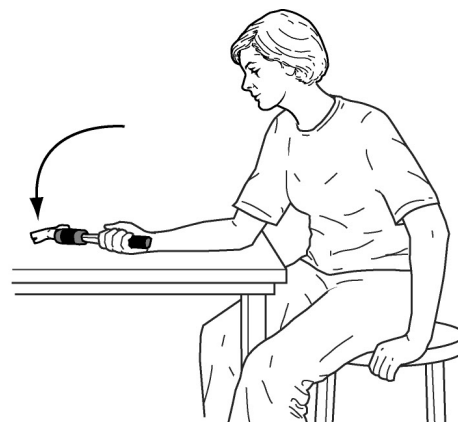
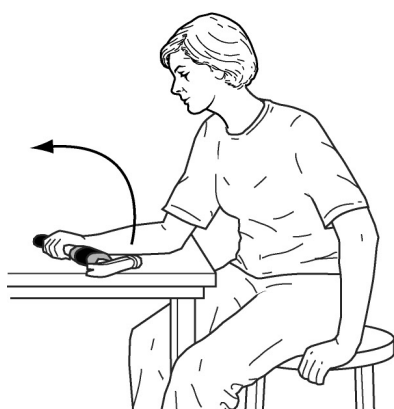
Wrist extension - palm down:

- With elbow bent 90 degrees, rest your lower arm on your leg or a table. Turn your hand so you palm is down towards the floor. Bend your wrist up as much as you can. Hold for 5 seconds and then slowly bend your wrist down. Repeat.
- Add weights as directed by your therapist.



Forearm rotation - pronation and supination:

- Sit with your arm resting on a table or on your leg, your elbow bent at 90 degrees. Hold a hammer or weight at one end with your palm facing up.
- Slowly turn or roll your lower arm, bringing the hammer up. Then slowly roll your arm further until your hand is palm down and the hammer is down.
- Roll your arm back, taking the hammer up and then back down to the starting position.



Hand squeeze:

Do this exercise several times each day, every day. Do not overdo.

1. Hold a small ball or balled up sock in the palm of your hand.
2. Make a fist around the ball and squeeze firmly. Hold for 2 to 3 seconds, and then relax and repeat.

**Apply Ice After Exercises**

Apply ice to your elbow for 10 to 15 minutes right after doing your exercises to reduce swelling and ease discomfort.

- Use an ice pack or a package of frozen peas.
- Use a thin towel or cloth between the ice pack and your skin to prevent damage to your skin. Do not put the ice pack directly on your skin.

Talk to your doctor or health care team if you have any questions about your care.

For more health information, contact the Library for Health Information at **614-293-3707** or e-mail **health-info@osu.edu**.