

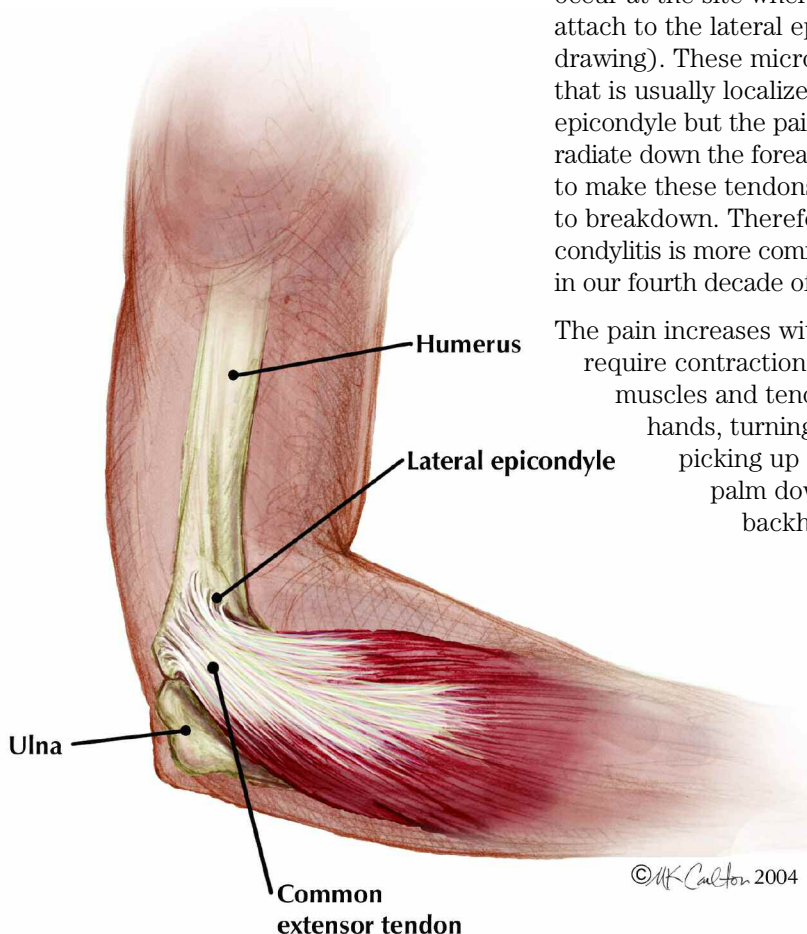
TENNIS ELBOW



AOSSM SPORTS TIPS

WHAT IS TENNIS ELBOW?

Tennis elbow is a form of tendonitis that causes pain over the bony prominence called the lateral epicondyle on the outside of the elbow. It is often referred to as lateral epicondylitis.



WHAT CAUSES IT?

Tennis elbow is caused by repetitive stress on the muscles and tendons that are connected to the lateral epicondyle. These muscles extend along the top, or dorsal, side of the forearm to the wrist

and are responsible for extending or bending back the wrist and fingers. The tendons are fibrous bands that connect the muscles to the bone, in this case the lateral epicondyle.

If too much stress is placed on these muscles and tendons, micro tears can occur at the site where the tendons attach to the lateral epicondyle (see drawing). These micro tears cause pain that is usually localized at the lateral epicondyle but the pain can occasionally radiate down the forearm. Aging appears to make these tendons more prone to breakdown. Therefore, lateral epicondylitis is more common once we get in our fourth decade of life and beyond.

The pain increases with activities that require contraction of the affected muscles and tendons: shaking hands, turning doorknobs, picking up objects with the palm down or hitting a backhand in tennis.

HOW DO I KNOW IF I HAVE TENNIS ELBOW?

No special tests are needed to make the diagnosis. This diagnosis is made by history and physician examination of the patient. The patient may present

symptoms consistent with tennis elbow and has pain when pressure is applied to the outside of the elbow. The patient frequently cannot remember an injury, but will have noticed the pain either at the beginning or end of an activity that requires wrist and elbow movement.

X-rays are not always required when evaluating a patient with tennis elbow symptoms, but a doctor may wish to order them just to make certain that the bone structures of the elbow are normal.

HOW IS TENNIS ELBOW TREATED?

Like many overuse injuries of sport, there is no sure-fire treatment. Rest itself does not necessarily cure the problem, but it may decrease the pain and allows healing to progress. Decreased activity with the elbow and wrist is generally preferred over absolute rest and complete inactivity. The healing of tennis elbow can take weeks to months.

Some physicians believe that the key to healing this overuse injury lies in increasing the circulation to the area while decreasing the tightness of the muscles. Therefore, stretching and strengthening exercises are frequently helpful.

The following exercise may help: Support the forearm on a flat surface with the wrist and hand free. Hold a 1 to 2 pound weight in the hand. Keeping the palm down, slowly extend the wrist. Bring it backward, or up, and then bend it forward, or down. The muscles on the top of the forearm should contract when the wrist is moved upward and stretch when the hand is moved downward.

To balance the forearm muscles, these exercises should be repeated with the palm facing up. Each exercise should be repeated 10 times slowly.

A loop of rubber tubing, with one end attached to a table leg or held on the floor with a foot, can be used to provide resistance instead of the weight. This will also increase circulation to the area.

A snug, but not tight, strap worn around the top of the forearm often decreases the pull of the muscles on the lateral epicondyle and lessens pain. When symptoms are present during everyday activities, the band should be worn during all waking hours. Occasionally, an elbow sleeve with a pad specially designed to put gentle pressure over the forearm muscles can be used. This sleeve has the advantage of not only changing the pull of the muscles, but keeping them warm as well, which increases their flexibility and circulation.

A physician may also prescribe ultrasound or electrical stimulation to increase circulation to the area.

Nonsteroidal anti-inflammatory medications like aspirin, ibuprofen, and ketoprofen, or various prescription drugs can treat the symptoms and may decrease the pain and irritation in and around the tendon. However, it appears unlikely that these medications can actually evoke more rapid healing of the condition.

Icing the joint after activity may also decrease the irritation and relieve the pain.

If treatment with decreased activity, exercises and medication is not effective, your physician may recommend a corticosteroid injection in the affected area. This can further decrease the pain and irritation. In some cases this is not effective and surgery can be considered for these resistant and chronic cases.

TIPS FOR PREVENTING INJURY

- Warm up well before play. Muscles and tendons are like Silly Putty and stretch more when they are warm. Make sure to keep the muscles and tendons warm as you play.
- Choose appropriate equipment and maintain it properly. A racquet handle that is too big or too small, strung too tightly or loosely, or has a too big or too small head, may increase stress to the elbow and wrist during play.
- Condition for the activity by stretching and strengthening all the muscles used in the sport. Also evaluate play techniques to make sure that they are not irritating the condition.

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Tennis Elbow Exercises



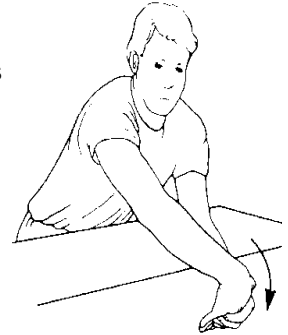
Wrist Flexor Stretch

1. Straighten elbow completely.
2. With palm facing up, grasp the middle of hand and thumb.
3. Pull wrist down until mild stretch is felt.
4. Hold for 30 seconds.
5. Release and repeat 3 times.
6. Perform exercises two times each day.



Wrist Extensor Stretch

1. Straighten elbow completely.
2. With palm facing down, grasp the back of the hand.
3. Pull wrist down until mild stretch is felt.
4. Hold for 30 seconds.
5. Release and repeat 3 times.
6. Perform exercises two times each day.



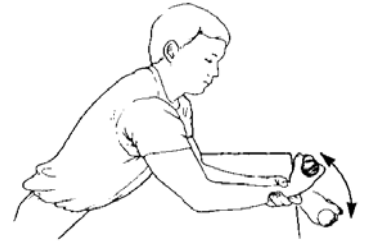
Wrist Extension with Weights

1. The forearm should be supported on a table with hand off edge and palm should face downward.
2. Using a weight, lower the hand as far as possible then curl wrist up as high as possible.
3. Repeat 30 times.
4. Perform exercise one time each day.



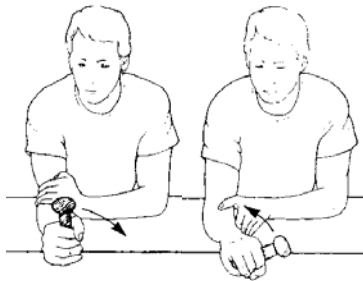
Wrist Flexion with Weights

1. The forearm should be supported on a table with hand off edge and palm should face upward.
2. Using a weight, lower the hand as far as possible then curl wrist up as high as possible.
3. Repeat 30 times.
4. Perform exercise one time each day.



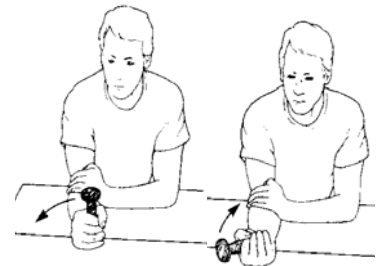
Wrist Pronation with Weights

1. The forearm should be supported on a table with wrist in neutral position.
2. Using a weight or hammer held in a normal hammering position, roll wrist and bring hammer into pronation as far as possible
3. Hold for 2 seconds.
4. Raise back to starting position and repeat.



Wrist Supination with Weights

1. The forearm should be supported on a table with wrist in neutral position.
2. Using a weight or hammer held in a normal hammering position, roll wrist and bring hammer into full supination as far as possible
3. Hold for 2 seconds.
4. Raise back to starting position and repeat.



Radial / Ulnar Deviation with Weights

1. The forearm should be supported on a table with wrist in neutral position and hand off of table.
2. Using a weight or hammer held in a normal hammering position, roll wrist and bring hammer into ulnar deviation as far as possible.
3. Then bring into radial deviation as far as possible.
4. Raise back to starting position and repeat.



These exercises are to be performed _____ times per week / day. Begin with 3 sets of 10 repetitions and progress to 5 sets of 10 repetitions. Progress your weight as tolerated (i.e.-5 sets of 10 repetitions completed easily with specific weight, you will increase by 1# and decrease you exercise to 3 sets of 10 repetitions). You will progress to 5 sets of 10 repetitions again and repeat the same process until you can perform 5 sets of 10 repetitions with 5#. You do NOT want to exceed 5# on these exercises at any time. After performing your exercises, ice your wrist for 15-20 minutes.