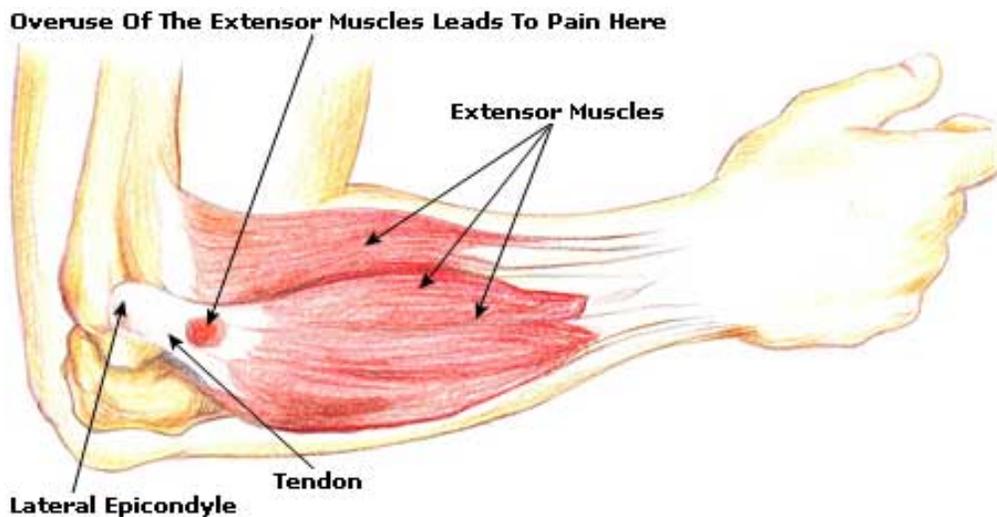


Tennis Elbow (Lateral Epicondylitis)

Background:

Tennis elbow is the common term known for pain on the outside part of the upper forearm, the lateral epicondyle. This condition was named after the pain that many tennis players would experience after playing and hitting one-handed backhand shots repetitively. In the medical word tennis elbow is known as lateral epicondylitis, or simply inflammation to the lateral epicondyle.



Cause:

When tennis players take these one-handed backhand shots it requires the wrist to move into extension. The wrist extensor muscles that allow the athlete to move their wrist into extension attach to the lateral epicondyle of the elbow. In order for the athlete to strike the ball properly the wrist extensor muscles have to activate very quickly and with a large amount of force. Inevitably, this action causes strain at the attachment site of these extensor muscles and after continuous repetitions of this movement micro-tears and inflammation begin to accumulate along the tendon of the muscle, or the attachment of the muscle belly to the bone.

Symptoms:

Athletes that have lateral epicondylitis will complain of pain that is dull, achy or burning on the outside portion of the elbow. Also, athletes will note that their grip strength has lessened. The symptoms of tennis elbow have a gradual

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onset; the symptoms may start very mild and progress over a few week period of time. The amount that the extensor muscles are used is the biggest factor for how quickly the symptoms will worsen.

Examination:

The doctor is going to do a number of things before making a diagnosis for this injury. Firstly, they will ask questions regarding how the injury began, what activities make the pain worse, any changes in training, and what symptoms are being experienced. Based on the answers to these questions the doctor will perform orthopedic special tests to confirm what they believe the problem is. Many of the tests will attempt to recreate the pain that the athlete has been dealing with, but this will not do any further damage to the injury. Lastly, depending on how comfortable the Physician is with their diagnosis they may order diagnostic imaging.

- X-rays will be used to look at the bony anatomy and see if there are any fractures
- MRIs will be used to view the soft tissue structures in the area such as the muscle, ligaments, and tendons. This is the best way for the doctor to see if there is inflammation in the wrist extensor tendon.

Treatment:

Nonsurgical treatment for tennis elbow has a very high success rate and in most cases rest is the only thing the athlete needs to get healthy. In order to expedite the recovery process or to nip the injury before it worsens there are a few things that the athlete can do:

- RICE - Rest, Ice, Compression, and Elevation
- Use a tennis elbow brace - counter acts forces to relieve pain
- Take NSAIDs – ibuprofen; DO NOT give aspirin to athletes under 20 years old
- Physical Therapy - increase forearm flexibility and strength
- Steroid injection - relief can last from a week up to a couple months

Typical Athlete Recovery:

The athlete's recovery is very dependent on how far the injury progressed before they began resting and treatment. If the athlete catches tennis elbow in the early stages of the injury they can expect to be back in no more than a week or

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two, as long as treatment is being done. For the athletes that do not take care of this injury in its' early stages and they allow it to worsen then treatment and down time away from sport are going to be much longer. Athletes that wait this long can be out for 1, 2 or even 3 months in serious cases.

Prevention:

The first part of prevention of this injury the athlete must be aware if there sport is susceptible to this injury or not. Having this knowledge will allow them to prepare properly. Giving the athlete the ability to focus on technique and form for all their repetitive motions. It is important that the athlete not overuse their arm and always allow the body ample time to rest and repair. Alter equipment is another great way of prevention. In racquet sports it has been shown that having looser strings, stiffer frame, and a racquet with the lowest possible swingweight will create the least amount of stress at the lateral epicondyle. Wearing a counterforce brace as well as strengthening and stretching the forearm muscles may aid the athlete in deterring tennis elbow. At the first sign of elbow pain it is crucial that the athlete not continue their activities, so more damage is not done.

Athletes At Risk:

Any sport that requires repetitive forceful wrist movements is going to have a higher prevalence of lateral epicondylitis than the sports that do not. Athletes that play sports such as tennis, cricket, swimmers, and many field athletes, like Shot Put, should use the prevention guidelines constantly. Golfers are also familiar with this injury but instead the pain is more common to occur on the inside of the elbow, medial epicondylitis.

Professional Athletes With Tennis Elbow:

Tim Henman (ATP), Sachin Tendulkar (IPL), Andrew Bailey (MLB)

Relevant Articles:

Tips to Prevent Tennis Elbow in Tennis Players

<http://hss.edu/onthemove/tips-to-prevent-tennis-elbow-lateral-epicondylitis-in-tennis-players/#.U40iVpRdUco>

Rehab for Tennis Elbow: The Super 7

<http://www.hughston.com/hha/a.seven.htm>

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Academic Journal Articles:

Lateral Epicondylitis in Tennis: Update on Etiology, Biomechanics and Treatment

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2465303/>

Management of Tennis Elbow

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3667434/>

An Exercise Program for the Management of Lateral Elbow Tendinopathy

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1725102/pdf/v039p00944.pdf>

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