

# TENNIS ELBOW

Patient Resource Courtesy of [SportsMedToday.com](https://www.sportsmedtoday.com).

## Background

“Tennis elbow” (also called “lateral epicondylitis” or “lateral elbow tendinopathy”) is a common musculoskeletal condition affecting the outside (lateral) portion of the elbow. The common extensor tendon, which straightens the fingers and pulls the wrist back (referred to as “extension”), connects to the humerus bone at this location. Tasks involving repetitive gripping or extending the wrist, and/or elbow trauma, may cause persistent pain where the tendons attach. When someone experiences pain at that location, there is typically inflammation present early in the course of the problem (within the first few weeks). If the pain is persistent beyond the first few weeks, then the disease course has likely changed from an inflammatory process to a degenerative process.

Tennis elbow is associated with many activities, including tennis, squash, carpentry, sewing and even computer use. While this condition can occur at any age, it most commonly occurs between 45-54 years of age and affects 1-3 percent of the population.

## Symptoms

Tennis elbow is characterized by pain on the outside of the elbow that is made worse by gripping objects and/or extending the wrist. The pain may be constant or only occur with activity. It may have a sudden or gradual onset. Individuals at highest risk for developing this condition include those who smoke, perform repetitive movements for at least 2 hours daily, regularly lift weights heavier than 44 pounds (20kg), and are between the ages of 45-54.

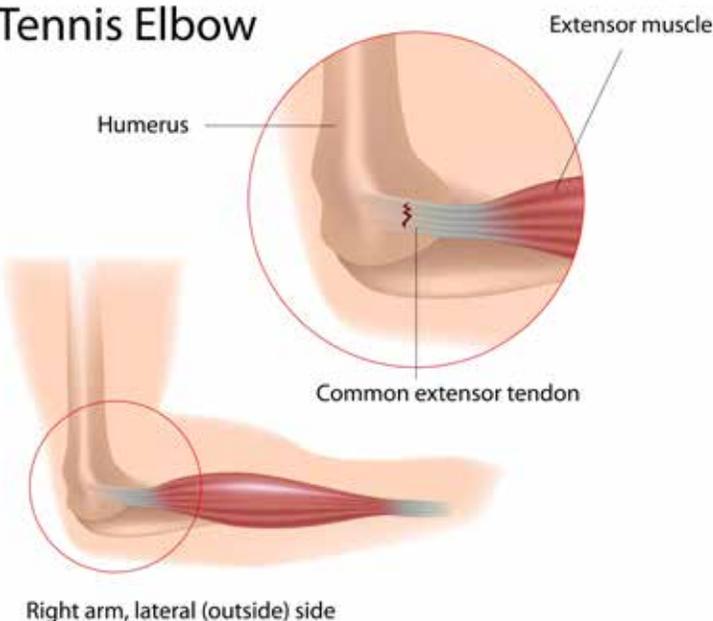
## Sports Medicine Evaluation & Treatment

Tennis elbow is commonly diagnosed by primary care and sports medicine physicians. If the athlete visits a sports medicine physician, a thorough exam will involve testing sensation, strength, range of motion, and applying pressure over bones, tendons/muscles and ligaments to determine areas of tenderness. If there is pain in locations other than the outside elbow (such as the shoulder or neck), numbness, tingling or weakness, the doctor should be informed, as this may help determine the diagnosis.

Tennis elbow is mostly a clinical diagnosis, meaning it is determined by 0 history of symptoms and the physical exam. Imaging is usually not necessary in the evaluation of lateral elbow pain. However, x-ray or other imaging may be useful in certain cases to rule out fractures (if there is a history of elbow trauma) or other causes of lateral elbow pain. Ultrasound may be used to evaluate the tendons in the area, which may show abnormalities associated with tendinopathy.

Without treatment, tennis elbow is estimated to last 6 months to 2 years; if function and quality of life are not limited, it is reasonable to allow time for improvement. Treatment strategies involve changing activities, rest, non-steroidal anti-inflammatory medications, ice, physical therapy, or bracing. Research has shown that physical therapy with a focus on eccentric strengthening (contracting the muscle while it is lengthening) can help improve pain and function. If symptoms do not improve with usual treatments, a doctor may offer to do a corticosteroid or platelet-rich plasma (PRP) injection, dry needling, or other therapies. Multiple treatments are often used together, and surgery is rarely needed.

## Tennis Elbow



Right arm, lateral (outside) side

**Injury Prevention**

Prevention of injury first involves identifying and changing activities that cause pain. Using the correct tools or improving workplace ergonomics can prevent injury. Complete rest from sport or work tasks may be necessary. If the pain is associated with an athletic activity such as tennis, instruction on proper technique by a coach or physical therapist may be helpful. Changing racket grip size may also decrease symptoms.

**Return to Play**

Return to sport or work for this condition will vary depending on the degree of pain and strength; there is no set timeline. In general, there should be no pain and there should be normal movement before returning to competition or work, but returning earlier is acceptable if painful activities can be avoided and movements can be changed even as there is improvement.

AMSSM Member Authors: Adam Harrold, MD, and Jacob Miller, MD

**References**

- Croisier JL, Foidart-Dessalle M, Tinant F, Crielaard JM, Forthomme B. An isokinetic eccentric programme for the management of chronic lateral epicondylar tendinopathy. *British Journal of Sports Medicine*. 2007;41(4):269.
- Cullinane FL, Boocock MG, Trevelyan FC. Is eccentric exercise an effective treatment for lateral epicondylitis? A systematic review. *Clinical Rehabilitation*. 2014 Jan;28(1):3-19. Epub 2013 Jul 23.
- Jayanthi, N. Epicondylitis (tennis and golf elbow). UpToDate website. [www.uptodate.com/contents/epicondylitis-tennis-and-golf-elbow](http://www.uptodate.com/contents/epicondylitis-tennis-and-golf-elbow). November 2, 2016. Accessed January 23, 2017.
- Montalvan, B, Parier, J, Gires, A, et al. Results of Three Years Medical Surveillance of the International Championships at Roland Garros: an Epidemiological Study in Sports Pathology. *Medicine and Science in Tennis*. 2004; 9.
- Shiri R, Viikari-Juntura E, Varonen H, Heliövaara M. Prevalence and determinants of lateral and medial epicondylitis: a population study. *American Journal of Epidemiology*. 2006;164(11):1065-1074.
- Sevier TL, Stegink-Jansen CW. Astym vs. eccentric exercise for lateral elbow tendinopathy: a randomized controlled clinical trial. *PeerJ*. 2015 May;19(3):e967.
- Struijs PA, Kerkhoffs GM, Assendelft WJ, Van Dijk CN. Conservative treatment of lateral epicondylitis: brace versus physical therapy or a combination of both—a randomized clinical trial. *Am J Sports Med*. 2004;32(2):462.



AMSSM is a multi-disciplinary organization of sports medicine physicians dedicated to education, research, advocacy and the care of athletes of all ages. The majority of AMSSM members are primary care physicians with fellowship training and added qualification in sports medicine who then combine their practice of sports medicine with their primary specialty. AMSSM includes members who specialize solely in non-surgical sports medicine and serve as team physicians at the youth level, NCAA, NFL, MLB, NBA, WNBA, MLS and NHL, as well as with Olympic teams. By nature of their training and experience, sports medicine physicians are ideally suited to provide comprehensive medical care for athletes, sports teams or active individuals who are simply looking to maintain a healthy lifestyle. Find a sports medicine physician in your area at [www.amssm.org](http://www.amssm.org).