

Tennis Elbow

What is Tennis Elbow?

Tennis elbow is a generic term that describes degeneration of tendon fibers that arise off the bony prominences on the outside (lateral) or inside (medial) of the elbow. (Fig. 1)

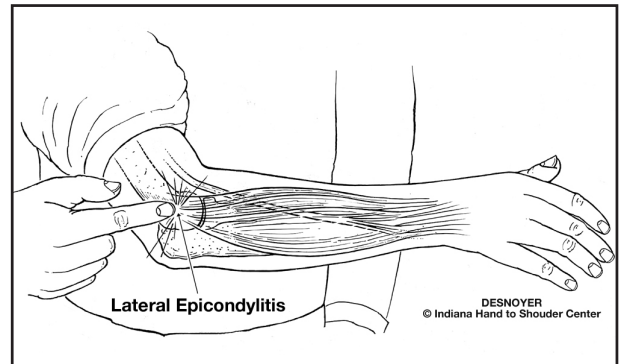


Fig. 1: Area of tenderness over the elbow.

What are the Causes?

Tennis elbow most commonly occurs in patients between 30 and 50 years of age as a natural aging process that can be aggravated or influenced by repetitive activities. Some patients may develop symptoms without any specific etiology or after simply bumping the side of their elbow. About half of athletes in racquet sports will develop symptoms of tennis elbow. Occupational and home causes can include: raking, painting, meat cutting, plumbing, repetitive carrying of objects such as suitcases, brief cases, tool bags, etc. The condition does not relate to inflammation. As individuals age, degenerative tears in the tendon origins may fail to heal.

Other pathology about the elbow can be confused with tennis elbow syndrome, including pressure on the radial nerve in the region of the elbow (radial tunnel syndrome), instability of the elbow, or arthritis of the elbow.

What are the Signs and Symptoms?

Patients complain of burning or achy pain on the side of their elbow that is aggravated by grasping or lifting objects. With lateral tennis elbow, even lifting a light object, such as a coffee cup or book, can lead to significant pain. Patients often experience discomfort initially extending or straightening their elbow in the morning and are particularly symptomatic grasping or carrying with their arm extended or picking up objects with their palm down (pronation).

Lateral tennis elbow patients will have tenderness on and around the bony prominence on the outside of the elbow. Patients will experience pain on grasp with the elbow extended, which is perceived more significant than when the elbow is flexed. Pain is often elicited by resistance to lifting or extending the wrist and fingers back against pressure.

Medial tennis elbow shows tenderness on and around the bony prominence on the inside of the elbow and is usually exacerbated by resisting pressure of wrist flexion and forearm pronation (twisting the forearm into the palm-down position). It is commonly associated with golf, weight lifting, and racketball.

Diagnosis

X-rays are usually not necessary unless there is concern for underlying arthritis or the elbow exhibits a lack of full range of motion or has swelling. Magnetic resonance imaging (MRI) can be of assistance if the physician is concerned about ligament instability.

Treatment

Nonsurgical: Ninety percent of patients will improve with time alone. Activities that are aggravating symptoms should be discontinued. Pain medications are rarely warranted and mainly include reliance upon acetaminophen or anti-inflammatory medication for pain relief. When a patient is unduly symptomatic, a wrist splint to support and diminish the tension on the tendon origin can provide significant initial relief of pain. A forearm strap to support the muscles in the forearm can also help with initial discomfort. (Fig. 2)

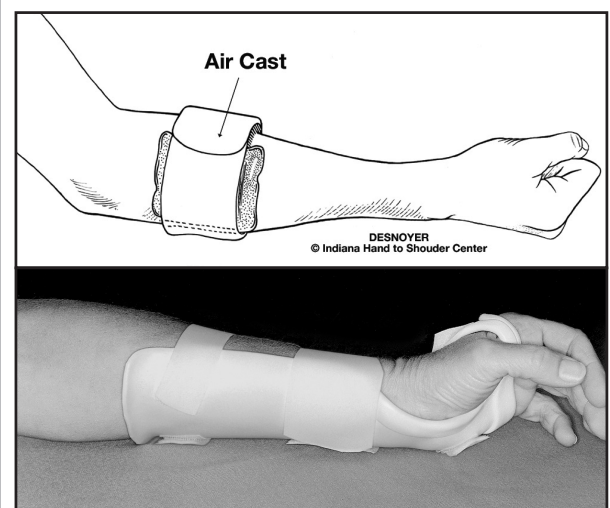


Fig. 2: Tennis elbow band (air cast) is used to provide pressure to the area and a splint that extends the wrist to relax the extensor muscles.

When patients are reasonably comfortable, flexibility, stretching and cross-frictional massage exercises are helpful. These are progressed into careful strengthening exercises. Other modalities: Corticosteroid injections have been the mainstay in treatment of tendinopathy yet long-term efficacy of corticosteroids has not been demonstrated. Corticosteroid injections often help for the first 6 weeks but have not been demonstrated

to show long-term benefit at 6-12 months. Other modalities that have been tried without demonstrated clear success are low-energy laser treatment, extracorporeal shockwave treatment, manipulation, iontophoresis and phonophoresis. In the presence of calcific tendinitis, ultrasound may be helpful.

Surgical Treatment: Patients who have persistent, unrelenting pain that is not improved are candidates for surgical treatment. If patients can make activity modifications and tolerate their discomfort, it is reasonable to carry out non-operative therapy for 9-12 months.

Surgery involves removing the diseased tissue. It can be done under local, regional or general anesthesia. Usually a small incision on the side of the elbow is utilized. For lateral tennis elbow, arthroscopic surgery is an option, particularly when there is any concern for any problems within the elbow joint itself. The results of arthroscopic and open incision treatment have been shown to be the same.

Postoperative Rehabilitation

Most patients are immobilized for comfort for 7 to 10 days. Sutures and splint are removed, followed by range of motion exercises. Light, gradual strengthening exercises are initiated to the hand at 4 to 6 weeks and wrist and elbow 6 to 8 weeks. It usually still takes 4 to 6 months after surgery until unrestricted, repetitive, forceful activities can be predictably allowed. Outcomes of tennis elbow surgery have been considered good or excellent in 80%-90% of patients.

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8501 Harcourt Road
Indianapolis, IN 46260
1-800-888-HAND (4263)
www.IndianaHandtoShoulder.com

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