Tennis Elbow: The Good, the Bad, and the Ugly

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Unfortunately, tennis elbow affects many of us. Tennis elbow, or lateral epicondylitis, is the most common injury in patients seeking medical attention with the complaint of elbow pain. Tennis elbow occurs in men and women equally, and on the dominant side 75% of the time. The typical age to get tennis elbow is between 35 and 65 years old.

It is thought that the problem occurs because of small, irreparable tears in the tendon that cocks up the wrist. Pain over the outside of the elbow is the most common symptom, which is where this tendon begins. This same tendon (called the extensor carpi radialis brevis or ECRB) also shares its origin with the common finger extensor tendons, which straighten the fingers out. Thus, it is not uncommon for the pain to extend down the top of the forearm to the wrist and hand. Usually my patients describe the pain when they are lifting things, especially away from their body, with the forearm turned palm down and the wrist flexed, or bent towards the palm side. Some pain can even be at rest and feel very intense like a burning or stabbing pain. The pain associated with tennis elbow usually has a gradual onset, but may also come on suddenly. Numbness is not associated with tennis elbow.

Tennis elbow is typically seen in manual laborers (plummers, painters, gardeners, and carpenters) or those involved in racquet sports. Probably 1/3 of regular tennis players experience tennis elbow at some point in their career. In addition to racquet sports, tennis elbow is seen in golfers, fencers, and other sports participants. However, the total number of patients who are tennis players is less than 10 %. It is not common for professional tennis players to get tennis elbow, as you will never see anyone at Wimbledon with a tennis elbow strap on! This is probably due to poor stroke mechanics in the everyday player, whereby the wrist is bent and then extends when striking the ball during the backhand. This puts tremendous strain on the ECRB, and with each stroke, exacerbates the problem. Other contributing factors include striking the ball off the "sweet spot" of the racquet, improper grip size, and over-tensioned tennis strings. Playing on harder surfaces also increases the risk of developing tennis elbow.

Other causes of pain over the outside of the elbow include instability of the joint, elbow arthritis, and radial tunnel syndrome. The symptoms of these conditions are usually distinct, but in some cases they can be confusing. X-rays of patients who have the diagnosis of tennis elbow are almost always normal. Other studies such as an EMG or MRI are only obtained if there is confusion about the diagnosis.

Before surgery is considered, a trial of at least six months of conservative treatment is indicated and consists of a properly placed forearm or wrist brace and modification of elbow activities. I have not found anti-inflammatory medication or physical therapy to be of significant value, although both can be used if desired. If the above treatment is not helpful, a cortisone injection can be beneficial but no more than three or four injections are recommended in any one location in a year.

Conservative treatment is in two phases. Phase I (pain relief): consists of activity modification, bracing, cortisone injections, and possibly anti-inflammatories and/or physical therapy. Phase II (prevention of recurrence): is equally as important and involves stretching and then later strengthening exercises, proper tennis form, grip size, and string tensioning, so the micro tears will not occur in the future. Stroke mechanics should be evaluated to ensure patients are hitting the ball in the center of the racquet and players should not lead the racquet with a flexed elbow. I will often encourage my patients to see a tennis pro/instructor for a swing and racquet evaluation. Approximately 70% of patients will be symptom free regardless of treatment in one year after symptoms begin.

Some newer treatments that have been described include extracorporeal shock wave therapy and autologous blood injection. Shockwave therapy is a controversial treatment option for tennis elbow and recent studies have not shown it to be of any benefit. A recent article in the Journal of Hand Surgery reported the results of a small group of patients who underwent injection of their own blood into the location of lateral epicondylitis. More investigation is needed before this should be considered a standard treatment.

When conservative treatment has failed, usually after 6 months, then surgery is discussed. Many procedures have been described. Procedures as simple as percutaneous release of the tendon off of the bone have been described and more recently arthroscopic procedures or other procedures involving the joint and resection of a ligament as well have been described.

The most popular procedure today is a simple excision of diseased tissue from within the tendon, shaving down the bone and re-attachment of the tendon. This can be performed as an outpatient procedure with regional anesthesia (where only the arm goes to sleep) and through a relatively small incision of approximately 3" long. After surgery, a sterile bandage and splint is placed on the elbow. Patients will remain in a splint for about one week to allow the incision to heal. After that point, the splint is removed, and the patient can begin gentle motion of the wrist and elbow. 85-90% of patients with this technique are typically able to perform full activities without pain after a recuperation of two to three months. Approximately 10-12% of patients have improvement but with some pain during aggressive activities and only 2-3% of patients have no improvement.

Tennis elbow is a very common and disabling problem. It is one of the most common conditions I see in my practice, and can sometimes be the most frustrating because of the persistence or recurrence of symptoms. Thankfully, only a small percentage of patients go on to need surgery. However, until the pain is under control, it can greatly curtail your active lifestyle.

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