Patient Guide to Tennis Elbow (Lateral Epicondylitis)

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WHAT IS TENNIS ELBOW?

Tennis elbow is a condition in which there is inflammation of the tendons (*tendinitis*) attached to the outside, or lateral side, of the elbow at a bony prominence of the arm bone (*humerus).*Muscles which work the wrist and fingers turn into a tendon which attaches to this area. This bony prominence is called the *lateral epicondyle,* hence this condition is also called "lateral epicondylitis." [Figure I]

Patients with tennis elbow experience pain at the lateral aspect of the elbow that can radiate or travel into the forearm and occasionally the hand. The pain occurs with grasping activities and may be accompanied by a sense of weakness. An achy type of discomfort may also be present at rest or at night time after activity. Once the tendons get inflamed, it can be difficult to eradicate because those tendons are used every time the hand grips or squeezes.

WHAT CAUSES TENNIS ELBOW?

Injury to these tendons can result from a sudden violent injury or, more commonly, from repetitive activity in which the tendons are essentially "overloaded." This situation can result from a variety of activities including sports and work, or from a change in one's regular activity. The "overload" of tendons is commonly seen in someone who plays more tennis than usual and then develops pain at the outer aspect of the elbow (thus the common name "*tennis elbow*"). However, a weekend of hedge clipping, excessive use of a screwdriver or hammer, or performance of other activities requiring constant squeezing or gripping can lead to the problem. A similar condition can develop on the inner or medial side of the elbow (*medial epicondylitis*). Since this condition is fairly common in golfers on their non-dominant arm, it is also called *"golfers elbow*."

IS IT A SERIOUS CONDITION?

Tennis elbow is painful but usually does not lead to serious problems. However, if the condition is untreated or becomes severely painful, then loss of function and loss of motion at the elbow can develop. Treatment in these cases may be a little more difficult, but rarely does long-term disability result.

HOW IS IT TREATED?

The majority of cases of tennis elbow get better without surgery. Your doctor will examine your elbow and perhaps take X-rays to evaluate the bones and joints of the elbow. If the problem is determined to be lateral epicondylitis, then treatment consists of the following (all techniques may not be necessary at once):

***1. Modification of Activity*:**

General activities which make the pain worse should be avoided or at least cut back. For tennis players this may mean playing less tennis. Alternatively, modifying the stroke or the grip size on the racquet may help. Use of the arm and hand within the limits of pain is recommended. In general, the patient can do anything that doesn't hurt. While continued activity in the presence of mild discomfort is not harmful, severe pain will only prolong the necessary recovery time and should be avoided.

2.*Ice*

Cold therapy is very helpful for this condition to limit pain and to decrease inflammation. It is recommended that the area be iced 2 to 3 times a day, especially after any activity such as sports or work. Ice can be applied with an ice bag or the area can be rubbed or massaged with an ice cube (*ice massage*). The ice should be applied for 20 to 30 minutes each time.

3. *Medication*

Oral nonsteroidal anti-inflammatory drugs are very helpful in controlling the pain and inflammation of tennis elbow. These medications are aspirin-like medicines which include ibuprofen (*Motrin, Advil, Nuprin, Medipren*, etc.), and other prescription medications (*Naprosyn, Indocin, Feldene, Relafen, etc.*). We recommend the medicine be taken daily for at least four to six weeks when treating severe cases. For less severe cases these medicines may be taken only when needed. All of these medications can have side effects and should be used under the direction of a physician.

4. Stretching and Strengthening Exercises

Stretching and strengthening of the involved muscle and tendon unit is one of the mainstays of treatment for this condition. A gentle stretching program is started through a range of motion at the elbow and wrist. This is combined with a program of muscle strengthening. A simple home program can be demonstrated by your physician in the office. In more severe cases, a referral to a physical therapist can be made for a supervised program.

5. Straps

Tennis elbow straps are found to be helpful by some patients. There are several different models available and they are designed to be worn 2-3 centimeters from the elbow. [Figure 2] This is intended to take the stress off the tendon where it attaches to the bone. The strap is to be worn during sports and during work. These straps should not be used as a sole means of treatment, but should supplement muscular stretching and strengthening exercises.

6. Wrist braces

These are worn on the wrist to keep the wrist bent backwards, taking the stress off of the muscles as they attach at the elbow. Although not utilized routinely, some physicians utilize them when the pain is severe and when other measures have failed. They are primarily to be used at night while sleeping but they can be used during the day as well.

7.Cortisone shots

These are considered when the measures above have not worked and the pain is severe. The cortisone is injected into the area of the inflamed tendons in order to decrease the inflammation. After the shot, most physicians recommend that the patient return to using ice

and anti-inflammatory medication. Sometimes the shot is curative and sometimes more than one shot is necessary.

WHEN IS SURGERY INDICATED?

Surgery is indicated when all of the above measures have failed over a course of several months and the pain continues to prevent activity. Most physicians feel that several cortisone shots are indicated before surgery is considered. In general, surgery is considered an option when all other treatment options have failed and pain continues to be severe and limiting a patients level of activity or function.

WHAT IS THE SURGERY?

The procedure that is done depends upon many factors, but there are basically two types of operations. In the first type a small incision is made (3-4 centimeters) and the abnormal tendon is trimmed. The defect created is sewn back together and allowed to heal. In the second type of operation a portion of tendon is released from the bone and then reattached.

WHAT IS DONE AFTER SURGERY?

In both operations, the patient usually goes home the same day of surgery. An arm sling and occasionally a plaster splint are used. The arm is to be elevated and kept dry. Stitches are removed 5 to 7 days after surgery and motion is begun. Rehabilitation and recovery depend upon the extent of the surgery and the type of surgery done. Most people cannot drive for a week. The success of these operations is generally 85-95% excellent relief from the pain. While return to daily activity without pain is often possible within 3 to 6 weeks, return to sports or heavy use of the arm can take several months.