Tennis Elbow

Lateral Epicondylitis
Anatomy

- Muscles that extend the wrist and fingers start at the lateral (outside) aspect of the elbow
- These muscles originate off a bony prominence called the lateral epicondyle
The Problem

- Small tears occur in the tendon as it leaves the bone.
- This may be from repetitive use, heavier than normal or unusual activity, or from direct injury.
Causes

- One study indicates that 95% of patients with this problem have never played tennis.
- The problem may start with a direct injury to the area, or may result from repetitive use of the wrist and arm.
Symptoms

- Pain at the lateral elbow with activity
- Aching pain with sharp flares brought on by activity.
- Swelling around lateral elbow
Treatment - Main

- Counterforce forearm strap worn for activities
- Scientific basis for use
- Transfers muscle origin away from involved tendons
Counterforce Strap

strap worn for activities
Treatment - Main

- Wrist splint worn during activities
- Protects the wrist extensor tendons that are involved
Treatment - Main

- **Ice** is used directly after activity
- Use for 10 to 15 minutes
- Apply to tender area at lateral elbow
Treatment - Main

- **Moist heat** can be applied before activity, or late at night
- **Stretching exercises** can be done several times a day
Treatment - Main

- **Lifting modifications** – lift in a way that avoids using the involved tendons
- For tennis elbow, lift with palms up

Correct way

Wrong way
Treatment - Main

- Anti-inflammatory medications are sometimes helpful. These are best taken for a limited time and not on a chronic basis.
- These medications may cause stomach irritation, and should not be used in patients on blood thinners or with asthma.
**Treatment - Main**

- **Anti-inflammatory medications** - A sample dose would be Advil, one or two tablets, three times a day with food.
- An alternative dose would be to take one or two tablets before and after heavy activity.
- Prescription medicines are available for patients with sensitive stomachs.
Treatment

- These non-invasive measures should be used as long as symptoms are present.
- Studies show that the large majority of patients experience symptom relief by one year.
- Other treatment adjuncts are available if symptoms are not well tolerated using the standard measures.
Treatment Adjuncts

- Physical Therapy
- Cortisone Injection
- Autologous blood injection
- Casting
- Acupuncture
Supervised Therapy

- Physical therapists can give detailed instructions in stretching and strengthening exercises.
- Analysis of home and work activities can be done with recommended modifications.
- Cortisone can be given through a patch with electric current, called iontophoresis.
Treatment - Adjuncts

- **Cortisone Injection.** Can be very effective in minimizing symptoms while the condition is healing.
Risks of Cortisone Injection

- Infection
- Allergic reaction – temporary facial flushing is most common
- Skin hypopigmentation – a patch of skin turns white
- Fat atrophy around injection site
- Tendon weakening – injections limited to three total to prevent this
Cortisone Injection

- Pain may recur between local anesthetic wearing off and cortisone starting (2-7 days after injection)
- Up to 3 cortisone injections can be given
- Regular treatment measures should still be used after injection for at least 3 to 4 weeks
Cortisone Injection
Autologous Blood Injections have been shown to provide relief in some patients.

Blood is taken from a vein in either arm, mixed with local anesthetic, and then injected into the painful area of the involved elbow.

The purpose is to promote healing of the injured tendon.
Autologous Blood Injections
Treatment - Adjuncts

- A long arm cast can be applied for 4 weeks
- Enforces rest of the affected tendons
- Designed to allow regular conservative measures more chance of being effective after cast is removed
Treatment - adjuncts

- Acupuncture has been shown in study to have some success in relieving discomfort.
- Many other treatments have been described, including cold laser therapy or shock wave therapy.
- These other treatments are not prescribed by our office.
Surgery

- Surgery for this condition is very rare
- Most cases will eventually resolve regardless of surgery
- Surgical results not as consistent as for most other surgeries
- Multiple surgical techniques have been used
Surgery

Degenerated tendon tissue is removed

Performed as an outpatient procedure
Elbow is splinted for 4 weeks after surgery
Supervised therapy is required after surgery
Surgery

2 weeks after surgery

Splint worn after surgery
Medial Epicondylitis

- Often called "golfer's elbow" or "reverse tennis elbow"
- Tendonosis on inside, or medial aspect, of elbow
Medial Epicondylitis

- Treatment measures essentially the same as for lateral epicondylitis
- *Except* - lifting modifications are reversed
Medial Epicondylitis

- Strap is worn with pad on inside of forearm
- Strap is worn for activities
The End

- Please let us know if you have any questions