Tennis Elbow (Lateral Epicondylitis)

Description

Tennis elbow is a degenerative condition of the tendon fibers that attach on the bony prominence (epicondyle) on the outside (lateral side) of the elbow. The tendons involved are responsible for anchoring the muscles that extend or lift the wrist and hand (see Figure 1).

Risk Factors/Prevention

Tennis elbow happens mostly in patients between the ages of 30 years to 50 years. It can occur in any age group. Tennis elbow can affect as many as half of athletes in racquet sports. However, most patients with tennis elbow are not active in racquet sports. Most of the time, there is not a specific traumatic injury before symptoms start. Many individuals with tennis elbow are involved in work or recreational activities that require repetitive and vigorous use of the forearm muscles. Some patients develop tennis elbow without any specific recognizable activity leading to symptoms.

Symptoms

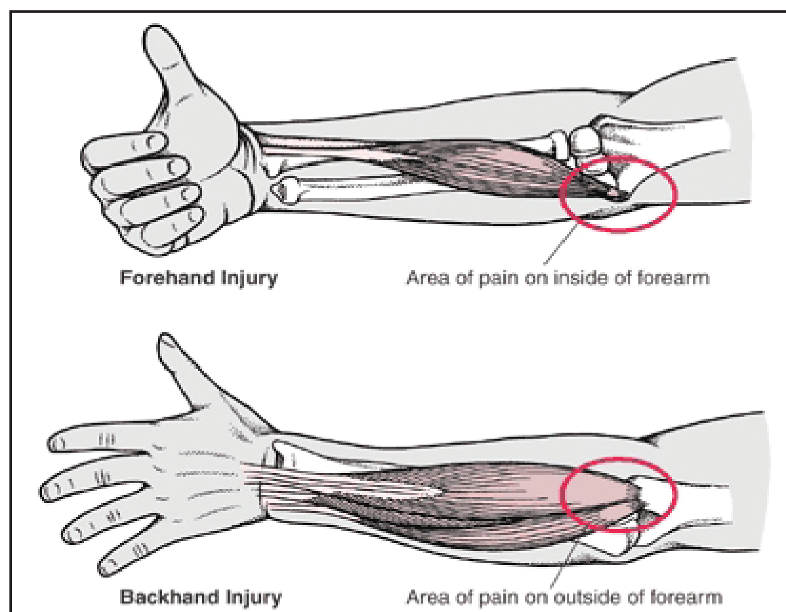
Patients often complain of severe, burning pain on the outside part of the elbow. In most cases, the pain starts in a mild and slow fashion. It gradually worsens over weeks or months. The pain can be made worse by pressing on the outside part of the elbow or by gripping or lifting objects. Lifting even very light objects (such as a small book or a cup of coffee) can lead to significant discomfort. In more severe cases, pain can occur with simple motion of the elbow joint. Pain can radiate to the forearm.

To diagnose tennis elbow, tell Dr. Norberg your complete medical history. He and his team will perform a physical examination.

The doctor may press directly on the bony prominence on the outside part of the elbow to see if it causes pain.

The doctor may also ask you to lift the wrist or fingers against pressure to see if that causes pain.

X-rays are not necessary. Rarely, MRI (magnetic resonance imaging) scans may be used to show changes in the tendon at the site of attachment onto the bone.



Treatment Options: Conservative

In most cases, non operative treatment should be tried before surgery. Pain relief is the main goal in the first phase of treatment. Dr. Norberg will tell you to stop or limit any activities that cause symptoms. You may need to apply ice to the outside part of the elbow. You may need to take acetaminophen or an anti-inflammatory medication for pain relief.

Orthotics can help diminish symptoms of tennis elbow. Dr. Norberg commonly recommends wrist splints. These can reduce symptoms by resting the muscles and tendons (see Figure 2).

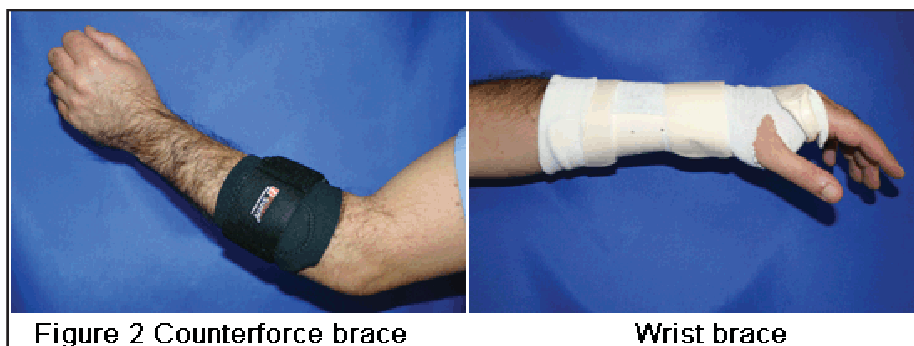


Figure 2 Counterforce brace Wrist brace

Treatment Options: Platelet Rich Plasma (PRP)

PRP injections are commonly helpful in treating tennis elbow. For this injection, patients come in and have their own blood drawn, the blood is then spun down in a centrifuge to concentrate the platelets, and the platelet rich material is then injected into the elbow. After the injection, patients should wear a wrist splint for one month. Although patients do not have pain in their wrist, wearing a wrist splint prevents wrist extension, which causes aggravation of tennis elbow symptoms. Patients should also avoid NSAIDs (ibuprofen or Aleve) for a month after the injection. It will take 4-6 weeks to see the results from a PRP injection. (Dr. Norberg also has a separate handout on PRP injections). Patients can schedule a PRP injection with Dr. Norberg or Dani Fitterer. The injection is performed under ultrasound guidance and the entire clinic visit will take approximately one hour. This procedure is not typically covered by insurance, and costs $400 out-of-pocket for the patient. Studies show approximately 80% of patients do well with the PRP injection for tennis elbow.

Treatment Options: Tenex FAST Procedure

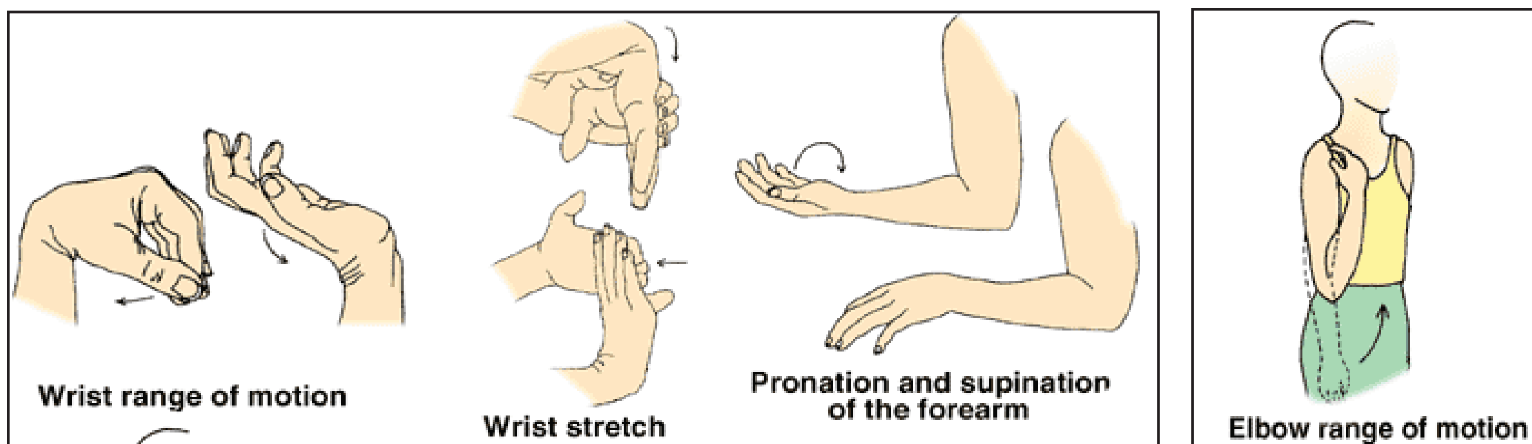
The FAST procedure will remove scar tissue and damaged tendon from the elbow. This procedure is performed Dr. Norberg at the Crosstown Surgery Center, located at our Edina location. It involves placement of a small needle in the damaged tendon under ultrasound guidance. The needle then irrigates and cauterizes the damaged tissue, leaving behind healthy tendon. This procedure takes approximately 15 minutes. We recommend patients wear a wrist splint and avoid painful activities for one month after the procedure. It is typically covered by insurance, but we encourage patients to check with their insurance prior to scheduling.

Not recommended: Cortisone Injections

Cortisone injections are no longer recommended for tennis elbow. A recent study showed patients who received cortison injections for tennis elbow did worse than patients who received saline (salt water) only injections. Prior to this study, cortisone injections were commonly used to treat tennis elbow. Dr. Norberg prefers patients try a PRP injection or the Tenex FAST procedure instead of a cortisone injection.

After pain is relieved, the next phase of treatment starts. Modifying activities can prevent further symptoms. Dr. Norberg will want you to do stretches and strengthening exercises to maintain wrist and elbow range of motion (See exercises below). Hand therapy can also be helpful. Non-operative treatment is successful in approximately 85 percent to 90 percent of patients with tennis elbow.

Wrist range of motion: Bend your wrist forward and backward as far you can. Repeat 10 times. Do 3 sets.
Wrist stretch: With arm extended out straight, bend wrist forward with use of your other hand. Stop when you feel stretch. Hold position 15 seconds. Repeat 3 times.
Repeat the exercise with wrist bent backwards.
Forearm: With elbow at your side and bent 90 degrees, bring your palm up and hold 3-5 seconds then slowly turn your palm facing down and hold 3-5 seconds. Repeat 10-15 times.
Elbow: Gently bring your palm up toward your shoulder and bend your elbow as far as you can. Then straighten your elbow out as far as you can, Repeat 10-15 times.



Treatment Options: Surgical

Surgery is considered only in patients who have incapacitating pain that does not get better after at least six months of non operative treatment, or patients who have failed to have lasting relief with 3 cortisone injections.

The surgical procedure involves removing diseased tendon tissue and reattaching normal tendon tissue to bone. The procedure is an outpatient surgery; you do not need to stay in the hospital overnight. It can be performed under regional or general anesthesia. Most commonly, the surgery is performed through a small incision over the bony prominence on the outside of the elbow. Recently, an arthroscopic surgery method has been developed and is indicated in specific cases. So far, no significant benefits have been found to using the arthroscopic method over the more traditional open incision.

After surgery, the elbow is placed in a bulky dressing and the patient is sent home. About one week later, the sutures and splint are removed. Then exercises are started to stretch the elbow and restore range of motion. Light, gradual strengthening exercises are started two months after surgery. Dr. Norberg will tell you when you can return to athletic activity. This is usually approximately four months to six months after surgery. Tennis elbow surgery is considered successful in approximately 90 percent of patients. A significant portion of people will continue to have mild symptoms in the area after surgery. These do not typically restrict activities.

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