

Tendinitis

Definition

Tendinitis is a condition caused by the tearing of tendon fibers and subsequent inflammation in the tendon. Tendons are the strong connective tissue that connect muscle to bone.

Description

When a muscle contracts, it pulls on the tendon, which is composed of tissue that cannot stretch. The tendon then transmits that pulling force to the bone and moves the bone, producing movement. Tendinitis usually results from excessive repeated demands placed on the tendon by the muscle. Tendinitis is not usually caused by a sudden injury; it is more commonly a result of a long period of overuse. Tendinitis occurs frequently with active individuals and those whose occupational tasks require repetitive motion.

Tendons that commonly become inflamed include:

- tendons of the hand
- tendons of the upper arm that affect the shoulder
- tendons of the forearm at the elbow
- the tendon of the quadriceps muscle group at the knee
- the Achilles tendon at the ankle

Causes & Symptoms

Repeated overuse of the tendon will cause small tears to develop in the tendon fibers. As a result, the body will initiate the injury repair process in the area and lay down scar tissue. Inflammation will develop in the area as part of the injury repair process. Inflammation increases the blood supply, bringing nutrients to the damaged tissues along with infection-fighting agents. The result is swelling, tenderness, pain, and heat. Redness may occur if the injury is close to the skin. Since many cases of tendinitis result from chronic inflammatory conditions that develop from long periods of overuse, the inflammatory process is not as exaggerated as with an acute injury. Therefore swelling, heat, and redness are not always visible in a tendinitis complaint because the inflammation is really at a low level.

Recent research has found that tendinitis sometimes develops as a side effect of treatment with quinolones, which are a group of antibiotics frequently used to treat bacterial infections. The tendon most likely to be affected by these drugs is the Achilles tendon, and the tendinitis usually develops within the first few weeks of antibiotic treatment.

Diagnosis

Some common tendon injuries are superficial and easy to identify. These include lateral epicondylitis (commonly referred to as tennis elbow) and Achilles' tendinitis, which affects the tendon just above the heel of the foot. While tennis elbow occurs more often in workers than in athletes (in spite of its name), tendinitis affecting the Achilles tendon is almost always related to sports. Tendinitis in the shoulder area is almost always found in workers who frequently carry heavy loads as part of their job.

Prevention

If given enough time, tendons will strengthen to meet the demands placed on them. The blood supply to tendons is poor, which means that tendons grow slowly. Therefore, adequate time is

required for good conditioning. Stretching the muscles that are associated with problematic tendon will also help decrease overuse of the tendon.