

Flexor Tendon Injuries

Description

Tendons are tissues that connect muscles to bone. When muscles contract, tendons pull on bones. This is what causes some parts of the body to move. The muscles that move the fingers and thumb (the flexor muscles) are located in the forearm, above the wrist. Long tendons extend from the flexor muscles through the wrist and attach to the small bones of the fingers and thumb.

Tendons are stretched tightly as they connect the muscle to the bone. If the tendon tears, the end of the tendon that is released pulls back toward the area to which it remains attached. A tear (rupture) or cut of the tendon anywhere along its route, at the wrist, in the palm, or along the finger, may make it impossible to bend one or more fingers.

Anatomy

Each finger has two flexor tendons; the thumb has one tendon. The tendons run along the palm side of the fingers. They are very close to the surface of the skin, particularly where the skin folds as the finger bends.

Types of injuries

Most often the flexor tendons are damaged by a cut. Because the nerves to the fingers are also very close to the tendons, a cut may damage them as well. This will result in numbness on one or both sides of the finger.

Athletic injuries are also common, usually in football, wrestling, or rugby. One player grabs another's jersey, and a finger gets caught and pulled. This type of injury is so common, it even has a name: "jersey finger."

Signs and symptoms

- An inability to bend one or more joints of the finger.
- Pain when the finger is bent.
- An open injury, such as a cut, on the palm side of the hand, particularly in the joint area where the skin folds as the finger bends.
- Mild swelling over the joint closest to the fingertip.
- Tenderness along the finger on the palm side of the hand.

Diagnosis

It is important to see a physician whenever the fingers are injured. This is especially true if the finger is jammed and the fingertip cannot be bent or straightened. The doctor will test the fingers by asking the patient to bend and straighten the fingers. Sometimes he or she may apply resistance in order to test the strength of the fingers. The doctor may test the feeling and blood flow to the fingers to see whether any nerves or blood vessels were injured. An X-ray may be needed to learn whether there is any damage to the bone.

Treatment

First Aid

Compression on the injured area will slow the flow of blood to the damaged site. The doctor may first clean and treat any superficial wounds. The hand may be placed in a splint.

Surgical Treatment

Because the tendon cannot heal unless the ends are touching, a torn (ruptured) tendon must be repaired or sewn back to the muscle or bone. This requires surgery. It is usually best to have the surgery as soon as possible after the injury.

The surgeon will sew the tendon using special stitches on both the inside and outside of the tendon. It can take up to two months before the repair is healed and it is strong enough that the hand can be used without protection. It may take another month or so before the hand can be used with any force.

In the meantime, a splint is usually worn. A physical therapist may need to help with special exercises as requested by your orthopaedic surgeon.