

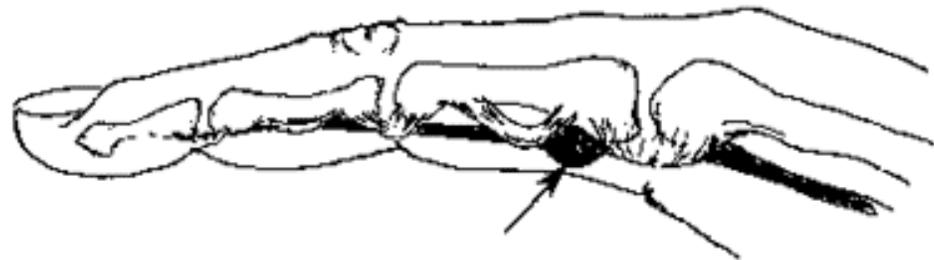
Trigger Fingers: New Developments By Garry S. Kitay, M.D.

Trigger fingers and thumbs are caused by a swelling in the digit's flexor tendon, commonly referred to as stenosing tenosynovitis, or simply as tendinitis. The abnormal tendon causes difficulties in both extending and flexing the involved fingers or thumb.

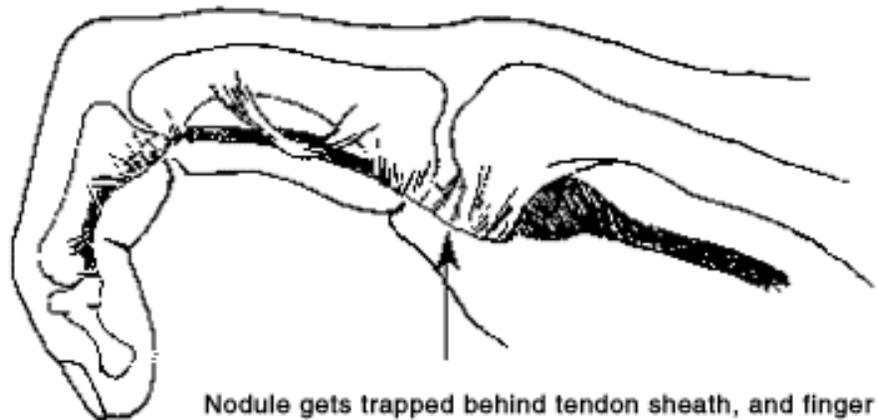
The tendons work like wires that connect the muscles in the forearm to the bones of the fingers and thumb. They travel beneath tunnels, also called pulleys, which hold the tendon close against the bone. There is also a slick lining between the tendons and the surrounding tunnel

called tenosynovium. In normal conditions, the tendon will glide effortlessly through the tunnel as an individual straightens and bends, or extends and flexes, their digits. A trigger finger or thumb occurs when the tendon develops a swelling in its lining. (See illustration) This nodule, or knot, in the tendon forces it to squeeze through the entrance and exit to the tunnel overlying it. This causes the pain, clicking, and locking commonly encountered in this condition. As the tendon catches this can create more inflammation and swelling, making the condition worse.

There can be two types of swelling of the tendon, nodular and diffuse. Nodular swelling involves a more discreet and palpable swollen area at the base of the digit. This type tends to respond more favorably to nonsteroidal anti-inflammatory drugs and steroid injections than those with the diffuse type.



Inflamed nodule of tendon



Nodule gets trapped behind tendon sheath, and finger becomes stuck in flexed position.

Illustrations provided by Clinical Reference System, (800) 237-8401

The condition of trigger finger tends to be more common with certain medical conditions including rheumatoid arthritis, gout, and diabetes. However the cause is often unclear. There is a subset of patients with this diagnosis who are born with the condition, termed congenital trigger finger and thumb.

Diagnosis

The diagnosis of trigger finger and thumb may begin with discomfort felt at the base of the digit. Occasionally, the patient can actually feel a “knot” in this area. At times, the patient experiences inability to flex the digit or senses a click with this motion. As the condition progresses, the finger actually begins triggering or locking. With this anomaly the patient often feels that the snap is occurring at the PIP joint (the middle knuckle of the finger).

Treatment

For some early forms of this condition, simple avoidance of obvious irritating activities is adequate to lead to a cure. This can involve avoidance of cutting, sewing, and other activities that involve repetitive stressing of the involved digits. Occasionally splinting can be helpful; however this is quite restrictive and can take weeks and even months to be effective. In early disease, the combination of massage, ice therapy, and nonsteroidal anti-inflammatory drugs has led to improvements.

The most effective nonsurgical treatment is a steroid injection. This leads directly to diminution of the swelling around the flexor tendon within the tendon sheath, and allows improved gliding of the tendon. In general, an anesthetic agent such as Lidocaine is either injected prior to the steroid or in combination with the steroid. The patient should be warned that finger numbness could last up to 24 hours. The steroid injections have been found to be very effective and may cure 70% of patients with the nodular type of condition after only one injection. If the condition recurs, repeating the injection an additional one or two times can enhance the possibility of a cure without a surgical approach.

However, if these nonsurgical conditions are not effective and the patient continues to have painful triggering, a surgical release can be considered. The surgery is performed as an outpatient. It involves release of the compressive tunnel, or pulley, overlying the tendon. Active motion of this digit begins immediately after surgery. The procedure is usually done using a local anesthetic with the patient awake and alert to verify that a complete release has been performed.

A newer technique has been developed called percutaneous release. With this procedure the surgical release is actually performed in the office. This is performed with a local anesthetic followed by insertion of a needle through the skin. The bevel of the needle is then used to scrape the constrictive portion of the tunnel with a repetitive swiping movement. Once the release is completed the patient is requested to fully flex the digit and in fact, when successful, there is no longer any sensation of triggering, clicking, or the like. There are very few complications with this procedure other than occasional pain, which has largely been eliminated by injecting steroids at the time of the release.

Conclusion

Trigger finger and thumb is a very common problem whose causes are not fully clear. When encountered early it can respond to simple avoidance of irritating activities and nonsteroidal anti-inflammatory drugs. In later cases it generally responds to nonoperative treatment in the form of steroid injections. If nonsurgical treatment fails there are excellent surgical options which generally lead to a cure of this troubling condition.