



## What is Trigger Finger?

Trigger finger is a painful, clicking, or locking of the finger or thumb due to thickening of the tendons usually occurring in adults over 40 years. It also occasionally occurs in toddlers where the finger (usually the thumb) is painless but stuck in a bent position.

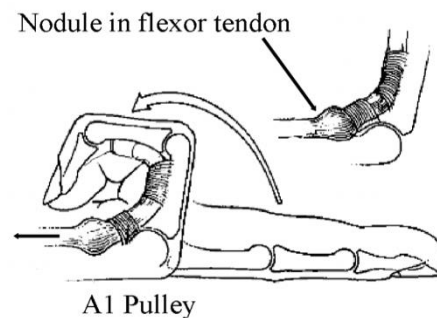
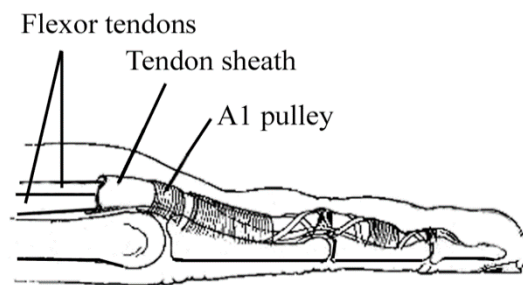
The tendons are tough, fibrous cords that connect the muscles of the forearm to the bones of the fingers and thumb, so we can bend (flex) and straighten (extend) our fingers. The flexor tendons glide through a tunnel called the tendon sheath. The sheath is lined with a thin membrane called synovium. The synovium produces lubricating fluid that helps reduce friction as the tendons glide through the tendon sheath. The tendon sheath has several thick, fibrous sections called pulleys.

### What are the Causes?

Trigger finger is caused by:

- the pulleys thickening which narrows the tunnel
- thickening of the flexor tendons

This leads to increased friction and irritation/more swelling of the tendon.



### What Conditions are Associated with Trigger Finger?

- Diabetes
- Hypothyroidism
- Pregnancy
- Gout
- Rheumatoid arthritis
- Psoriatic arthritis
- Carpal tunnel syndrome

In gout, rheumatoid & psoriatic arthritis, the synovial covering of the sheath becomes inflamed and thickened to several times its normal size. The tendon is no longer able to glide freely, forming a nodular thickening at the point where it tries to pass into the tunnel.

Trigger finger may also be associated with conditions such as diabetes, hypothyroidism & pregnancy which all cause thickening of the sheath or tendons. It can also occur in small children. The cause in children is poorly understood but possibly tendon thickening follows a minor injury.



## What are the Signs & Symptoms?

Before development of the actual “triggering”, the first sign may be discomfort in the palm at the base of the affected finger. Painful clicking is the most common symptom. As the condition progresses the finger may become locked. In children the condition is usually painless and is only noticed when the thumb becomes stuck in the bent position.

Trigger finger may be precipitated by very repetitive gripping activities or use of tools. During forceful bending of the finger or thumb, the enlarged portion of the tendon is dragged through the constricted opening. This motion is often accompanied by a painful click. The finger or thumb may become locked in a bent or straight position. Straightening the finger or thumb may require using the other hand to pull the finger out straight causing a painful snap as the swollen part of the tendon passes back through the sheath.

## How is it Treated?

### Non-operative treatment

If symptoms are mild, the initial treatment may involve the use of a small plastic splint that slides over the finger to reduce the movement of the tendon and reduce swelling, and a steroid injection into the tendon sheath. Steroids are very strong anti- inflammatories and reduce swelling slowly over several weeks. The splint is worn for four weeks both day and night and removed only for washing.

### Surgical treatment

Surgery is recommended in adults when non-operative treatment does not work, the symptoms have been present for many months, or the finger is locked.

Surgery is not advised in children under 3 years of age as most cases resolve spontaneously. If the deformity has not corrected by the age of 3 years, surgery is advised.

Surgery is performed as day surgery under general or local anaesthetic and sedation in adults, or a short general anaesthetic in toddlers. A 1cm incision is made in the palm at the base of the affected finger or thumb. The first (A1) pulley is released, relieving the constriction of the tendon as it passes through the sheath.

In cases involving inflammation of the tendon lining, it may be necessary to remove the thickened synovial covering surrounding the tendon (tenosynovectomy). A light dressing is then applied to protect the wound but allowing the finger to move. The dressing must be kept dry for the first 2 weeks. The hand can be used for light activities, and the finger gently stretched straight for 5 minutes, three times each day.

## What is the Recovery?

**2 weeks:** Dressings & stitches are removed. Dissolving sutures are used in infants.

**8 weeks:** Activities requiring the use of the affected hand may be uncomfortable for 6-8 weeks. The scar will be quite thick for the first 8 weeks then will flatten.

**4 months:** All swelling resolved, and hand use returned to normal.

## What are the Risks?

- Nerve injury (1 in 1000)
- Residual finger stiffness
- Recurrent triggering requiring removal of part of the tendon (~1%)
- Infection (1%)