# TRIGGER FINGER

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## Introduction

Tendons are cords of living tissue that connect muscles to bone. They act as the cables that allow joints to move at a distance from muscular contraction. This gives a mechanical advantage. The cable acts through pulleys again for mechanical advantage. The pulleys are the tendon sheaths. These sheaths are delicate tunnels lined by lubricating membrane called the synovium. Synovial sheaths are smooth and lubricated so helping the tendons slide without friction.

## What is Trigger Finger or Thumb?

Trigger finger, also called tenosynovitis, is inflammation of a flexor tendon and its synovial sheath in the finger (occasionally it affects the thumb in which case it is called trigger thumb).

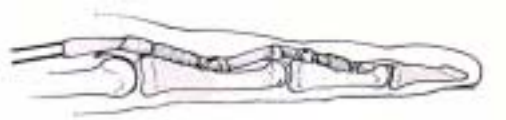

**Figure 1. The tendon and pulleys for the finger.**

## What Causes It?

The inflammation is most often due to repeated traumatic microscopic tears in the tendon. It can be due to infection, or some unknown cause. The tendon and its synovial sheath become swollen and may develop scarring. The swelling on the tendon, when flexed, lies outside the mouth of the first pulley. Attempts to straighten the finger are met with resistance when the swollen tendon is pulled up to and eventually through the narrowed pulley mouth at the base of the finger the trigger occurs.

**Figure 2. A small tear in the tendon has healed with a swollen scar.**

## How is it Diagnosed?

There is a clear history of the trigger. It is commonest in the index finger. It is often not very painful at first. It is often worse in the morning and settles during the day. Eventually the trigger can become stuck either outside or within the sheath. This leave the finger(s) difficult to bend or straighten.

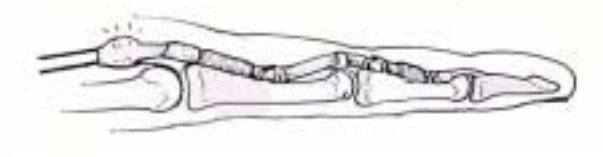

**Figure 3. The scarred swollen part of the tendon has triggered through the tight opening of the**

## How is it Treated?

Mild cases may be treated by non-surgical methods such as medications taken by mouth called non-steroidal anti-inflammatories may reduce swelling and triggering. An injection of corticosteroid can be particularly useful. Should these methods fail and before the trigger locks surgery should be considered.

## Operative Treatment

Surgical treatment is reserved for those who have severe pain, persistent symptoms after medical treatment, or who are at risk of permanent triggering. The aim is to release the mouth of the pulley at the base of the finger. For the fingers this can be undertaken under local anaesthetic. For the thumb or multiple fingers regional or general anaesthesia is preferred. A temporary tourniquet is used to make the operative field free of blood.

## Before Surgery

Please make arrangements to be accompanied home by a responsible adult after surgery. Do not eat or drink anything after midnight the night before the procedure unless you are instructed otherwise. Wash your arm the night before surgery and do not apply hand creams.

## Your Operation

Your operation will take place in the most modern facility by a trained Consultant surgeon who will explain each step of the procedure to you as it takes place. At surgery a local anaesthesia injected into the base of the triggering finger so you don't feel pain during surgery. After skin preparation and draping a tourniquet is inflated around your upper arm to reduce bleeding during the operation.

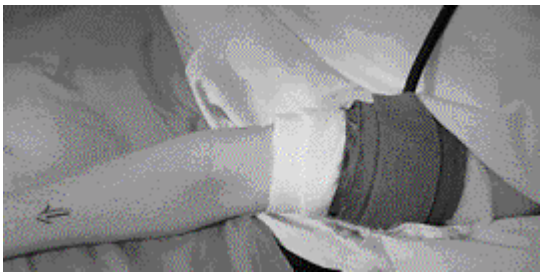

**Figure 4. A tourniquet is used for approximately 11 minutes.**

An incision is made at the base of your finger. The mouth of the pulley is widened to relieve the pressure in flexor tunnel. The skin is then closed with one suture.

## Benefits and Risks of Surgery

The benefit is to halt the progress of triggering with permanent weakness. There may be bleeding. This often settles with elevation. Infection occurs in an average 6% of patients because we all have bacteria on our skin and if these bacteria get into the cut they can multiply to produce infection. Infection can be surmised if you develop more severe pain, swelling redness or heat after the first 24 hours. In these circumstances please contact your GP immediately. Scar pain is less common. Very rarely, nerve damage occurs. Finally the condition can recur over years if the mouth of the pulley heals.

## After Surgery

Immediately after surgery your hand will be bandaged and will be kept elevated to keep the swelling down. You should maintain the elevation after you are taken home.

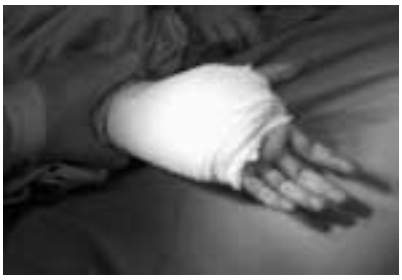

**Figure 5. The bandaged hand**

You may be given pain relief medications and be told to use an ice pack. It is important to keep the dressing dry so cover it with a plastic bag when bathing or showering. Dark blue or brown discoloration of the hand and wrist after surgery is normal and due to bruising. You will be told about exercising your hand by opening and closing your fingers and squeezing exercises.

**Figure 6. Leave the adhesive dressing for 10-14 days until the sutures are removed.**

You will probably be able to start light activities in one to two days. Avoid bending your fingers far forward or backward, and try not to bump the area around the suture. We will arrange follow-up appointments so that we can make sure you are healing properly after surgery. Contact your General Practitioner if you develop a pale blue or white hand, increasing pain for more than a day not relieved by medication, loss of sensation, throbbing, excessive swelling in the hand, or fever over 100 º F.