



TRIGGER FINGER

ABOUT

Trigger finger (and trigger thumb) refers to the catching and locking which occurs when a person makes a fist and straightens their fingers out again. The palm of our hand has many tunnels, known as pulleys. These pulleys hold our tendons (which help move your fingers) against the bone so we can make a proper fist. Trigger finger is due to inflammation of the tendon or its surrounding structure, causing it to catch when moving through these pulleys. Tendonitis is inflammation of the tendon whereas tenosynovitis refers to inflammation of the synovium or tendon sheath which surrounds the tendon. Inflammation of these structures results in swelling and restricts movement. When a tendon or tendon sheath swells it thickens and its fibres can bunch up in segments of the tendon. Severe cases of trigger finger can cause the finger or thumb to become stuck in the bent position as the tendon is too swollen to move back through the pulley when trying to straighten the finger.

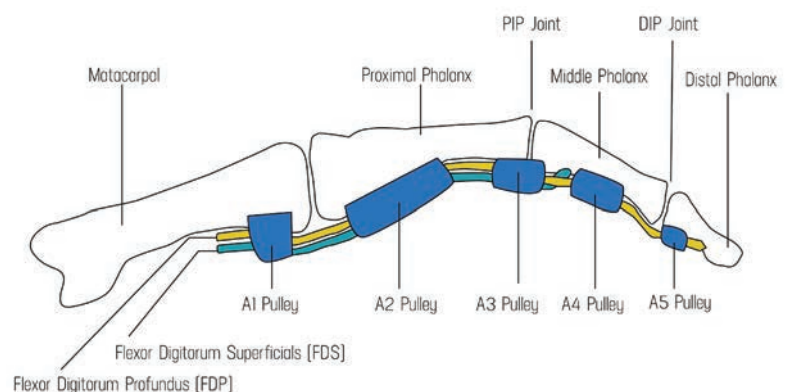
There are 3 types of pulleys on the palm side of the hand: annular, cruciform/cruciate and oblique. The annular pulley has a thick band shape and is often affected in the case of a trigger thumb/finger. There are 5 annular pulleys along the finger and 2 in the thumb. The most commonly injured pulley is the A1 pulley, which is located on the palm side of your hand just below your big knuckle (metacarpophalangeal joint).

Trigger finger is an injury often caused by overuse, repetitive movement or trauma to the area. Other contributing factors include diabetes, rheumatoid arthritis, a change in medication or fluid retention that results in increased swelling. There is a correlation of the onset of trigger finger occurring simultaneously with carpal tunnel syndrome. This is due to the change in the biomechanics at the wrist which results in increased tension through the A1 pulley causing inflammation.

SYMPTOMS

- Clicking or popping sound when making a fist, often felt in the middle joint of the finger and end joint of the thumb rather than the site of the catching
- Catching or locking sensation when the finger flexes into a fist and when you straighten the finger
- In severe cases you may not be able to straighten your finger with your own muscles and you may need to use the other hand to straighten the finger
- Pain on the palm side of the hand/finger
- Thickening of the tendon or a lump feeling where the finger catches

PULLEY AND FLEXOR TENDON ANATOMY



HOW HAND THERAPY CAN HELP

Assessment of your injury will help to determine which pulley is causing the triggering. This is performed by isolating joint movement and palpating the structures to determine what is catching. There is no x-ray or further imaging required unless there are other suspected complications. Ultrasound can often help confirm the diagnosis.

The treatment options for a trigger finger and trigger thumb include:

- Conservative management
- Corticosteroid injection
- Surgery

Conservative management under the guidance of a therapist is often trialled initially. This often includes custom made orthosis, cold therapy, anti-inflammatories and activity modification.

The orthosis will restrict movement of the injured tendon and prevent the tendon catching through the pulley. Treatment of trigger finger in the acute (early) stages increases the likelihood of recovery. Splinting time frames are dependent on the severity of the injury and often range from 3-10 weeks. It is important to follow the restrictions and orthosis wearing times your therapist has given you to optimise recovery. As the pain and triggering begin to settle, the orthosis may be removed for gentle activity with guidance from your therapist. A graded strengthening program is commenced after the injury has healed to regain grip strength and prevent reoccurrence.

If splinting is ineffective, a corticosteroid injection has been found to relieve pain and symptoms in many cases. In more severe or chronic cases surgical intervention may be required to release the pulley.



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REHABILITATION FOR THE UPPER
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