



Tenosynovitis of the Wrist: Trigger Finger

The sheaths of one or more tendons in the fingers or thumb have become dry, inflamed and sore. See Figure 1 overleaf.

(a) What is Tenosynovitis?

Tenosynovitis is inflammation of the *synovial sheath* of a tendon (also called a *tubular bursa*).

What is a Bursa?

A *bursa* is usually a fairly flat coin shaped and closed sac, the inner lining being *synovial membrane* which produces the *synovial fluid* which fills the sac and provides the lubrication. The plural of *bursa* is *bursae*. *Bursae* form where structures rub against each other, for example tendons or muscles sliding across bones. They prevent irritation and facilitate relatively friction-free smooth movement. Inflammation of a *bursa* is known as *bursitis*.

What is a Synovial Sheath (Tubular Bursa)?

A *synovial sheath* is a modified *bursa*, tubular in shape (also known as a *tubular bursa*), which is wrapped around a *tendon*, mainly in the hand or foot. It functions to lubricate the tendon as it moves during muscular work.

(b) Symptoms of Tenosynovitis

If you tap upon the affected *synovial sheath* you will elicit pain. Pain may be mild to severe on quick movement, with coexisting *crepitus*. *Crepitus* is the grating sensation and noise that occurs on movement of the affected tendon within the *synovial sheath* due to rubbing of tissue over a dry *synovial membrane*.

(c) Causes

The problem is generally related to overuse, as such overuse may initially inflame the *synovial membrane*, compromising the production of *synovial fluid* (the lubricant). The rubbing of the tendon on the walls of a dry membrane further inflames the tissue, exacerbating the problem.

(d) Trigger Finger: Volar Flexor Tenosynovitis

Trigger Finger (*Volar Flexor Tenosynovitis*) is one of the two most common variants of *tenosynovitis* in the hand/wrist area, the other being *De Quervain Syndrome*.

Trigger finger *tenosynovitis* occurs in the *tubular bursae* of the flexor tendons which clench the hand; *flexor pollicis longus* and the *flexors digitorum* of the fingers. See Figure 1 overleaf.

(e) Diagnosis of Trigger Finger: Tendon “Pop” on Hand Clench

Tenosynovitis in the tendon sheaths of any of the muscles mentioned above and shown in Figure 1 overleaf causes the tendons to “pop” as the hand is clenched, which explains its common name “Trigger Finger”. This “popping” is also diagnostic.

(d) Treatment

Rest, ice and a healing cream are a start. Since the problem arises from overuse, the musculature in the whole area is likely to be tight and myofascially hardened, and these tendons arise from muscles in the forearm. So your practitioner will release the muscle from which the tendon arises, and also all the surrounding musculature. This is important to creating the conditions for the inflamed tissue to recover.

Whilst it is unconventional, and painful, deep massage over the sheath may break-up the crystals of dried-up synovial fluid and pave the way for more rapid healing. Discuss this option with your practitioner.

Figure 1: Location of Tenosynovitis: "Trigger Finger"

