

# InfoSheet – Trigger Fingers

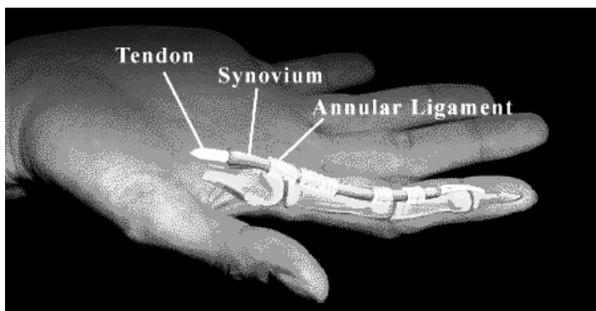
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## WHAT DO YOU FEEL?

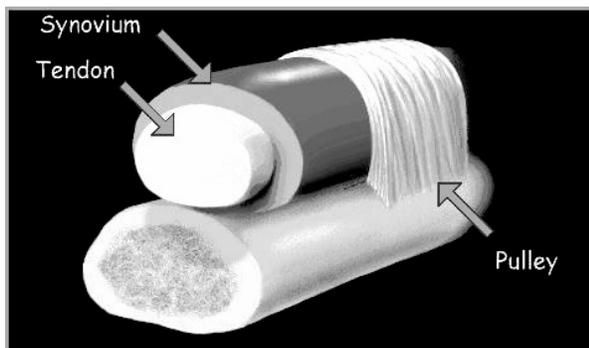
A triggering finger is one that “snaps” upon bending and/or straightening. The finger may at first be sore or swollen, without any noticeable snapping. Usually the soreness is at the base of the finger, but some people feel it more at the middle knuckle. In late stages, the finger may get stuck either in a flexed or an extended position, which is then termed a “locked” trigger finger.

## WHAT CAUSES THE PROBLEM?

Fingers bend and straighten by the action of muscles in the forearm pulling on cords, or tendons, that travel through the hand and down along the bones of the fingers. The tendons are held close against the bones by fibrous bands, or tunnels, called annular ligaments or “pulleys”.

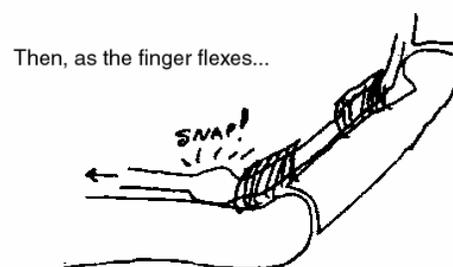
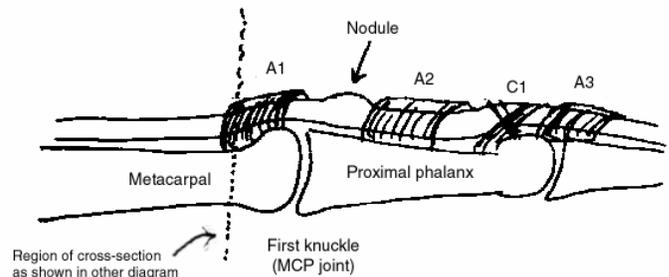


**Figure:** Tendons and pulleys (annular ligaments).



**Figure:** Cross-section of a tendon and pulley.

For unknown reasons, irritation of the tendon can produce a swelling or nodule between the A1 and A2 pulleys. This nodule then resists passing under the A1 pulley as the finger is flexed.



When the force is great enough, it slides under the pulley, causing the “snap” sensation. The same “hanging up” of the nodule happens with extension, causing a similar “snap”. The process tends to be self-irritating, like a vicious cycle, where the “snapping” causes more inflammation and swelling.

## WHO GETS TRIGGER FINGERS?

Triggering can happen at all ages, from less than 5 years of age to greater than 80. Sometimes triggering can follow a recent change in activities or work habits. Othertimes, it may follow an injury or surgery in the arm or hand. In the vast majority of cases, *there is, however, no clear reason for it to start.*

### **IS TRIGGERING MORE COMMON WITH SOME DISEASES?**

Triggering is more common with diabetes, rheumatoid arthritis, gout, and in people that have other tendon or connective tissue problems like carpal tunnel syndrome, rotator cuff tendinitis, or tennis elbow.

### **HOW ARE TRIGGER FINGERS TREATED?**

The goal is to interrupt the cycle of swelling and inflammation. Treatment options include medications by mouth, splinting, injections of cortisone, and surgical release.

Medications by mouth tend to not be helpful with the triggering, though they can help with the pain. Splinting keeps the finger straight (which is awkward and itself weakens the grip of the hand), and can eliminate the triggering in only about 30% of people, given six weeks of wear.

Injections of steroid (such as cortisone or a synthetic variant) around the pulley can stop the triggering in about 75-90% of people. Movement is not restricted with its use. If an injection is partially helpful, a second injection is tried.

For those that do not get relief from injections, surgical release is the next step. Through a small incision in the palm, often done with a local anesthesia, the pulley is split. This will allow the nodule to pass through without "catching" (see figure 2). The pulley then re-heals in its larger position. This procedure is done as an outpatient surgery with local anesthesia.

After surgery, the patient can move the fingers immediately, as no splinting is used. The stitches come out in 10-14 days. The skin is usually well-healed in 2 weeks, but some residual swelling and soreness can last 2-4 months.

**Figure:** Surgical trigger finger release (cross-section of finger showing bone, tendons, and pulley)

