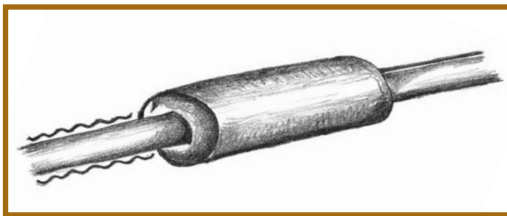


Trigger Finger

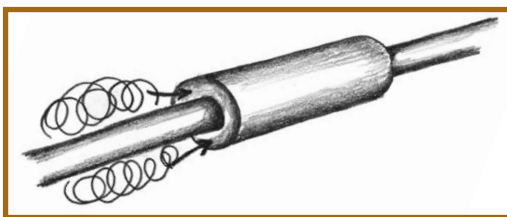
BROWN Endoscopic Trigger Release (BETR procedure)

Trigger finger (stenosing tenosynovitis) is a very common and often very painful condition that affects the thumb and fingers. Multiple fingers



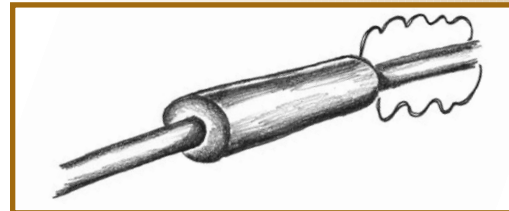
Tendon Tenosynovium allows for normal gliding

may be affected. The flexor tendons that bend the fingers pass through a series of pulleys comprising the tendon sheath. The problem is at the A1 pulley in the palm at the base of each finger. There's just enough room for the tendons to pass through this soda straw-sized tunnel with a thin covering of slippery gliding tissue called tenosynovium. The



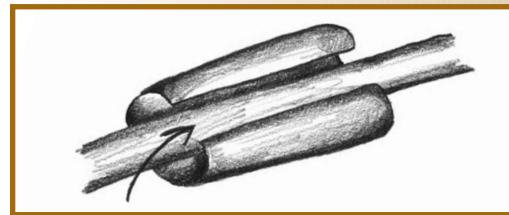
Tenosynovitis (inflamed) in diseased state

tenosynovium may become swollen in response to overuse, injury, arthritis, other diseases or for no particular reason at all. When this occurs, there



The tendon and tenosynovium squeezes through pulley and "trigger"

is not enough room for the tendon to glide freely. The bulky lump of tenosynovium is squeezed through the pulley and pops out on the other side. The pulley itself becomes thick-



Divided pulley ("Trigger release")

ened and hardened with cartilage over time. This "triggering" effect when severe can cause popping of the finger or the finger may become locked down into the palm. Pain occurs over the pulley in the palm or over the top (dorsum) of the finger. The hand may feel swollen all over and ache. Untreated, the pinched tendon's blood supply can be compromised and the tendon can rupture. This often requires a two-stage tendon reconstruction and several

months of rehabilitation.

The condition is easily treated by simply dividing the pulley allowing room for the tendon

to glide freely. This is called a "trigger finger release."

An "open" trigger finger release requires an incision in the palm,

which typically becomes quite painful as it heals requiring therapy perhaps for several weeks.

Dr. Brown saw the need for a minimally invasive approach and developed the BROWN ENDOSCOPIC TRIGGER RELEASE (BETR). The endoscope is positioned over the pulley utilizing two tiny three millimeter incisions. The pulley is divided while viewing the inside of the hand on a video monitor. Steri-strips (no stitches) and a light dressing is applied. A long acting anesthetic often makes the procedure virtually pain free. After seven days (keeping

Trigger Finger

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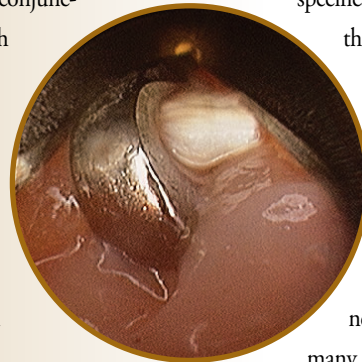


Endoscopic view of the A-1 pulley

the wound clean and dry) the steri-strips may be removed at home and there are no restrictions. The need for postoperative therapy is rare. The outpatient procedure is performed in conjunction with

other hand procedures such as the BROWN procedure endoscopic carpal tunnel release.

We have found the BETR to be far superior to open techniques as the postoperative pain is markedly decreased and the recovery period is quite short, a week compared to several weeks. We have successfully been performing the BETR since 1995 without any significant complications, helping people avoid a lengthy recovery and allowing them to get back to their daily activities.



A-1 pulley being divided

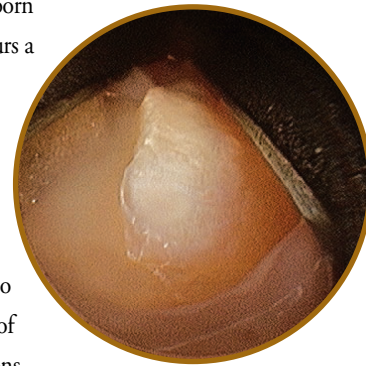
Normal post-operative swelling after hand surgery can give rise to trigger finger. **DE QUERVAIN'S DISEASE** is analogous to trigger finger but it occurs at the first dorsal compartment at the wrist. This type of stenosing tenosynovitis can cause severe pain limiting wrist motion, specifically ulnar deviation and

thumb motion. It may occur from overuse, injury or diseases which cause inflammation of synovium. De Quervain's is very common in mothers who carry a

newborn many hours a day holding the wrist flexed.

Early De Quervain's may respond to a brief course of steroidal or nonsteroidal medication. We do not recommend steroid injection as this can cause tendon rupture, injury to the radial sensory nerve, depigmentation of the skin or fat loss.

Anti-inflammatory medications and steroid injections for De Quervain's and trigger finger typically are only temporarily effective except in early cases. The condition is very easily treated with an outpatient De Quervain's release through a tiny wrist incision that releases the tendon compartment instantly allowing free gliding of the tendons. The surgeon must be experienced however. There is typically an accessory compartment present which must also be released otherwise the symptoms will persist. Untreated, tendon rupture can occur.



Divided A-1 pulley