

PALMARIS LONGUS SYNDROME

The palmaris longus muscle is a slender, fusiform muscle, found just medial of the flexor carpi radialis muscle. It originates from the humeral medial epicondyle by the common flexor tendon and from the antebrachial fascia. Its tendon lies between the flexor carpi radialis and the flexor carpi ulnaris. The tendon passes over the upper part of the flexor retinaculum. It inserts into the central part of the flexor retinaculum and the lower part of the palmar aponeurosis.

The palmaris longus muscle is *vestigial*, and is slowly disappearing from the human population. Twenty-four to twenty-six percent of the population lack one or both tendons (one from each arm). It has become *vestigial* because it serves almost no purpose. It is a very weak flexor, normally providing no substantial flexing force that would inhibit movement in the wrist in any direction. Its counterpart, in the calf, is the plantaris muscle. Apparently, as these muscles and tendons age, they shorten, may become calcific and brittle. In the lower leg, this often leads to a sudden breaking of the tendon when it is put under excessive pressure (as when a middle aged man decides he should do some “wind sprints”). In the forearm, the shortening leads to the *Palmaris Longus Syndrome*.

The *Palmaris Longus Syndrome* expresses itself as a feeling of “pressure” or pain in the palm of the hand, and a slight involuntary flexion tension in the wrist and fingers. These sensations can apparently be very disturbing for individuals who depend on easy dexterity of their fingers (like pianists or guitarists). This syndrome is a bit exceptional in that little has been written relative to its etiology, symptomology, and treatment.

In the case of the *Palmaris Longus Syndrome*, a DSR survey will demonstrate a typical long narrow pattern of relative high skin resistance along the anterior surface of the forearm. Usually extending from just distal to the wrist and finger muscle mass to just inside of the proximal margin of the carpal tunnel aponeurosis.

Treatment

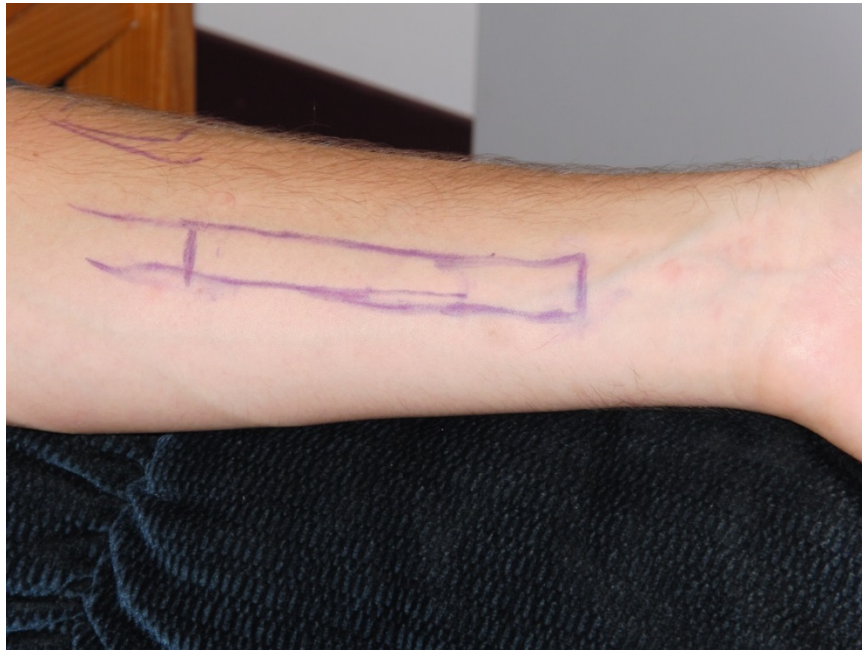
Treatment of the *Palmaris Longus Syndrome* centers on eliminating any inflammation and adhesions that are present and additionally decreasing any calcification that may be present in or on the tendon.

Application:

- Preset an ultrasound unit to deliver a 1 or 3.3 MHz pulsed waveform, at a pulsed rate of 50%, at an amplitude of 2.0 W/cm². Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.
- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Twenty minutes after the first ultrasound, preset the ultrasound unit to once again deliver a 1 or 3.3 MHz pulsed waveform (at a pulsed rate of 50%), at an amplitude of 2.0 W/cm². Apply the ultrasound to the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.
- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Apply cold laser (with or without simultaneous electrical stimulation provided by the laser applicator) to the inflamed zone for approximately six minutes. This is performed to “cool off” the manipulated

zone by effectively halting the production of prostaglandins (or facilitating enzyme destruction of **all** inflammatory being produced) by the stressed tissues.

Response to treatment is generally rapid, sometimes requiring only one or two treatments to affect a complete cessation of symptomology.



**The high skin resistance pattern commonly
associated with the Palmaris Longus Syndrome**

Trigger Points

The following trigger point formations may, singly or in combination, imitate or contribute to the pain associated with the *Palmaris Longus Syndrome*: Infraspinatus, Latissimus dorsi (upper portion), Serratus posterior superior, Serratus anterior, Subclavius, Pectoralis major (sternal portion), Pectoralis minor, Medial triceps (deep fibers), Palmaris longus, Flexor carpi radialis, Flexor digitorum sublimis (radial head), Flexor digitorum sublimis (humeral head), and First dorsal interosseus.