# Symptom Relief:

*Reliable treatment for complaints of bilateral wrist, thumb and arm pain, and hand weakness, in EDS patients: The Ericson Protocol*


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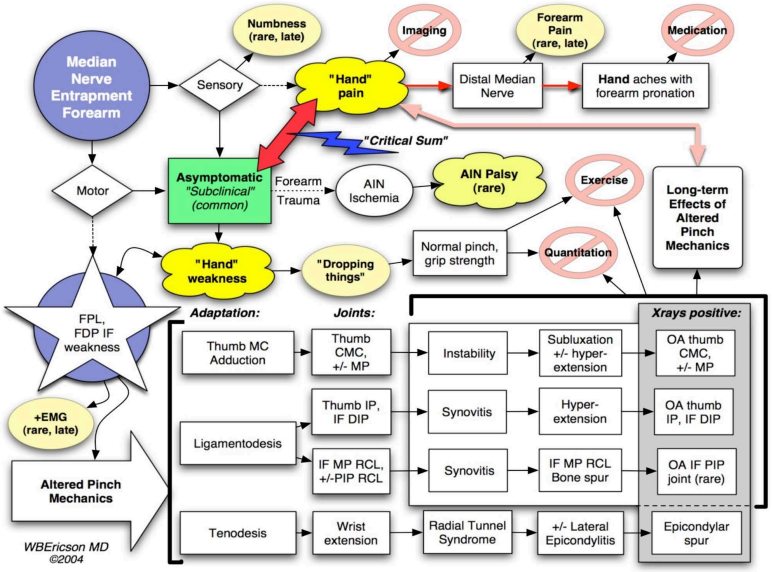
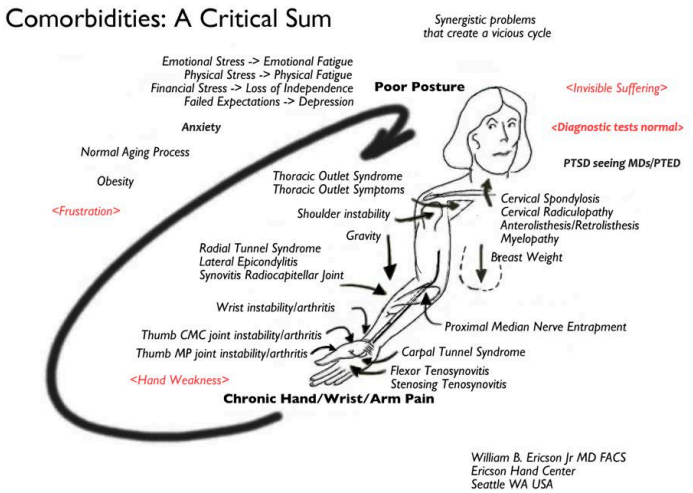
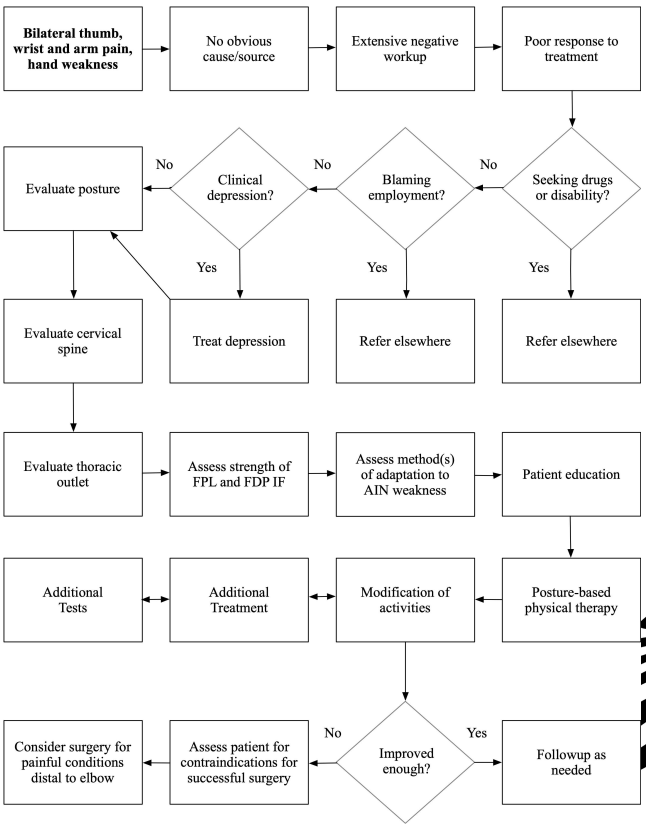
**Conflict of Interest Statement:** No conflict of interest




**Background:** Patients with EDS typically have upper extremity complaints of wrist pain, thumb pain, arm pain and hand weakness. Extensive workups by specialists including orthopedic surgeons, neurologists and rheumatologists tend to result in normal diagnostic tests, and these complaints are often resistant to standard treatment protocols, and eventually the entire arm aches at times. The author has developed a protocol for evaluating and treating these patients that involves a multidisciplinary approach, with a combination of 1) posture-based physical therapy, 2) evaluation of the cervical spine and thoracic outlet for possible contributions of referred pain in the arms, and 3) surgical stabilization of loose, painful joints and tendons, and nerve decompression surgery. This approach results in substantial pain relief and increased hand/arm function, and surgery can be performed safely in an outpatient setting.

1) It is the current hypothesis of the author that loose jointed patients have soft nerves, which are likely more susceptible to compression and tension in the extremities as the nerves pass through known tunnels; this would be a previously unrecognized type of peripheral neuropathy. A universal complaint for EDS patients is hand weakness, and on detailed examination, the weakness is specifically of the muscles innervated by the Anterior Interosseous Nerve: the Flexor Pollicis Longus (FPL) and the Flexor Digitorum Profundus of the Index Finger (FDP IF). The degree of weakness has been observed to be proportional to the patient's degree of joint laxity, and all EDS patients have profound weakness of these muscles when examined according to the Blix Curve. This weakness is the result of a gradient of pressure on the median nerve at the elbow as it pierces the pronator teres muscle, and is immediately and permanently correctable with nerve decompression surgery at the elbow through a small incision with a rapid recovery.

2) The weakness of the FPL and FDP IF is painless, and causes a sense of loss of dexterity, and difficulty opening food storage devices and prescription pill bottles. There are several ways patients can adapt to this weakness, and the adaptations occur without conscious effort or control. Hypermobile patients who adapt by wrist extension develop aching pain in the proximal lateral forearm/elbow (tennis elbow in a non-tennis player) that is often treated as a radial nerve problem but is actually a tendinosis of the ECRB fascia. Hypermobile patients who adapt by lateral pinching on their thumb develop progressive instability of the thumb CMC joint, followed by subluxation of the joint, and eventually arthritis. These patients also are at risk for stretching the scapholunate ligament, which causes dynamic pseudo-dissociative carpal instability. This results in dorsal wrist pain related to abnormal motion of the wrist bones under load. These problems respond well to surgery, even in EDS patients, and not to other treatments.