

Cubital Tunnel Release – Submuscular

Reproduced with permission – The Hand Rehabilitation Center of Indiana

Dr. Bienz

Indications

Anterior submuscular transposition of the ulnar nerve is indicated for patients suffering from persistent cubital tunnel syndrome. One advantage of this procedure is that the nerve is placed in a well vascularized muscular bed.

Surgical Procedure, DOS: _____

The origins of the superficial head of the flexor carpi ulnaris, flexor carpi radialis, palmaris longus, pronator teres, and a portion of the flexor digitorum superficialis are resected from the medial epicondyle. The ulnar nerve is released and transferred from the area of the cubital tunnel to a position anterior to the medial epicondyle. The ulnar nerve is then placed deep to those muscles in a parallel alignment to the median nerve. The flexor pronator mass is then reapproximated to its origin along the medial epicondyle.

Postoperative Rehabilitation

10-14 Days Postop, Begin Date: _____

The bulky dressing is removed. Edema control is initiated consisting of light compressive dressing, a 3” elastic bandage, or 4” elastic stockinette (i.e. Dema™ Grip or Jobst™).

Within 48 hours following suture removal, scar mobilization techniques may be initiated including scar massage with lotion, along with Elastomer™, Rolyn 50/50™, or Otoform K™.

A long arm splint is fitted to wear between exercise sessions and at night. The elbow is positioned in 90° of flexion, the forearm pronated, and the wrist at neutral to slight flexion. (Dr. Bienz addendum – Elbow at 90° flexion, forearm at 50° pronation, and wrist at 20° flexion).

AROM exercises may be initiated to the elbow with the forearm pronated and elbow in slight flexion. The forearm is pronated to avoid undue stress on the flexor pronator muscle group.

3 Weeks Postop, Begin Date: _____

Unrestricted AROM exercises are initiated to the forearm and wrist in conjunction with the AROM to the elbow. AROM exercises are performed 6 times a day for 10 minute sessions. It is important to encourage elbow extension with not only the forearm in a pronated and neutral position, but in supination as well.

5 Weeks Postop, Begin Date: _____

Active-assistive ROM exercises may be initiated to the elbow, forearm and wrist.

6 Weeks Postop, Begin Date: _____

PROM exercises are initiated to the elbow, forearm and wrist. Patients demonstrating significant limitation in achieving full active and passive extension of the elbow are encouraged to begin passive extension by 5 weeks with the surgeon's approval.

Progressive strengthening is initiated. To gradually begin strengthening with hand weights beginning with 1 pound and progressing to 4 pounds should be sufficient for recapturing upper extremity strength. To perform Nirschl exercises and equally strengthen all muscle groups is recommended.

8 Weeks Postop, Begin Date: _____

Patients returning to work with heavy demands on the upper extremity are encouraged to participate in a work conditioning program. This provides the opportunity to progressively recapture flexibility, endurance and muscle strength required for the demands of the individual job.

Considerations

If it is difficult to achieve full passive extension by 6 weeks postoperatively, a dynamic or static progressive extension splint should be initiated for the elbow.

It is important to emphasize scar mobilization techniques. It is not uncommon to have a dense scar that may be painful.