

Grasping Life With the Greatest Grip

► Studies abound on the relationship between grip strength as a predictor of function.¹⁻³ Sinh showed that death can be predicted in five years if the grip is below 31 pounds for women and 48 for men.⁴

Specific strength training programs for grip can be effective, but Keogh showed that a non-specific upper-limb strength training program improves hand strength. In Keogh's program, a 1-repetition maximum strength training program for the biceps and wrist flexors/extensors was performed.⁵

One pathology that affects grip is lateral epicondylitis. Smidt showed that pain-free grip strength is highly associated with measures of functional disability in people with lateral epicondylitis.⁶ An initial measure of grip strength is a nice way to quantify strength in patients and mark improvement over time.

Several studies have been published on the treatment of lateral epicondylitis. *Manipulation of the Wrist for the Management of Lateral Epicondylitis*, a randomized study done by Struijs, showed that manipulation of the wrist appeared to be more effective than ultrasound, transverse friction massage and strengthening and stretching exercises.

The treatment used in this study took 20 minutes and consisted of manipulation done 15 times alternated by forced passive extension or extension against resistance.⁷ Published in the *Annals of Internal Medicine* in December 2005, Wong studied the treatment of lateral epicondylitis with Botulinum toxin. It was found that Botox may decrease pain, but may be associated with digit paresis and weakness in finger extension.⁸

Bisset compared mobilization with movement and exercise, corticosteroid injections or took a "wait and see" approach for tennis elbow in a randomized controlled trial.⁹

Results showed that steroid injection had better results at six weeks but that physical therapy had better results in the long-term. Vincenzino in 2003 showed superior results of manual treatment.¹⁰ Treatment consisted of a Mulligan slow-lateral glide with pain-free grip (SLGWPFPG) strength and the following exercises:

- Bench and shoulder press;
- Radial and ulnar deviation;
- Rows, triceps, biceps;
- Pronation, supination, wrist flexion, extension;
- Putty.

In a randomized controlled trial conducted in 2008 by Nourbakhsh, an alternate approach to treating lateral epicondylitis was explored. The results showed that six sessions of low-frequency electrical stimulation applied manually over palpated tender points improved grip strength, pain and function.¹¹

With evidence to help establish safe and effective interventions, we can help patients grab life with all the strength they can muster to live longer and function more independently. ■

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