Lateral epicondylitis, or tennis elbow as it is commonly referred to, is a painful musculoskeletal condition that often limits strength and function.1 Moreover, lateral epicondylitis is one of the most prevalent disorders in the upper extremity affecting a wide range of the individuals from professional athletes to the general working population.2 The pathology is characteristically associated to pain in the region of the lateral epicondyle and it’s main provocation is linked to resisted use of the extensor musculature of the wrist.2

I wanted to investigate 2 common conservative intervention strategies are used to supplement a plan of care and reduce symptoms and deficits secondary to the very high prevalence of the condition. But I want to emphasize the idea of supplemental. As Mike discussed and stressed in his PowerPoint lecture, the mechanism of injury and the shear identification of the causation of the pathology is critical to successful outcome for your patient.3 As a physical therapist, you need to be able to investigate and discover the mechanics and/or factors that cause the symptoms and address these elements in order to truly help your patient. Until you identify the issues of the mechanism of injury, you have not really helped them.3 Thus, after identifying the mechanism of injury related to the lateral epicondylitis, what are effective interventions that can be used to optimize patient outcomes?

Firstly, I wanted to look at mobilization with movement (MWM). We had gone over this technique in our manual techniques class this past summer, and I wanted to investigate its efficacy in conservative treatment for tennis elbow. Many critically appraised studies have explored the efficacy of the MWM technique on pain and strength for adults with chronic lateral epicondylitis.4,5,6 A study by Vincenzino et al reported 58% improvement in pain-free grip strength during the MWM technique, a 46% improvement in pain-free grip strength immediately after the technique, and a 10% improvement in pressure-pain threshold immediately after the technique.4 To that end, Abbott et al demonstrated that during the MWM, 92% of subjects were able to perform a previously painful movement pain-free.5Furthermore, a study by Paungmali et al, revealed that MWM produced hypoalgesic improvements during grip strength examination and pressure pain-threshold testing. More interestingly, this same study reported that MWM produced physiological sympathoexcitation (which is a change in heart rate, blood pressure and cutaneous sudomotor and vasomotor function).6 Therefore, there is great amount of strong evidence that suggests MWM is an effective treatment strategy for individuals affected by lateral epicondylitis.

Forearm counterforce bracing is another intervention strategy used to manage lateral epicondylitis.7 The protective theory surrounding a counterforce brace suggests that the support band will reduce force through ‘gentle compression’ at the muscle tendon unit of the extensor carpi radialis brevis origin, therefore, decreases muscle expansion at the time of contraction and/or reduces ‘abusive’ tendon movement.7 In a study by Garg et al, forearm counterforce strap was compared to a wrist extension split for the treatment of lateral epicondylitis.8 Each of the interventions demonstrated improvements in the outcome measures: Mayo Elbow Performance and American Shoulder and Elbow Society Elbow Assessment Form.8 However, the wrist extension splint produces a greater degree of pain relief than the forearm strap.8 In another study, the forearm counterforce brace improved wrist joint proprioception and increases the pain threshold during passive stretching of the wrist extensors in subjects with tennis elbow.9

 After review of the literature above, these two treatment options should be considered for the clinician treating an individual with lateral epicondylitis. I’d like to reiterate that they are treatment options that should be used in conjunction with a thorough biomechanical and/or mechanical investigation (as well as other treatments i.e. strengthening, stretching, etc.) in order to optimally treat the current pathology, but also to prevent the recurrent nature of this specific injury.

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