

# ELECTRO NEUROMUSCULAR FACILITATOR FOR THE TREATMENT OF REPETITIVE STRAIN INJURY: A PILOT STUDY.

Gonçalves F., B.Sc. PT, M.Sc. Rehabilitation, Moore T. PhD (ABD), Oucharek B., B.Sc. (HK), Borys T., B.Sc., PhD, MD  
MMTR Neuromuscular Research Institute, Guelph, ON

## Introduction

Our objective was to identify the efficacy of the MMTR/ENF protocol for patients suffering from pain in the forearm, wrist and hand caused by repetitive strain injury (RSI). The MMTR/ENF protocol provides ENF application, Trigger point (TP) release and an exercise protocol focusing on the postural muscles of the neck, scapular and upper back regions; therefore the sites of pain are indirectly addressed via their innervations at the nerve root level.

## Methods

12 females (41.5±9.9) and 5 males (35±8.7), followed the MMTR /ENF protocol for a minimum of 6 and maximum of 13 sessions within 1 month. Subjects were excluded from this study if they presented with severe obesity (BMI > 34.9) and/or pregnancy. All subjects followed the same protocol.

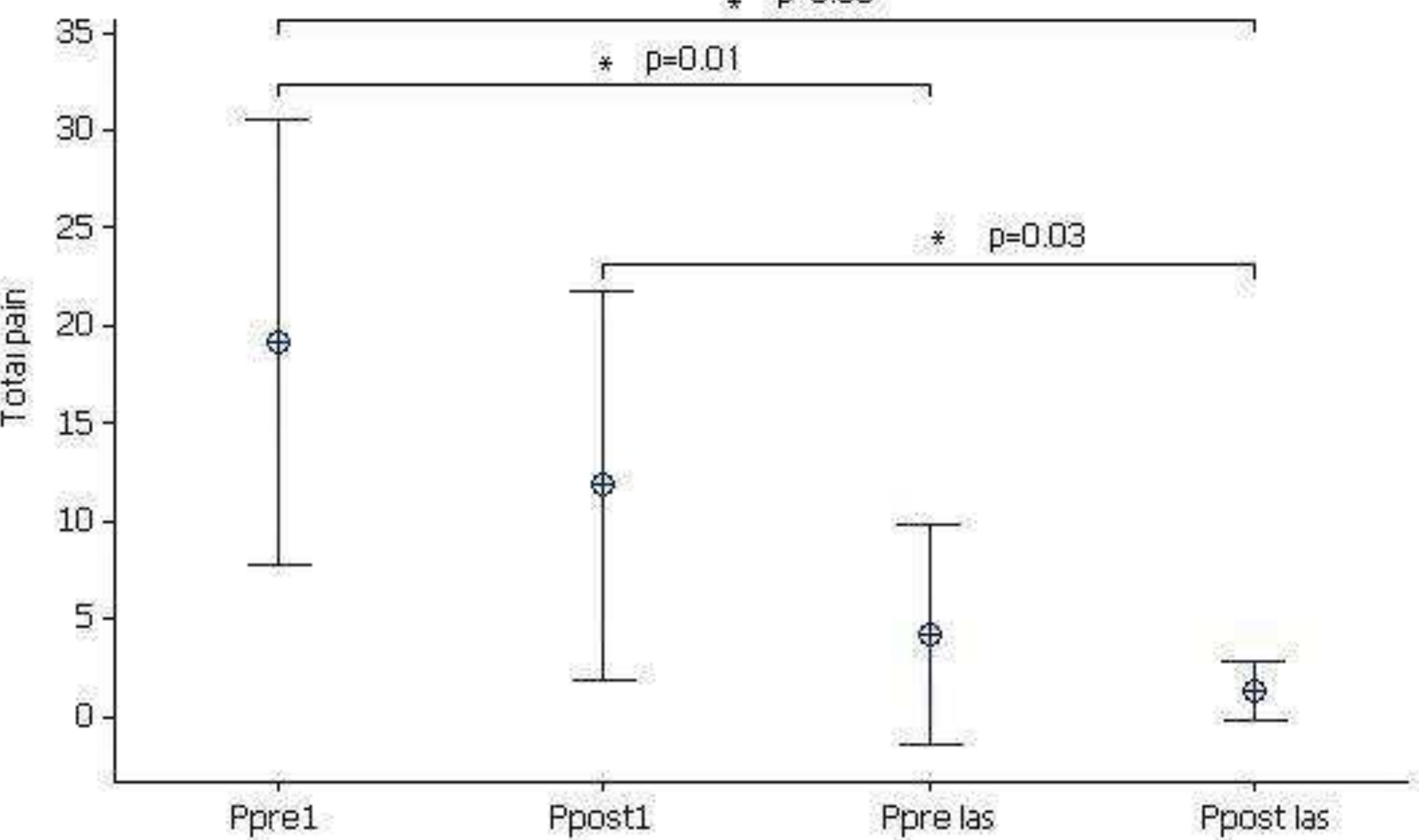


## Results

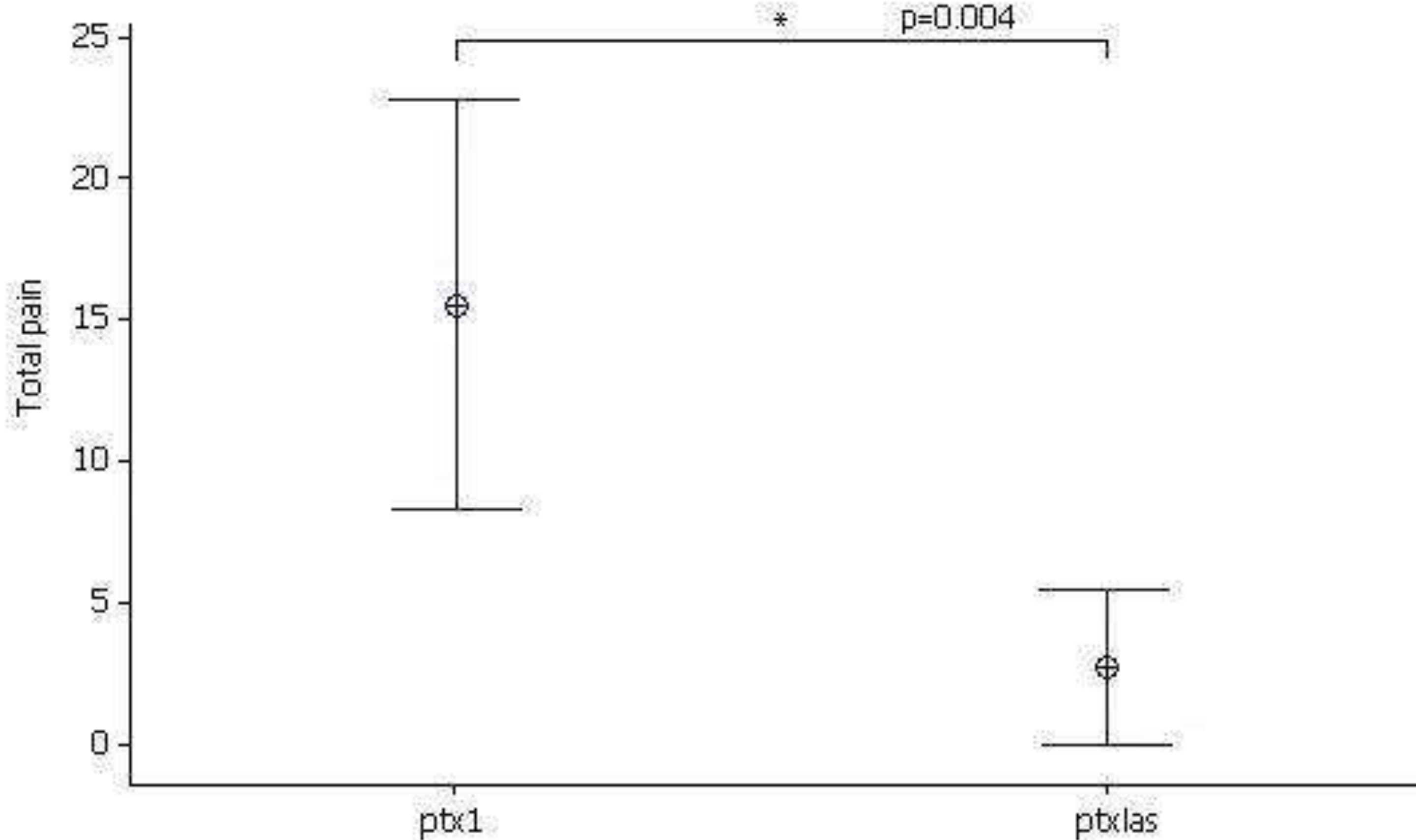
All data was analyzed using One-way ANOVA. Pain levels (P) were compared prior to (pre) and after (post) the first (1) and last (las) visits. We further analyzed overall data for the first (PTx1) and last (PTxlas) visits. Grip strength was measured prior to the first treatment (GTx1) and after the last visit (GTxlas). There was a significant difference ( $p < 0.05$ ) for pain levels between Ppre1 and Ppre las; Ppre1 and Ppost las; and Ppost1 and Ppost las (Graph 1). Results were also statistically significant for PTx1 and PTxlas (Graph 2). No significant difference was found for GTx1 and GTxlas ( $p = 0.12$ ), however, the raw data for grip strength showed that 14 of 17 subjects did have increased grip strength.

## Conclusion

Preliminary data show that perceived pain levels for RSI decreased after treatment following the MMTR/ENF protocol for one month. This improvement leads us to believe that the MMTR/ENF protocol should be considered for the treatment and prevention of upper extremity RSI.



Graph 1: Pain Levels Prior to and After First and Last Visits



Graph 2: Pain Level Comparison for First and Last Visits