The Effects of Graston Technique® Treatment Times on Sprint Performance in Collegiate Wrestlers

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Abstract

Objective: The aim of this study was to provide insight on how treatment times of 5 minutes and 8 minutes of GT® affect a 30-yard sprint performance.

Methods: 15 healthy college-aged male wrestlers received two treatments (5 minute and 8 minute) of Graston Technique® separated by approximately 48 hours. After a 5 minute bike warm-up, participants received GT® treatment on both quadriceps muscles. Participants completed a 10 minute active rest followed by a 30 second standing quadriceps stretch, 30 straight leg raises, and quadriceps stretch again. Participants then sprinted 3 30-yard sprint tests. Results: Significance was found between the baseline (4.63 ± 0.18 seconds) and 5 minute GT® treatment (4.53 ± 0.19 seconds) sprint times; t(14)=3.34, p = 0.005. No significance was found between the baseline and the 8 minute GT® treatment (4.57 ± 0.19 seconds) sprint times; t(14)=1.49, p = 0.159. Conclusions: Shorter GT® treatments provide a warm-up for the tissue allowing for better tissue function.

Results

The sprint times for the 5 minute GT® treatment (4.53 ± 0.18 seconds) were not significantly faster than the sprint times following the 8 minute GT® (4.57 ± 0.19 seconds) when compared to baseline sprint times (4.63 ± 0.18 seconds). There was a significant difference between baseline and 5 minute sprint times in healthy participants; t(14)=3.34, p = 0.005. There was no significant difference between baseline and 8 minute sprint times; t(14)=1.49, p = 0.159.

Figure 1. Graston Technique® Instruments used

Figure 2. Mean and Standard Deviation of Sprint Times

Conclusions and Clinical Significance

The primary conclusion drawn from the results of this study indicate that GT® can clinically improve sprint performance after receiving two treatments in healthy people. The first treatment initiates the healing process and starts breaking down adhesions while the second treatment can focus on tissue dysfunction. A 5 minute GT® treatment can act as a warm-up causing an increase in blood flow. However, a longer treatment time starts breaking down the tissue to rebuild and create stronger tissue.

Further Research

• Future research should be conducted to examine the effects of GT® treatments over an extended period of time and how it affects performance.

Acknowledgements

We would like to extend a thank you to NDSU and the College of Human Development and Education as well as the MS Athletic Training Education Program for funding this research.

References