Joint Event
42nd World Cancer Conference
12th World congress on
Addictive Disorders & Addiction Therapy
13th International Conference & Exhibition on
Physiotherapy, Physical Rehabilitation and Sports Medicine
July 17-18, 2023
Zurich, Switzerland

Acute effects of thoracolumbar fascia release techniques on range of motion, proprioception and muscular endurance in healthy young adults

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Purpose: This study investigates the acute effects of Graston and myofascial release on Thoraco-Lumbar Fascia (TLF) on lumbar Range of Motion (ROM), lumbar and cervical proprioception and trunk muscle endurance in healthy young adults.

Method: Twenty-four healthy young individuals were included in the study. Individuals were randomly divided into two groups as Graston Technique (GT) (n=12) and Myo-Fascial Release (MFR) (n=12). GT group received a fascial treatment with a graston instrument and the MFR group (n=12) received manual myofascial treatment. Both techniques were applied for 10 minutes and as a single session. Lumbar ROM (goniometer), lumbar proprioception (digital inclinometer), cervical proprioception (CROM device) and trunk muscle endurance (with McGill Endurance Test) were evaluated before and after treatment.

Results: Age, gender and body mass index of individuals in both groups were similar ($p>0.05$). In both GT and MFR groups, an increase in ROM in the flexion direction ($p<0.05$) and a decrease in the angle of deviation in proprioception in the flexion direction were determined ($p<0.05$). Neither technique had a significant effect on cervical proprioception and trunk muscle endurance ($p>0.05$). In addition, no difference was found between the effectiveness of Graston and myofascial release ($p>0.05$).

Conclusion: This study showed that Graston and myofascial release applied to TLF in healthy young adults effectively improve lumbar ROM and proprioception in the acute period. Considering these results, both Graston and myofascial release can be used to provide elasticity of TLF and improve proprioceptive return.