

The Second World Congress of Sports Physical Therapy

**Optimal Loading in Sport**  
 Friday 6th and Saturday 7th October 2017  
 at Titanic, Belfast  
 EARLY BIRD RATES APPLY UNTIL 31.5.17

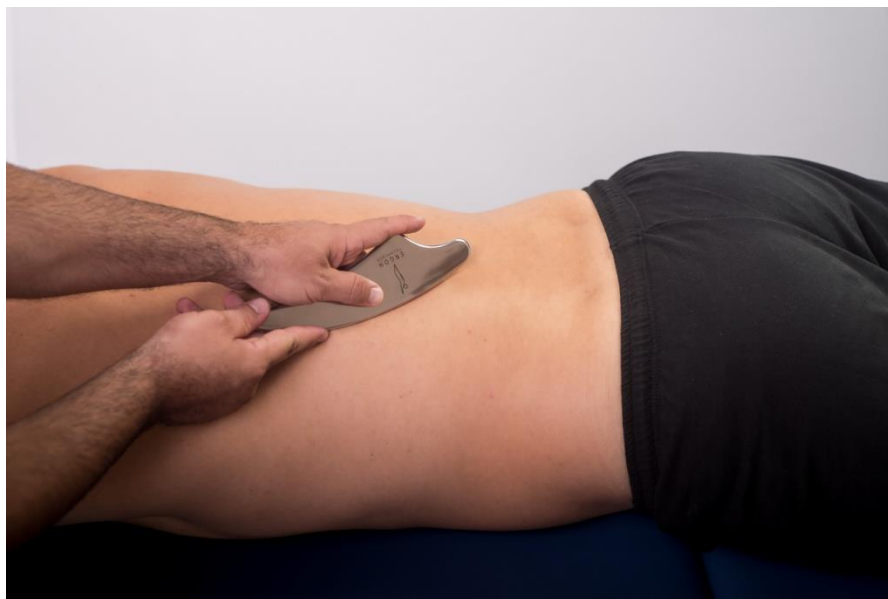
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## Treatment of the trunk and lower extremities with Ergon® IASTM Technique can increase hamstrings flexibility in amateur athletes: a randomized control study

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**Introduction and Aims.** The superficial back line (SBL) covers and controls the entire posterior surface of the body. It is formed mainly by the erector spinae muscles and the biceps femoris bonded through the sacrotuberous ligament and lumbar fascia.<sup>1</sup> According to Myers myofascial restrictions to a given point of the SBL can affect total or partial flexibility of the entire chain leading to pathological disorders such as increased lordosis and hamstrings shortness.<sup>2</sup> Based on the above, this study examined the acute effects of Ergon® IASTM Therapy (EIT)<sup>3</sup> application on the upper part and lower of the SBL on hamstrings flexibility.

**Methods.** 60 amateur athletes (college students) were recruited from the Technological Educational Institute of Western Greece, who had hamstring flexibility deficiencies. The participants were randomly divided into three groups and received either a single, 10-minute myofascial EIT treatment of the upper part-trunk- (n=20) and lower part-lower limbs- (n=20) of the SBL or served as control group (n=20). Hamstrings' flexibility was measured both before and after the therapy with a) the Sit and Reach (SR) test, b) the passive straight leg raise (SLR) test and c) the Fingertip-to-Floor (FTF) Test. A one-way ANOVA was used to determine if there were differences in flexibility gains between the pre and post measurements between groups.

**Results.** Statistically significant differences ( $P < 0.05$ ) in flexibility benefits were found for the groups receiving Ergon® IASTM Therapy, compared with the control group. More specifically, SR, SLR and FTF values gains for both subgroups that received treatment of the upper (trunk) and lower (lower extremities) part of the SBL were significantly higher ( $p = 0.000$ , respectively) than those of the control group. No significant differences were identified for the SR, SLR, and FTF values gains between the treatment groups ( $P > 0.05$ ).

**Conclusion.** The results of the present study suggest that Ergon® IASTM Therapy application on the trunk or the lower extremities is an effective treatment for improving the hamstrings flexibility in amateur athletes with hamstrings shortness. Implementation and evaluation of Ergon® IASTM technique on more randomized control studies is necessary for securing firm conclusions regarding its effectiveness in hamstrings injuries prevention and rehabilitation

## References.

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2. Myers TW. Anatomy trains: myofascial meridians for manual and movement therapists. 3rd ed. New York: Churchill Livingstone; 2014
3. Fousekis, K., Kounavi, E., Doriadis, S., Mylonas, K., & Kallistratos, E. (2016). The Effectiveness of Instrument-assisted Soft Tissue Mobilization Technique (Ergon Technique), Cupping and Ischaemic Pressure Techniques in the Treatment of Amateur Athletes' Myofascial Trigger Points. *J Nov Physiother S*, 3, 2.

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