ABSTRACT

Background: Foam Rolling (FR) has steadily gained in popularity as an intervention to increase range of motion (ROM) and reduce pain. It is believed that FR can remove restrictions due to fascial adhesions, thus improving ROM. FR has been proposed as a means to increase ITB length as a means to achieve these outcomes. Previous research has focused on the effects of FR over both muscle and fascia tissue together. However, no studies have examined the effects of FR over fascial tissue not containing muscle.

Purpose: The purpose of this study was to compare the acute effect of a single bout of foam rolling (FR) over the Iliotibial Band (ITB) compared to FR over the gluteal muscle group on hip adduction passive range of motion (PROM).

Methods: Twenty-seven participants were recruited for the study. Each participant performed three sessions: FR over tissue devoid of muscle, the ITB (PFR), FR over contractile tissue, the gluteal muscles (AFR), and a session without FR (control) in a randomized order. Hip adduction PROM was measured in a pre-post manner for each session.

Results: Results of the repeated measures ANOVA showed a significant interaction across session and time ($F_{(2, 25)} = 25.202, p < 0.001$, $\eta^2 = 0.502$, $1 - \beta = 1.000$). Post-hoc analysis showed the AFR post-test measure was significantly different from both control ($p < 0.001$) and PFR counterparts ($p < 0.001$). FR over the gluteal muscle group lead to a 14.8% improvement in hip adduction ROM, with PFR only a 2% improvement.

Conclusion: A single bout of FR over a myofascial group appears to increase PROM in healthy young adults, whereas FR over the ITB itself (primarily fascial tissue) does not. This suggests the conventional theory behind FR may need to be reevaluated.

Level of Evidence: Level 1B, laboratory study, repeated measures design

Key Words: Fascia, foam rolling, iliotibial band, Ober’s Test, range of motion

1 Beleura Health Solutions, Mornington, Victoria, Australia
2 Department of Kinesiology, Coastal Carolina University, Conway, South Carolina, USA

Conflict of Interest: The authors have no conflicts of interest to declare.

CORRESPONDING AUTHOR
MacGregor Hall
Beleura Health Solutions
945 Napean Hwy
Mornington, Victoria, 3931 Australia
Tel: 614-68-995-028
Fax: 613-5976-2599
E-mail: macatcoastal@gmail.com

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