

Immediate effects of self-myofascial release on latent trigger point sensitivity: a randomized, placebo-controlled study

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BACKGROUND Latent myofascial trigger points (MTrP) are suggested to provoke impairments in muscle function and tend to occur in both patients and healthy subjects. As they represent a risk factor for the development of myofascial pain syndromes, prompt treatment is advisable also in pain-free conditions. A multitude of therapeutic modalities has been proposed. Besides acupuncture and manual ischemic compression, foam rollers are used for treatment (self-myofascial release). However, the efficacy and the optimal protocol of this method have not been evaluated. The purpose of the present study therefore was to investigate the short-term effects of self-myofascial release on latent MTrP sensitivity.

METHODS According to sample size calculations, 48 healthy, pain-free subjects (26.4 ± 6 yrs, 18 men) with latent MTrP in the lateral gastrocnemius muscle were included. One week prior to interventions, all participants completed a familiarization session with the foam roller. They were randomly allocated to three groups: (1) static compression of the most sensitive MTrP using a foam roll, (2) slow but dynamic foam rolling of the gastrocnemius and (3) placebo laser acupuncture of the gastrocnemius. Treatment duration in each group was 90 seconds. Pressure pain threshold (PPT) of the most sensitive MTrP was assessed using a handheld algometer prior and post intervention.

RESULTS A repeated measures analysis of variance (3×2) did not yield indications for between group differences ($p > .05$) but for a time effect. While the other disposed treatments did not change MTrP sensitivity ($p > .05$), static compression of MTrP increased PPT (2.6 ± 0.8 to 3.0 ± 1.1 ; $p < .05$).

CONCLUSION Static self-myofascial release using a foam roller represents an alternative to reduce pressure pain of latent MTrP. Additional research should be conducted to extend these findings on patients with myofascial pain syndromes.