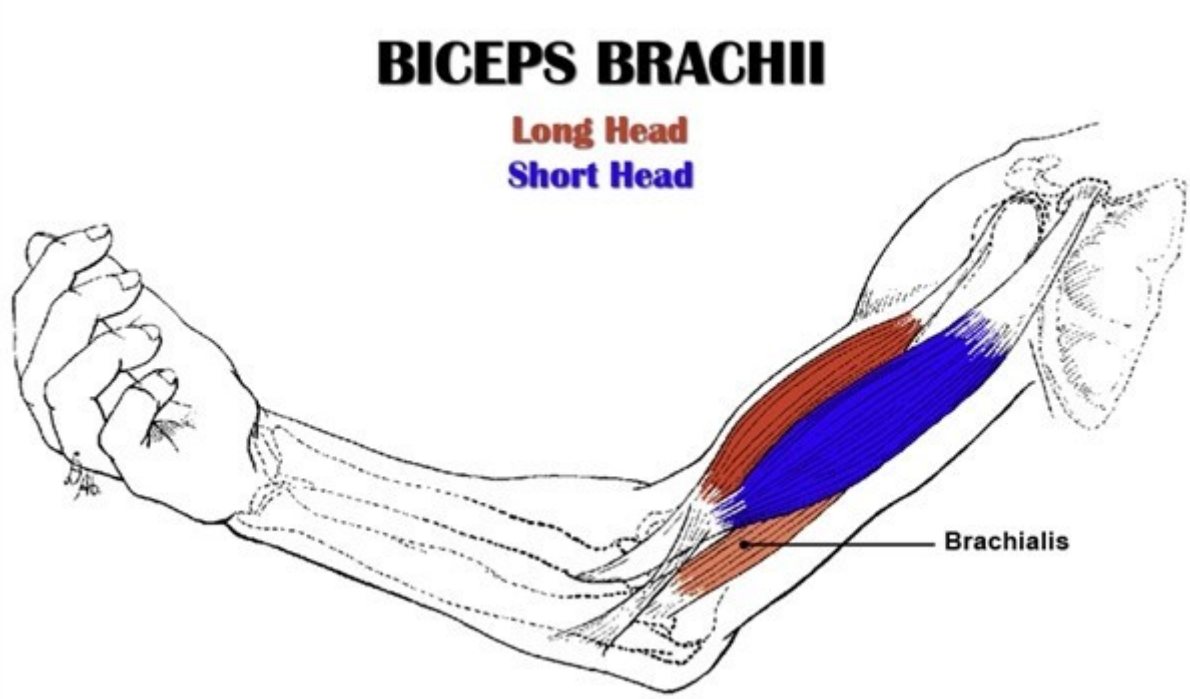
Medical PEMF Studies

PAIN

Effects of pulsed electromagnetic field therapy on delayed-onset muscle soreness in biceps brachii.



1. Phys Ther Sport. 2015 Feb;16(1):34-9. doi: 10.1016/j.ptsp.2014.02.006. Epub 2014 Mar 7.

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Medical PEMF Studies

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OBJECTIVE: to compare the effects of pulsed electromagnetic field (PEMF) therapy and sham treatment on DOMS-related variables in elbow flexors at 24, 48 and 72 h after delayed onset muscle soreness (DOMS) induction exercise.

DESIGN: randomized, double-blind, placebo-controlled study.
SETTING: Yonsei University laboratory.

PARTICIPANTS: In total, 30 healthy male college students.

MAIN OUTCOME MEASURES: Muscle soreness, peak torque, median frequency (MDF) and electromechanical delay (EMD) during isometric contraction at 24, 48 and 72 h after DOMS induction exercise.

RESULTS: Overall, the application of the PEMF was found to be effective in reducing the physiological deficits associated with DOMS, including improved recovery of perceived muscle soreness, MDF, and EMD during isometric contraction. Our results did not show that PEMF treatment was mechanically more effective for isometric peak torque generation compared to the sham group.

CONCLUSION: this study indicates that PEMF may be useful as a modality to reduce DOMS symptoms. However, further well-designed experiments are required to determine optimal treatment dosage and duration, and to investigate the physiological and clinical mechanisms of PEMF on DOMS.

PMID: 24906295 [PubMed - indexed for MEDLINE]