

# Lifting and Toning of Arms and Calves Using High-Intensity Focused Electromagnetic Field (HIFEM) Procedure Documented by Ultrasound Assessment

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## Abstract

**Objective:** The HIFEM procedure demonstrates positive outcomes on abdomen and buttock. This multi-center study aims to investigate its effect on adipose tissue and muscle mass located in upper arms and calves.

**Materials and methods:** Twenty subjects (45.10±15.19 years, 24.44±3.22 kg/m<sup>2</sup>) who underwent a HIFEM procedure (4 sessions; 20 minutes per muscle group) on arms and calves were evaluated. Overall, 7 patients were treated over biceps and triceps, 4 patients over calves, and 9 patients underwent treatment of both upper arms and calves. The changes in adipose and muscle tissue of musculus biceps brachii, triceps brachii, and gastrocnemius were evaluated by using ultrasound. The results from a 1-month, 3-month, and 6-month follow-up were compared to the baseline. Digital photographs, weight measurements, satisfaction, and comfort questionnaires were assessed at baseline and follow-ups.

**Results:** Ultrasound images revealed a significant ( $P < 0.05$ ) increase in the muscle mass of all studied muscles, with the most noticeable improvement in biceps brachii (+16.13% at 3 months). The fat deposits over arms and calves showed significant improvement ( $P < 0.05$ ), reaching -15.12% at 3 months. The results peaked at 3 months and were sustained up to 6 months with a slight but insignificant decline. Aesthetic enhancement of treated areas was documented while patients were highly satisfied.

**Conclusions:** The achieved outcomes showed that the HIFEM procedure is effective for muscle toning and fat reduction in arms and calves. The results suggest that the use of the HIFEM procedure is not limited only to abdominal and buttock shaping but is also effective for toning of arms and calves. *J Drugs Dermatol.* 2021;20(7):755-759. doi:10.36849/JDD.5878.