

Effect of Post-Exercise Dry Cupping Therapy on Muscle Recovery

Shayan Ahmed^{1*}, Phil Chilibeck¹

Introduction

Dry cupping therapy has gained popularity in athletic settings as a recovery modality, yet empirical evidence supporting its effectiveness remains limited. The practice involves using suction to create negative pressure on the skin, which is theorized to promote blood flow and tissue recovery.

Purpose

To determine whether post-exercise dry cupping therapy would improve recovery of muscle strength, reduce muscle soreness, and limit swelling compared to a sham control arm.

Keywords: Dry cupping; Muscle recovery; Resistance training.

Methods

Ten resistance-trained adults (aged 20-22) participated in a randomized, within-subject, blinded trial. Participants performed a biceps-focused muscle-damaging exercise. One arm received dry cupping therapy post-exercise, while the opposite arm received a sham cupping treatment (cups applied with no suction). Assessments were conducted at six time points: pre-exercise, post-exercise, post-cupping, and 24, 48, and 72 hours post-exercise. Outcomes included muscle strength (isometric torque via Biodex), muscle thickness (ultrasound), and soreness (Visual Analog Scale). Differences were analyzed using repeated-measures ANOVA to assess arm × time interactions and time main effects.

¹ College of Kinesiology, University of Saskatchewan

* Correspondence: zkh237@usask.ca

Results

There were no significant arm \times time interactions for any outcome, indicating similar recovery patterns between cupped and control arms. Significant time main effects were observed for all outcomes ($p < 0.01$). Muscle strength decreased post-exercise and remained below baseline at 24, 48, and 72 hours ($p < 0.05$). Muscle thickness increased post-exercise and remained elevated at 24 and 48 hours before returning to baseline by 72 hours ($p < 0.05$). Muscle soreness increased post-exercise and remained elevated at all follow-up time points ($p < 0.05$).

Conclusion

Dry cupping therapy applied after resistance exercise did not significantly improve recovery of strength, soreness, or swelling compared to control who received sham treatment. These findings suggest that cupping may not provide additional recovery benefits beyond placebo.