

## **Effects of Dry Cupping on Delayed Onset Muscle Soreness and Flexibility of the Gastrocnemius Muscle**

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### **ABSTRACT**

Limited range of motion and muscle soreness effect many people throughout their lifetime and finding relief can elevate quality of life. For decades, many claim that dry cupping therapy provides relief to soreness, tight muscles, pain, inflammation, flexibility, and helps with relaxation and performance.

**PURPOSE:** To analyze the effects of dry cupping on delayed onset muscle soreness (DOMS) and range of motion (ROM) of the gastrocnemius muscle. **METHODS:** Sixteen males and 16 females (age=29±9.8 yrs, ht=68.5±4.1 in, wt=166.2±35.2 lbs) were randomly assigned to three groups: A (no exercise), B (bilateral heel raises to exhaustion), and C (right unilateral heel raises to exhaustion). Dorsiflexion ROM was assessed bilaterally for all groups. All participants received the cupping protocol on the right gastrocnemius, but C also received it bilaterally. Cupping protocol applied four two-inch cups in each quadrant for 90 seconds. Participants reported soreness using a 10-point scale at 24- and 48-hours. Repeated measures ANOVAs were used to examine the effects of cupping on soreness and range of motion, respectively. Alpha was set at .05 for all tests. **RESULTS:** Significant differences for soreness existed at 24 and 48 hours between the calves that were and were not exercised for both the left and the right sides, regardless of cupping,  $p < .05$ . No differences in ROM occurred between any condition,  $p > .05$ . **CONCLUSIONS:** Dry cupping therapy does not impact DOMS or ROM of the gastrocnemius. While the heel raise protocol effectively caused soreness, dry cupping for 90 seconds after exercise does not reduce this effect.