

## DOMS after Acute Strenuous Exercise and Massage

Holub C and Smith JD

Health & Human Performance Laboratory; Department of Counseling, Health & Kinesiology; Texas A&M University-San Antonio; San Antonio, TX

---

Category: *Undergraduate*

Advisor / Mentor: *Smith JD (john.smith@tamusa.tamus.edu)*

### ABSTRACT

The art of massage therapy has been around for centuries and investigation of its effects on the human body continues. **Purpose:** This study is designed to determine if Swedish massage therapy reduces DOMS at 24- and 48-hours after a single bout of resistance exercise to fatigue. **Methods:** Twenty one volunteers completed a bout of body squats to exhaustion holding a 3.63 kg (8 lb.) weight for men and a 2.27 kg (5 lb.) for women, and after a one-minute rest did the same again but without the weight. This was immediately followed by a 20-minute Swedish massage on either the right or left leg (randomized), specifically the hamstrings, quadriceps, and gluteal muscles. After the massage was performed participants were then asked to report the soreness of treated leg after 24- and 48-hrs using a standard 0-10 pain scale. **Results:** A 2 (leg) X 2 (time) factorial ANOVA with repeated measures on the second factor indicated perceived soreness in the treated leg was significantly reduced compared to the untreated leg at 24 hrs ( $p = .003$ ) and 48 hrs ( $p = .017$ ). While soreness was significantly higher after 48 hrs compared to 24 hrs in the untreated leg ( $p = .012$ ), soreness in the treated leg was also significantly higher between the same time points ( $p = .007$ ), but to a lower magnitude. **Conclusion:** While it seems a single massage treatment immediately after exhaustive resistance exercise reduces the initial effect of DOMS, the difference in perceived pain from 24- to 48-hrs is not changed.