

Cupping Therapy on Delayed Onset Muscle Soreness of Back Musculature in College-Aged Male Lifters

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PURPOSE STATEMENT

- The present study aimed to evaluate the effectiveness of CT on enhancing muscle recovery in college-aged males with limited experience in RT
- It was hypothesized that CT will enhance recovery in back musculature by reducing VAS soreness scores

ABSTRACT

The present study was as a randomized placebo-controlled three-armed parallel-group trial comprised of twenty-one healthy novice men who were randomly assigned to one of three groups: a dry-CT intervention group, a placebo, sham cupping (SC) group, or a control group that received no post-exercise treatment. Training and treatment sessions took place every three days over an eight-week period. The effectiveness of CT was determined based on decreases in visual analogue scale (VAS) scores indicating DOMS severity. Secondary outcome measures, multidimensional fatigue inventory (MFI) scores indicating fatigue variations and Pittsburgh Sleep Quality Index (PSQI) scores indicated quality of sleep, were also evaluated for each group.

INTRODUCTION

- Under recovery is becoming an ever-growing occurrence in many young, active individuals due to an increased lack of recovery
- Modern-day CT is a well-recognized method of treatment due to the mechanisms of actions (MoA) associated with it
- CT functions by increasing blood circulation, consequentially increasing the transportation of amino acids and other essential nutrients for muscle protein synthesis to the site of treatment (Tx)
- Well researched forms of Tx with similar MoA have been shown to elicit beneficial results in terms of muscle recovery when treatment is performed immediately following RT

METHODS

Subject Recruitment

- Emailed Individuals at 4-year Public & Private Colleges & Universities

Criteria

- Males (18-25 y/o) with weightlifting experience of less than 3 days per week over the past year
- No history of musculoskeletal disorders (6 months), tobacco use, nor anabolic agents (12 months)

Research Design

- 8-week RT and Tx Protocol
- Three Subject Groups (n=7 per group; N=21 total)
 - 1.Intervention, CT Group
 - 2.Placebo, SC Group
 - 3.Control, No Tx Group

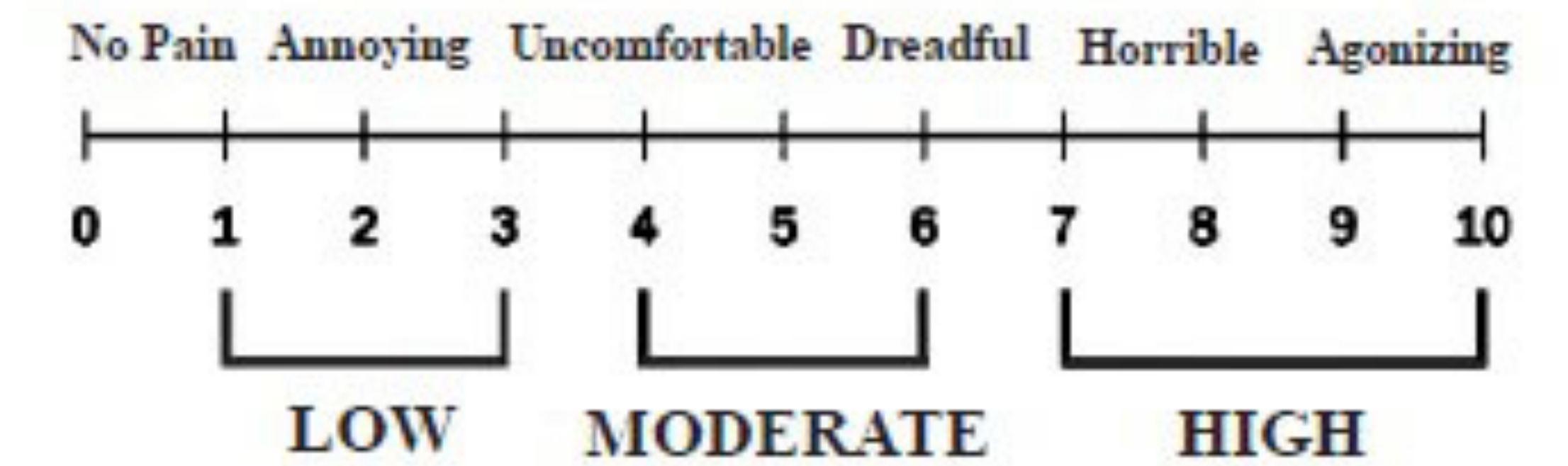
Outcome Measures

- VAS scores (DOMS severity; 0-10 score)
- MFI assessment (fatigue severity; 4-20 score for 5 sections)
- PSQI assessment (sleep severity; 0-3 score for 7 sections)

Data Analysis

- ANCOVA & SPSS
- Basic Descriptive Statistics
- Bivariate Two-Tailed Correlations ($P \leq 0.05$) between the Three Subject Groups

Vas Score



OPERATIONAL DEFINITIONS

Cupping Therapy: a form of treatment that places ‘cups’ on the skin and uses heat to create a vacuum that suctions subcutaneous blood towards the superficial skin

Delayed Onset Muscle Soreness: fatigue or pain felt in skeletal muscle 24 to 72 hours following RT; measured via VAS scores (0-10)

Novice: an individual with a weightlifting history of less than 3 training days per week over the past 12 months

Muscle Recovery: reduction in the duration and/or severity of DOMS

Visual Analogue Scale: measuring instrument used to numerically evaluate the severity of DOMS; numerical values for VAS scores range from 0 to 10

ACKNOWLEDGEMENTS

The researcher would like to extend their gratitude to writing fellow, Austin Reames, peer-reviewer, Kylee Garrison, research consultant, Katie Hartley, and professor, Dr. Hartman. Also, this research would not have been possible without the resources of the Gardner-Webb University library and librarians.

REFERENCES

- Al-Bedah, A., Elsubai, I., Qureshi, N., Aboushanab, T., Ali, G., El-Olemy, A., ... Alqaed, M. (2019). The medical perspective of cupping therapy: Effects and mechanisms of action. *Journal of Traditional and Complementary Medicine*, 9(2), 90-97. <https://doi.org/10.1016/j.jtme.2018.03.003>
- Gleeson, M. (2002). Biochemical and immunological markers of over-training. *Journal of Sports Science & Medicine*, 1(2), 31.
- Trofa, D., Obana, K., Herndon, C., Noticewala, M., Parisien, R., Popkin, C., & Ahmad, C. (2020). The evidence for common nonsurgical modalities in sports medicine, part 2: Cupping and blood flow restriction. *Journal of the American Academy of Orthopaedic Surgeons: Global Research and Reviews*, 4(1). <https://doi.org/10.5435/jaaosglobal-d-19-00105>
- Guarneri, M., Oberg, E., Casco, A. (2019). Cupping therapy [Image]. *Medicinenet.com* <https://www.medicinenet.com/cupping/article.htm>
- [Visual analogue scale] (n.d.) https://www.saudija.org/viewimage.asp?img=SaudiJAnaesh_2016_10_1_55_169476_f3.jpg

