Historical Research Report

Effects of a "Holographic" Disk on Delayed-Onset Muscle Soreness and Performance: A Pilot Study

Evidence-based reconstruction of the 2011 University of Alabama conference abstract and research poster

Original investigators: Andrew T. Del Pozzi, Charles P. Katica, Phillip A. Bishop | The University of Alabama, Tuscaloosa, Alabama

Prepared by 8ight Research Labs as a historical documentation and research-library report. This compilation is not represented as a manuscript authored, endorsed, or newly approved by the original investigators.

Executive summary

A ten-participant, counterbalanced, repeated-measures, double-blind, placebo-controlled pilot investigation evaluated an encoded "holographic" disk placed at traditional Chinese medicine acupressure points after novel resistance exercise. The published conference abstract reports higher combined exercise repetitions ($p = 0.01$), higher perceived recovery ($p = 0.03$), and lower perceived exertion ($p = 0.04$) in the disk condition compared with placebo. Pain sensation did not differ significantly ($p = 0.21$). The small sample and limited reporting prevent definitive conclusions about clinical efficacy or mechanism.

1. Publication and provenance

Original study title	**Effects of a "Holographic" disk on Delayed Onset Muscle Soreness and Performance: a Pilot Study**
Investigators	Andrew T. Del Pozzi; Charles P. Katica; Phillip A. Bishop
Affiliation	The University of Alabama, Tuscaloosa, AL
Published abstract	Medicine & Science in Sports & Exercise, Vol. 43, No. 5, Supplement, p. S281 (2011), abstract 1729
Conference listing	June 1, 2011, 3:30–5:00 PM, Board #262
Research sponsor	Zero Quantum, Suwanee, Georgia (grant support disclosed in abstract)
Study ethics	User reports IRB approval; approval letter, protocol number and approval date not included in supplied records

Publication status: The supplied journal supplement page establishes publication of a conference abstract. It does not establish publication of a full-length peer-reviewed research article or supply an independent record of IRB approval.

2. Objective and hypothesis

The investigators sought to determine whether encoded holographic data disks applied at traditional Chinese medicine acupressure sites would reduce discomfort associated with delayed-onset muscle soreness (DOMS) and improve resistance-exercise performance approximately 24 hours after novel exercise.

3. Methods

Participants

Ten healthy adults participated (6 men, 4 women). Reported group characteristics: age 26.9 ± 3.4 years; height 176.1 ± 8.3 cm; mass 78.2 ± 17.0 kg; body fat 14 ± 7.5%.

Design and protocol

The original abstract characterizes the study as counterbalanced, repeated-measures, double-blind, and placebo-controlled. Participants performed three sets to volitional failure across six resistance exercises. After exercise, either the active disk or an appearance-matched placebo was applied according to manufacturer directions. Participants returned approximately 24 hours later and repeated testing. After a seven-day washout, participants crossed over to the alternate disk condition using different exercises and a different body region. The research poster describes an initial familiarization/10-repetition maximum determination and a seven-day washout; full allocation and blinding procedures are not available.

Outcome measures and analysis

Outcomes reported were the pre/post change in total exercise repetitions expressed as z-scores, rating of perceived recovery (RPR), OMNI rating of perceived exertion (RPE), and a pain scale. The abstract states that paired t-tests were used. No participant-level dataset, analysis code, prespecified primary outcome, confidence intervals, or crossover carryover assessment was supplied.

4. Results

Combined repetitions	**Active disk: z = 0.17 ± 2.12; placebo: z = −2.35 ± 2.77; p = 0.01**
Rating of perceived recovery	Active disk: 6.1 ± 1.9; placebo: 4.7 ± 1.9; p = 0.03
OMNI perceived exertion	Active disk: 8.0 ± 0.9; placebo: 8.9 ± 0.9; p = 0.04
Pain sensation	No statistically significant difference; p = 0.21

Values are transcribed from the submitted ACSM abstract and the printed conference abstract. They are not independently recalculated. The poster reports the same significance pattern. These exploratory results should not be interpreted as proof of a specific biological mechanism.

5. Discussion

The reported performance and perception measures favored the active disk condition in this small pilot sample. However, the absence of a significant pain difference means the experiment did not demonstrate its stated pain-relief objective on the reported pain measure. The authors themselves called for larger studies of pain, strength, and recovery in trained weightlifters. The available sources do not establish how the disk might act physiologically, nor do they test modern 8ightLabs or WarrensLove products.

6. Limitations and reporting considerations

- Only ten participants; estimates may be unstable and generalizability is limited.
- The crossover design used different exercises/body regions between periods; period, order and carryover effects cannot be assessed from the supplied summary.
- The poster and abstract provide summary statistics rather than raw data, confidence intervals or a full statistical analysis plan.
- Multiple outcomes were tested; no multiplicity adjustment is documented.
- IRB approval is reported by the sponsor but no approval document or protocol identifier has been provided.
- The research was supported by Zero Quantum; this financial relationship should remain disclosed in every republication.
- Conference-abstract publication is not equivalent to a full-length peer-reviewed article.

7. Conclusions

The 2011 University of Alabama pilot study reported statistically significant favorable differences in exercise repetitions, perceived recovery and perceived exertion after use of the investigated holographic disk compared with placebo. No statistically significant reduction in pain was reported. Findings are preliminary and warrant independent replication with larger samples, preregistered methods, comprehensive blinding documentation and full data reporting.

8. Separate historical project: skin blood flow grant proposal

A distinct six-page proposal titled “Validation of the Zero Quantum Holographic Disk for Enhancement of Skin Blood Flow in Spinal Cord Injured Athletes,” attributed to Gary Hodges and Andrew Del Pozzi, describes a proposed repeated-measures, double-blind, placebo-controlled study using laser-Doppler flowmetry and intradermal microdialysis. The planned sample was ten healthy adults and ten adults with spinal cord injuries, with a proposed performance period of June 15, 2012 through June 15, 2013 and a project budget of $39,585.21. The proposal states that IRB approval would be obtained before testing. No final data or proof of study completion is included; accordingly, it is listed as a proposal only, not as completed research.

9. Recommended public-library description

“Historical University of Alabama pilot research, sponsored by Zero Quantum, was published as a conference abstract in the 2011 supplement of Medicine & Science in Sports & Exercise. The study reported exploratory differences in exercise performance and perceived recovery, but not pain, with a holographic disk compared with placebo. The complete underlying dataset and IRB approval record have not yet been supplied to the archive.”

10. Primary source documents

1. Del Pozzi AT, Katica CP, Bishop PA. Effects of a “Holographic” disk on Delayed Onset Muscle Soreness and Performance: a Pilot Study. Medicine & Science in Sports & Exercise. 2011;43(5 Suppl):S281. Conference abstract 1729. (Journal supplement page provided.)

2. Del Pozzi AT, Katica CP, Bishop PA. Abstract submitted to the American College of Sports Medicine. (One-page author abstract supplied.)

3. The University of Alabama. Effects of a “Holographic” disk on Delayed Onset Muscle Soreness and Performance: a Pilot Study. Research poster photograph supplied.

4. Hodges G, Del Pozzi A. Validation of the Zero Quantum Holographic Disk for Enhancement of Skin Blood Flow in Spinal Cord Injured Athletes. Grant proposal to Zero Quantum, six pages; proposed 2012–2013.

11. Documents to obtain before journal submission

- IRB approval letter and protocol identifier for the DOMS study.
- Original protocol, consent/blinding procedures, and any trial registration details.
- Full dataset and statistical output, including paired comparisons and crossover sequence.
- Written permission or appropriate rights clearance for reproducing the University of Alabama poster and journal supplement page.
- Original investigator review of any proposed full manuscript; authorship and permissions must be agreed before submission.