

NSCA

GLOBAL CONFERENCE 10TH EDITION

23/25 OTTOBRE >> VERONA 2026



CALL FOR ABSTRACT **10TH NSCA GLOBAL CONFERENCE**



The 10th NSCA Global Conference officially opens the Call for Abstracts, inviting researchers, professionals, students, and specialists in the field who wish to share their scientific work, research projects, or practical experiences in the areas of strength and conditioning, physiotherapy, performance, and sports rehabilitation.

The goal is to promote scientific and professional dialogue, highlighting original contributions that reflect the central theme of the event: the integration between **Strength & Conditioning and Physiotherapy** to optimize performance, prevent injuries, and support effective recovery pathways.

Selection Procedures



ABSTRACT SUBMISSION

Authors are invited to submit an original abstract (maximum 2,000 characters) in English, prepared according to the following format:

- Title: Brief (fewer than 15 words) and written in Title Case.
- Authors: The first and last names of all authors should be included in the author block.
- Do not include academic titles (e.g., PhD, MD), as these may interfere with online search functions.

Structure:

- Introduction / Background
- Methods
- Expected or Obtained Results
- Conclusions and Practical Implications

Each table, figure, or diagram counts as 300 characters toward the total character limit.

Do not use brand names within the abstract.

Please indicate any funding sources (grants) and acknowledgments related to artificial intelligence usage during the submission process.



SCIENTIFIC REVIEW

All submitted abstracts will be evaluated by the NSCA GC Italy Scientific Committee.

The evaluation criteria will include:

- Relevance and originality of the content
- Methodological rigor
- Practical applicability within the sports or clinical context
- Scientific quality and clarity of presentation



ACCEPTANCE NOTIFICATION

Selected authors will receive an official email and will be invited to present their work as a poster or oral communication during the conference.

ABSTRACT EXAMPLES

BRAKING FORCE-TIME CHARACTERISTICS BETWEEN TRADITIONAL SQUATS AND FLYWHEEL INERTIA SQUATS AT DIFFERENT LOADS

PURPOSE: The purpose of this study was to examine the differences in braking force-time characteristics between traditional back squats and flywheel inertia squats performed using a spectrum of loads.

METHODS: 17 resistance-trained subjects took part in this research study including 9 men (age=24.7±4.0 years, height=171.7±5.8 cm, body mass=77.9±11.2 kg, relative one repetition maximum [1RM] back squat=2.01±0.26 kg/kg) and 8 women (age=23.0±2.1 years, height=167.6±8.6 cm, body mass=71.5±7.7 kg, relative 1RM back squat=1.43±0.25 kg/kg). Each subject participated in three total sessions over the course of one week. During the first testing session, each subject completed a 1RM back squat and were familiarized with flywheel inertia squats. During the subsequent two testing sessions, the subjects performed three repetitions each of the free weight back squat exercise with 40, 50, 60, 70, and 80% of their 1RM back squat or flywheel squats using inertial loads of 0.010, 0.025, 0.050, 0.075 and 0.100 kgm². The traditional and flywheel squat session order was randomized. All squat repetitions were performed on dual force plates sampling at 1000 Hz. Raw force-time data were collected and exported for analysis within a customized spreadsheet. Braking mean force, duration, and impulse were compared using a series of 2 (condition) x 5 (load) repeated measures ANOVA. In addition, Hedge's g effect sizes were calculated between conditions to examine the magnitude of the differences at each load.

RESULTS: The descriptive data for each load and mode are displayed in Table 1. There was a significant interaction between mode x load for eccentric mean force ($p < 0.001$), and duration ($p = 0.008$) but not for braking impulse ($p = 0.513$). In addition, there was a significant load main effect for braking impulse ($p < 0.001$) but not for mode ($p = 0.140$). Large-very large effects favoured traditional squats for braking mean force ($g = 1.66$ - 2.70). The differences in braking duration between conditions were small-moderate ($g = 0.25$ - 1.00). Finally, the effect sizes between conditions for eccentric impulse were trivial-moderate ($g = 0.12$ - 0.76).

CONCLUSIONS: Significantly greater braking mean forces were produced during traditional squats compared to flywheel squats. In contrast, braking durations were significantly greater during flywheel squats compared to traditional. There were no significant differences between squat conditions for braking impulse; however, moderate effect sizes favouring the traditional condition were present at the lightest loads.

PRACTICAL APPLICATION: The desired training adaptation may influence the decision to use one training mode over another. Traditional squats may be more beneficial for braking rapid force production as greater force may be produced over shorter durations. However, flywheel training may provide a novel braking stimulus to individuals who almost exclusively use traditional exercises within their training programs.

ACKNOWLEDGEMENTS: none

Table 1: Eccentric mean force, eccentric duration, and eccentric impulse for traditional and flywheel inertia squats.

Load (%1RM)	Traditional		
	Eccentric Mean Force (N/kg)	Duration (s)	Impulse (Ns)
40	21.5 ± 3.0*	0.42 ± 0.11	651.8 ± 136.4
50	22.7 ± 3.4*	0.49 ± 0.13	808.2 ± 186.3†
60	24.4 ± 3.5*	0.49 ± 0.12	889.3 ± 220.7†
70	25.4 ± 3.6*	0.55 ± 0.11	1044.1 ± 269.5†
80	26.7 ± 3.8*	0.61 ± 0.13	1230.9 ± 308.5†
Inertia (kgm ²)	Flywheel		
	Eccentric Mean Force (N/kg)	Duration (s)	Impulse (Ns)
0.010	16.4 ± 2.0	0.48 ± 0.14#	563.1 ± 127.3
0.025	18.0 ± 1.9	0.52 ± 0.11	685.0 ± 125.3†
0.050	18.0 ± 2.1	0.64 ± 0.21#	857.4 ± 278.3†
0.075	17.9 ± 2.2	0.76 ± 0.27#	999.9 ± 348.0†
0.100	18.0 ± 2.3	0.83 ± 0.30#	1106.1 ± 381.7†

* = significantly greater than flywheel corresponding load ($p < 0.001$); # = significantly greater than traditional corresponding load ($p < 0.05$); † = significantly greater than all the preceding lighter loads ($p < 0.05$)

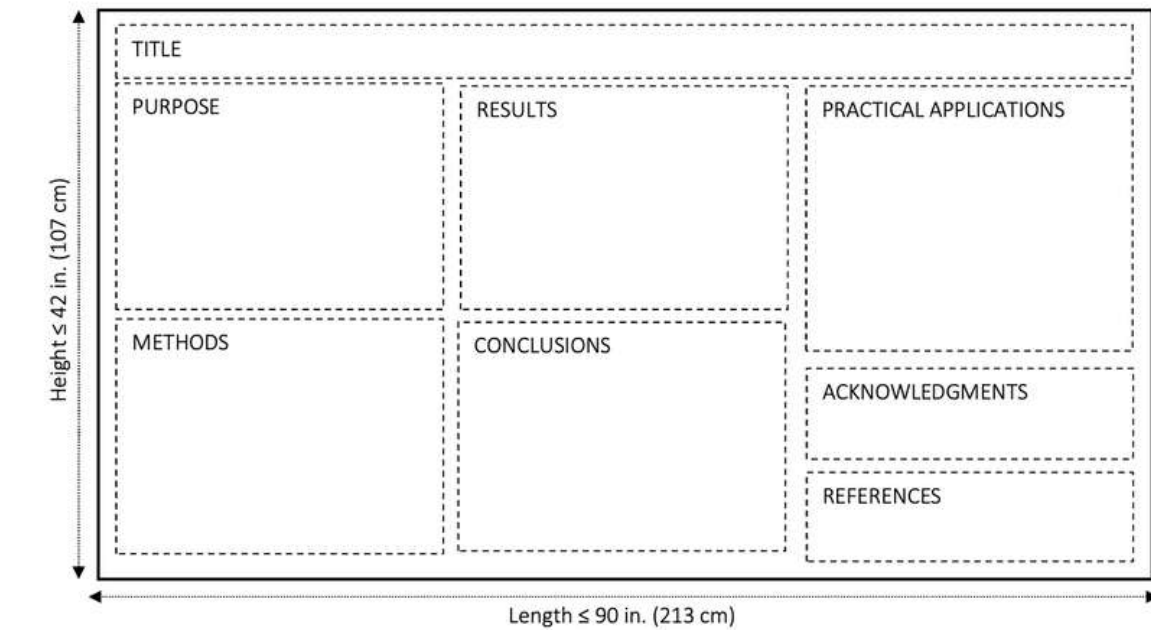


GUIDELINES FOR POSTER ABSTRACT PRESENTATION

- All poster presentations must be printed on a single, uniform sheet with dimensions not exceeding 42 × 90 inches (107 × 229 centimeters) (height × width).
- Unless otherwise specified, the poster display boards will measure 48 × 96 inches (122 × 244 cm).
- Poster abstract presentations must be consistent with the content of the accepted abstract and include the following sections: Purpose, Methods, Results, Conclusions, and Practical Applications.
- Poster presenters are required to stand next to their poster for the entire duration of the assigned presentation time.
- The Research Committee recommends one of the following two layout options as a general guideline for all poster presentations: Traditional Poster or #BetterPoster

EXAMPLE OF A TRADITIONAL POSTER

I. TRADITIONAL POSTER DESIGN



2025 Undergraduate Student Poster Presentation Winner

April Krywe – Creighton University

Creighton University

College of Arts and Sciences
Department of Exercise Science
and Pre-Health Professions

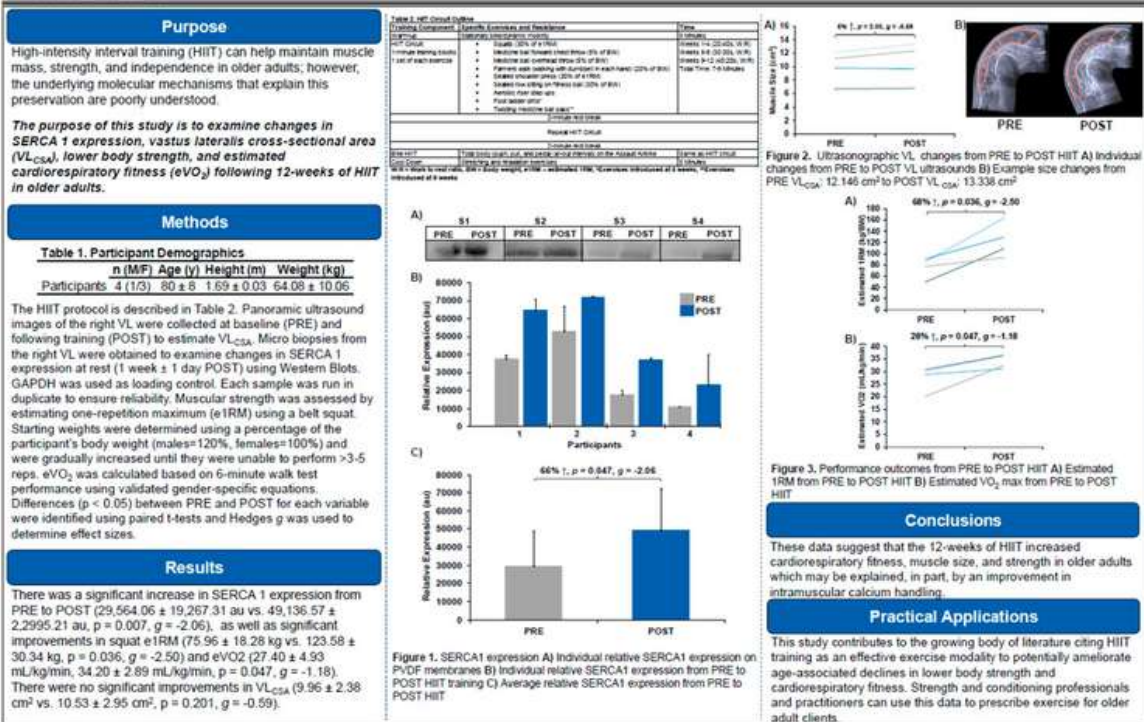
THE IMPACT OF HIIT ON MUSCLE FUNCTION AND SERCA1 IN OLDER ADULTS: A PILOT STUDY

April Krywe¹, Rashelle Hoffman², Eric Bredahl¹, Blake Murphy¹, Joan Eckerson¹, Mitchel Magrini¹

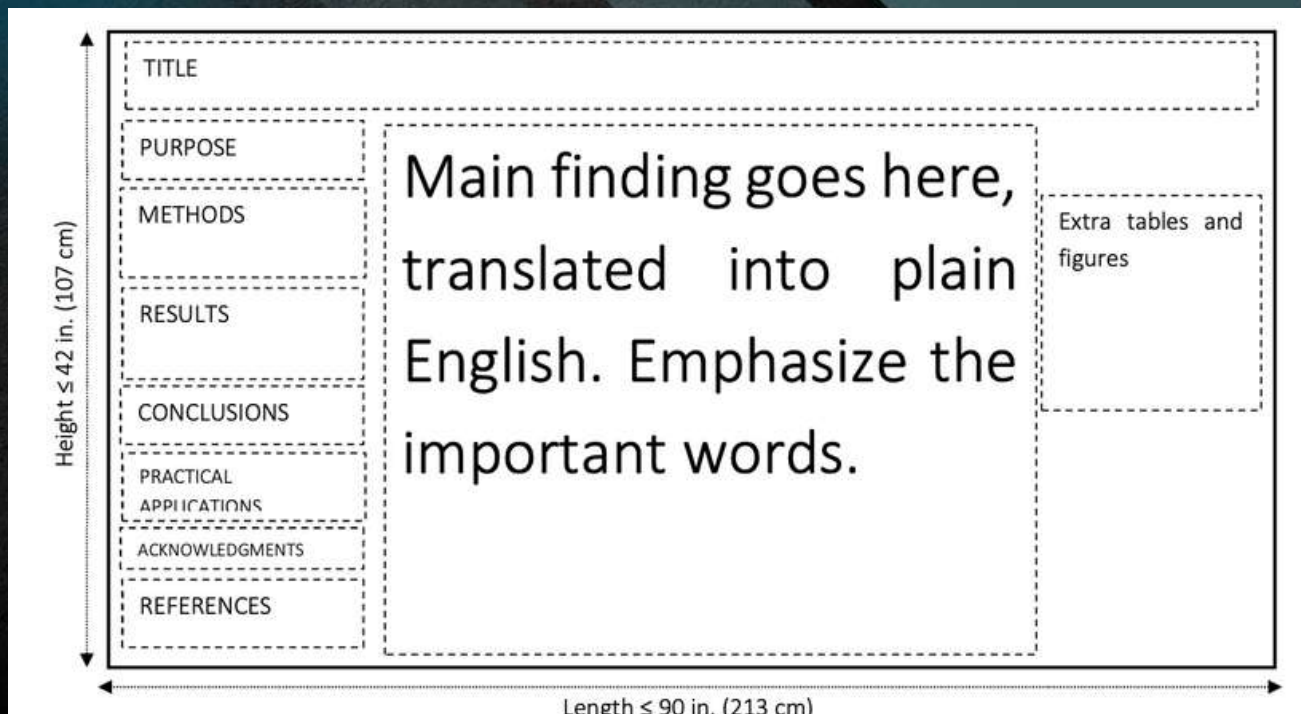
¹Department of Exercise Science and Pre-Health Professions, Creighton University

²Department of Physical Therapy, Creighton University

CURAS
Center for Undergraduate
Research and Scholarship



EXAMPLE OF A #BETTERPOSTER DESIGN





Influence of Relative Load on Fatigue During One Set of Forearm Flexion Muscle Actions to Failure at Maximal Intended Velocity

Tyler J. Neltner¹, Robert W. Smith³, Jocelyn E. Arnett², Dolores G. Ortega², Jack W. Sullivan¹, Brandon N. Jesse¹, John J. Bartaszewicz¹, Terry J. Housh², Richard J. Schmidt²

¹University of Wisconsin-Platteville; ²University of Nebraska- Lincoln; ³Wayne State College

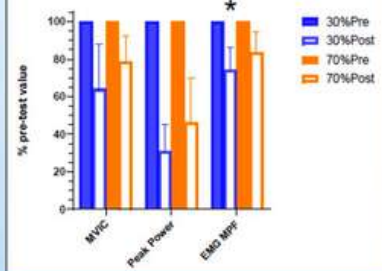


INTRODUCTION

Velocity-based training has recently gained interest as an alternative to traditional resistance training that emphasizes the relative load lifted, while performing the repetition at a slower self-selected velocity. The purpose of the present study was to examine the effects of relative load during one set of forearm flexion muscle actions to failure performed at maximal intended velocity (MIV) on performance (maximum voluntary isometric contraction (MVIC), peak force (PF), peak velocity (PV), and peak power (PP)) and neuromuscular responses.

Despite the **low load** inducing a **greater magnitude of metabolic stress**, the decreases in MVIC, peak velocity, and peak power **were not influenced** by the relative load used for the max velocity forearm flexion muscle actions.

FIGURE 1. Fatigue responses



METHODOLOGY

On separate days, 14 men (mean $\pm$ SD: age=22.9 $\pm$ 2.0 yrs; body mass=85.0 $\pm$ 16.9 kg; height=178.7 $\pm$ 5.9 cm) completed one set of forearm flexion muscle actions to failure at 30% and 70% of their one-repetition maximum (1RM), in a random order. Prior to the fatiguing task the subjects completed pre-testing which consisted of two repetitions of dynamic forearm flexion muscle actions at the load equivalent to the fatiguing task and two maximum voluntary isometric contractions, performed in a random order. Following the fatiguing task the subjects were re-tested (post-testing) in the same manner of pre-testing. All muscle actions were performed unilaterally, on a preacher curl setup with their nondominant arm. The concentric phase of each repetition was completed at MIV (as quickly as possible). Electromyographic (EMG) signals were recorded from the biceps brachii during testing, and the amplitude (AMP) and mean power frequency (MPF) values were normalized to the values from the pre-test MVIC with the highest force output. For all performance (MVIC, peak force, peak velocity, and peak power) and neuromuscular (EMG AMP and MPF) parameters, a fatigue index was calculated as the percent decline from pre-test to post-test. Paired samples t-tests were used to examine differences in the number of repetitions completed at each load, as well as in the fatigue index for all performance parameters.

RESULTS

The subjects completed a significantly ($p < 0.001$, $d = 3.0$) greater number of repetitions to failure at 30% 1RM (64.9 $\pm$ 17.4) compared to 70% 1RM (16.7 $\pm$ 5.1). Peak force decreased more significantly ($p < 0.001$, $d = 1.3$) following the 30% (32.0 $\pm$ 16.8%) versus 70% 1RM task (7.6 $\pm$ 9.9%). In addition, there was a significantly ($p = 0.004$, $d = 0.9$) greater decrease in EMG MPF for the 30% (25.6 $\pm$ 11.7%) compared to the 70% 1RM task (16.3 $\pm$ 11.0%). There were, however, no significant ($p > 0.05$) differences between the 30% and 70% tasks for the fatigue index for MVIC, PV, PP, or EMG AMP.

PRACTICAL APPLICATION

The results of this study offer strength and conditioning practitioners with valuable insights into the effects of relative load during fatiguing muscle actions performed at MIV. For instance, training with lower relative loads at MIV will induce a greater metabolic stress, without negatively affecting movement velocity or PP production, compared to when training with moderate relative loads.

CONCLUSION

The results of the study indicated that, although the subjects were able to sustain repetitions to failure for longer at 30% 1RM compared to 70% 1RM, there were no load-specific effects of fatigue on decreases in MVIC, PV, or PP. In addition, there were no differences in changes in muscle excitation (EMG AMP) from pre-test to post-test. However, the 30% 1RM task induced a greater decrease in motor unit action potential conduction velocity compared to the 70% 1RM task, as evidenced by the decrease in EMG MPF.



CONFERENCE REGISTRATION

The acceptance of the abstract is subject to the purchase of a registration ticket for the 10th NSCA Global Conference.

Registration is mandatory for at least one of the authors and grants access to all scheduled scientific, practical, and networking sessions.



HOW AND WHERE TO SUBMIT

Your submission must be sent to the following email address:

riccardo.battioli@nsca.it

Please include the following in the email subject line:

"Name-Surname + Abstract
Submission NSCA Global Conference
2026"

Deadlines and Useful Information

**ABSTRACT
SUBMISSION DEADLINE**



**JUNE 31,
2026**

**NOTIFICATION OF
RESULTS**



**JULY 31,
2026**

Presenting your work at the 10th NSCA Global Conference represents a unique opportunity to actively contribute to the international scientific dialogue, share professional experiences, and build connections with colleagues and researchers from around the world.

The best abstract will be honored with the “Young Investigator Award.”

The winner will be recognized during the Saturday evening dinner.