NSCA®
NATIONAL STRENGTH AND CONDITIONING ASSOCIATION

2026 NSCA National Conference Research Abstract Submission & Presentation Guidelines

Updated August 21, 2025

THE NATIONAL STRENGTH AND CONDITIONING ASSOCIATION® (NSCA®)

The National Strength and Conditioning Association (NSCA) is a nonprofit professional organization dedicated to advancing the strength and conditioning profession around the world.

Mission statement: As the worldwide authority on strength and conditioning, we support and disseminate research based knowledge and its practical application, to improve athletic performance and fitness

The NSCA advances the profession by supporting strength and conditioning professionals devoted to helping others discover and maximize their strengths. We disseminate research-based knowledge and its practical application by offering industry-leading certifications, research journals, career development services, and continuing education opportunities. The NSCA community is composed of more than 45,000 members and certified professionals who further industry standards as researchers, educators, strength coaches, personal trainers, and other roles in related fields.

GENERAL INFORMATION

The National Strength and Conditioning Association (NSCA) is pleased to make a call for research abstract submissions for presentation at the 2026 National Conference. Research abstract presentations are an opportunity to present current research findings to researchers and strength and conditioning professionals at the NSCA National Conference. The research abstracts are the largest portion of the scientific programs presented yearly at the National Conference. The NSCA encourages all researchers and students to submit their abstracts for consideration to the NSCA National Conference.

SUBMISSION DEADLINE

The abstract submission deadline is March 2, 2026 (11:59 PM Eastern Time). Late submissions will not be accepted.

NOTIFICATION

Lead authors will receive notification of acceptance or rejection of their research abstract by May 1, 2026. If you do not receive notification by May 1, please contact abstracts@nsca.com.

LANGUAGE

All abstracts must be written in English.

COST

There is no cost to submit an abstract, but due to costs incurred by the NSCA, all accepted abstracts are expected to be presented.

FAILURE TO PRESENT

Failure to present an accepted abstract may result in disqualification from presentations at future NSCA conferences. Poster presenters are expected to stand next to their poster for the duration of their session.

PRESENTATION FORMAT

Research abstracts can be presented in either a podium or poster. Due to a limited number of available podium presentations, all requests for podium presentations cannot be accommodated. If an abstracted submitted for a podium presentation is not accepted for that format, it will automatically be assigned to a poster presentation.

PRESENTATION DATES

Podium and poster presentations occur on all three days of the conference. Thursday and Friday podium presentations are exclusively for students. Podium presentations typically occur in the morning with poster presentations occurring in two blocks each day (except Saturday where only one poster session occurs).

PUBLICATION OF ABSTRACTS

Accepted abstracts, that are presented, will be published in an electronic supplement to the *Journal of Strength and Conditioning Research* (date to be determined). The NSCA encourages all research abstract presenters to submit the completed manuscript of their presented research for consideration in the *Journal of Strength and Conditioning Research*.

RESEARCH ABSTRACT SUBMISSION GUIDELINES

- Abstracts must be original research studies and include only original data that are unpublished.
- Narrative reviews, systematic reviews, and meta-analyses will not be accepted.
- Abstracts may not have been previously presented (except at an NSCA regional or state conference).
- All data collection must be completed at the time of submission. Incomplete data collection will not be accepted.
- Do not submit abstracts containing data currently in press. If data contained in an accepted abstract is published (paper, electronic, or other format) prior to the abstract's submission to the National Conference, the abstract will be withdrawn.
- Case studies (involving clinical cases, rare circumstances, adverse events, etc.) will only be considered on an individual basis.
- Abstract cannot exceed 3,500 characters, counting spaces (3,000 characters with a table or figure).
- Sample size should be sufficient to draw meaningful conclusions based on primary statistical analyses used.
- The first author of the research abstract is the *primary author* and must present the abstract. However, all authors must approve the abstract prior to submission.
- One person may be the primary author on a maximum of two abstracts (only one may be submitted as a podium presentation).
- The number of authors for each abstract is limited to ten (10). An author is defined as an individual identified by the research group to have made substantial contributions to the reported work and agrees to be accountable for these contributions.
- All abstract presenters must pay for their conference registration and all other fees associated with travel.
- Abstracts may only be submitted online.
- For questions, please email the NSCA at abstracts@nsca.com.

SUBJECT CATEGORIES

There are thirteen (13) available categories for research abstracts:

1. Biochemistry / Endocrinology
2. Biomechanics / Neuromuscular
3. Body Composition
4. Endurance Training / Cardiorespiratory
5. Fitness / Health
6. Flexibility / Stretching
7. Nutrition / Ergogenic Aids
8. Resistance Training / Periodization
9. Social and Behavioral Science
10. Special Populations (health conditions)
11. Speed / Power Development
12. Sport Science
13. Tactical Strength and Conditioning

POLICY ON USE OF ARTIFICIAL ITELLIGENCE (AI)

AI authoring tools do not meet the standards required for authorship as defined by the International Committee for Medical Journal Editors (ICMJE). Authors who use AI tools in the writing of their abstract, production of images or graphical elements of the abstract, or in the collection and analysis of data, must be transparent in fully disclosing how the AI tool was used and which tool was used. All authors are fully responsible for the content of their manuscript, even those parts produced by an AI tool, and are thus liable for any breach of publication ethics.

In addition, authors should not upload an accepted or published abstract or any part of it into a generative AI tool as this may violate the copyright agreement or licensing terms in effect at the time of acceptance.

USE OF HUMAN AND ANIMAL SUBJECTS

All research studies that include data recorded from human participants must comply with the Declaration of Helsinki and the US Department of Health and Human Services Policy for the Protection of Human Research Subjects (US Code, Title 45, Part 46 Protection of Human Subjects). All animal studies must comply with the Public Health Service Policy on Humane Care and Use of Laboratory Animals.

ABSTRACT FORMATTING SPECIFICATIONS

- All abstract submissions must be formatted correctly (see examples below) and include original research-based data to allow for a thorough review. Abstracts that do not meet these criteria will not be accepted.
- The body of the abstract cannot exceed 3,500 characters (including spaces) when there is no figure or table included. When there is a figure or table associated with the abstract, the text cannot exceed 3,000 characters (including spaces).

FIGURES AND TABLES

- Abstracts may contain either one figure or one table, but not both. Abstracts submitted with more than one figure or table will have both images removed.
- Any figure or table must pertain to the abstract for the purpose of visualizing data and must be referred to in the text of the abstract. Figures or tables that do not pertain to the abstract will be removed.
- Figures or tables must be concise. It is at the discretion of the NSCA if a figure or table is too big, and if so, it will be removed. Additional text that should be in the abstract may not be substituted in the figure or table.
- The resolution of the figure or table must be adequate for reprinting (i.e., = 150 dpi).
- Including a figure or table does not replace any of the required sections (i.e., purpose, methods, results, etc.).
- No photos or pictures are allowed – only a figure or a table.
- The figure or table must be an image file (.jpg, .gif, and .png are accepted). PDF and PowerPoint are not acceptable.

REQUIRED INFORMATION

- Abstracts/submissions must contain the following:
  - Long title cannot exceed 150 characters (including spaces).
  - Short title cannot exceed 10 words.
  - Language: English.
  - Abstracts must contain the following sections: PURPOSE, METHODS, RESULTS, CONCLUSIONS, and PRACTICAL APPLICATIONS. An introduction is optional and not required, but it will count against the character count.
  - Acknowledgements should be included to denote funding sources and/or conflicts of interest when applicable.
- Abstracts/submissions cannot contain the following:
  - Advertising. Research abstracts should be non-biased, free from solicitations, and should not contain demonstrations of products for the purpose of sales.
  - Author(s) degrees (MS, PhD, etc.) or credentials (CSCS, FNSCA, etc.).
- The following information will be asked during the submission process:
  - All authors' names.
    - If the primary/presenting author is submitting for award consideration, they must be an NSCA Member (professional or student).
    - If an author is NSCA certified, their NSCA ID Number must be entered to automatically record NSCA CEUs. If the author's NSCA ID Number is not entered, the author must self-report the CEUs.
  - All authors' primary institutions/laboratories (institution/laboratory name, city, state).
  - All authors' professional mailing address, email address, and phone number.
  - Desired presentation format (i.e., podium or poster).
    - Due to limited availability, not all podium requests can be accommodated.
  - Abstract subject category.
  - If the abstract is being considered for a Student Research Award (see below).

BRAND NAMES

- Brand names may only be used in the METHODS section to describe testing procedures when necessary and/or in the ACKNOWLEDGEMENTS section to describe funding or disclose any financial relationships.
- Brand names cannot appear in the title (short or long).
- Brand names may not be used for promotional purposes. It is at the discretion of the NSCA to determine if the use of the brand name is for descriptive or promotional purposes.
- The NSCA reserves the right to replace any brand name with a generic name without notice.

REFERENCES

All references must follow the Journal of Strength and Conditioning Research reference style.

References must be alphabetized by surname of first author and numbered. References are cited in the text by numbers [e.g., (4,9)]. All references listed must be cited in the abstract and referred to by number. For journal entries with 6 or more co-authors, please list the first 3 names followed by "et al." When citing chapters within an edited textbook, authors MUST specifically cite the chapter author names (not the editors). Authors must also include the chapter name and page range for all book references

Below are several examples of references:

Journal Article

Hartung GH, Blancq RJ, Lally DA, Krock LP. Estimation of aerobic capacity from submaximal cycle ergometry in women. Med Sci Sports Exerc 27: 452–457, 1995.

Kraemer WJ, Hatfield DL, Comstock BA, et al. Influence of HMB supplementation and resistance training on cytokines responses to resistance exercise. J Am Coll Nutr 33: 247-255, 2014.

Book

Lohman TG. Advances in Body Composition Assessment. Champaign, IL: Human Kinetics, 1992.

Chapter in an edited book

Yahara ML. The shoulder. In: Clinical Orthopedic Physical Therapy. J.K. Richardson and Z.A. Iglarsh, eds. Philadelphia: Saunders, 1994. pp. 159–199.

Software

Howard A. Moments ½software. University of Queensland, 1992.

Proceedings

Viru A, Viru M, Harris R, Oopik V, Nurmekivi A, Medijainen L, Timpmann S. Performance capacity in middle-distance runners after enrichment of diet by creatine and creatine action on protein synthesis rate. In: Proceedings of the 2nd Maccabiah-Wingate International Congress of Sport and Coaching Sciences. G. Tenenbaum and T. Raz-Liebermann, eds. Netanya, Israel, Wingate Institute, 1993. pp. 22–30.

Dissertation/Thesis

Bartholmew SA. Plyometric and vertical jump training. Master's thesis, University of North Carolina, Chapel Hill, 1985.

EXAMPLE ABSTRACT WITH FIGURE OR TABLE

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

S. Murphy[1], H. Fredrick[1], M. Phillips[1], C. Cantwell[2], J. Chard[3], A. Sundh[4], C. Taber[5], M. Beato[6], T. Suchomel[1]
[1]Carroll University, [2]University of Wisconsin - Platteville, [3]BRX Performance, [4]Chicago Bears Football Club, [5]Sacred Heart University, [6]University of Suffolk

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 kgm^2. 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.

Traditional			
Load (%1RM)	**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†
Flywheel			
Inertia (kgm^2)	**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 ($p < 0.05$)

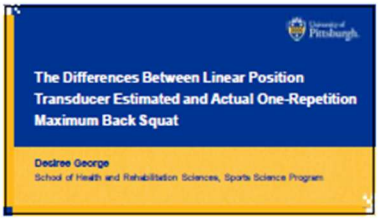
PODIUM ABSTRACT PRESENTATION GUIDELINES

- All podium abstract presentations must be prepared in Microsoft PowerPoint.
- All presenters are required to upload their presentation to an NSCA Dropbox account prior to the conference. Dropbox account URL to be provided.
- Presenters should bring a back-up copy of their presentation on a USB drive.
- All presenters should check in with their session's moderator prior to presenting.
    - Moderators are assigned in 1-hour blocks (9:00 – 10:00 AM, 10:00 – 11:00 AM, etc.). Podium presenters should check-in with their moderator before the hour block of their presentation.
- Podium abstract presentations must be consistent with the contents of the accepted abstract, and include the following sections: purpose, methods, results, conclusions, and practical applications.
- Podium presentations are 10 – 12 minutes in duration with 3 – 5 minutes of questions from the audience and responses from the presenter.

EXAMPLE PODIUM PRESENTATION

2025 Master's Student Podium Presentation Winner

Desiree George – University of Pittsburgh



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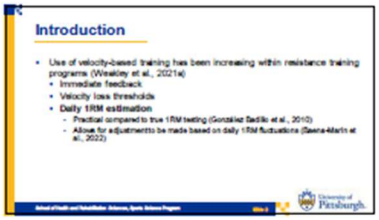

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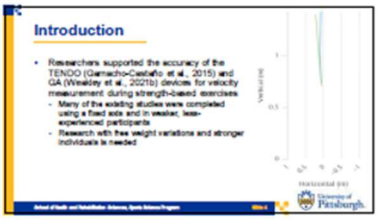

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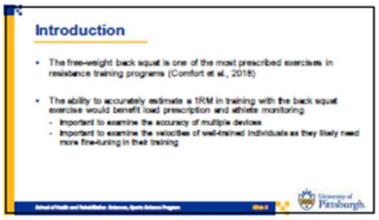

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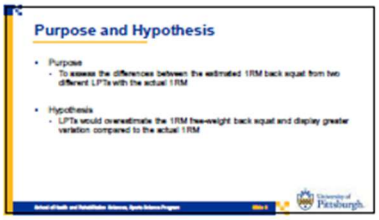

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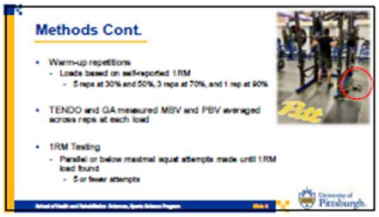

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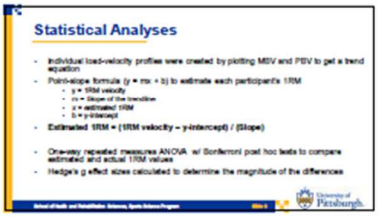

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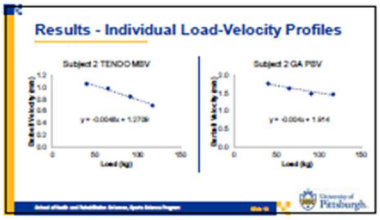

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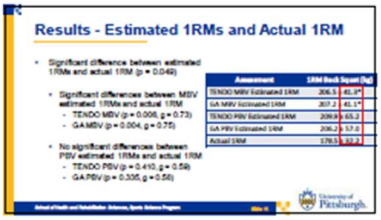

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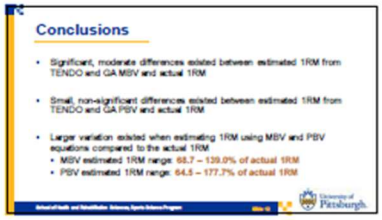

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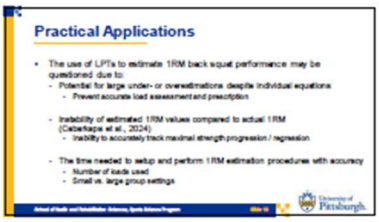

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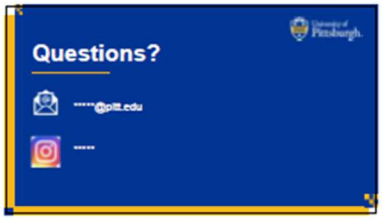

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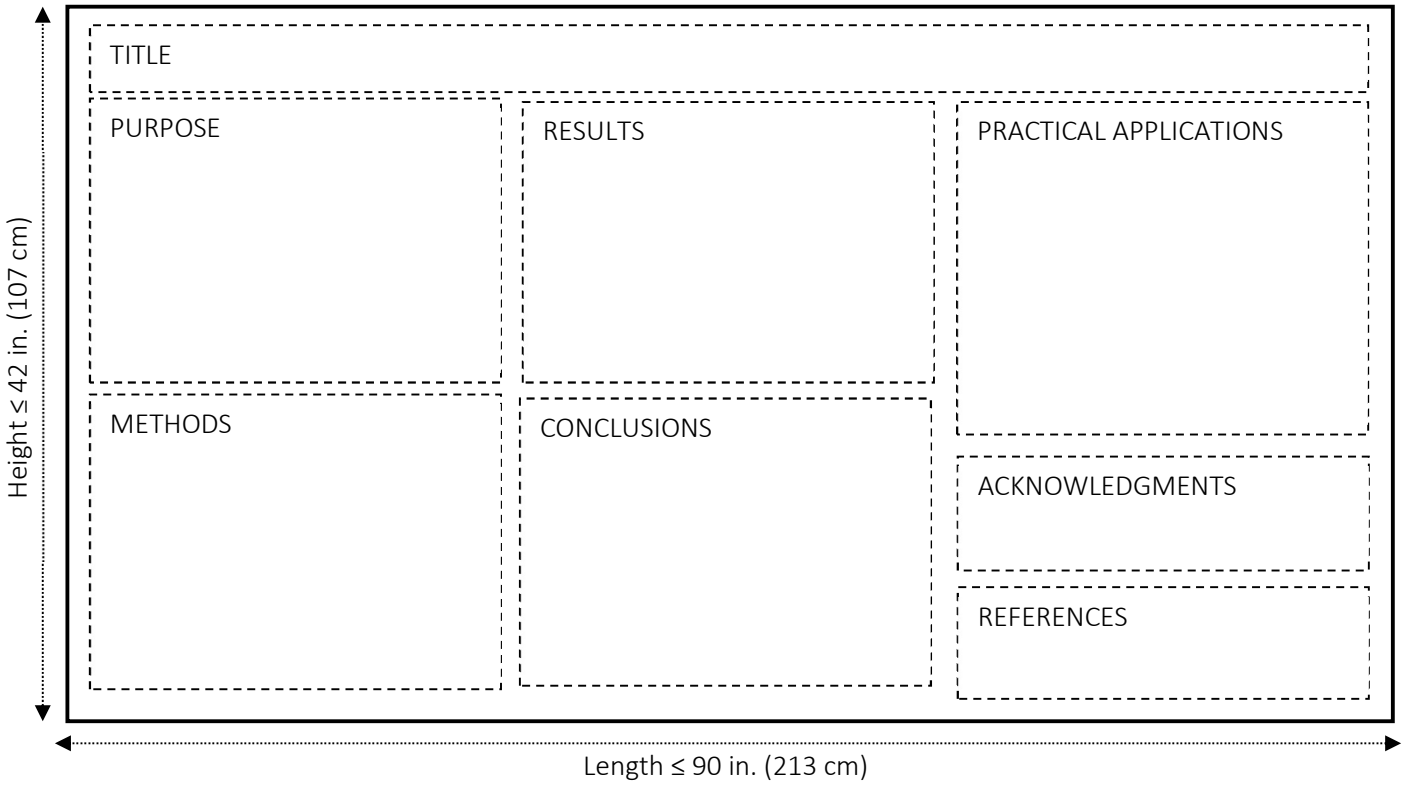
POSTER ABSTRACT PRESENTATION GUIDELINES

- All poster presentations should be printed on one uniform poster sheet with dimensions not exceeding 42 × 90 inches (107 × 229 centimeters) (height × width). Unless otherwise noted, the poster boards on which the posters are hung should be 48 × 96 in. (122 × 244 cm).
- Poster abstract presentations abstract presentations must be consistent with the contents of the accepted abstract, and include the following sections: purpose, methods, results, conclusions, and practical applications.
- Poster presenters are expected to stand next to their poster for the duration of the presentation time.
- The Research Committee recommends one of the two following layouts (Traditional Poster or #betterposter) as a general guideline for all poster presentations:

I. TRADITIONAL POSTER DESIGN



EXAMPLE OF TRADITIONAL POSTER PRESENTATION

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 Krywe[1], Rashelle Hoffman[2], Eric Bredahl[1], Blake Murphy[1], Joan Eckerson[1], Mitchel Magrini[1]
[1]Department of Exercise Science and Pre-Health Professions, Creighton University
[2]Department of Physical Therapy, Creighton University

CURAS Center for Undergraduate Research and Scholarship

Purpose

High-intensity interval training (HIIT) can help maintain muscle mass, strength, and independence in older adults; however, the underlying molecular mechanisms that explain this preservation are poorly understood.

The purpose of this study is to examine changes in SERCA 1 expression, vastus lateralis cross-sectional area (VL_{CSA}), lower body strength, and estimated cardiorespiratory fitness (eVO_2) following 12-weeks of HIIT in older adults.

Methods

Table 1. Participant Demographics

	n (M/F)	Age (y)	Height (m)	Weight (kg)
Participants	4 (1/3)	80 ± 8	1.69 ± 0.03	64.08 ± 10.06

The HIIT protocol is described in Table 2. Panoramic ultrasound images of the right VL were collected at baseline (PRE) and following training (POST) to estimate VL_{CSA}. Micro biopsies from the right VL were obtained to examine changes in SERCA 1 expression at rest (1 week ± 1 day POST) using Western Blots. GAPDH was used as loading control. Each sample was run in duplicate to ensure reliability. Muscular strength was assessed by estimating one-repetition maximum (e1RM) using a belt squat. Starting weights were determined using a percentage of the participant's body weight (males=120%, females=100%) and were gradually increased until they were unable to perform >3-5 reps. eVO_2 was calculated based on 6-minute walk test performance using validated gender-specific equations. Differences ($p < 0.05$) between PRE and POST for each variable were identified using paired t-tests and Hedges *g* was used to determine effect sizes.

Results

There was a significant increase in SERCA 1 expression from PRE to POST (29,564.06 ± 19,267.31 au vs. 49,136.57 ± 2,2995.21 au, p = 0.007, *g* = -2.06), as well as significant improvements in squat e1RM (75.96 ± 18.28 kg vs. 123.58 ± 30.34 kg, p = 0.036, *g* = -2.50) and eVO2 (27.40 ± 4.93 mL/kg/min, 34.20 ± 2.89 mL/kg/min, p = 0.047, *g* = -1.18). There were no significant improvements in VL_{CSA} (9.96 ± 2.38 cm^2 vs. 10.53 ± 2.95 cm^2, p = 0.201, *g* = -0.59).

Table 2. HIIT Circuit Outline

Training Component	Specific Exercises and Resistance	Time
Warm-up	Stationary bike/dynamic mobility	5 Minutes
HIIT Circuit: 1-minute training blocks 1 set of each exercise	• Squats (30% of e1RM) • Medicine ball forward chest throw (5% of BW) • Medicine ball overhead throw (5% of BW) • Farmers walk (walking with dumbbell in each hand) (20% of BW) • Seated shoulder press (30% of e1RM) • Seated row sitting on fitness ball (30% of BW) • Aerobic riser step ups • Foot ladder drills* • Twisting medicine ball pass**	Weeks 1-4 (20:40s, W:R) Weeks 5-8 (30:30s, W:R) Weeks 9-12 (40:20s, W:R) Total Time: 7-9 Minutes
2-minute rest break		
Repeat HIIT Circuit		
2-minute rest break		
Bike HIIT	Total body (push, pull, and pedal) all-out intervals on the Assault Airbike	Same as HIIT circuit
Cool Down	Stretching and relaxation exercises	5 Minutes

W:R = Work to rest ratio, BW = Body weight, e1RM – estimated 1RM, *Exercises introduced at 6 weeks, **Exercises introduced at 9 weeks

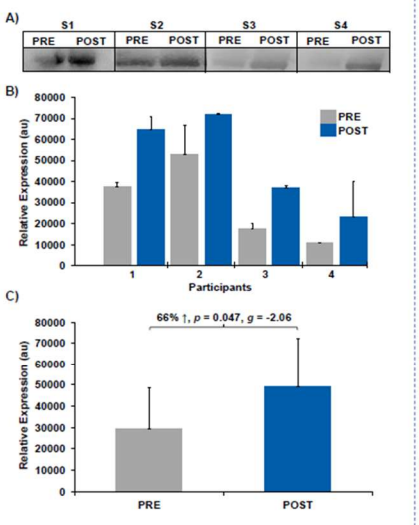


Figure 1. SERCA1 expression **A)** Individual relative SERCA1 expression on PVDF membranes **B)** Individual relative SERCA1 expression from PRE to POST HIIT training **C)** Average relative SERCA1 expression from PRE to POST HIIT

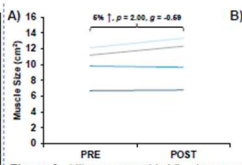


Figure 2. Ultrasonographic VL changes from PRE to POST HIIT **A)** Individual changes from PRE to POST VL ultrasounds **B)** Example size changes from PRE VL_{CSA}: 12.146 cm^2 to POST VL_{CSA}: 13.338 cm^2

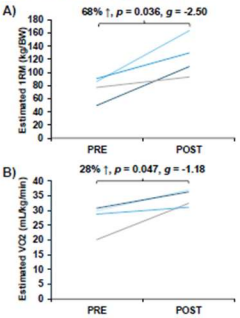


Figure 3. Performance outcomes from PRE to POST HIIT **A)** Estimated 1RM from PRE to POST HIIT **B)** Estimated VO_2 max from PRE to POST HIIT

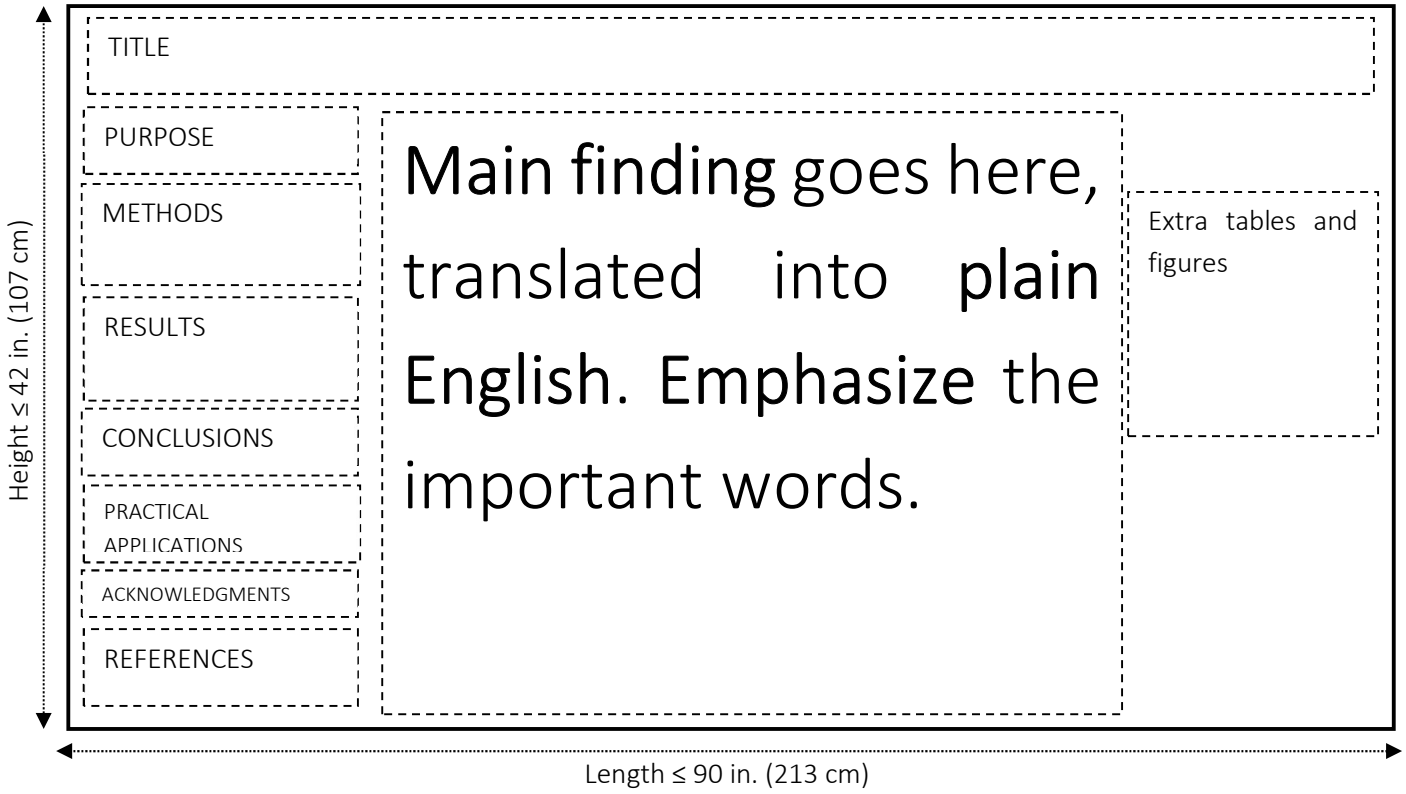
Conclusions

These data suggest that the 12-weeks of HIIT increased cardiorespiratory fitness, muscle size, and strength in older adults which may be explained, in part, by an improvement in intramuscular calcium handling.

Practical Applications

This study contributes to the growing body of literature citing HIIT training as an effective exercise modality to potentially ameliorate age-associated declines in lower body strength and cardiorespiratory fitness. Strength and conditioning professionals and practitioners can use this data to prescribe exercise for older adult clients.

II. #BETTERPOSTER DESIGN



More information on #betterposter design can be found at https://www.youtube.com/watch?v=1RwJbhkCA58

EXAMPLE OF #BETTERPOSTER DESIGN

UNIVERSITY OF WISCONSIN PLATTEVILLE

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

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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.

METHODOLOGY

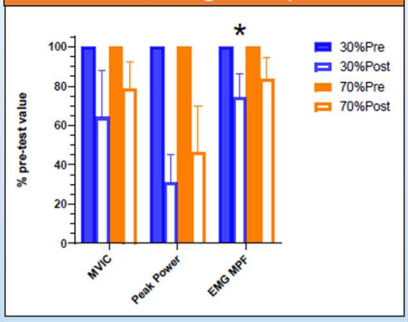
On separate days, 14 men (mean±SD: age=22.9±2.0 yrs; body mass=85.0±16.9 kg; height=178.7±5.9 cm) completed one set of forearm flexion muscle actions to failure at 30% and 70% of their one-repetition maximum (1RM), in a random order. Prior to the fatiguing task the subjects completed pre-testing which 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.

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.

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 effecting movement velocity or PP production, compared to when training with moderate relative loads.

FIGURE 1. Fatigue responses



RESULTS

The subjects completed a significantly ($p<0.001$, $d=3.0$) greater number of repetitions to failure at 30% 1RM (64.9±17.4) compared to 70% 1RM (16.7±5.1). Peak force decreased more significantly ($p<0.001$, $d=1.3$) following the 30% (32.0±16.8%) versus 70% 1RM task (7.6±9.9%). In addition, there was a significantly ($p=0.004$, $d=0.9$) greater decrease in EMG MPF for the 30% (25.6±11.7%) compared to the 70% 1RM task (16.3±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.

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.

ABSTRACT REVIEW PROCESS

The Scientific Programs Subcommittee is responsible for reviewing the NSCA Research Abstracts to ensure that the correct formatting has been applied and to solicit blinded external review(s) for scientific content. Abstracts that do not meet the previously stated formatting criteria will be rejected. The Scientific Programs Subcommittee may solicit a blinded external review. The abstract may be externally reviewed for scientific content, appropriate methodology, correct statistical analysis, proper interpretation of results, and contribution to the field of strength and conditioning. If a reviewer suggests rejecting an abstract, the Scientific Programs Subcommittee will independently re-review the abstract in question. In this case, the Scientific Program Subcommittee will have final authority to accept or reject the abstract.

The Scientific Program Subcommittee may edit an abstract that a reviewer has suggested rejecting to make it acceptable. If this occurs, the author will be notified and allowed to accept or reject the edits.

STUDENT AWARD CONSIDERATION

Any student author who wishes to submit a research abstract for award consideration must be the primary author of the abstract and a member of the NSCA. Each student can only have one (1) abstract (podium or poster) submitted for award consideration.

STUDENT RESEARCH AWARD DESCRIPTION

The NSCA awards outstanding student research efforts through the NSCA Student Research Awards. Five awards are given each year:

1. Doctoral Abstract Podium Presentation
2. Doctoral Abstract Poster Presentation
3. Master's Abstract Podium Presentation
4. Master's Abstract Poster Presentation
5. Undergraduate Abstract Poster Presentation

PRELIMINARY JUDGING FOR STUDENT AWARDS

The top five (5) master's podium and top ten (10) doctoral podium submissions after the initial review period will be selected to be judged at the National Conference. The top ten (10) doctoral posters, top ten (10) master's posters, and top ten (10) undergraduate posters after the initial review period will be selected to be judged at the National Conference. Students selected to be judged at the National Conference will be notified of their selection.

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- Each student award applicant must be a current Student or Professional NSCA Member at the time the abstract is submitted.
- A student can be the primary author on a maximum of 2 abstracts; however, only 1 abstract can be eligible for the student award.
- The candidate must be enrolled as a full-time student at the time of abstract submission *or* have completed his/her degree no more than 1-year prior to the NSCA National Conference.
- The abstract must be submitted according to the required specifications (*see above*) and the "Student Award" option must be selected.
- The presentation guidelines (either podium or poster) must be met as stated in this document.
- Student award candidates must attend the NSCA National Conference to present their research.
- Winners will be announced at the NSCA Awards Banquet on the Friday evening of the conference, as well as through NSCA's social media channels.
- Case studies are not eligible for award consideration.

STUDENT AWARD JUDGING CRITERIA

Below are five (5) basic questions and additional sub-questions that are used by the judges to evaluate the student award candidates. Each question is answered with a Likert scale response on evaluation sheets, with spaces for judges' comments. The points are tallied, and the comments are considered, narrowing the candidates for consideration. In the event of a tie, an overall subjective score provided by the judges from 1 – 100 will be considered.

1. Was the presentation knowledgeable and professional?
    a. For podium presentations – were the slides readable?
    b. For poster presentations – was the poster readable?
    c. How involved was the student with this project?
        i. Did the student provide well-informed responses to the questions?
        ii. How knowledgeable was the student about this project?
    d. How well did the authors follow the guidelines for abstract presentations (component parts)?
2. Was the introduction/literature review sufficient and relevant?
3. Was the study well designed?
    a. Was the purpose clearly stated?
    b. Did the methodology address the research question?
    c. Were the statistical procedures appropriate?
    d. Were the conclusions valid based on the results of the study?
4. What was the scientific impact of the research?
5. How well did the student *bridge the gap* with the practical application section?

SUBMISSION CHECKLIST

- ✓ Abstract is written in English.
- ✓ Research study is original and has not been previously published or presented.
- ✓ All required sections are provided and labeled.
- ✓ PURPOSE, METHODS, RESULTS, CONCLUSIONS, and PRACTICAL APPLICATIONS.
- ✓ All data are completed and present at the time of submission.
- ✓ No brand names are included (only permitted in METHODS and/or ACKNOWLEDGEMENTS sections to describe procedures).
- ✓ No brand names appear in the long or short title.
- ✓ Any funding is described in the acknowledgments section.
- ✓ Any potential conflicts of interest are described in the acknowledgments section.