Abstract Guidelines and Checklist

NOTE: If the checklist is not complete, the abstract may not be accepted or eligible for presentation.

□ Abstracts must be submitted using the NEACSM 2024 Abstract Submission Google Form. The deadline for submissions is **Tuesday, August 6th, 2024 BY 11:59 PM (EST)**.

□ For Student Investigator Award Applicants (undergraduate and graduate students):
□ Complete the Student Contribution Checklist
- Optional: Complete the Student Detailed Description of Research Contribution

□ Attestation of Student Contribution: Complete Student and Mentor signature

□ For President's Cup Competition Applicants (graduate students only):
□ Complete above requirements for the Student Investigator Award
□ Review Eligibility Criteria Checklist: Participant Eligibility Criteria Checklist_ACSM President's Cup.docx.pdf
□ Opt into the President's Cup Competition on the NEACSM 2024 Abstract Submission Google Form

□ The entire abstract must be typed using Times New Roman font, and 12-point font size.

□ Title of the abstract is in UPPERCASE and in bold and limited to 15 words.

□ Authors and affiliations: All first and last names and ACSM Fellows denoted by FACSM. Institutional affiliations of all authors are included. Authors' titles or degrees are not included.

□ Abstract is single-space and one paragraph and limited to no more than 350 words (not including spaces, title, author names, institutional affiliations, and grant funding). One figure, chart or table can be included. If a figure, chart or table is included, word count is reduced to 300 words.

□ Abstract includes the specific subheadings of **PURPOSE**, **METHODS**, **RESULTS**, and **CONCLUSION** in UPPERCASE and bold within the body of the abstract. A brief background section may precede the **PURPOSE**, but there is no subheading (see example abstract below).

□ Human studies must comply with the ACSM statement regarding the use of human subjects and informed consent. (*MSSE*®, Vol. 30, No. 7, July 1998, "Policy Statement Regarding the Use of Human Subjects and Informed Consent."). Animal studies must comply with the NIH guidelines regarding the use of animals. To access the policy, go to www.acsm-msse.org. On the upper right-hand side (under "Information for Authors"), click on "Journal Info" in the second paragraph, and click on the "Instructions and Guidelines" link. Scroll down to "Human & Animal Experimentation Policy Statements."

- To ensure consistency and clarity, it is directed that authors use the terms as defined by *MSSE*®, “Information for Authors,” while utilizing the units of measurement of the Systeme International de’Unite (SI).
- Abstract must include data to substantiate the findings/conclusions.
- Grant funding information is included at the bottom of the abstract (as applicable).
- The abstract submission form should be saved as a PDF with the lead author’s last name first initial (i.e., Cook S. pdf), and uploaded to the Abstract Submission Form.
- Please contact NEACSMfreecomm@gmail.com with any questions ahead of the submission deadline.

ABSTRACT SUBMISSION DEADLINE: Tuesday August 6th BY 11:59 PM (EST).

See below for example abstracts:

Scientific Abstract Example:

EFFECT OF 6 WEEKS OF ECCENTRIC CYCLING TRAINING ON WALKING ECONOMY IN HEALTHY INDIVIDUALS

Albino G. Schifino, Luis F. Diaz, Andrew J. Weiler, C.H. Leong
Department of Physical Education and Human Performance, Central Connecticut State University.

Low muscular strength is associated with physical decline. Progressive strength training has been demonstrated to improve physical functional outcomes. Because eccentric exercise is a potent stimulus for increasing muscle size, strength and power, it has the potential to serve as a time-effective intervention to improve ambulatory function at a lower metabolic cost compared to traditional strength training. **PURPOSE:** The purpose of this study was to examine if a 6-week eccentric cycling training intervention could improve walking economy in healthy individuals. **METHODS:** Seven healthy individuals (six males and one female; age=27±6 yrs; mass=73.4±9.7 kg; height=1.7±0.9m) trained on an eccentric ergometer for 6 weeks (3x/week; 10–30 min; 54–66% of HR_{max}). The metabolic cost of walking (C_w; J/kg/m) was assessed one week prior to, and one week following 6 weeks of eccentric cycling training. C_w was determined as the net energy cost (J/kg/s), divided by walking speed (m/s) during steady-state walking at 5 walking speeds (0.7, 1.11, 1.39, 1.67, and 1.9 m/s). Cohen's d effect sizes (*ES*) were calculated for all analyses and *ES* magnitudes of 0.10, 0.30, and 0.50, were interpreted as small, medium, and large effects, respectively. **RESULTS:** During eccentric cycling training, participants increased work rates from 92.7±29.7 to 222.6±64.6 W, while exercising at "fairly light" to "somewhat hard" exertion levels (11±2 to 13±1; Borg-scale units). Following eccentric cycling training, post-training C_w was significantly lower while walking at 0.7m/s (P=0.03). Although there were no statistical significance detected at the walking speeds of 1.11, 1.39 , 1.67, and 1.9 m/s (all P>0.05), the lower post-training Cw observed provide strong evidence for a trend of decreased Cw following eccentric cycling training. **CONCLUSIONS:** These results demonstrate that 6 weeks of chronic eccentric cycling training was effective in improving walking economy, and can be safely administered and tolerated by healthy individuals. To the best of our knowledge, this is the first report of a significant improvement in ambulatory function following 6 weeks of eccentric cycling training in a young healthy population. Improvement in ambulatory function would be beneficial for both aging and athletic populations.

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Case Study Abstract Example:

EFFECT OF MODERATE- AND VIGOROUS-INTENSITY AEROBIC AND ANAEROBIC EXERCISE TESTING ON A WOMAN WITH POST-COVID-19 SYNDROME

Jeff Schlicht, Paul M. Gallo
Department of Health Promotion and Exercise Sciences, Western Connecticut State University Department of Exercise Science and Wellness, Norwalk Community College

Individuals with post-COVID-19 syndrome (long COVID) are subject to a variety of persistent symptoms including sporadic bouts of dyspnea. Both aerobic and anaerobic exercise modalities are highly effective treatments for the management of other chronic respiratory diseases, but exercise tolerance or benefits in long COVID patients are unclear. **PURPOSE:** The purpose of this case study was to determine if exercise of various intensities and modalities triggered dyspneic episodes in a person with long COVID. **METHODS:** A woman (44 yrs; mass 73 kg; BMI 24.4 kg·m 2; resting peripheral blood oxygen saturation 98%) who was infected with COVID-19 in November 2020 and had persistent and unpredictable bouts of significant dyspnea was tested 8 months post-infection. She performed a graded exercise treadmill test (GXT) at habitual walking speed (3.0 mi·hr -1) with increasing grade of 2% per minute, 6-min treadmill walking tests at 60% and 80% peak heart rate (HR), one repetition maximum (1RM) leg press strength test, and 8-repetition leg press sets at 50%, 60%, 70%, and 80% 1RM. All tests were performed on the same day. The order of testing (post-test rest period) were: GXT (10 min); 60% walking (10 min); 80% walking (10 min); 1RM determination (3 min); 50% 1RM, 60% 1RM, 70% 1RM, 80% 1RM (3 min between sets). Oxygen saturation was captured via fingertip pulse oximeter, dyspnea was assessed by the Modified Borg Dyspnea Scale (Borg), and HR was captured using a chest-strap HR monitor. **RESULTS:** During all aerobic tests she maintained normal oxygen saturation (range: 94-98%) and did not reach 5 (severe dyspnea) on Borg (range: 0.5-4, highest rating at peak GXT). Similar results were seen during anaerobic testing (oxygen saturation range 98-99%, Borg range 0.5-3, highest rating post-80% 1RM set). **CONCLUSION:** Acute bouts of moderate- and vigorous-intensity aerobic or anaerobic exercise testing sessions did not trigger severe dyspnea in a long COVID patient prone to episodes of breathlessness. These results suggest that research using moderate or vigorous aerobic or strength training may be feasible in long COVID patients to determine.

Experiential-learning Abstract Guidance:

Experiential-learning abstracts are more flexible, but should be structured in the same way as the other categories (Purpose, Methods, Results, Conclusions). The Purpose and Methods, describe why and what was done during the project. However, instead of traditional Results with statistical analyses, describe the “outcomes” or “products” of the project. The conclusion should clearly state what was learned or gained from participating in the project or learning event.

Projects that qualify as Experiential-learning broadly include an out of classroom learning experience (e.g., internship experience, independent study, field work, or other practical study where the focus was “learning by doing”). We encourage students and faculty mentors to contact us we any questions: NEACSMfreecomm@gmail.com