

# Sten Stray-Gundersen, Ph.D

Research Associate  
The University of South Carolina

Email: [sten@mailbox.sc.edu](mailto:sten@mailbox.sc.edu)

## EDUCATION

**The University of Texas at Austin** 2019-2023

*Exercise Physiology*, Ph.D

*PI/Advisor:* Sophie Lalande, Ph.D

*Dissertation:* Acute Effects of Intermittent

Hypoxia on Peripheral Vascular Function  
in Young and Older Adults

*Exercise Physiology*, M.S. Student 2017-2019

*PI/Advisor:* Hirofumi Tanaka, Ph.D, FASCM

*Thesis:* Walking with Blood Flow Restriction:

Wide-Rigid Cuffs vs. Narrow-Elastic Bands

**Dartmouth College** 2012-2016

*B.A. Biology*

*Dartmouth Varsity Men's Soccer (Co-Captain)*

## PROFESSIONAL EXPERIENCE

**The University of South Carolina**

*Department of Exercise Science*

**Position:** Research Associate:

Sport Science Lab

2023-Present

**The University of Texas at Austin**

*Department of Biological Sciences*

**Position:** Biology Teaching Assistant:

Human Systems Physiology

2017-2022

*Department of Kinesiology (Exercise Physiology)*

**Position:** Graduate Student Researcher in

The Cardiovascular Aging Research Lab (MS) and

The Clinical Exercise Physiology Lab (PhD)

2017-2019

2019-2023

**BStrong**

Speaker/Educator/Certifier/Coach

2017-Present

**ROI Performance**

Exercise Physiologist

Director of BFR Applications

2020-Present

## AWARDS

**Dissertation Writing Fellowship for Spring 2023**—December 2022

Awarded by The University of Texas at Austin Graduate School

**Alderson Graduate Teaching Scholarship for 2021-2022**—August 2022

Awarded by The University of Texas at Austin, Department of Kinesiology and Health Education

**Joe R. & Teresa Lozano Long Graduate Fellowship**—August 2022

Awarded by The University of Texas at Austin, Department of Kinesiology and Health Education

**Outstanding Teaching Assistant Award for 2021-2022**—May 2022

Awarded by the Biological Instructional Office in the College of Natural Sciences

**Lynn Wade McCraw Endowed Presidential Fellowship**—April 2022

Awarded by The University of Texas at Austin, Department of Kinesiology and Health Education

**TACSM President's Cup Winner**—February 2022

Awarded at the TACSM Annual Regional Conference in the Doctoral category for best poster presentation of original work, "Hypoxic Preconditioning Attenuates Ischemia-reperfusion Injury in Older Adults."

**Alderson Graduate Teaching Scholarship for 2020-2021**—August 2020

Awarded by The University of Texas at Austin, Department of Kinesiology and Health Education

**Texas New Scholar Scholarship for 2019-2021**—August 2020

Awarded by The University of Texas at Austin, Department of Kinesiology and Health Education

## PUBLICATIONS

Wojan, F, **Stray-Gundersen S**, Nagel MJ, Lalande S. Short exposure to intermittent hypoxia increases erythropoietin levels in healthy individuals. *J Appl Physiol* (1985). **2023**

**Stray-Gundersen S**, Massoudian S, Wojan F, Tanaka H, Lalande S. Hypoxic preconditioning reduces endothelial ischemia-reperfusion injury in older adults. *Am J Physiol Regul Integr Comp Physiol*. **2022**.

Wojan F, **Stray-Gundersen S**, Nagel MJ, Lalande S. Short exposure to intermittent hypoxia increases erythropoietin levels in healthy individuals. *J Appl Physiol* (1985). **2021**.

Wooten SV, Fleming RYD, Wolf JS Jr, **Stray-Gundersen S**, Bartholomew JB, Mendoza D, Stanforth PR, Stanforth D, Hernandez LM, Tanaka H. Prehabilitation program composed of blood flow restriction training and sports nutrition improves physical functions in abdominal cancer patients awaiting surgery. *Eur J Surg Oncol*. **2021**.

Jarrard CP, Nagel MJ, **Stray-Gundersen S**, Tanaka H, Lalande S. Hypoxic preconditioning attenuates ischemia-reperfusion injury in young healthy adults. *J Appl Physiol* (1985). **2021**.

Wooten SV, Mittag U, Alvero Cruz JR, **Stray-Gundersen S**, Hoffmann F, Michély S, Möstl S, Sies W, Mulder E, Rauschendorfer P, Chilibeck PD, Rittweger J, Tanaka H. Life Satisfaction, Positive Affect, and Sleep Impairment in Masters Athletes: Modulation by Age, Sex, and Exercise Type. *Front Physiol*. **2021**.

**Stray-Gundersen S**, Wooten S, Tanaka H. Walking With Leg Blood Flow Restriction: Wide-Rigid Cuffs vs. Narrow-Elastic Bands. *Front Physiol*. **2020**.

Wooten SV, **Stray-Gundersen S**, Tanaka H. Hemodynamic and Pressor Responses to Combination of Yoga and Blood Flow Restriction. *Int J Sports Med*. **2020**.

## ORAL PRESENTATIONS

### **Institute for Human and Machine Cognition:**

Blood Flow Restriction: Mechanisms, Considerations, and Applications. April **2023**.

### **President's Cup National ACSM Annual Competition:**

**Stray-Gundersen S**, Massoudian S, Wojan F, Tanaka H, Lalande S. Hypoxic Preconditioning Attenuates Ischemia-reperfusion Injury in Older Adults. May **2022**.

## POSTER PRESENTATIONS

**Stray-Gundersen S**, Wojan F, Tanaka H, Lalande S. Acute Effect of Intermittent Hypoxia on Peripheral Vascular Function in Older Adults. Experimental Biology Annual National Conference. April **2023**.

**Stray-Gundersen S**, Wojan F, Massoudian S, Tanaka H, Lalande S. Acute Effect of Intermittent Hypoxia on Peripheral Vascular Function in Young Healthy Adults. Experimental Biology Annual National Conference. April **2022**.

**Stray-Gundersen S**, Massoudian S, Wojan F, Tanaka H, Lalande S. Hypoxic Preconditioning Attenuates Ischemia-reperfusion Injury in Older Adults. Experimental Biology Annual National Conference. April **2022**.

Wojan, F, **Stray-Gundersen, S**, Massoudian, S, Lalande, S. Impact of Intermittent Hypoxia Exposure on Erythropoietin Levels in Older Individuals. Experimental Biology Annual National Conference. April **2022**.

**Stray-Gundersen S**, Massoudian S, Wojan F, Tanaka H, Lalande S. Hypoxic Preconditioning Attenuates Ischemia-reperfusion Injury in Older Adults. TACSM Annual Regional Conference. February **2022**.

Wojan, F, **Stray-Gundersen, S**, Massoudian, S, Lalande, S. The Influence of Intermittent Hypoxia on Erythropoietin Levels in Older Adults. TACSM Annual Regional Conference. February **2022**.

**Stray-Gundersen S**, Wooten S, Tanaka H. Walking with Leg Blood Flow Restriction: Wide-Rigid Cuffs vs. Narrow-Elastic Bands. ACSM Annual National Conference. June **2019**.

### **PROFESSIONAL MEMBERSHIPS**

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|----------------------------------------------------|--------------|
| American College of Sports Medicine: Texas Chapter | 2017-Present |
| American College of Sports Medicine                | 2017-Present |
| American Physiological Society                     | 2019-Present |