# **EMILY ERLENBACH**

DEPARTMENT OF KINESIOLOGY AND COMMUNITY HEALTH

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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#### **EDUCATION**

# Ph.D. UIUC, Kinesiology

2023

Advisor: Dr. Neha Gothe

Committee Members: Dr. Neha Gothe, Dr. Edward McAuley, Dr. Nicholas Burd,

Dr. Dori Rosenberg

Thesis Title: Testing the Efficacy of a Novel Social Cognitive Theory-Based Intervention to Reduce Sedentary Behavior and Promote Physical Activity among

Working Adults

# MS UIUC, Kinesiology

2020

Advisor: Dr. Neha Gothe

Committee Members: Dr. Neha Gothe, Dr. Edward McAuley

Thesis Title: The Association Between Light Physical Activity and Cognition Among

Adults: A Scoping Review

**BS** University of California at Davis, Neurobiology, Physiology & Behavior 2017

Graduated with Honors

## RESEARCH EXPERIENCE

#### **Graduate Research Assistant**

2018- Present, University of Illinois at Urbana-Champaign Exercise Psychology Lab, under the direction of Dr. Neha Gothe.

Research focuses on the biological, psychological, and social health benefits of physical activity across the lifespan. Projects aim to promote physical activity in sedentary populations and examine the underlying physiological and psychological changes accompanying physical activity engagement.

# TEACHING EXPERIENCE

# University of Illinois at Urbana-Champaign

Lead Instructor, Kinesiology and Community Health

Spring 2022: Kinesiology 448 (Exercise and Health Psychology)

• An undergraduate core course that provides an overview of physical activity as it relates to health and well-being, including personality, anxiety, stress, cognition, depression, quality of life; epidemiology of physical activity in the US and across the world; theory and interventions for behavior change.

# **University of Illinois at Urbana-Champaign**

Teaching Assistant, Kinesiology and Community Health

Fall 2018, Spring 2019, Fall 2019: Kinesiology 140 (Social Science of Human Movement)

- An undergraduate course with 25-30 students per section,
- Topics included gender and race in sports, performance-enhancing substance usage, disability in sports, sports iconography, childhood sports, and physical activity.
- In charge of leading discussion sections, developing quizzes, grading assignments, and holding office hours

Fall 2019, Spring 2020, Fall 2020: Kinesiology 448 (Exercise and Health Psychology)

- An undergraduate and graduate level course with approximately 60 students covering various topics regarding the benefits of exercise towards physical and psychological health.
- In charge of developing and grading assignments and exams.
- Guest lectured classes on Healthy People 2020 campaign; Exercise and Sleep; Exercise and Anxiety; Health Behavior Theories; Sedentary Behavior; Exercise-Induced Resilience, Burnout, and Addiction; College Students, Exercise and Mental Health

Spring 2020: Kinesiology 201 (Physical Activity Research Methods)

- An undergraduate course with approximately 30 students per section
- Topics included statistical approaches to measuring physical activity, scientific methods for physical activity research, and research ethics.
- In charge of leading discussion sections, grading assignments, and holding office hours.

#### PUBLICATIONS AND CONFERENCE PRESENTATIONS

#### Journal Publications

- 1. Gothe, N. P., Erlenbach, E., Garcia, V., Malani, R., Voss, S., Camacho, P.B., McAuley, E., Burd, N., Sutton, B.P., Damoiseaux, J. (2023). Yoga, aerobic and stretching exercise effects on neurocognition: Randomized controlled trial protocol. Contemporary Clinical Trials, 107240.
- **2. Erlenbach**, **E.**, McAuley, E., Gothe, N.P. (2021). The association between light physical activity and cognition among adults: a scoping review. *Journals of*

- *Gerontology Series A: Biomedical Sciences and Medical Sciences*, 76(4). https://doi.org/10.1093/gerona/glab013
- **3.** Gothe, N. P., & **Erlenbach**, **E**. (2021). Feasibility of a yoga, aerobic and stretching-toning exercise program for adult cancer survivors: the STAYFit trial. *Journal of Cancer Survivorship*, 1-10.https://doi.org/10.1007/s11764-021-01101-y
- **4.** Gothe, N.P., **Erlenbach**, **E**., & Engels, H.J. (2021). Exercise and self-esteem model: Validity in a sample of healthy female adolescents. *Current Psychology*, 1-9. https://doi.org/10.1007/s12144-021-01390-7.
- **5.** Gothe, N.P., **Erlenbach**, **E.** (2020). Feasibility of an 8-week yoga intervention among middle-aged and older adults. *OBM Geriatrics*, *4*(4), 15. doi:10.21926/obm.geriatr.2004137.
- **6.** Gothe, N. P., **Erlenbach, E. D**., Streeter, S. L., & Lehovec, L. (2020). Effects of yoga, aerobic, and stretching and toning exercises on cognition in adult cancer survivors: protocol of the STAY Fit pilot randomized controlled trial. *Trials*, (1), 1-9.
- 7. Gothe, N. P., Khan, I., Hayes, J., Erlenbach, E., & Damoiseaux, J. S. (2019). Yoga effects brain health: A systematic review of the current literature. *Brain Plasticity*, 5(1), 1-17.

# Manuscripts Under Review

- 1. Erlenbach, E., Singleton, C., Gothe, N.P. (2023). Sedentary electronic time is detrimental for aerobic fitness among low-fit adults: Findings from the NHANES dataset (Under Review). *BMC Public Health*
- **2. Erlenbach, E.,** Gothe, N.P. (2023). How feasible and effective is it to simultaneously reduce sedentary time and promote exercise engagement among middle-aged working adults? Protocol of the One Step at a Time pilot randomized controlled trial (Under Review). *BMC Public Health*
- **3.** Garcia, V., **Erlenbach, E.,** Gothe, N.P. (2023). Socio-ecological model to examine physical activity barriers, facilitators, and preferences among adult cancer survivors: Results from focus groups (Under Review). *Journal of Cancer Survivorship*.

# **Peer-Reviewed Presentations**

1. Erlenbach, E., Malani, R.N., McAuley, E. & Gothe, N.P. (2023, June 14-17) Differences in Objective and Subjective Sedentary Time among Working and Non-Working Adults. [Presentation]. The International Society of Behavioral Nutrition and Physical Activity 22nd Annual Meeting, Uppsala, Sweden.

- **2.** Erlenbach, E., Garcia, V., & Gothe, N.P. (2023, April 26-29). *The efficacy and acceptability of an incremental step count-promotion strategy for cancer survivors*. [Poster]. The 44th Annual Meeting of the Society for Behavioral Medicine, Phoenix, AZ.
- **3.** Erlenbach, E., Malani, R.N., McAuley, E. & Gothe, N.P (2022, November 2-6). Feasibility and Acceptability of a Hybrid Aerobic Exercise Program for Older Adults during the COVID-19 Pandemic. [Poster]. The Gerontological Society of America (GSA) 2022 Annual Scientific Meeting, Indianapolis IN.
- **4.** Malani, R.N., **Erlenbach, E.,** Gothe, N.P. & McAuley, E. (2022, November 2-6). *Effects of a Six-month Exercise Program on Physical Activity among Older Adults with Chronic Conditions*. [Poster]. The Gerontological Society of America (GSA) 2022 Annual Scientific Meeting, Indianapolis IN.
- **5.** Erlenbach, E., Garcia, V., McAuley, E., & Gothe, N.P. (2022, April 9-11). *Light physical activity is a positive predictor of cardiorespiratory fitness among inactive older adults*. [Poster] Society of Behavioral Medicine Annual Meeting, Baltimore, MD.
- **6.** Garcia, V., **Erlenbach, E.,** & Gothe, N.P. (2022, May 18-21). *The feasibility of recruiting cancer survivors to participate in a fully remote physical activity promotion program during a pandemic.* [Poster]. International Society of Behavioral Nutrition and Physical Activity Annual Meeting, Phoenix, AZ.
- **7.** Malani, R.N., Garcia, V., **Erlenbach, E**., Gothe, N.P. & McAuley, E (2022, May 18-21). Knowledge, levels, and barriers to physical activity amongst adults with chronic conditions. [Poster] International Society of Behavioral Nutrition and Physical Activity Annual Meeting, Phoenix, AZ.
- **8.** Voss, S., **Erlenbach, E.,** Garcia, V., McAuley, E., & Gothe, N.P. (2022, Apr. 8). *Feasibility and acceptability of a hybrid in-person and Zoom-based yoga program for older adults: Preliminary data*. [Poster]. Society of Behavioral Medicine Annual Meeting, Baltimore MD.
- **9. Erlenbach, E.,** Singleton, C.R., & Gothe, N.P. (2021, April 12-16). *Television and computer use negatively impacts aerobic fitness among low- and medium-fit adults* [Research talk]. Society of Behavioral Medicine 42<sup>nd</sup> Annual Meeting, Virtual Conference.
- **10.** Garcia, V., **Erlenbach, E.,** & Gothe, N.P. (2021, April 12-16). *Predictors of physical activity among cancer survivors: role of demographic factors and precancer physical activity* [Poster presentation]. Society of Behavioral Medicine 42<sup>nd</sup> Annual Meeting, Virtual Conference.

- **11.** Danbury, A.D., **Erlenbach, E.,** Gothe, N.P. (2021, April 12-16). The effects of a pre-season yoga intervention on collegiate student-athlete stress and anxiety: A pilot study [Poster presentation]. Society of Behavioral Medicine 42<sup>nd</sup> Annual Meeting, Virtual Conference
- **12. Erlenbach, E.,** McAuley, E., Gothe, N.P. (2020, November 4-7). *Can light physical activity improve cognition among older adults? A scoping review* [Poster presentation]. Gerontological Society of America 2020 Annual Scientific Meeting, Virtual Conference.
- **13.** Zimmerman, B., Clements, G.M., Bowie, D.C., Jones, H., Mejia, D., Rubenstein, S., **Erlenbach, E.,** Gothe, N.P., Sutton, B.P., Low, K.A., Gratton, G., & Fabiani, M (2019, October 4-11). *Physical activity, but not VO*<sub>2peak</sub>, predicts cerebrovascular blood flow and operation span in aging females [Poster presentation]. Society for Psychophysiology Research 2020 Annual Meeting, Virtual Conference.
- **14. Erlenbach, E.,** Streeter, S., & Gothe, N.P (2020, April 1-4). *Influence of weekend sitting time and moderate-to-vigorous physical activity in predicting cardiovascular fitness among college students* [Poster presentation]. Society of Behavioral Medicine 41<sup>st</sup> Annual Meeting, Virtual Conference.
- **15. Erlenbach, E.**, Engels, H.J., & Gothe, N.P (2019, March 6-9). *Validity of the exercise and self-esteem model in a sample of adolescent athletic females* [Poster presentation]. Society of Behavioral Medicine 40<sup>th</sup> Annual Meeting, Washington D.C.
- **16.** Brown, N., Hill, G., **Erlenbach, E.,** & Gothe, N.P (2019, March 6-9. *Subjective and actigraph-measured sleep quality and affect in adult cancer survivors*. Society of Behavioral Medicine 40<sup>th</sup> Annual Meeting, Washington D.C.

## **RESEARCH GRANTS**

#### Grants Applied

## National Institute on Aging, R21 (PA-20-196)

09/2021-8/2023

Co-PIs: Gothe, N., McAuley, E.

Erlenbach, E (Co-I)

Project: One Step at a Time: Testing the Feasibility of a Novel Social Cognitive Theory-Based Intervention to Reduce Sedentary Behavior.

This randomized controlled trial tests the feasibility and efficacy of a novel 12-week SCT-based intervention targeting reductions in daily sitting time and increasing exercise participation among middle-aged office workers. The outcomes include physical activity, sedentary time measures, and program feasibility and efficacy assessments.

Budget Requested: \$413,568.00

## National Institutes of Health, F31AG071195-01A1

01/2021-12/2023

Co-Sponsors: Gothe, N., McAuley, E.

Impact Score: 50

Erlenbach, E (Co-I)

Project: *The Effects of Sedentary Behavior and Aerobic Fitness on Cognition*The proposed randomized controlled trial will examine whether decreasing daily sitting time improves cognition above and beyond improvements observed by aerobic fitness among inactive, middle-aged office workers. The outcomes include measures of executive functioning, aerobic fitness, and mean daily physical activity and sedentary time.

# PRESENTATIONS AND INVITED LECTURES

**Erlenbach, E.** (2021). Move your way to a better day: How exercise can combat stress, anxiety, and depression. Webinar presentation for Cornell University Summer Selfcare Series. July 20<sup>th</sup>, 2021. More information available at http://cceorangecounty.org/events/2021/07/08/summer-selfcare-series

**Erlenbach, E.,** Gothe, N.P. (2020). Health screening, safety considerations and group exercise instruction for exercise leaders. Workshop presentation for University of Illinois Extension staff as part of the *Physical Activity Training with the University of Illinois Extension*. July 30<sup>th</sup>, 2020.

**Erlenbach, E.** (2020). Move your way to a better day: How exercise can combat stress, anxiety and depression. Webinar presentation for University of Illinois Extension Summer Self-Care Series. July 28<sup>th</sup>, 2020. More information available at https://extension.illinois.edu/global/summer-self-care-series.

**Erlenbach, E**. (2019). Effects of yoga, strength training and aerobic exercise on cognition in adult cancer survivors. Invited presentation for the Society of Behavioral Medicine's Spotlight on Graduate and Trainee Research webinar.

#### HONORS AND AWARDS

2023 Doctoral Scholar, American Kinesiology Association, 2023

Laura J. Huelster Award, Department of Kinesiology and Community Health, University of Illinois, 2022

Paul D. Doolen Scholar Award in the Behavioral-Social Sciences, University of Illinois, 2021

UIUC Office of the Provost Center for Innovation in Teaching & Learning, Graduate Teacher Certificate, 2021

Society of Behavioral Medicine 42<sup>nd</sup> Annual Conference, Meritorious Abstract Recipient, 2021

List of Teachers Ranked as Excellent by their Students (UIUC), 2018-2021

Department of Kinesiology and Community Health, Travel Grant Award (UIUC), 2019, 2021, 2022, 2023

# **PROFESSIONAL AFFILIATIONS**

Gerontological Society of America, 2020-Present Sedentary Behavior Research Network, 2019-Present Society of Behavioral Medicine, 2018-Present International Society of Behavioral Nutrition and Physical Activity, 2023-present

# PROFESSIONAL SERVICE

**Graduate student representative,** Kinesiology and Community Health Educational Policy Committee (2020-2023)

**Search committee member,** Exercise Psychology Lab Project Coordinator (2020, 2021)

# **Peer-Reviewed Articles for:**

- Experimental Brain Research
- Brain Imaging and Behavior
- BMJ Open
- Journal of Gerontology, Medical Sciences
- Scientific Reports
- Medicine & Science in Sport & Exercise

#### SKILLS AND CERTIFICATIONS

# **Statistical and Data Analyses**

- SPSS
- SAS
- R Studio
- M plus

## **Project and Course Management**

- NIA's Clinical Research Operations & Management System (CROMS)
- Research Electronic Data Capture (REDCap)
- Oualtrics
- Microsoft Office Suite (Word, PowerPoint, Access, Excel)
- Canvas Online Learning Systems
- Compass 2G learning management system

#### **Certifications**

- American College of Sports Medicine Certified Personal Trainer, 2022
- UIUC Office of the Provost Center for Innovation in Teaching & Learning, Graduate Teacher Certificate, 2021
- American Red Cross CPR, AED, and First Aid Certification (2021)
- Collaborative Institutional Training Initiative (CITI) certifications