

Christopher E. Kline, Ph.D.
Curriculum Vitae

CONTACT INFORMATION

Department of Health and Physical Activity
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EDUCATION and TRAINING

- B.A., Sports Science** 1998-2002
Department of Health & Human Performance, Malone College, Canton, OH
- M.S., Exercise Science** 2003-2005
Department of Exercise Science, University of South Carolina, Columbia, SC
Thesis: *Investigation of Circadian Variation in 200-m Freestyle Swim Performance*
Mentor: Shawn D. Youngstedt, Ph.D.
- Ph.D., Exercise Science** (Applied Physiology concentration) 2006-2011
Department of Exercise Science, University of South Carolina, Columbia, SC
Dissertation: *The Effect of Exercise Training on the Severity and Health Consequences of Obstructive Sleep Apnea*
Mentors: Shawn D. Youngstedt, Ph.D.; J. Larry Durstine, Ph.D.; Steven N. Blair, P.E.D.
- NHLBI Postdoctoral Research Fellowship, Sleep and Chronobiology** 2010-2013
Translational Research Training in Sleep Medicine
Department of Psychiatry, University of Pittsburgh
Mentors: Martica Hall, Ph.D.; Daniel J. Buysse, M.D.
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APPOINTMENTS and POSITIONS

- Clinical Research Assistant 2003-2004
Clinical Exercise Research Center
Department of Exercise Science, University of South Carolina
- Graduate Research Assistant 2003-2010
Chronobiology Laboratory
Department of Exercise Science, University of South Carolina
- Graduate Teaching Assistant 2007-2008
Department of Exercise Science, University of South Carolina
- Research Associate 2009-2010
Research and Development
WJB Dorn VA Medical Center, Columbia, SC
- Postdoctoral Scholar 2010-2013
NHLBI T32 Translational Research Training in Sleep Medicine
Department of Psychiatry, University of Pittsburgh School of Medicine

Postdoctoral Associate <i>Department of Psychiatry, University of Pittsburgh School of Medicine</i>	2013
Assistant Professor <i>Department of Psychiatry, University of Pittsburgh School of Medicine</i>	2014-2015
<i>Dept. of Health & Physical Activity, School of Education, Univ. of Pittsburgh</i>	2015-present

RESEARCH INTERESTS

- Exercise as a behavioral treatment for sleep disorders (insomnia, obstructive sleep apnea)
 - Bidirectional relationship between physical activity and sleep
 - Cardiometabolic risks of subclinical sleep disturbance and sleep disorders
 - Sleep as a pathway through which physical activity improves cardiometabolic health
 - Influence of poor sleep as a determinant of behavioral weight loss interventions
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CERTIFICATIONS

Level I Certified Coach	USA Track & Field	2004-present
Certified Exercise Physiologist	American College of Sports Medicine	2004-present
Strength & Conditioning Specialist	National Strength & Conditioning Association	2006-present

HONORS

University of South Carolina (USC) Department of Exercise Science Outstanding Master's Student Award	2005
Delta Omega Public Health Honorary Society (<i>Mu</i> Chapter)	2005
USC Graduate Student Day Research Award Runner-up (Health/Life Sciences category)	2007
USC Arnold School of Public Health Doctoral Fellowship	2007-2008
USC Graduate School Travel Grant	2008-2010
Sleep Research Society First-time Trainee Travel Award	2009
USC Charles Coker Trustee Fellowship	2009
USC Arnold School of Public Health Travel Grant	2009
Sleep Research Society Trainee Award Based on Scientific Merit	2010
Sleep Research Society Abstract Excellence Award	2011
USC Department of Exercise Science Outstanding Doctoral Student Award	2011
USC Arnold School of Public Health Doctoral Achievement Award	2011
USC Graduate School Outstanding Dissertation Award (Biological/Life Sciences)	2011
American Academy of Sleep Medicine (AASM) Young Investigator Research Forum	2012
Sleep Research Society Abstract Meritorious Award	2012
CDC Physical Activity and Public Health Research Course fellow	2012
National Sleep Foundation 'Sleep in America Poll' Task Force Member	2012-2013
National Institutes of Health NHLBI Clinical Research Loan Repayment Program	2012-present
American Psychosomatic Society Citation Poster Award	2013
American Psychosomatic Society Young Investigator Colloquium attendee	2013
Sleep Research Society Abstract Honorable Mention Award	2013
AASM Young Investigator Award Honorable Mention	2013
Society of Behavioral Sleep Medicine Merit Award	2014
NIH Summer Institute on Randomized Behavioral Clinical Trials fellow	2014

SCHOLARLY PUBLICATIONSPeer-reviewed Articles:

1. Youngstedt SD, **Kline CE**. Epidemiology of exercise and sleep. *Sleep Biol Rhythms* 2006;4(3):217-221. PMID: 25374476; [PMCID: PMC4217702](#).
2. **Kline CE**, Durstine JL, Davis JM, Moore TA, Devlin TM, Zielinski MR, Youngstedt SD. Circadian variation in swim performance. *J Appl Physiol* 2007;102(2):641-649. [PMID: 17095634](#).
3. Zielinski MR, **Kline CE**, Kripke DF, Bogan RK, Youngstedt SD. No effect of chronic moderate sleep restriction on glucose tolerance in older long sleepers. *J Sleep Res* 2008;17(4):412-419. PMID: 18691360; [PMCID: PMC3244074](#).
4. Youngstedt SD, **Kline CE**, Zielinski MR, Kripke DF, Devlin TM, Bogan RK, Wilcox S, Hardin JW. Tolerance of chronic moderate sleep restriction in older long sleepers. *Sleep* 2009;32(11):1467-1479. PMID: 19928386; [PMCID: PMC2768953](#).
5. **Kline CE**, Devlin TM, Durstine JL, Davis JM, Moore TA, Youngstedt SD. Circadian rhythms of psychomotor task vigilance performance and mood in the ultra-short sleep/wake protocol. *Chronobiol Int* 2010;27(1):161-180. PMID: 20205564; [PMCID: PMC3248591](#).
6. **Kline CE**, Zielinski MR, Devlin TM, Kripke DF, Bogan RK, Youngstedt SD. Self-reported long sleep in older adults is closely related to objective time in bed. *Sleep Biol Rhythms* 2010;8(1):42-51. PMID: 25210491; [PMCID: PMC4157821](#).
7. Youngstedt SD, **Kline CE**, Ginsberg JP, Zielinski MR, Hardin JW. Bright light treatment for high-anxious young adults: a randomized controlled pilot study. *Depress Anxiety* 2011;28(4):324-332. [PMID: 21254315](#).
8. **Kline CE**, Crowley EP, Ewing GB, Blair SN, Durstine JL, Davis JM, Burch JB, Youngstedt SD. The effect of exercise training on obstructive sleep apnea and sleep quality: a randomized controlled trial. *Sleep* 2011;34(12):1631-1640. PMID: 22131599; [PMCID: PMC3208839](#).
9. **Kline CE**, Ewing GB, Burch JB, Blair SN, Durstine JL, Davis JM, Youngstedt SD. Exercise training improves selected aspects of daytime functioning in adults with obstructive sleep apnea. *J Clin Sleep Med* 2012;8(4):357-365. PMID: 22893765; [PMCID: PMC3407253](#).
10. **Kline CE**, Crowley EP, Ewing GB, Burch JB, Blair SN, Durstine JL, Davis JM, Youngstedt SD. Blunted heart rate recovery is improved following exercise training in overweight adults with obstructive sleep apnea. *Int J Cardiol* 2013;167(4):1610-1615. PMID: 22572632; [PMCID: PMC3417075](#).
11. **Kline CE**, Sui X, Hall MH, Youngstedt SD, Blair SN, Earnest CP, Church TS. Dose-response effects of exercise training on the subjective sleep quality of postmenopausal women: exploratory analyses of a randomised controlled trial. *BMJ Open* 2012;2(4):e001044. PMID: 22798253; [PMCID: PMC3400065](#).

12. Plourde G, **Kline CE**. Improving obstructive sleep apnea in a morbidly obese woman: role of dietary modification and physical activity. *Clin Nursing Studies* 2013;1(3):43-48. [DOI: 10.5430/cns.v1n3p1](#).
13. **Kline CE**, Irish LA, Kraffy RT, Sternfeld B, Kravitz HM, Buysse DJ, Bromberger JT, Dugan SA, Hall MH. Consistently high sports/exercise activity is associated with better sleep quality, continuity and depth in midlife women: the SWAN Sleep Study. *Sleep* 2013;36(9):1279-1288. PMID: 23997360; [PMCID: PMC3738036](#).
14. Hall M, Middleton K, Thayer JF, Lewis TT, **Kline CE**, Matthews KA, Kravitz HM, Kraffy RT, Buysse DJ. Racial differences in heart rate variability during sleep in midlife women: the SWAN Sleep Study. *Psychosom Med* 2013;75(8):783-790. PMID: 24077772; [PMCID: PMC3902648](#).
15. Okun ML, **Kline CE**, Roberts JM, Wettlaufer B, Glover K, Hall M. Prevalence of sleep deficiency in early gestation and its associations with stress and depressive symptoms. *J Womens Health* 2013; 22(12):1028-1037. PMID: 24117003; [PMCID: PMC3852611](#).
16. Irish LA, **Kline CE**, Rothenberger SD, Kraffy RT, Buysse DJ, Gold EB, Bromberger JT, Kravitz HM, Zheng H, Hall MH. A 24-hour approach to the study of health behaviors: temporal relationships between waking health behaviors and sleep. *Ann Behav Med* 2014;47(2):189-197. PMID: 24043549; [PMCID: PMC3956705](#).
17. Iftikhar I, **Kline CE**, Youngstedt SD. The effects of exercise training on the severity of sleep apnea: a meta-analysis. *Lung* 2014;192(1):175-184. PMID: 24077936; [PMCID: PMC4216726](#).
18. Buman MP, Phillips B, Youngstedt SD, **Kline CE**, Hirshkowitz M. Does nighttime exercise really disturb sleep? Results from the 2013 National Sleep Foundation Sleep in America poll. *Sleep Med* 2014;15(7):755-761. [PMID: 24933083](#).
19. Duncan MJ, **Kline CE**, Vandelanotte C, Sargent C, Rogers NL, Di Milia L. Cross-sectional associations between multiple lifestyle behaviors and health-related quality of life in the 10,000 Steps Cohort. *PLoS One* 2014;9(4):e94184. PMID: 24714564; [PMCID: PMC3979761](#).
20. **Kline CE**, Irish LA, Buysse DJ, Kravitz HM, Okun ML, Owens JF, Hall MH. Sleep hygiene behaviors of midlife women with insomnia or sleep-disordered breathing: the SWAN Sleep Study. *J Womens Health* 2014;23(11):894-903. PMID: 25353709; [PMCID: PMC4236092](#).
21. Dishman RK, Sui X, Church TS, **Kline CE**, Youngstedt SD, Blair SN. Decline in cardiorespiratory fitness and odds of incident sleep complaints. *Med Sci Sports Exerc* 2015;47(5):960-966. PMID: 25207930; [PMCID: PMC4362810](#).
22. Irish LA, **Kline CE**, Gunn HE, Buysse DJ, Hall MH. The role of sleep hygiene in promoting public health: a review of empirical evidence. *Sleep Med Rev* 2015;22:23-36. PMID: 25454674; [PMCID: PMC4400203](#).
23. Buman MP, **Kline CE**, Youngstedt SD, Phillips B, de Mello MT, Hirshkowitz M. Sitting and television viewing: novel risk factors for sleep disturbance and apnea risk? Results from the 2013 National Sleep Foundation Sleep in America poll. *Chest* 2015;147(3):728-734. PMID: 25633255; [PMCID: PMC4364317](#).

24. Hall MH, **Kline CE**, Nowakowski S. Insomnia and sleep apnea in midlife women: prevalence and consequences to health and functioning. *F1000Prime Rep* 2015;7:63. DOI: 10.12703/P7-63. PMID: 26097736; [PMCID: PMC4447062](#).
25. Herring MP, **Kline CE**, O'Connor PJ. Effects of exercise on sleep among young women with generalized anxiety disorder. *Ment Health Phys Act* 2015;9:59-66. PMID: 2656640; [PMCID: PMC4637973](#).
26. **Kline CE**, Reboussin DM, Foster GD, Rice TB, Strotmeyer ES, Jakicic JM, Millman RP, Pi-Sunyer FX, Newman AB, Wadden TA, Zammit G, Kuna ST. The effect of changes in cardiorespiratory fitness and weight on obstructive sleep apnea severity in overweight adults with type 2 diabetes. *Sleep* 2016;39(2):317-325. PMID: 26446118; [PMCID: PMC4712401](#).
27. Taylor BJ, Matthews KA, Hasler BP, Roecklein KA, **Kline CE**, Buysse DJ, Kravitz HM, Tiani AG, Harlow SD, Hall MH. Bedtime variability and metabolic health in midlife women: the SWAN Sleep Study. *Sleep* 2016;39(2):457-465. PMID: 27091639; [PMCID: PMC4712396](#).
28. Duncan MJ, **Kline CE**, Rebar AL, Vandelanotte C, Short CE. Greater bed- and wake-time variability are associated with less healthy lifestyle behaviors: a cross-sectional study. *Z Gesundh Wiss (J Public Health)* 2016;24(1):31-40. PMID: 27110481; [PMCID: PMC4836438](#).
29. Youngstedt SD, **Kline CE**, Elliott JA, Zielinski MR, Devlin TM, Moore TA. Circadian phase-shifting effects of bright light, exercise, and bright light plus exercise. *J Circ Rhythms* 2016;14(1):2. PMID: 27103935; [PMCID: PMC4834751](#).
30. Gunn HE, Buysse DJ, Matthews KA, **Kline CE**, Cribbet MR, Troxel WM. Sleep-wake concordance in couples is inversely associated with cardiovascular disease risk markers. *Sleep* 2017;40(1):zsw028. [PMID: 28364457](#); PMID: In process.
31. Hall MH, Mulukutla S, **Kline CE**, Samuelsson LB, Taylor BJ, Thayer JF, Krafty RT, Frank E, Shoushtari H, Kupfer DJ. Objective sleep duration is prospectively associated with endothelial function. *Sleep* 2017;40(1):zsw003. [PMID: 28364470](#); PMID: In process.
32. Baker JH, Rothenberger SD, **Kline CE**, Okun ML. Exercise during early pregnancy is associated with greater sleep continuity. *Behav Sleep Med* (in press). [PMID: 27739877](#); PMID: In process.
33. **Kline CE**, Krafty RT, Mulukutla S, Hall MH. Associations of sedentary time and moderate-vigorous physical activity with sleep-disordered breathing and polysomnographic sleep in community-dwelling adults. *Sleep Breath* 2017;21(2):427-434. [PMID: 27837376](#); PMID: 5400700.

Invited Reviews:

1. **Kline CE**. The bidirectional relationship between exercise and sleep: implications for exercise adherence and sleep improvement. *Am J Lifestyle Med* 2014;8(6):375-379. PMID: 25729341; [PMCID: PMC4341978](#).

Invited Editorials:

1. **Kline CE**. Exercise: shifting fluid and sleep apnoea away. *Eur Respir J* 2016;48(1):23-25. [PMID: 27365507](#); PMID: PMC5046835.

Invited Papers and Book Chapters:

1. Youngstedt S, **Kline C**, Zielinski M, Devlin T, Lee A, Kripke D. Moderate sleep restriction in older long sleepers. In: Kumar VM, Mallick HN, eds. *Proceedings of the 2nd Interim Congress of the World Federation of Sleep Research and Sleep Medicine Societies (New Delhi, India, Sept. 22-26, 2005)*. Bologna, Italy: Medimond; 2005, p. 161-166. ISBN: 978-8875872106.
2. Youngstedt SD, Sharma S, **Kline CE**. Sleep. In: Durstine JL, Moore GE, LaMonte MJ, Franklin BA, eds. *Pollock's Textbook of Cardiovascular Disease and Rehabilitation*. Champaign: Human Kinetics; 2008, p. 263-268. ISBN: 978-0736059671.
3. Youngstedt SD, **Kline CE**. Circadian rhythms and exercise. In: Micheli LJ, ed. *Encyclopedia of Sports Medicine*. Thousand Oak, CA: Sage Publications; 2010, p. 284-288. ISBN: 978-1412961158.
4. **Kline CE**. Sleep and exercise. In: Mooren FC, ed. *Encyclopedia of Exercise Medicine in Health and Disease*. Heidelberg, Germany: Springer-Verlag; 2012, p. 790-794. ISBN: 978-3540360650 (hardcover), 978-3540298076 (online).
5. **Kline CE**. Actigraphy. In: Gellman MR, Turner JR, eds. *Encyclopedia of Behavioral Medicine*. New York, NY: Springer; 2013, p. 17-21. ISBN: 978-1441910042 (hardcover), 978-1441910059 (online).
6. **Kline CE**. Polysomnography. In: Gellman MR, Turner JR, eds. *Encyclopedia of Behavioral Medicine*. New York, NY: Springer; 2013, p. 1501-1504. ISBN: 978-1441910042 (hardcover), 978-1441910059 (online).
7. **Kline CE**. Sleep duration. In: Gellman MR, Turner JR, eds. *Encyclopedia of Behavioral Medicine*. New York, NY: Springer; 2013, p. 1808-1810. ISBN: 978-1441910042 (hardcover), 978-1441910059 (online).
8. **Kline CE**. Sleep quality. In: Gellman MR, Turner JR, eds. *Encyclopedia of Behavioral Medicine*. New York, NY: Springer; 2013, p. 1811-1813. ISBN: 978-1441910042 (hardcover), 978-1441910059 (online).
9. **Kline CE**, Youngstedt SD. Adjunctive and alternative treatment of CSR. In: Kushida CA, ed. *The Encyclopedia of Sleep, Vol.3*. Waltham, MA: Academic Press; 2013, p. 96-101. ISBN: 978-0123786104.
10. **Kline CE**, Youngstedt SD. Exercise and sleep. In: Kushida CA, ed. *The Encyclopedia of Sleep, Vol.1*. Waltham, MA: Academic Press; 2013, p. 114-119. ISBN: 978-0123786104.
11. Hall MH, Fernandez-Mendoza J, **Kline CE**, Vgontzas AN. Insomnia and health. In: Kryger MH, Roth T, Dement WC, eds. *Principles and Practice of Sleep Medicine (6th ed.)*. Philadelphia, PA: Elsevier; 2017; p. 794-803. ISBN: 978-0323242882.

Published Letters to the Editor:

1. Youngstedt SD, Kripke DF, **Kline CE**, Zielinski MR, Bogan RK. Lack of impairment in glucose tolerance: support for further investigation of sleep restriction in older long sleepers. *J Sleep Res* 2010;19(1):116-117. [PMID: 20470263](#).
2. **Kline CE**. Author's response to Nicolau et al. *J Womens Health* 2015;24(3):254-255. PMID: 25761215; [PMCID: PMC4363914](#).

Published Abstracts (and their Corresponding Presentations):

1. Youngstedt SD, **Kline CE**, Zielinski M, Lee A, Devlin TM, Kripke DF. Influence of moderate sleep restriction in older self-reported long sleepers. *Sleep Biol Rhythms* 2005;3(S1):A68. Presented as an oral communication at the 2nd Interim Congress of the World Federation of Sleep Research and Sleep Medicine Societies (New Delhi, India), September 23, 2005.
2. Youngstedt SD, **Kline CE**, Zielinski M, Moore T, Elliott JA. Circadian phase-shifting effects of bright light vs. exercise and bright light and exercise combined. *Med Sci Sports Exerc* 2006;38(5S):S99. Presented as an oral communication at the 53rd Annual Meeting of the American College of Sports Medicine (Denver, CO), May 29, 2006.
3. **Kline CE**, Youngstedt SD, Devlin TM, Lee AY, Zielinski MR, Moore TA, Davis JM, Durstine JL. Circadian variation in swim performance. *Med Science Sports Exerc* 2006;38(5S):S226-227. Presented as a poster at the 53rd Annual Meeting of the American College of Sports Medicine (Denver, CO), May 29, 2006.
4. Youngstedt SD, **Kline CE**, Zielinski MR, Kripke DF. Tolerance of moderate sleep restriction in older self-reported long sleepers. *Sleep* 2006;29(Suppl.):A106. Presented as an oral communication at the 20th Annual Meeting of the Associated Professional Sleep Societies (Salt Lake City, UT), June 10, 2006.
5. Chen SC, Davis JM, Carlsted C, **Kline C**, Murphy EA, Carmichael MD. Effects of quercetin feedings on maximal oxygen consumption and fatigue during exercise. *Med Sci Sports Exerc* 2008;40(5S):S165. Presented as a poster at the 55th Annual Meeting of the American College of Sports Medicine (Indianapolis, IN), May 29, 2008.
6. **Kline CE**, Devlin TM, Zielinski MR, Moore TA, Davis JM, Durstine JL, Youngstedt SD. Circadian variation in reaction time performance. *Med Sci Sports Exerc* 2008;40(5S):S428. Presented as a poster at the 55th Annual Meeting of the American College of Sports Medicine (Indianapolis, IN), May 29, 2008.
7. **Kline CE**, Devlin TM, Zielinski MR, Moore TA, Durstine JL, Davis JM, Youngstedt SD. Time of habitual training does not alter circadian rhythm of swim performance. *Med Sci Sports Exerc* 2009;41(5S):S531. Presented as a poster at the 56th Annual Meeting of the American College of Sports Medicine (Seattle, WA), May 29, 2009.
8. Chen SC, Davis JM, Mahoney S, Barrilleaux T, Hubbles K, **Kline C**, Carmichael M, Murphy EA. Carbohydrate-protein beverage improves recovery from muscle damage induced by downhill running. *Med Sci Sports Exerc* 2009;41(5S):S578. Presented as a poster at the 56th Annual Meeting of the American College of Sports Medicine (Seattle, WA), May 30, 2009.
9. **Kline CE**, Devlin TM, Zielinski MR, Moore TA, Durstine JL, Davis JM, Youngstedt SD. The circadian variation in swim performance is not altered by the time of habitual training. *Sleep* 2009; 32(Suppl.):A59. Presented as a poster at the 23rd Annual Meeting of the Associated Professional Sleep Societies (Seattle, WA), June 10, 2009.
10. **Kline CE**, Youngstedt SD. The anxiolytic effect of acute exercise does not vary by time of day or circadian phase. *Med Sci Sports Exerc* 2010;42(5S):S59. Presented as an oral communication at

the 57th Annual Meeting of the American College of Sports Medicine (Baltimore, MD), June 3, 2010.

11. Cornelius SK, **Kline CE**, Anderson J, Ginsberg JP, Youngstedt SD. The effect of bright light therapy on PTSD-related sleep disturbances. *Sleep* 2010;33(Suppl.):A237. Presented as a poster at the 24th Annual Meeting of the Associated Professional Sleep Societies (San Antonio, TX), June 7, 2010.
12. **Kline CE**, Sui X, Church TS, Youngstedt SD, Blair SN. Dose-response effects of a 6-month exercise training program on the subjective sleep quality of postmenopausal women. *Sleep* 2010; 33(Suppl.):A350-A351. Presented as a poster at the 24th Annual Meeting of the Associated Professional Sleep Societies (San Antonio, TX), June 9, 2010.
13. **Kline CE**, Crowley EP, Ewing GB, Rowell EA, Giles KL, Blair SN, Durstine JL, Davis JM, Burch JB, Youngstedt SD. Exercise training improves heart rate recovery in adults with obstructive sleep apnea. *Med Sci Sports Exerc* 2011;43(5S): S190-S191. Presented as a poster at the 58th Annual Meeting of the American College of Sports Medicine and 2nd World Congress on 'Exercise is Medicine' (Denver, CO), June 1, 2011.
14. Crowley SK, **Kline CE**, Ginsberg JP, Youngstedt SD. The effect of bright light therapy on posttraumatic stress disorder-related sleep disturbances. *Sleep* 2011;34(Suppl.):A253. Presented as a poster at the 25th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), June 13, 2011.
15. **Kline CE**, Milton DN, Kane CJ, Crowley EP, Ewing GB, Blair SN, Durstine JL, Davis JM, Burch JB, Youngstedt SD. Exercise training significantly reduces obstructive sleep apnea severity and improves sleep quality in untreated adults: a randomized controlled trial. *Sleep* 2011;34(Suppl.): A144-A145. Presented as a poster at the 25th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), June 14, 2011.
16. **Kline CE**, Porter MM, Rose ED, Cornelius SK, Ewing GB, Blair SN, Durstine JL, Davis JM, Burch JB, Youngstedt SD. Changes in daytime functioning following exercise training in adults with untreated obstructive sleep apnea: a randomized controlled trial. *Sleep* 2011;34(Suppl.):A144. Presented as a poster at the 25th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), June 14, 2011.
17. Youngstedt SD, **Kline CE**, Zielinski MR, Kripke DF. Tolerance of chronic sleep restriction in long sleepers does not differ for those with existing morbidities. *Sleep* 2011;34(Suppl.):A49. Presented as a poster at the 25th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), June 15, 2011.
18. **Kline CE**, Crowley EP, Ewing GB, Burch JB, Blair SN, Durstine JL, Davis JM, Youngstedt SD. Influence of autonomic function and exercise training on C-reactive protein levels in obstructive sleep apnea. *Med Sci Sports Exerc* 2012;44(5S):S358-S359; *Sleep* 2012;35(Suppl.):A186-A187. Presented as a poster at the 59th Annual Meeting of the American College of Sports Medicine and 3rd World Congress on 'Exercise is Medicine' (San Francisco, CA), May 29-June 2, 2012, and as a poster at the 26th Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 9-13, 2012.
19. **Kline CE**, Krafty RT, Kravitz HM, Sternfeld B, Dugan SA, Buysse DJ, Bromberger JT, Hall M. A consistent history of physical activity is associated with improved sleep continuity and quality in

midlife women: the SWAN Sleep Study. *Sleep* 2012;35(Suppl.):A422. Presented as a poster at the 26th Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 9-13, 2012.

20. Lubinski LA, **Kline CE**, Hall M, Buysse DJ. The relationship between self-reported physical activity and sleep in older adult insomniacs and healthy sleepers. *Sleep* 2012;35(Suppl.):A404-A405. Presented as a poster at the 26th Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 9-13, 2012.
21. **Kline CE**, Hall MH, Earnest CP, Blair SN, Church TS. Poor subjective sleep quality is associated with lower insulin sensitivity in overweight postmenopausal women. *Psychosom Med* 2013;75(3):A-54. *Sleep* 2013;36(Suppl.):A286. Presented as a poster at the 71st Annual Scientific Meeting of the American Psychosomatic Society (Miami, FL), March 13-16, 2013, and the 27th Annual Meeting of the Associated Professional Sleep Societies (Baltimore, MD), June 1-5, 2013.
22. Hall M, Mulukutla S, Thayer JF, Krafty RT, **Kline CE**, Samuelsson LB, Frank E, Kupfer DJ. Sleep duration is prospectively associated with endothelial structure and function. *Sleep* 2012;35(Suppl.):A321. Presented as an oral communication at the 27th Annual Meeting of the Associated Professional Sleep Societies (Baltimore, MD), June 1-5, 2013.
23. Iftikhar IH, **Kline CE**, Hill L, Youngstedt SD. Effects of exercise training and non-surgical weight loss on obstructive sleep apnea: a meta-analysis. *Sleep* 2013;36(Suppl.):A146. Presented as a poster at the 27th Annual Meeting of the Associated Professional Sleep Societies (Baltimore, MD), June 1-5, 2013.
24. **Kline CE**, Irish LA, Sternfeld B, Buysse DJ, Zheng H, Kravitz HM, Matthews KA, Bromberger JT, Dugan SA, Hall MH. Exercise frequency is associated with parasympathetic activity during sleep in midlife women: the SWAN Sleep Study. *Sleep* 2013;36(Suppl.):A398. Presented as a poster at the 27th Annual Meeting of the Associated Professional Sleep Societies (Baltimore, MD), June 1-5, 2013.
25. Milligan BJ, Samuelsson LB, **Kline CE**, Kupfer DJ, Thayer JF, Hall MH. Delayed bed time is associated with risk factors for atherosclerosis and ischemic stroke. *Psychosom Med* 2014;76(3):A-132-133. Presented as a poster at the 72nd Annual Meeting of the American Psychosomatic Society (San Francisco, CA), March 12-15, 2014.
26. **Kline CE**, Hall MH, Buysse DJ, Earnest CP, Blair SN, Church TS. Sleep initiation complaints are associated with lower cardiorespiratory fitness among postmenopausal women. *Psychosom Med* 2014;76(3):A-55, *Sleep* 2014;37(Suppl.):A189. Presented as an oral presentation at the 72nd Annual Meeting of the American Psychosomatic Society (San Francisco, CA), March 12-15, 2014, and as a poster presentation at the 28th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), May 31-June 4, 2014.
27. **Kline CE**, Lubinski LC, Seres RJ, Miewald JM, Hall MH, Buysse DJ. Improved sleep quality does not result in increased physical activity in older adults with insomnia. *Med Sci Sports Exerc* 2014;46(5S):S562-563. Presented as a thematic poster at the 61st Annual Meeting of the American College of Sports Medicine and 5th World Congress on 'Exercise is Medicine' (Orlando, FL), May 27-31, 2014.
28. **Kline CE**, Buman MP, Youngstedt SD, Phillips B, de Mello MT, Hirshkowitz M. Self-reported physical activity intensity and sleep apnea risk: the 2013 'Sleep in America' poll. *Med Sci Sports*

Exerc 2014;46(5S):S374. Presented as a poster at the 61st Annual Meeting of the American College of Sports Medicine and 5th World Congress on 'Exercise is Medicine' (Orlando, FL), May 27-31, 2014.

29. **Kline CE**, Hall MH. Associations of sedentary time and moderate-vigorous physical activity with sleep-disordered breathing. *Sleep* 2014;37(Suppl.):A155-A156. Presented as a poster at the 28th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), May 31-June 4, 2014.
30. Milligan BJ, Samuelsson LB, **Kline CE**, Frank E, Hall M. Sex differences in sensitivity to the timing and regularity of sleep-wake behaviors. *Sleep* 2014;37(Suppl.):A56. Presented as a poster at the 28th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), May 31-June 4, 2014.
31. Okun M, Baker J, Rothenberger S, **Kline C**. The effect of exercise on sleep during pregnancy. *Sleep* 2014;37(Suppl.):A349. Presented as a poster at the 28th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), May 31-June 4, 2014.
32. **Kline CE**, Strollo PJ, Chasens ER, Rockette-Wagner B, Kriska A, Imes CC, Burke LE. Insufficient and poor sleep are associated with barriers to healthy eating and lower physical activity: baseline characteristics of the EMPOWER Study. *Circulation* 2015;131(Suppl 1):AP073. Presented as a poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Baltimore, MD), March 3-6, 2015.
33. **Kline CE**, Krafty RT, Thayer JF, Frank E, Kupfer DJ, Hall MH. Night follows day: does physical activity influence sleep reactivity? *Psychosom Med* 2015;77(3):A-131. Presented as a poster at the 73rd Annual Meeting of the American Psychosomatic Society (Savannah, GA), March 18-21, 2015.
34. Hall MH, **Kline CE**, Thayer JF, Krafty RT, Frank E, Kupfer DJ. Objectively-assessed sleep predicts Framingham Risk score nearly two decades later. *Psychosom Med* 2015;77(3):A-120. Presented as an oral presentation at the 73rd Annual Meeting of the American Psychosomatic Society (Savannah, GA), March 18-21, 2015.
35. Herring MP, **Kline CE**, O'Connor PJ. Effects of exercise training on self-reported sleep among young women with generalized anxiety disorder (GAD). *Eur Psychiatry* 2015;30(Suppl 1):465. Presented as a thematic poster at the 23rd European Congress of Psychiatry (Vienna, Austria), March 28-31, 2015.
36. **Kline CE**, Strollo PJ, Chasens ER, Rockette-Wagner B, Kriska A, Imes CC, Burke LE. Association of baseline sleep with changes in physical activity and perceived barriers to healthy eating among participants in a behavioral weight loss intervention. *Med Sci Sports Exerc* 2015;47(5S):S343. Presented as an oral presentation at the 62nd Annual Meeting of the American College of Sports Medicine (San Diego, CA), May 26-30, 2015.
37. Casement MD, **Kline CE**, Matthews KA, Kravitz HM, Bromberger J, Harlow SD, Zheng H, He F, Hall MH. Variability in sleep duration mediates the relationship between chronic stress and symptoms of depression and anxiety in midlife women: the SWAN Sleep Study. *Sleep* 2015;38(Suppl.):A317. Presented as an oral presentation at the 29th Annual Meeting of the Associated Professional Sleep Societies (Seattle, WA), June 6-10, 2015.

38. Chasens ER, Imes CC, **Kline CE**, Strollo PJ, Burke LE. Is obstructive sleep apnea associated with poorer outcomes in a behavioral weight loss intervention study? *Sleep* 2015;38(Suppl.):A294. Presented as an oral presentation at the 29th Annual Meeting of the Associated Professional Sleep Societies (Seattle, WA), June 6-10, 2015.
39. Casement M, **Kline C**, Matthews K, Kravitz H, Bromberger J, Harlow S, Zheng T, He F, Hall M. Variability in sleep duration mediates the relationship between chronic stress and symptoms of depression and anxiety in midlife women. *Neuropsychopharmacology* 2015;40(S1):S510-511. Presented as a poster at the 54th Annual Meeting of the American College of Neuropsychopharmacology (Hollywood, Florida), December 6-10, 2015.
40. **Kline CE**, Strollo PJ, Chasens ER, Rockette-Wagner B, Kriska AM, Imes CC, Sereika SM, Burke LE. Changes in objective and subjective sleep parameters following a 12-month behavioral weight loss intervention and their relationship to weight change. *Circulation* 2016;133(Suppl 1):AMP92. Presented as a moderated poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Phoenix, AZ), March 1-4, 2016.
41. **Kline CE**, Rice TB, Strollo PJ, Barinas-Mitchell E. Three-year progression of sleep-disordered breathing is associated with cardiovascular disease risk factors in young adults. *Circulation* 2016;133(Suppl 1):AP315. Presented as a poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Phoenix, AZ), March 1-4, 2016.
42. Rockette-Wagner B, Kriska AM, Ma Q, Sereika SM, **Kline CE**, Imes C, Burke LE. Objectively measured physical activity and sedentary behavior change during a lifestyle intervention in overweight adults: does season matter? *Circulation* 2016;133(Suppl 1):AP248. Presented as a poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Phoenix, AZ), March 1-4, 2016.
43. Taylor BJ, Samuelsson LB, **Kline CE**, Krafty RT, Thayer JF, Frank E, Kupfer DJ, Hall MH. Evening chronotype is associated with insulin resistance in adults without recurrent depression. *Psychosom Med* 2016;78(3):A-32. Presented as a poster at the 74th Annual Meeting of the American Psychosomatic Society (Denver, CO), March 9-12, 2016.
44. **Kline CE**, Strollo PJ, Chasens ER, Rockette-Wagner B, Kriska AM, Imes CC, Sereika SM, Burke LE. Associations between sleep and changes in activity and barriers to healthy eating following a 12-month behavioral weight loss intervention. *Med Sci Sports Exerc* 2016;48(5S):S8. Presented as a thematic poster at the Annual Meeting of the American College of Sports Medicine (Boston, MA), May 31-June 4, 2016.
45. Baniak LM, **Kline CE**, Morris JL, Chasens ER. Sleep and activity as predictors of subjective health status in middle-aged women. *Am J Respir Crit Care Med* 2016;193(Suppl.):A5546. Presented as a poster at the American Thoracic Society International Conference (San Francisco, CA), May 13-18, 2016.
46. Chasens ER, Baniak LM, **Kline CE**. Correlates of sleep quality in women: results of the National Sleep Foundation 2013 poll. *Am J Respir Crit Care Med* 2016;193(Suppl.):A5544. Presented as a poster at the American Thoracic Society International Conference (San Francisco, CA), May 13-18, 2016.

47. **Kline CE**, Swift DL, Hall MH, Earnest CP, Blair SN, Church TS. Predictors of improved sleep quality following six months of exercise training in postmenopausal women. *Sleep* 2016;39(Suppl.):A349. Presented as a poster at the 30th Annual Meeting of the Associated Professional Sleep Societies (Denver, CO), June 11-15, 2016.
48. Hall MH, **Kline CE**, Gao C, Samuelsson LB, Cribbet MR, Taylor BJ, Frank E, Krafty RT, Thayer JF, Kupfer DJ. Sleep explains the association between depression and Framingham 'heart age' in women. *Sleep* 2016;39(Suppl.):A351. Presented as a poster at the 30th Annual Meeting of the Associated Professional Sleep Societies (Denver, CO), June 11-15, 2016.
49. Burke LE, Chasens ER, Imes CC, **Kline CE**, Strollo PS, Baniak LM, Mendez D, Rathbun S. Does quality of sleep affect self-efficacy for adhering to a healthy lifestyle plan? *Ann Behav Med* 2017;51(Suppl 1):S1816-1817. Presented as a poster at the 38th Annual Meeting of the Society of Behavioral Medicine (San Diego, CA), March 29-April 1, 2017.
50. Imes CC, **Kline CE**, Rockette-Wagner B, Baniak L, Mendez DD, Chasens ER, Sereika SM, Burke LE. Bidirectional relationship between sleep and sedentary behavior in adults who are overweight and obese. *Circulation* 2017;135(Suppl 1):AMP028. Presented as a moderated poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Portland, OR), March 7-10, 2017.
51. **Kline CE**, Burke LE, Sereika SM, Imes CC, Baniak LM, Mendez DD, Strollo PJ, Ye L, Chasens ER. Sleep apnea is reduced following a behavioral weight loss intervention but impedes weight loss outcomes. *Circulation* 2017;135(Suppl 1):AMP089. Presented as a moderated poster at the American Heart Association Epidemiology & Prevention/Lifestyle & Cardiometabolic Health Scientific Sessions (Portland, OR), March 7-10, 2017.
52. Bowman MA, Smagula SF, Brindle RC, **Kline CE**, Mulukutla SR, Krafty RT, Frank E, Kupfer DJ, Thayer JF, Hall MH. We got the beat: lower sleep-wake rhythmicity is associated with larger brachial artery diameter. *Psychosom Med* 2017;78(3):A24-25. Presented as a poster at the 75th Annual Meeting of the American Psychosomatic Society (Sevilla, Spain), March 15-18, 2017.
53. **Kline CE**, Kowalsky RJ, Perdomo SJ, Barone Gibbs B. Use of a sit-stand desk reduces wake time during the subsequent night's sleep. *Med Sci Sports Exerc* 2017;49(5S):S640. Presented as a thematic poster at the 64th Annual Meeting of the American College of Sports Medicine (Denver, CO), May 30-June 3, 2017.
54. Kowalsky RJ, Perdomo SJ, Balzer JR, **Kline CE**, Barone Gibbs B. The influence of a sit-stand desk on sleepiness, physical discomfort, physical fatigue and mental fatigue. *Med Sci Sports Exerc* 2017;49(5S):S632-633. Presented as an oral communication at the 64th Annual Meeting of the American College of Sports Medicine (Denver, CO), May 30-June 3, 2017.
55. Erwin JA, Buysse DJ, Hall MH, Germain A, **Kline CE**. The insomnia short-sleep phenotype: Does one night of laboratory sleep accurately capture their habitual sleep? *Sleep* 2017;40(Suppl.):A115-116. Presented as an oral presentation at the 31st Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 3-7, 2017.
56. **Kline CE**, Perdomo SJ, Hergenroeder AL, Barone Gibbs B. The effect of reducing sedentary behavior on sleep quality among adults with chronic low back pain: a randomized controlled pilot study. *Sleep* 2017;40(Suppl.):A387-388. Presented as a poster at the 31st Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 3-7, 2017.

57. Kubala AG, Buysse DJ, Brindle RC, Mulukutla SR, Krafty RT, Erwin JA, Thayer JF, Hall MH, **Kline CE**. Physical activity and sleep health: an association between intensity not volume. *Sleep* 2017;40(Suppl.):A317. Presented as a poster at the 31st Annual Meeting of the Associated Professional Sleep Societies (Boston, MA), June 3-7, 2017.
58. Imes CC, **Kline CE**, Mendez DD, Chasens ER, Burke LE, Rathbun SL. Intention to engage in physical activity predicts objectively measured physical activity: results from an ecological momentary assessment study of lapses during weight loss. Submitted for presentation at the American Heart Association Scientific Sessions 2017 (Anaheim, CA), November 11-15, 2017.

Unpublished Conference Proceedings:

1. Devlin TM, Youngstedt SD, **Kline CE**, Blankenship JB, Lee AY, Zielinski MR, Wilcox S, Kripke DF. Sleep and mood of older self-reported long sleepers: preliminary findings. Presented as an oral communication at the 27th Annual Southern Sleep Society Meeting (New Orleans, LA), April 1, 2005.
2. **Kline CE**, Youngstedt SD, Blankenship JB, Lee AY, Zielinski MR, Devlin TM, Wilcox S, Bogan RK, Kripke DF. Influence of chronic moderate sleep restriction in older long sleepers: preliminary findings. Presented as a poster at Aging Research Day (Columbia, SC), April 8, 2005.
3. **Kline CE**, Youngstedt SD, Devlin TM, Lee AY, Zielinski MR, Davis JM, Durstine JL. Circadian variation in swim performance. Presented as an oral communication at the 2006 Southeastern Chapter of the American College of Sports Medicine Meeting (Charlotte, NC), February 10, 2006.
4. **Kline CE**, Youngstedt SD, Devlin TM, Lee AY, Zielinski MR, Moore TA, Davis JM, Durstine JL. Circadian variation in swim performance. Presented as an oral communication at the University of South Carolina Graduate Student Day (Columbia, SC), April 5, 2006.
5. Chen S, Davis JM, Matthews E, Crowley P, Greene N, Quig M, Wilson A, Payn T, Lyerly W, Newall S, **Kline C**, Murphy A, Carmichael M. Effects of caffeine and carbohydrate ingestion on physical/mental functions during team sports exercise. Presented as an oral communication at the Southeastern Chapter of the American College of Sports Medicine Annual Meeting (Charlotte, NC), February 12, 2007.
6. **Kline CE**, Zielinski MR, Bogan RK, Kripke DF, Youngstedt SD. Influence of chronic moderate sleep restriction on older self-reported long sleepers. Presented as an oral communication at the University of South Carolina Graduate Student Day (Columbia, SC), April 4, 2007.
7. Youngstedt SD, Ginsberg JP, **Kline CE**, Zielinski MR. Bright light treatment for high-anxious young adults. Presented as a poster at the Society for Light Treatment and Biological Rhythms Annual Meeting (Vancouver, Canada), June 26, 2008.
8. Youngstedt SD, Ginsberg JP, Powell DA, **Kline CE**, Zielinski MR. Bright light: a novel treatment for posttraumatic stress disorder. Presented as an oral communication at the Society for Light Treatment and Biological Rhythms Annual Meeting (Vancouver, Canada), June 27, 2008.
9. **Kline CE**, Crowley EP, Ewing GB, Burch JB, Blair SN, Durstine JL, Davis JM, Youngstedt SD. Influence of exercise training on C-reactive protein levels in adults with obstructive sleep apnea.

Presented as a thematic poster at the 34th Annual Meeting of the Mid-Atlantic Regional Chapter of the American College of Sports Medicine (Harrisburg, PA), November 4, 2011.

10. Duncan MJ, **Kline C**, Vandelanotte C, Sargent C, Di Milia L. Relationships between physical activity, sitting time, dietary habits, sleep, and self-rated health in the 10,000 Steps Cohort. Presented as a poster at the International Society of Behavioural Nutrition and Physical Activity Annual Meeting (Ghent, Belgium), May 22-25, 2013.
11. Buman MP, **Kline CE**, Youngstedt SD, Phillips B, de Mello MT, Hirshkowitz M. Sitting time associations with sleep and apnea risk: results from the 2013 National Sleep Foundation Sleep in America Poll. Presented as a poster at the 5th International Congress on Physical Activity and Public Health (Rio de Janeiro, Brazil), April 8-11, 2014.

RESEARCH GRANTS

Current Research Support

- | | | |
|--|------------|--------------------------------|
| NIH (NHLBI) Mentored Patient-Oriented Career Development Award
K23 HL118318 | Kline (PI) | 01/01/14-12/31/18
\$664,523 |
| <i>A novel risk factor for cardiovascular disease: The insomnia-short sleep phenotype</i> | | |
| Purpose: To provide focused training in the measurement of subclinical cardiovascular disease (CVD), diagnosis/treatment of insomnia, and design/conduct of randomized trials; the linked research project will examine whether insomnia with short sleep is associated with subclinical CVD and develop/refine a novel behavioral treatment (CBT-I with exercise) for this phenotype.
Role: PI | | |
| CRDF Small Grant
University of Pittsburgh Central Research Development Fund | Kline (PI) | 07/01/17-06/30/19
\$15,998 |
| <i>Exercise and obstructive sleep apnea: Examination of the nocturnal rostral fluid shift as a mechanism of effect</i> | | |
| Purpose: To address whether acute exercise impacts obstructive sleep apnea (OSA) severity and examine whether evening exercise reduces OSA severity to a greater extent than morning exercise in comparison with a sedentary control condition. | | |

Completed Research Support

- | | | |
|--|------------|-------------------|
| R01 HL107370 | Burke (PI) | 04/01/16-03/31/17 |
| <i>Real time data collection with adaptive sampling and innovative technologies</i> | | |
| Purpose: To improve ecological momentary assessment (EMA) methodology by further developing and testing an adaptive assessment system designed by an interdisciplinary team using state-of-the-science hardware and software that limits subject burden while facilitating real-time data collection in the context of a behavioral weight loss intervention.
Role: Co-investigator (5% effort [cost-shared] during no-cost extension year) | | |
| L30 HL115832 | Kline (PI) | 09/01/11-08/31/14 |
| NIH Loan Repayment Program Award (\$23200) | | |
| <i>Exercise, the Cardiovascular Risk of Insomnia, and Sleep-related Hyperarousal; A Novel Cardiovascular Disease Risk Factor: The Insomnia-Short Sleep Phenotype (renewal)</i> | | |
| Purpose: To examine the relationships between physical activity, sleep-related hyperarousal, insomnia, and cardiovascular risk in archival datasets and a proposed CDA application
Role: PI | | |

Gatorade Sports Science Institute GSSI Student Research Grant (\$2700) <i>Investigation of circadian variation in 200-m freestyle swim performance</i> Purpose: To determine the existence of a circadian rhythm in swim performance using a chronobiological technique that standardizes various exogenous factors Role: PI	Kline (PI)	09/01/05-08/31/06
American College of Sports Medicine Research Foundation ACSM Doctoral Student Research Grant (\$5000) <i>Circadian phase-shifting effects of three exercise durations</i> Purpose: To compare the circadian phase-delaying properties of moderate-intensity exercise durations of 30, 60 and 90 minutes in a sample of young, healthy adults Role: PI	Kline (PI)	06/01/07-05/31/09
Gatorade Sports Science Institute GSSI Student Research Grant (\$1500) <i>Shifting human circadian rhythms with different exercise durations</i> Purpose: To compare the circadian phase-delaying properties of moderate-intensity exercise durations of 30, 60 and 90 minutes in a sample of young, healthy adults Role: PI	Kline (PI)	09/01/07-08/31/08
1R36CD000695 CDC Public Health Dissertation Research Grant (\$37,992) <i>Exercise: A novel treatment for obstructive sleep apnea</i> Purpose: To evaluate the efficacy of exercise training for the reduction of obstructive sleep apnea severity and its associated health consequences Role: PI	Kline (PI)	08/01/08-07/31/10
T32 HL082610 NIH (NHLBI) Institutional Training Grant <i>Translational research training in sleep medicine</i> Purpose: To train clinical and basic researchers in a translational approach to sleep medicine Role: Postdoctoral Trainee	Buyse (PI)	07/01/12-06/30/17

TEACHING EXPERIENCE

Workshops

2003	Assistant Workshop Coordinator Cooper Institute Physical Fitness Specialist Fast Track Clinic Department of Exercise Science, University of South Carolina <i>Details:</i> workshop designed to prepare individuals for Physical Fitness Specialist certification exam; attended by 2 adults in the health/fitness field.
2004-2005	Assistant to Workshop & Certification Coordinator American College of Sports Medicine Health/Fitness Instructor Workshop & Certification Department of Exercise Science, University of South Carolina <i>Details:</i> 3-day workshop (and certification) session that prepared individuals in the health/fitness field for the Health/Fitness Specialist certification; regularly attended by 20-35 adults interested in certification or obtaining continuing education credits.

- 2006-2009 Lecturer
 American College of Sports Medicine Health/Fitness Specialist Workshop
 Department of Exercise Science, University of South Carolina
Details: taught Metabolic Calculations lecture, which entailed instruction on how to understand and estimate energy expenditure using ACSM formulas and definitions
- 2006-2010 Workshop Director
 American College of Sports Medicine Health/Fitness Specialist Workshop
 Department of Exercise Science, University of South Carolina
Details: 2-day workshop that prepared individuals in the health/fitness field for the Health/Fitness Specialist certification; regularly attended by 15-30 adults interested in certification or obtaining continuing education credits.
- 2015 Panel Lecturer
 Sleepless in Savannah: 2015 American Psychosomatic Society (APS) Sleep Measurement Workshop
 APS Annual Meeting, Savannah, GA
Details: Invited lecturer for two presentations during the 4-hour workshop: 'Actigraphy Lab Session' and 'Obesity, Obstructive Sleep Apnea, and Psychosomatic Medicine'. Approximately 25 attendees.

Service on Thesis, Masters and Doctoral Dissertation Committees

- 2009 Undergraduate Honors thesis committee member
 David Elliott, Department of Biological Sciences, College of Arts & Sciences, University of South Carolina: *The effects of eszopiclone on adenomatous polyposis development in APC^{Min +/-} mice*
- 2010 Undergraduate Honors thesis committee member
 Kate Hubble, Department of Exercise Science, Arnold School of Public Health, University of South Carolina: *The truth about half marathons*
- 2016-2017 Doctoral dissertation committee member
 Charity Breneman, Dept of Exercise Science, University of South Carolina, 2016
Associations between sleep parameters and physical activity in middle-aged and older adults
 Sophy Perdomo, Dept of Health and Physical Activity, University of Pittsburgh, 2017
Acute dose response effects of aerobic exercise on cerebrovascular hemodynamics and arterial stiffness

Direct Student Supervision (#primary/co-author on abstract listed previously)

- 2009-2010 Independent Study, Apnea and Activity Research Study
 Colin Kane, 2009-2010, Honors College Undergraduate Research Fellow (#14)
 DeAnna Milton, 2009-2010, Honors College Undergraduate Research Fellow (#14)
 Kelli Giles, 2010, Undergraduate Research Assistant (#13)
 Graham Jones, 2010, Undergraduate Research Assistant
 Morgan Porter, 2010, Undergraduate Research Assistant (#16)
 Ashley Reluzco, 2010, Undergraduate Research Assistant
 Elizabeth Rose, 2010, Undergraduate Research Assistant (#16)
 Elizabeth Rowell, 2010, Undergraduate Research Assistant (#13)

2016 Hannah Sagedy, 2010, Undergraduate Research Assistant
 Directed Research Experience, Commercial Activity Tracker Study
 Victoria DiRenzo, 2016, Undergraduate Research Assistant
 Elizabeth Dierkes, 2016, Undergraduate Research Assistant
 Julie Erwin, 2016, Graduate Student Researcher (#54)
 Andrew Kubala, 2016, Graduate Research Assistant (#57)

Guided Mentorship on Research Projects (#primary/co-author on abstract listed previously)

2011-2012 Leanna Lubinski, Research Associate
The association between sleep and physical activity in older adults (#20)
 2012 Samantha Leathers, Medical Student
The relationship between medication use and sleep in midlife women
 2017 Christy Taylor, Medical Student
The effects of snoring on subclinical cardiovascular disease

Academic Courses

Summer 2004, Fall 2004 EXSC 341A (Health/Fitness Practicum)
 Guest Lecturer
 Department of Exercise Science, University of South Carolina
Details: delivered lecture on common musculoskeletal fitness testing procedures, cues, norms

Summer 2005 EXSC 351 (Acquisition of Motor Skills)
 Laboratory Teaching Assistant
 Department of Exercise Science, University of South Carolina
Details: led labs that provided hands-on application of motor learning concepts (e.g., motor ability hypotheses, anxiety and performance)

Summer 2005 EXSC 530 (Physiology of Muscular Activity)
 Guest Lecturer
 Department of Exercise Science, University of South Carolina
Details: single lecture that reviewed ATP-PC system and anaerobic glycolysis

Fall 2005 EXSC 731 (Mechanics of Motor Skill Performance)
 Laboratory Teaching Assistant
 Department of Exercise Science, University of South Carolina
Details: instructed lab that focused on studying performance on distinct motor ability tasks and discussing results relative to motor ability hypotheses

Spring 2006 EXSC 710 (Behavioral Aspects of Physical Activity)
 Guest Lecturer
 Department of Exercise Science, University of South Carolina
Details: single lecture that reviewed the effects of exercise on sleep

Spring 2006 EXSC 351 (Acquisition of Motor Skills)
 Guest Lecturer
 Department of Exercise Science, University of South Carolina
Details: single lecture that provided an overview of motor learning concepts and research methods

Spring 2007	EXSC 351 (Acquisition of Motor Skills) Laboratory Teaching Assistant Department of Exercise Science, University of South Carolina <i>Details:</i> taught 3 laboratory sections of class; led labs regarding the effect of factors (e.g., attention, practice) on motor performance
Fall 2007, Summer 2008	EXSC 530 (Physiology of Muscular Activity) Laboratory Coordinator/Teaching Assistant Department of Exercise Science, University of South Carolina <i>Details:</i> coordinated 12 sections and taught 2 sections of laboratory class; labs focused on basic skills and principles related to exercise physiology (e.g., fitness testing, maximal oxygen consumption, blood pressure measurement)
Spring 2008, Summer 2008	EXSC 531 (Clinical Exercise Physiology) Laboratory Coordinator/Teaching Assistant Department of Exercise Science, University of South Carolina <i>Details:</i> coordinated 12 sections and taught 2 sections of laboratory class; labs focused on skills related to clinical exercise physiology (e.g., electrocardiography preparation and interpretation, graded exercise testing protocols)
Spring 2012	PSYC 1057 (Seminar in Sleep and Health) Guest Lecturer Department of Psychology, University of Pittsburgh <i>Details:</i> supervised and directed presentations on 'Sleep and Metabolism'
Summer 2014	Summer Medical Student Didactic Series Guest Lecturer Department of Psychiatry, University of Pittsburgh <i>Details:</i> led a presentation on 'The Basics of SDB' to medical students and summer research interns
Spring 2015:	HPA 3377 (Chronic Disease Case Studies) Guest Lecturer Department of Health & Physical Activity, University of Pittsburgh <i>Details:</i> led a presentation on 'Exercise and Sleep', emphasizing the bidirectional relationship between these two behaviors
Spring 2016-17:	HPA 3377 (Chronic Disease Case Studies) Course Instructor Department of Health & Physical Activity, University of Pittsburgh <i>Details:</i> facilitated guest presentations by Pitt researchers whose research focuses on chronic diseases/conditions and how lifestyle management may impact these conditions; led lectures introduced topics, administered weekly quizzes, designed and reviewed final paper assignments

Seminars and Invited Presentations

1. Is there circadian variation in athletic performance? *Invited presentation at the University of South Carolina Department of Exercise Science Seminar Series (Columbia, SC), November 11, 2005.*

2. Exercise, athletic performance, and circadian rhythms. *Invited presentation at the University of South Carolina Department of Exercise Science Seminar Series (Columbia, SC), March 21, 2008.*
3. The effect of sleep time, circadian rhythms, and training time of day on performance. *Invited presentation at the National Strength and Conditioning Association 7th Annual South Carolina State Clinic (Columbia, SC), April 26, 2008.*
4. The effects of exercise training on the severity and health consequences of obstructive sleep apnea. *Invited presentation at the University of South Carolina Department of Exercise Science Seminar Series (Columbia, SC), April 16, 2010.*
5. Exercise training for OSA: a randomized controlled trial. *Invited presentation at the Sleep Research Society Trainee Day DataBlitz (Minneapolis, MN), June 11, 2011.*
6. Circadian rhythms and athletic performance. *Invited presentation as part of the symposium "Sleep, recovery, regeneration and performance in sport: an examination of current sleep research and health initiatives focused on the relationship of sleep to exercise" (Samuels C, Youngstedt S, Mah C, co-presenters) at the World Association of Sleep Medicine/Canadian Sleep Society Congress (Quebec City, Canada), September 10-15, 2011.*
7. The potential utility of exercise training in the management of obstructive sleep apnea. *Invited presentation at the University of Pittsburgh Multidisciplinary Sleep Grand Rounds Seminar Series (Pittsburgh, PA), October 6, 2011.*
8. Improving sleep with exercise: A novel pathway for reducing cardiometabolic risk? *Invited presentation at the Auburn University Department of Kinesiology (Auburn, AL), January 9, 2013.*
9. Exercise and sleep: Comparing 'Sleep in America' poll results with empirical data. *Invited presentation at the University of Pittsburgh Multidisciplinary Sleep Grand Rounds Seminar Series (Pittsburgh, PA), March 7, 2013.*
10. More than improved sleep quality: The effects of physical activity on nocturnal physiology and multiple dimensions of sleep. *Invited presentation at the Academy of Behavioral Medicine Research Annual Meeting ("Behavior, Health, and Aging"; Monterey, CA), June 29, 2013.*
11. Insomnia with short sleep duration: Its cardiovascular risk and treatment with a novel behavioral intervention. *Invited presentation at the University of Pittsburgh Multidisciplinary Sleep Grand Rounds Seminar Series (Pittsburgh, PA), December 5, 2013.*
12. Exercise as a treatment for obstructive sleep apnea. *Invited presentation as part of the Bench to Bedside symposium "Exercise as a behavioral sleep medicine intervention" (KG Baron, AS Walters, PC Zee, co-presenters) at the 28th Annual Meeting of the Associated Professional Sleep Societies (Minneapolis, MN), May 31-June 4, 2014.*
13. Cardiometabolic risk in the insomnia/short sleep phenotype: Could exercise be a key treatment component? *Invited presentation as a University of Pittsburgh Department of Psychiatry 'Researchers on the Rise' lecture (Pittsburgh, PA), October 24, 2014.*
14. Exercise and obstructive sleep apnea: OSA risk across the physical activity continuum. *Invited presentation at the University of Pittsburgh Multidisciplinary Sleep Grand Rounds Seminar Series (Pittsburgh, PA), January 8, 2015.*

15. Sleep and athletic performance. *Invited presentation at the University of Pittsburgh Sports Psychiatry Special Interest Group seminar (Pittsburgh, PA), January 13, 2015.*
16. Sleep: a novel pathway through which physical activity reduces cardiometabolic risk. *Invited presentation at the University of Pittsburgh Department of Health & Physical Activity (Pittsburgh, PA), March 16, 2015.*
17. Sleep: the forgotten pillar of health. *Invited presentation (co-presented with DJ Buysse) at the Pittsburgh Urban League Lunch and Learn Series (Pittsburgh, PA), August 6, 2015.*
18. Sleep and rest to maximize your run. *Invited presentation at the 'Final Tune UP! Maximize Your Race' seminar organized by the UPMC Lemieux Sports Complex (Pittsburgh, PA), April 2, 2016.*
19. Sleep and circadian rhythms: their importance to weight loss and behavior change in lifestyle interventions. *Invited presentation as part of the symposium "Sleep, circadian physiology, and body weight regulation" (KP Wright, FAJL Scheer, co-presenters; CE Kline, chair) at the World Congress on The Basic Science of Energy Balance/American College of Sports Medicine Annual Meeting (Boston, MA), June 1, 2016.*
20. Physical activity as a treatment and prevention of sleep problems. *Invited tutorial (co-presented with SD Youngstedt) at the American College of Sports Medicine Annual Meeting (Boston, MA), June 3, 2016.*
21. Sleep and rest to maximize your CC performance. *Invited presentation at the Cuyahoga Falls High School Black Tiger Cross Country Camp (Cuyahoga Falls, OH), August 8, 2016.*
22. The importance of sleep to weight loss and weight maintenance. *Invited webinar presentation given to Sanford Profile health coach staff, October 20, 2016.*
23. Sleep management. *Invited presentation at the Triathlon and Endurance Sports Clinic organized by the UPMC Lemieux Sports Medicine Center (Pittsburgh, PA), March 31, 2017.*
24. The importance of sleep health. *Invited presentation to the Carnegie Mellon University 'Topics in Health and Physical Activity' class (Pittsburgh, PA), April 1, 2017.*
25. Bidirectional relationships between weight change and sleep apnea in a behavioral weight loss intervention. *Invited short presentation at the 2nd Annual University of Pittsburgh Cardiovascular Epidemiology Conference (Pittsburgh, PA), April 3, 2017.*
26. The importance of sleep to health and fitness. *Invited presentation at the American College of Sports Medicine Health and Fitness Summit (San Diego, CA), April 8, 2017.*
27. Apnea 102: Can it be assessed by self-report? *Invited presentation at the Sleep T32 Journal Club (Pittsburgh, PA), May 19, 2017.*

PROFESSIONAL MEMBERSHIP and SERVICE

Professional Membership

Southeastern Chapter, American College of Sports Medicine

2005-2007

National Strength and Conditioning Association	2005-2012
American College of Sports Medicine	2005-present
Sleep Research Society	2008-present
Society for Light Treatment and Biological Rhythms	2009-2010
Mid-Atlantic Chapter, American College of Sports Medicine	2011-2012
American Academy of Sleep Medicine	2011-2013
American Psychosomatic Society	2012-2015
American Heart Association (Council on Lifestyle and Cardiometabolic Health)	2012-present
Sedentary Behaviour Research Network	2015-present

Expert Consultant to the Media

<i>The State</i> (Columbia, SC) newspaper (rhythms in athletic performance)	2005
<i>Shape Magazine</i> (time-of-day considerations of exercise)	2006
<i>WTOP News</i> (Wash., D.C.) (circadian variation in athletic performance)	2007
<i>American Physiological Society</i> (circadian variation in athletic performance)	2007
<i>ForbesLife Executive Woman</i> (exercise and circadian rhythms)	2007
<i>USA Today</i> (circadian variation in athletic performance)	2007
<i>The Los Angeles Times</i> (circadian variation in athletic performance)	2007
<i>Women's Health</i> (circadian variation in athletic performance)	2007
<i>Discovery Channel News</i> (circadian variation in athletic performance)	2007
<i>Carolina Minutes</i> (News highlighting USC research, SC ETV) (sleep apnea)	2009
<i>Health Wealth & Happiness</i> (WGCV 620 am radio, Columbia, SC) (sleep apnea)	2009-2010
<i>Runner's World</i> (circadian variation in athletic performance)	2010
<i>VIV Magazine</i> (chronobiology of mood and exercise)	2010
<i>WIS Saturday Morning News</i> (Columbia TV news, Columbia, SC) (sleep apnea)	2010
<i>WebMD</i> (exercise training for management of obstructive sleep apnea)	2011
<i>Health</i> (effects of exercise on women's sleep)	2012
<i>WPXI</i> (Pittsburgh TV news) (Sleep in America poll: Exercise and sleep)	2013
<i>Pittsburgh Post-Gazette</i> (Sleep in America poll: Exercise and sleep)	2013
<i>The (Toronto) Globe and Mail</i> (exercise and sleep)	2015
<i>Huffington Post Healthy Living</i> (exercise and sleep)	2015
<i>Reuters</i> (exercise and insomnia)	2016
<i>UPMC Healthbeat</i> (sleep and athletic performance)	2017
<i>CNN</i> (exercise and sleep)	2017

Journal Club Interview

<i>Am. Academy of Sleep Technologists</i> Journal Club #19: Exercise and Sleep Apnea	2013
<i>American Thoracic Society</i> Journal Club: Fitness, Weight, and Sleep Apnea	2016

Ad-hoc Manuscript Reviewer

<i>American Journal of Lifestyle Medicine</i>	2009
<i>Angle Orthodontist</i>	2012
<i>Behavioral Sleep Medicine</i>	2014-2016
<i>BMJ Open</i>	2016
<i>British Journal of Nutrition</i>	2015
<i>Clinical Psychology Review</i>	2017
<i>European Journal of Applied Physiology</i>	2014, 2015
<i>European Respiratory Journal</i>	2015
<i>Gerontology</i>	2012

<i>International Journal of Cardiology</i>	2013
<i>International Journal of Injury Control and Safety Promotion</i>	2014
<i>International Journal of Sports Medicine</i>	2006-2008
<i>Journal of the American Geriatrics Society</i>	2010
<i>Journal of Applied Physiology</i>	2008, 2011
<i>Journal of Clinical Sleep Medicine</i>	2014, 2015
<i>Journal of Gerontology: Medical Sciences</i>	2007
<i>Journal of Nervous & Mental Disease</i>	2012
<i>Journal of Occupational & Environmental Medicine</i>	2014, 2015
<i>Journal of Sleep Disorders & Therapy</i>	2013
<i>Journal of Sleep Research</i>	2010
<i>Maturitas</i>	2012
<i>Medicine & Science in Sports & Exercise</i>	2014, '16, '17
<i>Nature & Science of Sleep</i>	2013
<i>Neuropsychiatric Disease & Treatment</i>	2013
<i>Perceptual and Motor Skills</i>	2009
<i>Physiology & Behavior</i>	2006
<i>PLoS One</i>	2015, 2017
<i>Psychological Medicine</i>	2012
<i>Psychophysiology</i>	2011, 2014
<i>Respiratory Medicine</i>	2015
<i>Scandinavian Journal of Medicine & Sports</i>	2015
<i>Scientific Reports</i>	2017
<i>Sleep</i>	2015, 2017
<i>Sleep & Breathing</i>	2013
<i>Sleep Health</i>	2015, 2016
<i>Sleep Medicine</i>	2011, 2014-17
<i>Sleep Medicine Reviews</i>	2012-14, 2016

Ad-hoc Book Chapter Reviewer

Reger-Nash W. Sleep balance. In: Reger-Nash W, Smith M, Juckett G. *Foundations of Wellness*. Champaign, IL: Human Kinetics, 2015. 2012

Extramural Abstract Reviewer

American Psychosomatic Society Annual Meeting 2013, 2014
Associated Professional Sleep Societies (APSS/SLEEP) Annual Meeting 2016

Extramural Grant Reviewer

Mitacs Accelerate Internship Program 2014
Towson University School of Emerging Technologies Seed Grant Program 2015
VA Office of Research & Development Small Projects (SPiREs) grant review 2016

University-related Service

Elected Member, Arnold School of Public Health Student Association 2005-2007
Responsibilities: Association vice-president (2006-2007), co-chair of Publicity/
 Orientation committee, organizing Association activities/programs for School of Public Health

Student Representative, Department of Exercise Science 2007
 Clinical Assistant Faculty Search Committee

<i>Member, Organizing Committee, NSCA 6th Annual South Carolina State Clinic</i> <i>Responsibilities: assisting with site preparation for hosting clinic and on-site registration</i>	2007
<i>Judge, University of South Carolina Region II Science and Engineering Fair (Social/Behavioral Sciences)</i>	2009
<i>Assistant, University of Pittsburgh CTSI Mobile Science Lab</i> <i>Responsibilities: assisted with 'Exercise is Good for your Health' science program at camps and schools</i>	2011
<i>Internal Grant Reviewer</i> <i>Western Psychiatric Institute and Clinic Research Review Committee</i>	2011, 2013, 2014
<i>Member, Organizing and Planning Committee</i> <i>University of Pittsburgh Sleep Medicine Institute Research Day</i>	2015, 2016
<i>Member, Faculty Development Committee</i> <i>School of Education, University of Pittsburgh</i>	2016-2017
<u>Professional Service</u>	
<i>Representative for the Sleep Research Society</i> <i>NCAA Interassociation Task Force on Sleep and Wellness</i>	2017-present
<i>Committee Member</i> <i>Lifestyle/EPI Behavior Change Committee, American Heart Association</i>	2017-2019
<i>Scientific Advisory Panel</i> <i>adidas ALL DAY fitness application</i>	2017-present

PROFESSIONAL DEVELOPMENT: WORKSHOPS AND TRAINING

** Indicates competitive selection process*

<i>American Academy of Sleep Medicine Young Investigator Research Forum *</i> American Academy of Sleep Medicine NIH Natcher Conference Center, Bethesda, MD	2012
<i>Physical Activity and Public Health: A Postgraduate Course on Research Directions and Strategies *</i> Centers for Disease Control and Prevention, University of South Carolina The Lodge at Mountain Village, Park City, UT	2012
<i>American Psychosomatic Society Young Investigator Colloquium *</i> American Psychosomatic Society InterContinental Miami Hotel, Miami, FL	2013
<i>Course in Scientific Management and Leadership *</i> University of Pittsburgh Schools of the Health Sciences Herberman Conference Center, Pittsburgh, PA	2013

<p><i>14th Annual Summer Institute on Randomized Behavioral Clinical Trials</i> *</p> <p>NIH Office of Behavioral and Social Sciences Research, National Heart, Lung, and Blood Institute</p> <p>Airlie Conference Center, Warrenton, VA</p>	2014
<p><i>8th Annual Bedside to Bench Conference: Sleep, Circadian Rhythms, and Aging— New Avenues for Improving Brain Health, Physical Health and Functioning</i> *</p> <p>NIH National Institute on Aging, American Geriatrics Society</p> <p>Marriott Hotel & Conference Center, Bethesda, MD</p>	2015
<p><i>Principles and Practice of CBT-I Seminar</i></p> <p>Dr. Michael Perlis, Penn Behavioral Sleep Medicine</p> <p>Houston Hall, University of Pennsylvania</p>	2015
<p><i>Health Sciences Leadership Academy</i> *</p> <p>University of Pittsburgh Office of Academic and Career Development</p> <p>Biomedical Science Tower, University of Pittsburgh</p>	2016
<p><i>NIH 'K to R01' Workshop</i></p> <p>NIH National Heart, Lung, and Blood Institute</p> <p>NIH Campus, Bethesda, MD</p>	2016