

**Ryan C. Brindle**  
Curriculum Vitae

**PERSONAL INFORMATION**

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Department of Psychology, Neuroscience Program  
Washington and Lee University  
204 West Washington Street  
Lexington, VA 24450  
Email: rbrindle@wlu.edu

**EDUCATION**

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2012-2015	<b>University of Birmingham</b>	Birmingham, England
	Ph.D., Cardiovascular Psychophysiology	
	Thesis: Peripheral Physiological Mechanisms of Cardiovascular Stress Reactivity	
2008-2012	<b>Allegheny College</b>	Meadville, PA, USA
	B.S., Neuroscience and Psychology	
	Senior Thesis: The Relationship between Depression and Cardiovascular Reactivity to Acute Psychological Stress	

**EMPLOYEMENT**

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2018-	<b>Washington and Lee University</b>	Lexington, VA
	Assistant Professor, Department of Psychology, Neuroscience Program	
2017-2018	<b>University of Pittsburgh</b>	Pittsburgh, PA
	F32 (Role: PI) Postdoctoral Scholar in Translational Sleep Medicine Research	
2016-2017	<b>University of Pittsburgh</b>	Pittsburgh, PA
	T32 Postdoctoral Scholar in Translational Sleep Medicine Research	

**AWARDS & HONORS**

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2017	American Academy of Sleep Medicine Young Investigators Research Forum Invitee
2017	American Psychosomatic Society Young Investigators Colloquium Invitee
2016	Young Scholar Award, American Psychosomatic Society
2012	Magna Cum Laude, Allegheny College
2012	Neuroscience & Psychology Departmental Honors, Allegheny College
2012	Senior Class Major Prize in Neuroscience (Given once annually), Allegheny College
2011	Junior Class Major Prize in Neuroscience (Given once annually), Allegheny College
2010-2011	Distinguished Alden Scholar (GPA > 3.8), Allegheny College
2009	Psi Chi Honor Society
2008-2012	Alden Scholar (Dean's List Equivalent), Allegheny College
2008-2012	Trustee Scholarship for Academic Excellence, Allegheny College

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**FELLOWSHIPS & GRANTS**

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**Fellowships**

- 2017-2018 Examining the bi-directional relationship between sleep and psychological stress: A sleep-stress cycle (F32HL137227; \$72,740) Role: Principle Investigator
- 2016-2017 Translational Research Training in Sleep Medicine (T32HL082610) Role: Postdoctoral Research Fellow
- 2012-2015 University of Birmingham Elite Doctoral Research Fellowship (£95,420) Role: Principle Investigator
- 2011 American Heart Association Summer Research Fellowship (\$3500) Role: Research Fellow

**Travel Grants**

- 2014 University of Birmingham Travel Award (£500)
- 2013 British Psychological Society Grindley Grant (£500)
- 2013 Alec Dale Conference Travel Funding, Allegheny College (\$650)

**Other Grants**

- 2013 University of Birmingham Student Led Conference Grant (£500)
- 2013 British Heart Foundation Small Meeting in Cardiovascular Science Grant (£2500)

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**PUBLICATIONS**

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**Refereed Journal Articles**

1. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., Carroll, D., & Lucas, S.J.E. (2018). Assessment of cerebral pressure-flow relationship using psychological stress to manipulate blood pressure. *Psychophysiology*, *e13265*.
2. Hall, M.H., **Brindle, R.C.**, & Buysse, D.J. (2018). Sleep and cardiovascular disease: Emerging opportunities for health psychology. *American Psychologist*.
3. John-Henderson, N., **Brindle, R.C.**, & Ginty, A.T. (2018). The changing relationship between childhood emotional trauma and sleep quality: The role of psychological distress during a life transition. *British Journal of Psychology*.
4. **Brindle, R.C.**, Cribbet, M.R., Duggan, K.A., Kline, C.E., Krafty, R.T., Thayer, J.F., Mulukutla, S.R., & Hall, M.H. (2018). Slow-wave sleep moderates the relationship between cardiovascular reactivity to acute psychological stress and carotid intima-media thickness. *Psychosomatic Medicine*, *80*, 301-306.
5. **Brindle, R.C.**, Cribbet, M.R., Samuelsson, L.E., Frank, E., Krafty, R.T., Thayer, J.F., Buysse, D.J., & Hall, M. (2018). Remnants of the past: Childhood trauma exposure and age of first traumatic experience relate to poor sleep health. *Psychosomatic Medicine*, *80*, 200-207.

6. **Brindle, R.C.**, Phillips, A.C., Bibbey, A., Carroll, D., & Ginty, A.T. (2017). Exploring the possible origins of blunted cardiac reactivity to acute psychological stress. *International Journal of Psychophysiology*, *113*, 1-7.
7. **Brindle, R.C.**, Ginty, A.T., Jones, A., Phillips, A.C., Roseboom, T.J., Carroll, D., Painter, R.C., & de Rooij, S.R. (2016). Cardiovascular reactivity patterns and pathways to hypertension: A multivariate cluster analysis. *Journal of Human Hypertension*, *30*, 755-760.
8. Bibbey, A., Ginty, A.T., Phillips, A.C., **Brindle, R.C.**, & Carroll, D. (2016). Blunted cardiac stress reactors exhibit relatively high levels of behavioural impulsivity. *Physiology and Behavior*, *159*, 40-44.
9. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., Fisher, J.P., McIntyre, D., & Carroll, D. (2016). Heart rate complexity: A novel approach to assessing cardiac stress reactivity. *Psychophysiology*, *53*, 465-472.
10. Ginty, A.T., **Brindle, R.C.**, & Carroll, D. (2015). Cardiac stress reactions and perseverance: Diminished reactivity is associated with study non-completion. *Biological Psychology*, *109*, 200-205.
11. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., & Carroll, D. (2014). A tale of two mechanisms: A meta-analytic approach toward understanding the autonomic basis of cardiovascular stress reactivity. *Psychophysiology*, *51*, 946-976.
12. **Brindle, R.C.**, Ginty, A.T., & Conklin, S.C. (2013). Is the association between depression and blunted cardiovascular stress reactions mediated by perceptions of stress? *International Journal of Psychophysiology*, *90*, 66-72.
13. **Brindle, R.C.** & Conklin, S.C. (2011). Daytime sleep accelerates cardiovascular recovery after psychological stress. *International Journal of Behavioral Medicine*, *19*, 111-114.

#### **Manuscripts Currently Under Review**

1. **Brindle, R.C.**, & Hall, M.H. (under review) Sleep, stress, and health.
2. de Geus, E., Gianaros, P., **Brindle, R.C.**, Jennings, J.R., & Berntson, G. (under review). Should heart rate variability be “corrected” for heart rate? Biological, quantitative, and interpretive considerations.

#### **Manuscripts in Preparation**

1. **Brindle, R.C.**, Cribbet, M.R., Thayer, J.F., Siegle, G.J., Klein, C.E., Samuelsson, L.E., Taylor, B.J., & Hall, M. (drafted). Older adults with insomnia are not hyperaroused by psychological stress.

#### **Abstracts from Conference Presentations**

1. **Brindle, R.C.**, Buysse, D.J., & Hall, M.H. (2018). Poor cardiometabolic health is related to an aggregate measure of sleep health in a nationally representative sample of Americans: Results from the Midlife in the United States (MIDUS) Study. *SLEEP*, *41*, A331.
2. Bowman, M.A., **Brindle, R.C.**, Kline, C.E., Matthews, K.A., Neal-Perry, G.S., Kravitz, H.M., Joffe, H., Buysse, D.J., & Hall, M.H. (2018). Sleep health is related to physical health

- in midlife women: The Study of Women's Health Across the Nation (SWAN) study. *SLEEP*, 41, A257.
3. **Brindle, R.C.**, Duggan, K.A., Bowman, M.A., Mathyssek, C., Kline, C.E., Kravitz, H.M., Krafty, R.T., & Hall, M.H. (2018). The relationship between daily sleep and worry: Analysis of diary and actigraphy data in the study of women's health across the nation (SWAN) sleep study. *Psychosomatic Medicine*, 80, A14.
  4. Cribbet, M.R., **Brindle, R.C.**, Frank, E., Thayer, J.F., Krafty, R.T., Hall, M.H. (2018). Early life adversity is associated with cortical activation during sleep. *Psychosomatic Medicine*, 80, A112.
  5. Kubala, A.G., Buysse, D.J., **Brindle, R.C.**, Mulukutla, S.R., Krafty, R.T., Erwin J.A., Thayer, J.F., Hall, M.H., & Kline, C.E. (2017). Physical activity and sleep health: An association between intensity not volume. *SLEEP*, 40, A317.
  6. **Brindle, R.C.**, Cribbet, M.R., Samuelsson, L.E., Frank, E., Krafty, R.T., Thayer, J.F., Buysse, D.J., & Hall, M. (2017). Remnants of the past: Childhood trauma exposure and age of first traumatic experience relate to poor sleep health. *Psychosomatic Medicine*, 79, 3, A-137
  7. Bowman, M.A., Smagula, S.F., **Brindle, R.C.**, Kline, C.E., Mulukutla, S.R., Krafty, R.T., Frank, E., Kupfer, D.J., Thayer, J.F., & Hall, M.H. (2017). We got the beat: lower sleep-wake rhythmicity is associated with larger brachial artery diameter. *Psychosomatic Medicine*, 79, 3, A-25.
  8. Ginty, A.T., Williams, S., **Brindle, R.C.**, Phillips, A.C., & Carroll, D. Depressive symptomology: Associations with acute psychological stress and a stressful life transition. Association for Behavioral and Cognitive Therapies (ABCT) Conference, New York, USA, October 2016.
  9. Phillips, A.C., **Brindle, R.C.**, Ginty, A.T., Roseboom, T.J., Carroll, D., de Rooij, S.R., & Der, G. Different patterns of cardiovascular reactivity to stress predict different pathways to disease. Stress and Anxiety Research (STAR) Conference, Zagreb, Croatia, July 2016.
  10. **Brindle, R.C.**, Ginty, A.T., Jones, A., Phillips, A.C., Roseboom, T.J., Carroll, D., Painter, R.C., & de Rooij, S.R. (2016). Cardiovascular reactivity patterns and pathways to hypertension: A multivariate cluster analysis. *Psychosomatic Medicine*, 78, 3, A-38.
  11. **Brindle, R.C.**, Ginty, A.T., Carroll, D., & Phillips, A.C. (2016). High allostatic load is associated with blunted cardiac reactivity to acute mental stress. *Psychosomatic Medicine*, 78, A-63.
  12. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., & Carroll, D. (2014). A tale of two mechanisms: A meta-analytic approach to the autonomic basis of cardiovascular reactivity. 11<sup>th</sup> Annual Psychology, Health and Medicine Conference, *The Psychological Society of Ireland*.
  13. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., Bibbey, A., & Carroll, D. (2014). Blunted systolic blood pressure responses to acute psychological stress are related to measures of behavioral perseverance. *International Congress of Behavioral Medicine*, Groningen, The Netherlands.

14. Ginty, A., S.E. Williams, **Brindle, R.C.**, Bibbey, A., Phillips, A.C., Carroll, D. (2014) Do you listen to your head or your heart: Dissociation between psychological and physiological systems. *International Journal of Behavioral Medicine*, 21, S59.
15. **Brindle, R.C.**, Ginty, A.T., Phillips, A.C., & Carroll, D. (2014). A tale of two mechanisms: A meta-analysis of the autonomic basis of cardiovascular stress reactivity. *Psychosomatic Medicine*, 76, A48.
16. **Brindle, R.C.**, Ginty, A.T., Conklin, S. (2013). Symptoms of depression and cardiovascular stress reactivity: The role of stressor type, stress exposure, and stress perception. *Psychosomatic Medicine*, 75, 3.
17. **Brindle, R.**, Seseck, J., Conklin, S. (2011). Depression is related to blunted cardiovascular reactivity. *Psychosomatic Medicine*, 73, 34.
18. **Brindle, R.**, Kimicata, A., Vance, C., Costantini, L., Domachowski, D., Conklin, SM. (2010). Daytime sleep does not influence cardiovascular reactivity to stress. *Psychosomatic Medicine*, 72, 78.
19. Costantini, L., **Brindle, R.**, Domachowski, D., Vance, C., Kimicata, A., Conklin, S. (2010). Self-reported sleep quality and daytime sleep architecture in college students is related to neuroticism. *Psychosomatic Medicine*, 72, 125.
20. Domachowski, D., Costantini, L., Vance, C., **Brindle, R.**, Kimicata, A., Conklin, S. (2010). Evening chronotype is associated with daytime dysfunction and neuroticism in college students. *Psychosomatic Medicine*, 72, 123.
21. Vance, C.C., **Brindle, R.C.**, Costantini, L.R., Domachowski, D.J., Kimicata, A.C., Conklin, S.M. (2010). Exercise is related to daytime sleep architecture, but not self-reported sleep quality in young adults. *Psychosomatic Medicine*, 72, 126.

## TEACHING & SUPERVISION EXPERIENCE

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### Completed Coursework

- |      |                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------|
| 2012 | Introduction to Learning and Teaching in Higher Education, Masters Level (University of Birmingham) |
| 2012 | Laboratory-Based Demonstrating, Masters Level (University of Birmingham)                            |

### Undergraduate Level Teaching

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|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 2017, Spring | Research Methods, Lecturer, Lab Instructor (University of Pittsburgh)                                                                            |
| 2015, Fall   | “Diseases of the Night” Invited Lecture (Allegheny College)                                                                                      |
| 2013-2015    | Skills for Sport and Exercise Sciences- Lecturer, Seminar Leader, Exam and Coursework Grader (University of Birmingham)                          |
| 2013-2014    | Cardiovascular Behavioral Medicine- Seminar Leader, Exam and Coursework Grader (University of Birmingham)                                        |
| 2012-2015    | Research Methods & Statistics for Sport and Exercise Sciences- Lab and Seminar Instructor, Exam and Coursework Grader (University of Birmingham) |
| 2010-2012    | Organic Chemistry II: Synthetic Strategies- Workshop Instructor (Allegheny College)                                                              |

2010-2012     Organic Chemistry I: Forms and Function- Workshop Instructor (Allegheny College)

### **Undergraduate Research Mentoring**

2012-2015     Supervised 18 undergraduate students on their final year dissertation projects (University of Birmingham)

### **Graduate Level Teaching**

2017, Spring   Sleep and Circadian Rhythms in Health and Disease- Course Design, Lecturer (University of Pittsburgh)

### **Graduate and Medical School Level Research Mentoring**

2016-           Supervising 2 medical school student on final-year scholarly project

### RESEARCH PLACEMENTS

2011           American Heart Association Summer Research Fellowship: The role of mTOR pathway in central angiotensin signaling, Pennsylvania State University Medical School, Hershey, PA

2011           Independent Study: Symptoms of depression and cardiovascular reactivity, Allegheny College, Neuroscience Program

2009           Independent Study: Daytime sleep and cardiovascular reactivity, Allegheny College, Department of Psychology

### RESEARCH SKILLS

Behavioral stress paradigms (active, passive, physical, and socially-evaluative stress), Sleep paradigms (constant routine, multiple sleep latency test, waking EEG), Sleep scoring, Venipuncture, Cannulation, Flow Cytometry, Competitive ELISA, Transcranial Doppler echocardiography, Cardiac Doppler echocardiography, Blood pressure and flow measurements, Cortisol/Melatonin measurement and analysis, Spectral analysis of electrocardiography (EKG) and electroencephalography (EEG), Statistical analysis on SPSS and other packages, Meta-analysis

### SERVICE TO PROFESSION

#### **Ad Hoc Journal Reviewer**

<i>International Journal of Psychophysiology</i>	<i>Psychoneuroendocrinology</i>	<i>Psychosomatic Medicine</i>
<i>Journal of Clinical Sleep Medicine</i>	<i>Psychology of Sport &amp; Exercise</i>	<i>Scientific Reports</i>
<i>Journal of Psychosomatic Research</i>	<i>Psychophysiology</i>	<i>Sleep</i>
<i>PLoS ONE</i>	<i>Anxiety, Stress, &amp; Coping</i>	<i>Behavioral Medicine</i>

### **Leadership**

2016-2017     Sleep Medicine Institute Research Day Planning Committee, University of Pittsburgh

- 2014- Emerging Leaders Initiative, American Psychosomatic Society
- 2014- Professional Education Committee, American Psychosomatic Society
- 2013-2014 Chairman, Cardiovascular Behavioral Medicine Group, University of Birmingham
- 2013 Chairman of committee that organized a one-day conference on cardiovascular stress reactivity with internal and external funding at University of Birmingham
- 2012-2013 Doctoral Student Representative, School of Sport and Exercise Sciences, University of Birmingham
- 2012-2013 Doctoral Student Representative, Postgraduate Research Committee, University of Birmingham

**Professional Organization Membership**

- American Psychosomatic Society
- American Academy of Sleep Medicine

**Public Engagement**

- 2017-2018 Allegheny County Health Department Lunch and Learn Lecture Series
- 2017 Caregiving Aging Mastery Program, Jewish Community Center, Pittsburgh (Lecture Series)
- 2017 AgeWell Program, Jewish Community Center, Pittsburgh (Lecture Series)