

BIOGRAPHICAL SKETCH

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NAME: Ali A. Weinstein

eRA COMMONS USER NAME (credential, e.g., agency login): AAWEINSTEIN

POSITION TITLE: Professor, Global and Community Health and Senior Scholar, Center for the Advancement of Well-Being

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Lafayette College, Easton, PA	BS	1999	Psychology
University of Maryland, College Park, MD	MA	2001	Kinesiology
Uniformed Services University of the Health Sciences, Bethesda, MD	MS	2004	Medical Psychology
University Services University of the Health Sciences, Bethesda, MD	PhD	2007	Medical Psychology

A. Personal Statement

I am a medical/health psychologist with expertise in the important contributors to health and well-being, particularly in regards to chronic illness. I am passionate about training the next generation of APS scholars and making APS a welcoming and equitable organization that actively seeks to create and promote opportunities for diverse scholars.

B. Positions and Honors**Positions and Employment**

2007-13	Assistant Professor, Graduate Programs Director (2008–2013), Rehabilitation Science Global and Community Health/Rehabilitation Science, George Mason University, Fairfax, VA
2007-	Director/Deputy Director (Director, 2013 – Present), Center for the Study of Chronic Illness and Disability, George Mason University, Fairfax, VA
2008-	Researcher, Betty & Guy Beatty Center for Integrated Research, Outcomes Research Program Inova Health System, Falls Church, VA
2013-22	Associate Professor, Graduate Programs Coordinator (2013-2016), Global and Community Health, George Mason University, Fairfax, VA
2019-	Senior Scholar, Center for the Advancement of Well-Being, George Mason University, Fairfax, VA
2022-	Professor, Global and Community Health, George Mason University, Fairfax, VA

Honors and Awards

2006–07	Henry M. Jackson Foundation Fellowship in Medical Sciences
2011	Habit of Excellence Award, College of Health and Human Services, George Mason University
2016	University Teaching Excellence award, George Mason University
2017	Mentoring Excellence Award, Office of Student Scholarship, Creative Activities, and Research, George Mason University

2017–18	Selected for 10 th cohort of the American Psychological Association (APA) Leadership Institute for Women in Psychology
2020	Elected Fellow of the American Psychological Association

C. Contributions to Science

1. Assessment of fatigue and its relation to performance and symptomatology in various patient populations.

Current measures of fatigue rely on self-reports, but fatigue can mean different things to different people. These fatigue measures are often insensitive, making fatigue contributors difficult to identify and acts as a barrier to effective treatment. Therefore, a portion of my work has helped to determine the relationships between fatigue and physical performance, as well as the perceived effort within that performance. In addition, I have investigated the different physiological correlates of fatigue. This work has demonstrated that we can associate performance-induced fatigue to self-reported overall fatigue. In addition, a panel of biomarkers is sensitive to the difference between physical and mental fatigue.

Gerber, L.H., Weinstein, A.A., Mehta, R., & Younossi, Z.M. (2019). Importance of fatigue and its measurement in chronic liver disease. World Journal of Gastroenterology 25(28), 3669-3683. Invited.

Weinstein, A.A., Escheik, C., Oe, B., Price, J.K., Gerber, L.H., & Younossi, Z.M. (2016). Perceptions of effort during activity in patients with Chronic Hepatitis C and Non-Alcoholic Fatty Liver Disease. PM&R, 8(1), 28-34.

Loria, A., Doyle, K., Weinstein, A.A., Winter, P., Escheik, C., Price, J., Wang, L., Biredinc, A., Baranova, A., Gerber, L., & Younossi, Z.M. (2014). Multiple factors predict physical performance in people with Chronic Liver Disease. American Journal of Physical Medicine and Rehabilitation, 93(6), 470-476.

Weinstein, A.A., Drinkard, B.M., Diao, G., Furst, G., Dale, J.K., Straus, S.E. & Gerber, L.H. (2009). Exploratory analysis of the relationships between aerobic capacity and self-reported fatigue in patients with rheumatoid arthritis, polymyositis, and chronic fatigue syndrome. PM&R, 1(7), 620-628.

2. The role of exercise withdrawal in the development of fatigue and depressive symptoms.

Individuals who are sedentary are more likely to be fatigued and individuals who are physically active are less likely to be fatigued. However, most of the literature in this topic area utilized cross-sectional investigations. I decided to design a study where I experimentally manipulated physical activity level to determine its relationship with fatigue and depressive symptoms. The paradigm used was an exercise withdrawal study. In addition to the psychological variables that were examined, biological and physiological data were also collected (heart rate variability, inflammation, fitness level). The research conducted suggested that following the withdrawal of exercise, an increase in fatigue and depressive symptoms and a decrease in fitness level developed. In addition, heart rate variability was a predictor of the development of these symptoms in response to exercise withdrawal. These results suggest that individuals with autonomic system dysregulation are more susceptible to the development of fatigue and depressive symptoms when exercise is withheld. This information may serve as an important tool in risk stratification. Identification of individuals at risk for developing fatigue and depressive symptoms would allow early intervention and prevention techniques to be utilized to help prevent or ameliorate these mood symptoms.

Weinstein, A.A., Koehmstedt, C., & Kop, W.J. (2017). Mental health consequences of exercise withdrawal: A systematic review. General Hospital Psychiatry, 49, 11-18.

Berlin, A.A.(Weinstein, A.A), Kop, W.J., & Deuster, P.A. (2006). Depressive mood symptoms

and fatigue following exercise withdrawal: The potential role of decreased fitness. Psychosomatic Medicine, 68(2), 224-230.

Weinstein, A.A., Deuster, P.A., & Kop, W.J. (2007). Heart rate variability as a predictor of negative mood symptoms induced by exercise withdrawal. Medicine and Science in Sports and Exercise, 39(4), 735-741.

Kop, W.J., Weinstein, A.A., Deuster, P.A., Whitaker, K., & Tracy, R.P. (2008). Inflammatory markers and negative mood symptoms following exercise withdrawal. Brain, Behavior, and Immunity, 22(8), 1190-1196.

3. Hyper-reactivity to mental and physical challenges in those with depression.

Depression is the most common mental disorder in the United States. Individuals with depression are at an increased risk of cardiovascular morbidity and mortality. However, little is known regarding the possible mechanisms to explain this relationship. One of the possible pathways explaining this relationship is hyper-reactivity to mental and physical challenges in depressed individuals. Hyper-reactivity to challenge is an exaggerated response (either mental or physical) to the challenge tasks. The overarching hypothesis of this type of investigation is that depressed individuals display higher reactivity to mental and physical challenges than non-depressed individuals. In one of my research projects, reactivity to mental (mental arithmetic and anger recall) and physical challenges (exercise bout on treadmill) was assessed in depressed and non-depressed control participants. Neurohormonal (adrenocorticotrophic hormone, cortisol, norepinephrine, and epinephrine), negative mood, cardiovascular (systolic blood pressure, diastolic blood pressure, and heart rate), and inflammatory (interleukin-6, tumor necrosis factor- α , and C-reactive protein) responses to mental challenge (anger recall and mental arithmetic) and physical challenge (treadmill exercise) tasks were assessed. Results indicated that depressed participants: 1) displayed higher reactivity of neurohormonal and negative mood measures, as well as increased cardiovascular and inflammatory responses during the challenge tasks; and 2) neurohormonal and negative mood responsiveness were associated with cardiovascular and inflammatory reactivity. This study demonstrated that hyper-reactivity to both mental and physical challenges are documented among depressed individuals. Therefore, hyper-reactivity to challenge may be a possible pathway linking depression and development of cardiovascular disease. If this finding holds in future research, then interventions aimed at reducing hyper-reactivity to challenge can be designed.

Weinstein, A.A., Deuster, P.A., Francis, J.L., Bonsall, R.W., Tracy, R.P., & Kop, W.J. (2010). Neurohormonal and inflammatory hyper-responsiveness to acute mental stress in depression. Biological Psychology, 84(2), 228-234.

Weinstein, A.A., Deuster, P.A., Beadling, C., Francis, J.L., & Kop, W.J. (2010). The role of depression in short-term mood and fatigue responses to acute exercise. International Journal of Behavioral Medicine, 17(1), 51-57.

Weinstein, A.A., de Avila, L., Kannan, S., Paik, J.M., Golabi, P., Gerber, L.H. & Younossi, Z.M. (2022). Interrelationship between physical activity and depression in nonalcoholic fatty liver disease. World Journal of Hepatology, 14(3), 612-622.

Complete List of Published Work in MyBibliography

<https://www.ncbi.nlm.nih.gov/pubmed/?term=weinstein+aa>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

U.S. Health Resources and Services Administration Goldberg (PI) 2022-2027
The George Mason University Health and Public Safety Workforce Resiliency Training Program (HPSWRTP)

The purpose of this project is to develop the (HPSWRTP, that would offer accessible education and training opportunities to promote the health and well-being of nurses, social workers, public health professionals and healthcare leaders in rural and underserved communities across the United States.

Role: Education Program Lead

Inova Health Systems

Weinstein (PI)

07/01/15-06/30/24

Resident Education in Clinical Research

The purpose of this project is for George Mason University to provide clinical research services for residents at Inova Fairfax Medical Campus.

Role: Principal Investigator