Sheila G. West, PhD

Sheila West is Professor of Biobehavioral Health and Director of the Vascular Health Interventions Laboratory at the Pennsylvania State University. Trained at the University of North Carolina at Chapel Hill and the Ohio State University, she joined the faculty at Penn State in 1999. Dr. West leads an interdisciplinary research team that conducts randomized clinical trials examining effects of nutrition and psychological stress on blood pressure and vascular function. The goal of her research program is to identify foods and nutrients that enhance vascular function and reduce blood pressure responses to stress. Dr. West's work has been published in *Hypertension*, *Current Atherosclerosis Reports*, *Annals of Behavioral Medicine*, *The American Journal of Clinical Nutrition* and other biomedical and psychological journals. Her recent studies have examined the effects of omega-3 fatty acids, pistachios, walnuts, dairy foods, and soy on vascular endothelial function and blood pressure responses to acute stress.

Katherine A. Sauder, PhD

Katherine Sauder earned her doctorate at The Pennsylvania State University in 2014 under the mentorship of Dr. Sheila West. Her graduate research focused on understanding the effects of pistachios on cardiovascular risk factors in adults with type 2 diabetes, and examining the association between overall diet quality and vascular function in older adults. She has experience in both epidemiology and clinical trials, and has used a variety of techniques to assess vascular function including flow-mediated dilation, peripheral arterial tonometry (EndoPAT), and pulse wave velocity. She is currently a post-doctoral fellow at the University of Colorado School of Medicine, where she is extending her work in nutrition and diabetes to dietary prevention of gestational diabetes in pregnancy

Tree nuts and cardiovascular risk factors in diabetes

Cardiovascular disease continues to be the leading cause of death among individuals with type 2 diabetes, and management of vascular health is vital to reducing risk even after blood sugar control is achieved. Relatively few studies have examined the benefits of nut consumption on vascular health in type 2 diabetes, particularly in regard to systemic hemodynamics, endothelial function, and arterial stiffness. This presentation will provide an overview of these vascular measures, including relation to cardiovascular risk and techniques for assessment. We will review recent work demonstrating the effects of nut consumption on vascular function, including a 10-week controlled-feeding study for adults with type 2 diabetes that tested a low-fat diet and a moderate-fat diet containing pistachios. Last, we will highlight current gaps in the literature and discuss opportunities for future research.

Learning objectives:

1. Understand the role of systemic hemodynamics, endothelial function, and arterial stiffness in cardiovascular risk
2. Understand techniques for assessing these vascular health markers
3. Learn how nut consumption may affect vascular health in diabetes