

**Name of Presenter:** Corso, Lauren ML<sup>1</sup>

**Co-authors:** Wing, Rena R.<sup>2</sup>; Tate, Deborah F<sup>3</sup>; Espeland, Mark A<sup>4</sup>; Blanchard, Bruce E<sup>1</sup>; McCaffery, Jeanne M<sup>1</sup>

<sup>1</sup> University of Connecticut, Department of Allied Health Sciences, Storrs CT

<sup>2</sup> Brown University, Weight Control and Diabetes Research Center, Providence RI

<sup>3</sup> University of North Carolina, Gillings School of Public Health, Chapel Hill NC

<sup>4</sup> Wake Forest University, Wake Forest School of Medicine, Winston-Salem NC

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**Title:** Uric Acid as a Predictor of Weight Gain and Cardiometabolic Health in the Study of Novel Approached to Weight Gain Prevention (*SNAP*) Study.

**Theme:** Cardiometabolic Health

**Major Advisor:** Dr. Jeanne McCaffery

**Abstract**

Individuals with obesity and multiple cardiometabolic abnormalities have a 10-fold increased risk of type 2 diabetes. Young adults are uniquely susceptible to developing weight gain. Increasing evidence suggest that oxidative stress pathways may contribute to the development of obesity and subsequent cardiometabolic dysfunction. Uric acid (UA), a clinical marker of oxidative stress, is associated with metabolic dysfunction in established cardiovascular disease, type 2 diabetes and kidney disease, however, few trials have examined UA as a marker to predict early cardiometabolic risk in young, healthy populations. The purpose of this study was to examine UA as predictor of weight and cardiometabolic outcomes over 6-years and determine the impact of a weight gain prevention intervention on uric acid in healthy, young adults. We found that higher baseline UA was a significant predictor of less favorable BMI, triglycerides, HDL, glucose, insulin and HOMA, independent of age, sex, baseline weight, baseline cardiometabolic status, and intervention assignment. Additionally, 5% weight loss was sufficient to lower UA. UA may be a promising biomarker for clinical screens so that early intervention can be initiated to prevent the progression to type 2 diabetes in young adults.