# University of Massachusetts Medical School eScholarship@UMMS

Senior Scholars Program

Office of Educational Affairs

5-20-2014

### Evening Snacking in Relation to Self-reported Declines in Sleep Quality during Pregnancy: Preliminary Results from the Decision-Making, Eating, and Weight Gain during Pregnancy (DEW) Study

Wendy McCallum

University of Massachusetts Medical School, Wendy.McCallum@umassmed.edu

Bradley M. Appelhans Rush University Medical Center

Tiffany A. Moore Simas *University of Massachusetts Medical School*, TiffanyA.MooreSimas@umassmemorial.org

See next page for additional authors

Follow this and additional works at: http://escholarship.umassmed.edu/ssp

Part of the <u>Behavior and Behavior Mechanisms Commons</u>, <u>Obstetrics and Gynecology Commons</u>, and the <u>Women's Health Commons</u>

### Repository Citation

McCallum, Wendy; Appelhans, Bradley M.; Moore Simas, Tiffany A.; Xiao, Sherry R.; Alikhan, Shums; Pierre-Louis, Isabelle C.; Olendzki, Barbara C.; Pagoto, Sherry L.; and Waring, Molly E., "Evening Snacking in Relation to Self-reported Declines in Sleep Quality during Pregnancy: Preliminary Results from the Decision-Making, Eating, and Weight Gain during Pregnancy (DEW) Study" (2014). University of Massachusetts Medical School. *Senior Scholars Program*. Paper 161. http://escholarship.umassmed.edu/ssp/161

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Senior Scholars Program by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.

Evening Snacking in Relation to Self-reported Declines in Sleep Quality during Pregnancy: Preliminary Results from the Decision-Making, Eating, and Weight Gain during Pregnancy (DEW) Study

### **Authors**

Wendy McCallum, Bradley M. Appelhans, Tiffany A. Moore Simas, Sherry R. Xiao, Shums Alikhan, Isabelle C. Pierre-Louis, Barbara C. Olendzki, Sherry L. Pagoto, and Molly E. Waring

### Keywords

Pregnancy, Quality of sleep, Snacking

#### **Comments**

Poster presented on Senior Scholars Program Poster Presentation Day at the University of Massachusetts Medical School, Worcester, MA, on April 30, 2014. Medical student Wendy McCallum participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

This poster was also presented at the University of Massachusetts Center for Clinical and Translational Science Research Retreat, Worcester, MA, on May 20, 2014.



# Evening snacking in relation to self-reported declines in sleep quality during pregnancy: preliminary results from the Decision-Making, Eating, and Weight Gain during pregnancy (DEW) Study



Wendy McCallum, BA<sup>1</sup>, Bradley M. Appelhans, PhD<sup>2</sup>, Tiffany A. Moore Simas, MD MPH MEd<sup>3,4,5</sup>, Sherry R. Xiao, MPH<sup>1</sup>, Shums Alikhan, BS<sup>1</sup>, Isabelle C. Pierre-Louis, BS<sup>1</sup>, Barbara C. Olendzki, RD MPH LDN<sup>6</sup>, Sherry L. Pagoto, PhD<sup>6</sup>, Molly E. Waring, PhD<sup>1</sup>

<sup>1</sup> Division of Epidemiology of Chronic Diseases and Vulnerable Populations, Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA; <sup>2</sup>Department of Preventive Medicine, Rush University Medical Center, Chicago, IL; <sup>3</sup> Division of Research, Department of Obstetrics and Gynecology, University of Massachusetts Medical School, Worcester, MA; 4 Department of Pediatrics, University of Massachusetts Medical School, Worcester, MA; <sup>5</sup> Department of Obstetrics and Gynecology, UMass Memorial Health Care, Worcester, MA; <sup>6</sup> Division of Behavioral and Preventive Medicine, Department of Medicine, University of Massachusetts Medical School, Worcester, MA

## **Objective**

To examine the association between changes in sleep quality from prepregnancy and evening snacking.

## Methods

The DEW study enrolled women who were 18+ years old, pregnant with singleton gestation <36 weeks, English speaking, with prepregnancy body mass index (BMI) 18.5-40kg/m<sup>2</sup>, with plans to deliver at UMMHC

Women reported sleep as being "about the same", "a little better", "a lot better", "a little worse", or "much worse" as compared to 3 months prior to pregnancy; changes in sleep quality were categorized as "worse" or "same/better"

Women completed three 24-hour dietary recalls (2 weekdays, 1 weekend day).

Evening snacks were defined as eating occasions after dinner but before an hour after usual bedtime during which something other than water was consumed

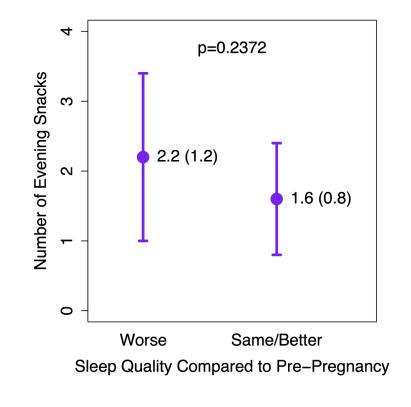
Fisher's Exact tests and t-tests provided comparisons for evening snacking (yes/no), number of snacks, and energy intake from snacks

# **Results**

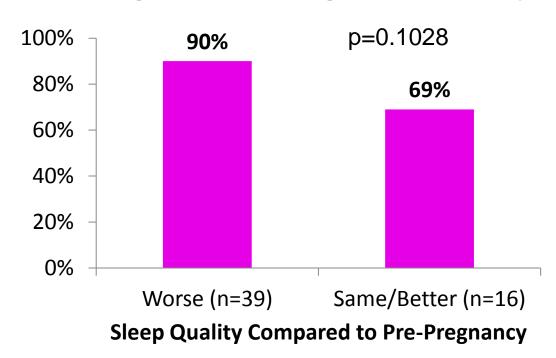
- Cohort included 55 women; 58% non-Hispanic White, aged 30.0 (SD:4.3) years; gestational age 23.0 (SD:5.9) weeks
- Of 866 meals reported, 94 were evening snacks
- 71% (n=39) reported her current sleep quality was worse than during the 3 months before pregnancy

quality from pre-pregnancy

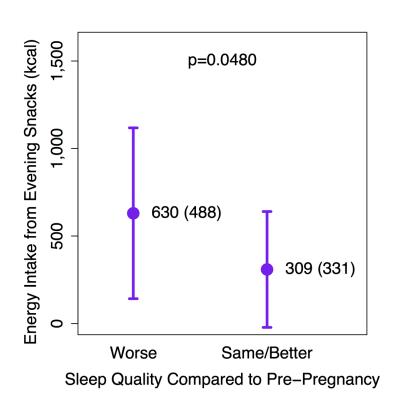
Among women reporting evening snacks (n=46), the number of snacks did not differ by change in sleep



**Evening snacks were reported by the majority of** women, regardless of change in sleep quality



Among women reporting evening snacks, energy intake from these snacks was higher among women whose sleep quality had declined from pre-pregnancy



# **Conclusions**

Declines in sleep quality during pregnancy may be linked to evening calorie intake. More research is needed to understand the role of sleep quality, eating behavior, and weight gain during pregnancy.