

## Does sleep quality influence eating patterns in postpartum women?

S. Perron<sup>1</sup>, J. Pelletier<sup>1</sup>, C. Pouliot<sup>1</sup>, B. A. Matenchuk<sup>2</sup>, M. H. Davenport<sup>2</sup>, I Giroux<sup>1, 1</sup> <sup>1</sup>School of Nutrition Sciences, Faculty of Health Sciences, University of Ottawa, Ottawa, ON; <sup>2</sup>Program for Pregnancy & Postpartum Health, Faculty of Kinesiology, Sport and Recreation, University of Alberta, Edmonton, AB.

**Introduction:** Evidence suggests an association exists between poor sleep, increased frequency of food craving and poor diet quality. Postpartum women need to adjust their sleep pattern to the circadian rhythm of their offspring, which may affect their eating pattern and overall health.

**Objective:** The aim of this study was to assess the differences in eating patterns of postpartum women with good versus poor sleep quality.

**Methodology:** Eighty-seven postpartum women with an average age of  $32.57 \pm 4.01$  years were recruited at  $25.78 \pm 13.17$  weeks postpartum. We compared eating pattern parameters (number of daily eating occasions, as well as timing of energy intake) using 3-day food intake records. The 3-day food records were analyzed by ESHA Food Processor to estimate the daily energy intake. Participants were classified based on sleep status (good *versus* poor sleepers according to Pittsburgh Sleep Quality Index Scores). Comparison between groups (good *versus* poor sleepers) and times of the day (morning, afternoon, night) were done using independent samples t-tests to evaluate the daily eating occasions, energy intake and % of energy intake. Results are presented as means  $\pm$  standard deviations.

**Results:** Of the 87 participants, 23 were good sleepers and 64 poor sleepers. There was no difference in eating patterns between good sleepers and poor sleepers. Participants had on average  $5.56 \pm 1.02$  eating occasions per day, including  $2.63 \pm 0.96$  snacks. The average energy intake distribution of all postpartum women was  $25.24 \pm 7.02\%$  in the morning,  $33.74 \pm 7.87\%$  in the afternoon and  $40.31 \pm 8.74\%$  in the evening/night. The average energy intake during the evening was significantly higher than that in the morning ( $579.8 \pm 204.3$  versus  $935.7 \pm 329.0$  kcal,  $p < 0.001$ ).

**Conclusions:** The majority of participating women had poor sleep in postpartum and consumed a significant proportion of their total energy intake in the evening. Future studies should assess quality of evening/night food choices of postpartum women.

**Significance:** Dietitians and health professionals assisting postpartum women should keep in mind the sleep quality of postpartum women and their timing of eating when assisting them with advice about healthy eating.

**Funded by:** With assistance from the University of Ottawa Undergraduate Research Opportunity Program