

What is the effect of sleep quality on diet quality in postpartum women?

J. Pelletier¹, S. Perron¹, C. Pouliot¹, B. A. Matenchuk², M. H. Davenport², I. Giroux¹.

¹School of Nutrition Sciences, Faculty of Health Sciences, University of Ottawa, Ottawa, ON;

²Program for Pregnancy & Postpartum Health, Faculty of Kinesiology, Sport and Recreation, University of Alberta, Edmonton, AB.

Introduction: The postpartum period is a demanding period in women's lives where disrupted sleep may increase the risk of postpartum weight retention, which predisposes them to future health problems. Poor sleep can result in poor quality food choices, such as foods high in fat and saturated fat, and low in fiber.

Objective: The aim of this study was to compare diet quality parameters of postpartum women with good *versus* poor sleep quality.

Methods: The 3-day food intake records of 95 postpartum women (<12 months postpartum) were analyzed using ESHA Food Processor to assess diet quality parameters (daily macronutrient and fiber intake, compared to dietary recommendations). Participants were classified as “good” (score <6) or “poor” (score ≥6) sleepers based on their Pittsburgh Sleep Quality Index Score. Independent sample t-tests were used to assess differences in dietary parameters between groups.

Results: Women were 32.6±4.0 years old (mean±standard deviation) and their pre-pregnancy body mass index was 24.1±4.5 kg/m². There was no difference in diet quality parameters between good (n=26) and poor sleepers (n=69). However, the percentage of energy intake from fat and saturated fat for all women (n=95) were high at 36.0±6.8% and 13.1±4.8% respectively. Fifty-four percent of women (n=51) had a percent of energy intake from fat above the Acceptable Macronutrient Distribution Range (AMDR, 20-35%). Moreover, 77.9% of women (n=74) had a percent of energy intake from saturated fat above Health Canada's recommendation (<10%). Furthermore, only 26.3% of women (n=25) met the adequate intake (AI) recommendation for fiber. The average fiber intake was 11.5±4.3 g/1000kcal/d, compared to the AI of 14 g/1000kcal/d. However, their percent energy intake from carbohydrates and proteins were within AMDRs (48.9±7.5% within 45-65% and 16.4±3.3% within 10-35%, respectively).

Conclusions: Although no difference was found in diet quality parameters evaluated between participating postpartum women with good *versus* poor sleep, they would benefit from education about selection of foods low in fat and saturated fat and rich in fiber.

Significance: Our results suggest that nutrition education would be beneficial for postpartum women in order to help them meet nutrient intake recommendations for optimal health.

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