

14 - 16 November 2025

London , United Kingdom

## Dietary and Sleep Profiles of Postmenopausal Women with Inadequate Creatine Intake

**Julia Orri**

*University Of San Francisco, United States*

### Abstract

Background: Creatine (Cr) functions in the human body in metabolic and performance capacities. Consuming adequate Cr post menopause may be essential for skeletal muscle integrity, fall risk reduction and brain health. Observational studies on the effects of suboptimal Cr are limited, especially after menopause, where synthesis is reduced. The purpose of this study was to evaluate the dietary intake of Cr and sleep among active postmenopausal (PM) women. Methodology: Thirty participants were either 55 and under (A), 56-64 yr (B) or 65+ (C). Participants completed a 72-hour food record. Sleep quality was assessed using the Global Pittsburgh Sleep Quality Index (PSQI). Measures included dietary Cr and its amino acid precursors; carbohydrate, fat, protein, energy and PSQI. Results: None of the participants reached the recommended dietary Cr intake of >13 mg per kg body mass per day. Dietary Cr was not significantly different between groups [ $2.7 \pm 2.4$  (A);  $1.7 \pm 1.7$  (B);  $1.4 \pm 1.3$  (C) mg/kg BM/d]. Daily protein and amino acid precursors were not different between groups; however, the lowest values were found in the women aged 65 years and older. The oldest participants had the highest PSQI, reflecting poor sleep. Conclusions: We demonstrate that adequate dietary Cr was not attainable, with the insufficiency augmented with age. Reduction in Cr and its amino acid precursors with increasing age is clinically relevant, as suboptimal creatine has been associated with skeletal, cardiovascular and neurodegenerative disorders. Studies are needed on the addition of creatine-rich foods and supplemental Cr in older females.

**Keywords:** Aging; Female; Nutrition