

Nutrient Intake and Body Habitus After Spinal Cord Injury: An Analysis by Sex and Level of Injury

Abstract

Background/Objectives: To examine nutrient intake and body mass index (BMI) in the spinal cord injury (SCI) population according to level of injury and sex.

Design: Cross-sectional study conducted at 2 SCI treatment centers.

Participants/Methods: Seventy-three community-dwelling individuals with C5-T12 ASIA Impairment Scale (AIS) A or B SCI. Subjects were divided into 4 groups: male tetraplegia (N=24), male paraplegia (N=37), female tetraplegia (N=1), and female paraplegia (N=11). Mean age was 38 years; 84% were male; and 34% were white, 41% were African American, and 25% were Hispanic. Participants completed a 4-day food log examining habitual diet. Dietary composition was analyzed using Food Processor II v 7.6 software.

Results: Excluding the 1 woman with tetraplegia, total calorie intake for the other 3 groups was below observed values for the general population. The female paraplegia group tended to have a lower total calorie intake than the other groups, although macronutrient intake was within the recommended range. The male tetraplegia group, male paraplegia group, and the 1 woman with tetraplegia all had higher than recommended fat intake. Intake of several vitamins, minerals, and macronutrients did not meet recommended levels or were excessively low, whereas sodium and alcohol intake were elevated. Using adjusted BMI tables, 74.0% of individuals with SCI were overweight or obese.

Conclusions: Women with paraplegia tended to maintain healthier diets, reflected by lower caloric and fat intakes, fewer key nutrients falling outside recommended guidelines, and less overweight or obesity. Individuals with tetraplegia tended to take in more calories and had higher BMIs, and using adjusted BMI, the majority of the population was overweight or obese. The majority of people with SCI would benefit from nutritional counseling to prevent emerging secondary conditions as the population with SCI ages.