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Associations between consumption of ready to eat cereal and nutrient intake in the United Kingdom

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Abstract

Introduction: Ready to eat cereal (RTEC) is a nutrient dense food in a typical western diet. Studies have reported better nutrient intake associated with RTEC consumption in other countries, however, little is known in the United Kingdom. The objective of the study was to examine consumption patterns of RTEC and to investigate associations between RTEC consumption and nutrient intake in a nationally representative sample in the United Kingdom.

Materials and Methods: Children aged 1.5–18 years old (N = 2564) and adults aged 19 years or older (N = 2705) from the National Diet and Nutrition Survey rolling programme 2012/13–2015/16 were included in the study. The average of four-day food diary data was used for analysis. RTEC included all food items from the high fiber breakfast cereals and other breakfast cereals, excluding porridge and instant hot oat cereals. Participants were classified as RTEC eaters if they reported consumption of RTEC at least once during the four days. Percentage contribution of RTEC to daily intake of nutrients in RTEC eaters was calculated. Differences in energy and nutrient intake between RTEC eaters and non-eaters were compared using multiple linear regression analyses for surveys, adjusting for age, gender, and equivalized income level. Energy intake was also included as a covariate in the analyses of nutrients intake.

Results: About 75% of children were RTEC eaters, whereas 52% of adults reported RTEC consumption. Their daily intake of RTEC were 35.1 g and 42.8 g, respectively. RTEC is a critical source of several key vitamins and minerals. For example, RTEC contributed to over 20% of daily intake of iron, folate, vitamin D, riboflavin, and thiamin in both children and adults who consumed RTEC. Compared to non-eaters, both child and adult RTEC eaters had significantly higher intake of total energy, carbohydrate, fiber, calcium, potassium, iron, phosphorus, magnesium, niacin, folate, riboflavin, thiamin, vitamin B6, vitamin B12, as well as significantly lower intake of sodium and total fat. Adult RTEC eaters also had higher intake of vitamin C and vitamin D. There was no difference in intake of non-milk extrinsic sugar by RTEC consumption status in both children and adults, although total sugar intake was higher in adult RTEC eaters.

Discussion: RTEC is an important dietary source of key nutrients in the United Kingdom. Consumption of RTEC is associated with higher intake of nutrients to encourage and lower intake of nutrients to limit, in both children and adults in the United Kingdom.

Conflict of Interest

All authors are employees of General Mills.