



INTAKE OF SELECTED FOODS AND BEVERAGES AND HYPERURICEMIA IN ADULTS - ELSA-BRASIL (2008-2010)

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BACKGROUND

Hyperuricemia is a causal component known to be necessary, but not sufficient, for the development of gout and has also been associated with metabolic syndrome, cardiovascular disease, hypertension, obesity, diabetes mellitus and chronic kidney disease. Recommendations to decrease the intake of purine-rich foods to reduce hyperuricemia are still widely disseminated, even though most studies on food intake and hyperuricemia did not perform sex-stratified analysis and did not adjust for the simultaneous intake of other food groups and medications that may impact hyperuricemia. This study investigated the association between dietary intake of food groups and alcoholic beverages and the presence of hyperuricemia.

MATERIALS AND METHODS

Cross-sectional analyses were performed using baseline data (2008-2010) from the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil). The presence of hyperuricemia was defined as $UA \geq 6.8 \text{ mg/dL}$. Subjects who used medications to manage hyperuricemia and/or those with daily energy intake <500 or >6000 kcal/day and/or a history of bariatric surgery were excluded. Food intake was assessed by a food frequency questionnaire (114 items) and grouped into: dairy products, fruits/vegetables/legumes, meat, organ meat, fish and alcoholic beverages. Sex-stratified logistic regression investigated the association between the daily intake of each food groups (servings/day; categorized into “no/low”, “moderate” and “high” intake) and hyperuricemia. All the analyses were adjusted for potential confounders (age, BMI, glomerular filtration rate, use of medications, energy intake) and for all food groups. Results are presented for full-adjusted models.

RESULTS

14,320 subjects (55% female), mean (SD) age of 52 (9) years, were included. The prevalence of hyperuricemia was 37% in men and 6% in women. After all adjustments, greater intake of dairy was associated with lower chances of hyperuricemia in both sexes, with a downward linear trend only in men. High intake of meats was independently associated with higher odds of hyperuricemia in both sexes. Greater intake of total alcohol, and beer, were associated with hyperuricemia in men, with a dose-response gradient. Men in the high intake category of spirits were 37% more likely to have hyperuricemia and women in the high intake group of beer were nearly 2 times more likely to have hyperuricemia, compared to the no/low intake.

CONCLUSION

Results suggest a potential beneficial role of dairy products consumption on hyperuricemia. The association between alcohol intake and hyperuricemia differed by type of beverage and between sexes. Results reinforce the need to consider the whole diet in the analysis as well as to conduct sex-stratified analysis.