

Editor, *Journal of Pediatrics*

Re: Sugar-sweetened beverages, serum uric acid, and blood pressure in adolescents

Editor,

The conclusion by Nguyen et al (1) that higher sugar-sweetened beverage consumption (as proxy for dietary fructose) may affect cardiovascular risk factors like serum uric acid and blood pressure lacks significance for three reasons.

Fructose intake has not been shown to be a risk factor for reasons other than caloric contribution at real-world intake levels. Support comes only from extreme single-sugar test diets in animals (up to 60% of energy as fructose; see ex., (2, 3)) and humans (up to 50% of energy as fructose; see ex., (4, 5)) that reflect neither the ratio of simple sugars in the diet (fructose:glucose = 0.8 (6)), nor intakes by the population mean or 95th percentile (9.1% or <18% of energy as fructose, respectively (7)).

Second, the attempt to link in adolescent subjects the small measured uric acid difference between low and high beverage consumers (0.17 mg/dL) with increased risk of incident gout, kidney disease, hypertension, stroke mortality and ischemic heart disease using adult cohort data is inappropriate.

And third, Nguyen's argument for a significant effect is not compelling. Using published threshold values for adolescent hyperuricemia (7 mg/dL, (8, 9)) with the authors' plot of serum uric acid levels vs. daily sugar-sweetened beverage consumption, it can be calculated that adolescents would need to consume the improbable volume of 15 L of sugar-sweetened beverage/day before the threshold to hyperuricemia would be crossed.

Absent convincing data from real-world exposures demonstrating significant effects, the role of sugar-sweetened beverages on cardiovascular risk factors like serum uric acid and blood pressure cannot be considered significant.

References

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