

REVIEW ARTICLE

Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease^{1, 2, 3}


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Currently, we are experiencing an epidemic of cardiorenal disease characterized by increasing rates of obesity, hypertension, the metabolic syndrome, type 2 diabetes, and kidney disease. Whereas excessive caloric intake and physical inactivity are likely important factors driving the obesity epidemic, it is important to consider additional mechanisms. We revisit an old hypothesis that sugar, particularly excessive fructose intake, has a critical role in the epidemic of cardiorenal disease. We also present evidence that the unique ability of fructose to induce an increase in uric acid may be a major mechanism by which fructose can cause cardiorenal disease. Finally, we suggest that high intakes of fructose in African Americans may explain their greater predisposition to develop cardiorenal disease, and we provide a list of testable predictions to evaluate this hypothesis.

Key Words: Fructose • uric acid • sugar • arteriosclerosis • endothelial dysfunction • hypertension • obesity • chronic kidney disease • metabolic syndrome

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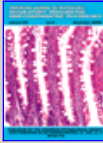
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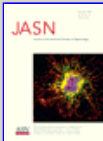
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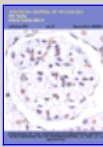
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