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Excess Fructose May Play Role in Diabetes, Obesity and Other Health Conditions

Richard J. Johnson, MD and Takahiko Nakagawa, MD (Division of Renal Diseases and Hypertension, University of Colorado) provide a concise overview of recent clinical and experimental studies to understand "how excessive amounts of fructose, present in added sugars, may play a role in high blood pressure, diabetes, obesity, and chronic kidney disease (CKD)".

Dietary fructose is present primarily in added dietary sugars, honey, and fruit. Americans most frequently ingest fructose from sucrose, a disaccharide containing 50% fructose and 50% glucose bonded together, and high fructose corn syrup (HFCS), a mixture of free fructose and free glucose, usually in a 55/45 proportion. With the introduction of HFCS in the 1970s, an increased intake of fructose has occurred and obesity rates have risen simultaneously.

The link between excessive intake of fructose and metabolic syndrome is becoming increasingly established. However, in this review of the literature, the authors conclude that there is also increasing evidence that fructose may play a role in hypertension and renal disease. "Science shows us there is a potentially negative impact of excessive amount of sugar and high fructose corn syrup on cardiovascular and kidney health," explains Dr. Johnson. He continues that "excessive fructose intake could be viewed as an increasingly risky food and beverage additive."

Concerned that physicians may be overlooking this health problem when advising CKD patients to follow a low protein diet, Dr. Johnson and Dr. Nakagawa recommend that low protein diets include an attempt to restrict added sugars containing fructose.

Dr. Johnson and Dr. Nakagawa are listed as inventors on several patent applications related to lowering uric acid for the treatment or prevention of hypertension, diabetes, and fatty liver.

Editor's Note: This article is not intended to provide medical advice, diagnosis or treatment.