Does Fructose Intake Contribute to Common Behavioral Disorders?

Excessive sugar consumption may stimulate impulsive behaviors, ranging from ADHD to bipolar disorder and aggression.

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New study findings published in the journal Evolution and Human Behavior by researchers at the University of Colorado Anschutz Medical Campus suggest that the overconsumption of sugar may contribute to common mental health conditions, such as attention-deficit hyperactivity disorder (ADHD), bipolar disorder and aggressive behavior.

For the paper, researchers theorized that excessive intake of fructose, which is present in refined sugars and high fructose corn syrup, may play a role in behavioral disorders associated with obesity and a Western diet.

Fructose lowers energy in cells, triggering a foraging response similar to the body's reaction to starvation.

Richard Johnson, MD, a professor at the University of Colorado School of Medicine and the lead author of the study, explained that a foraging response stimulates risk taking, impulsivity, novelty seeking, rapid decision-making and aggressiveness to help people secure food for survival. But when excessive amounts of sugar are consumed, this response can become overactive and cause the kind of reckless behavior exhibited by people with ADHD, bipolar disorder and aggression.

"While the fructose pathway was meant to aid survival, fructose intake has skyrocketed during the last century and may be in overdrive due to high amounts of sugar that are in the Western diet," said Johnson.

Researchers stressed that they're not saying sugar causes aggressive behavior but that it may contribute to this problem. Johnson recommended that future studies also examine the role of sugar and uric acid (a fructose metabolite).

However, he cautioned that genetics, family dynamics, biology, emotional and environmental factors still remain key in determining the mental health of individuals.

For related coverage, read "Can Soda Increase Women's Cardiovascular Risk?" and "Excessive

Consumption of Sugary Drinks Linked to Increased Risk of Death.”

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