Moderate consumption of sugary drinks has little impact on adolescents' metabolic health

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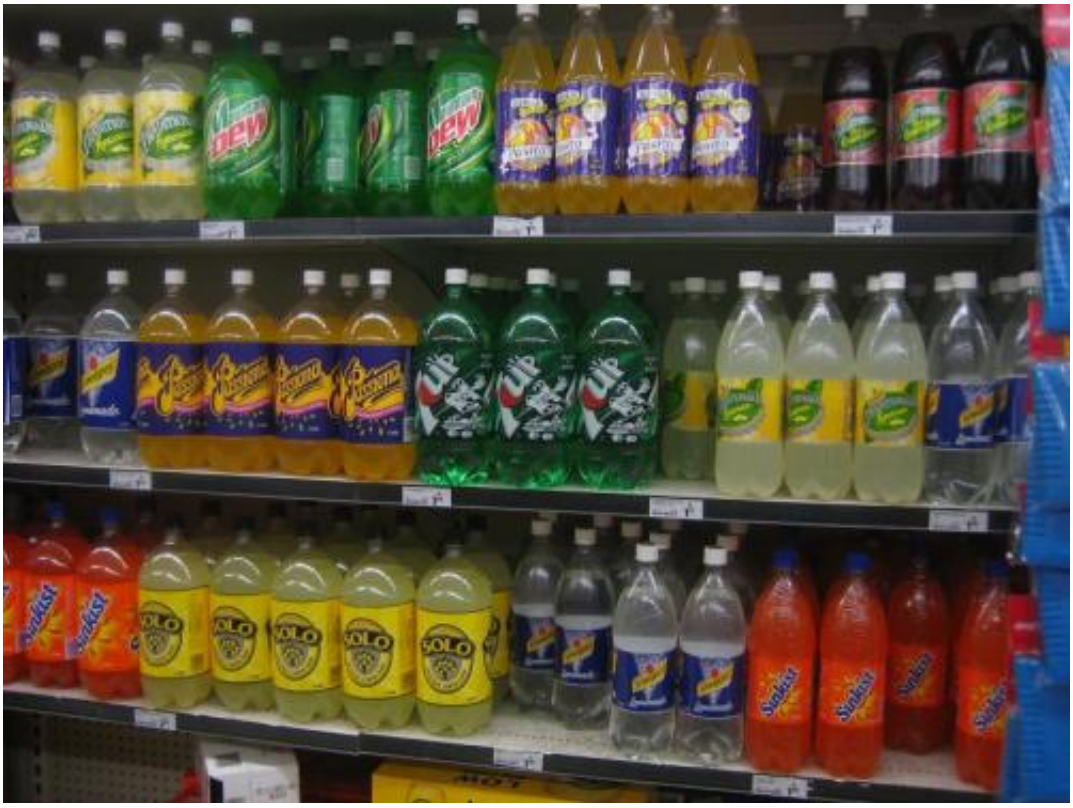

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Sugar-sweetened beverages are the largest source of added sugar in the diets of adolescents in the United States, and young adults ages 15-20 consume more of these drinks than any other age group, according to the Centers for Disease Control and Prevention. Adolescent obesity rates,

which have quadrupled over the past thirty years, led to widespread scrutiny of added dietary sugars, especially those found in carbonated beverages. Now, MU researchers have found that short-term, moderate consumption of high-fructose and high-glucose beverages has little impact on the metabolic health of weight-stable, physically active adolescents.

"These beverages may not be as unhealthy for adolescents as previously thought, provided that kids stay active," said Jill Kanaley, professor and associate chair in the MU Department of Nutrition and Exercise Physiology. "That physical activity component is really critical in protecting against some of the negative effects of drinking large amounts of sugar-sweetened drinks demonstrated in previous studies."

Kanaley's study measured several aspects of metabolic health, including insulin sensitivity and cholesterol levels, after participants had consumed moderate amounts of either high-glucose or high-fructose beverages every day for two weeks. The high-glucose drink contained 50 grams of glucose and 15 grams of fructose; the high-fructose drink contained 50 grams of fructose and 15 grams of glucose. In comparison, two 12-ounce cans of white soda contain about 50 grams of fructose, although the amount of sugar found in soft drinks varies by brand and type. The researchers used armbands with electronic sensors to monitor physical activity of the participants, all of whom were healthy male and female adolescents ages 15-20.

Although some research has shown that consuming sugary drinks can have detrimental metabolic effects, Kanaley said that the results of these studies have been inconsistent. Previous research often has excluded adolescents and did not measure participants' levels of physical activity. In one of her previous studies, which recently was published in Medicine in Science and Sports, Kanaley found that increased physical activity diminished negative effects associated with high-fructose diets.

"Many parents of adolescents worry about their children's consumption of sweetened beverages," Kanaley said. "I certainly would recommend that they work to reduce their children's intake of sugary drinks, but it also is important for kids to remain active, especially if they are drinking a lot of sugary beverages. In our study, the female adolescents averaged around 8,000 steps per day, and the males averaged about 10,000 steps per day. These children weren't athletes, but they had active lifestyles."

Kanaley's article was published in the *American Journal of Clinical Nutrition*.

Provided by University of Missouri-Columbia