

Early consumption of soda indicator of unhealthy diet

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Young girls who drink soda have less healthy diets through adolescence than their peers who do not drink soda, according to a Penn State study.

The ten-year study showed that girls who drank soda at age five had diets that were less likely to meet nutritional standards for the duration of the study, which ended at age 15. Girls who did not drink soda at age five did not meet certain nutritional requirements, but their diets were healthier.

The difference between the two groups in nutrient intake is "not just because of what they are consuming, but because of what they are not consuming," said Laura Fiorito, postdoctoral fellow in Penn State's Center for Child Obesity Research.

Milk intake differed greatly between the two groups -- soda drinkers drank far less milk than non-soda drinkers -- and milk has all of the nutrients that differed between the groups except fiber. At age five, non-soda drinkers consumed 10 to 11 ounces of milk daily, while soda drinkers had less than seven ounces.

"Adequate nutrient intake is important for optimal health and growth," the researchers reported in a recent issue of the [Journal of the American Dietetic Association](#).

For example, low [calcium intake](#) is associated with increased risk of bone fractures and higher added sugar is associated with dental problems

and the development of several chronic diseases, such as [type 2 diabetes](#).

The Institute of Medicine, part of the National Academy of Sciences, recommends that girls between age 14 and 18 receive at least 65 milligrams of vitamin C daily. In this study, soda drinkers fell short at just 55 milligrams daily, while non-soda drinkers exceeded the recommendation at 70.5 milligrams daily.

Although soda drinkers had less healthy diets, both groups failed to meet recommendations for certain nutrients. The Institute recommends that girls age 14 to 18 receive at least 1,300 milligrams of calcium daily. At age 15, soda drinkers in the study averaged 767 milligrams a day, while non-soda drinkers had slightly higher intakes at 851 milligrams a day, but were still deficient.

The researchers also found that both groups increased their soda consumption by age 15. However, soda drinkers were consuming nearly twice as much soda at age 15 than their counterparts -- 6.6 ounces a day versus 3.4 ounces a day.

Although the study has considerable implications on how beverages impact diet, Fiorito believes children may already have developed drinking preferences and patterns by age five.

"We think that the patterns develop when they are younger. Some studies show that children already drinking soda or carbonated beverages at age two," said Fiorito.

The study followed 170 girls for 10 years, documenting meals three times every two years. Girls classified as "soda drinkers" -- those who drank roughly four ounces of soda daily at age five -- showed much lower intakes of fiber, protein, vitamin C, vitamin D, calcium, magnesium, phosphorous, and potassium throughout the study than "non-

soda drinkers" -- those who had no soda intake at age five. Also, the soda drinkers had much higher intake of added sugars. The study did not distinguish between diet and regular soda because the "soda drinkers" drank both types, but diet soda intake was very low at age five.

Parents of soda drinkers in the study had higher body mass indexes than non-soda drinkers' parents. Fiorito believes this suggests that "parents model consumption patterns for their children," and that the parents' unhealthy eating habits not only contributed to an increased BMI, but influenced children.

There have been other studies on the effects of soda on dieting, but this is the first study to track the consumption of multiple beverages over a ten-year period. Included in the study were coffee/tea, soda, milk, 100 percent fruit juice, and fruit drinks - any fruit-flavored drinks with less than 100 percent fruit juice.

Other beverages have come under scrutiny in recent years for their possible negative health consequences. For example, the American Academy of Pediatrics issued a formal statement in 2001 that recommended limits on children's fruit juice intake. The Academy has not issued any formal statement on soda, but this study provides a clear link showing that soda can prevent people from maintaining a [healthy diet](#).

Provided by Pennsylvania State University

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