

Junk food diet may predict future depression symptoms in teens

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An innovative study finds that sodium and potassium levels—reflections of a person's typical diet—may be predictors of future depression in teens. The first-of-its-kind study is published in *Physiological Reports*.

The number of adolescents with depression has increased an estimated 30 percent in the past 10 years. Studies have shown a link between a [healthy diet](#) and improved mood in adults, but there is little research on the effect of diet on the development of depression in teenagers.

Researchers followed 84 [middle school students](#)—primarily from [low-income families](#)—for a year and a half. The study focused on "urban African American youth who are at a higher risk for both poor diet and depression," the research team explained. At the start and end of the study, the researchers collected the participants' urine and administered a commonly used screening test for depression. They tested the urine for sodium (salt) and [potassium levels](#). Sodium in the urine has been found to be a reliable marker of how much salt a person regularly eats and "may reflect the consumption of processed, [unhealthy foods](#)," the researchers wrote. Urinary potassium level is also "a marker of overall diet quality, with higher potassium excretion positively correlated with greater intake of vegetables, fruits, whole grains, fish and poultry," they added. Low urinary potassium levels—similar to high sodium levels—are associated with eating fast food and other processed items.

Higher sodium and lower potassium levels were not related to symptoms of depression at the baseline reading at the start of the trial, but predicted increased depression at follow-up at the end of the study. This may mean that the effects of an unhealthy diet on mood build up over time. "These results suggest that reducing the consumption of sodium-rich foods and increasing the consumption of potassium-rich foods (e.g., fruits, vegetables and whole grains) may help reduce the prevalence of depression in adolescents," the researchers wrote.

"Sodium and potassium excretion predict increased depression in urban adolescents" is published in *Physiological Reports*.

More information: Sylvie Mrug et al. Sodium and potassium

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Physiological Reports (2019). [DOI: 10.14814/phy2.14213](https://doi.org/10.14814/phy2.14213)

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