

For young people, irregular meals, e-cigarette use linked to frequent headaches

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For children and teens, irregular meals such as skipped breakfasts are linked to an increased risk of frequent headaches, according to a new study published in *Neurology*. The study also found that for those ages 12 to 17, substance use and exposure, specifically electronic cigarettes (e-cigarettes), were associated with frequent headaches.

For the study, frequent headaches were defined as occurring more than once per week.

"It is not uncommon for children and teens to have headaches, and while medications are used to stop and sometimes prevent headaches, [lifestyle changes](#) may also offer an effective route to relief by preventing headaches from happening and improving [quality of life](#)," said study author Serena L. Orr, MD, MSc, of the University of Calgary in Canada and a member of the American Academy of Neurology.

The study included nearly 5 million children and teens, ages five to 17, who were enrolled in a large Canadian health survey. They were asked if they had experienced headaches over the previous six months and how often. Approximately 6% of participants had headaches more than once a week.

The survey asked about several lifestyle factors including screen time, sleep hours and meals. Anxiety and mood disorders were assessed. Participants ages 12 to 17 were also asked about substance use and exposure.

For meals, participants reported how many times over the past week they ate breakfast and how often they sat down to eat dinner with their family, for a total of 14 possible meals. Those who experienced frequent headaches had an average of nine such meals compared to an average of 12 meals for kids who had one or fewer headaches a week.

After adjusting for factors such as age, sex, household income and the other lifestyle factors, researchers found that participants who regularly ate breakfast as well as dinners with their family had an 8% lower risk of frequent headaches than those who did not eat regular meals.

Participants ages 12 to 17 were also asked how often they used

substances like alcohol, cigarettes, [e-cigarettes](#) and cannabis. E-cigarettes were used daily by 8% of participants with frequent headaches compared to 3% of participants with one or fewer headaches per week. Also, 79% of participants with frequent headaches had not used e-cigarettes in the past month compared to 88% of those who did not have frequent headaches.

After adjustments for age, sex, [household income](#), and the other lifestyle factors, researchers found those who used e-cigarettes daily had double the odds of frequent headaches compared to those who never used e-cigarettes.

After similar adjustments, researchers did not find links to headaches for sleep, [screen time](#) and other [substance use](#).

Participants with anxiety and mood disorders had twice the risk of frequent headaches as those without.

"We assessed anxiety and [mood disorders](#) because they have been linked to headaches and may impact lifestyle behaviors," said Orr. "It is possible regular family meals may lead to greater connectedness and communication within the family, and better mental health outcomes, which in turn may impact headache frequency."

Orr added, "Our findings suggest that asking about lifestyle factors such as substance abuse may help [medical professionals](#) identify lifestyle interventions that may be helpful to [young people](#) and may help to reduce frequent headaches."

A limitation of the study was it did not include [children](#) and teens living in foster homes, institutions or on First Nation reserves and other Indigenous settlements in Canada.

More information: Christelle Nilles et al, Lifestyle Factors Associated With Frequent Recurrent Headaches in Children and Adolescents, *Neurology* (2024). DOI: 10.1212/WNL.0000000000209160

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