Food Insecurity, but Not HIV, Associated With Cognitive Impairment

Going hungry for a prolonged period raised the risk of declining mental performance.

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Any period of going hungry among people with HIV was associated with worse cognitive function in a study published in The Journal of Nutrition. But ongoing hunger—hunger reported throughout a two-year period—was associated with a fourfold increase in cognitive decline.

The findings are consistent with previous research showing that a lack of food was associated with worse HIV controland higher rates of death among people with HIV who inject drugs. That puts hunger right on par with housing insecurity and poverty as structural issues that negatively affect people living with HIV.

The analysis by PhD candidate Javier Tamargo, of Florida International University, and colleagues drew data from 394 participants in the Miami Adult Studies on HIV (MASH) cohort between 2016 and 2020. The study followed participants from entry to two years later, with check-ins at one year and two years. Participants filled out a questionnaire on hunger and took a cognitive test that required them to be able to read and write.

The participants were primarily Black (72%) and had a [median? Average?] age around 54. Just over half (54%) were cisgender men, and 78% were living below the poverty line. About two thirds of participants were living with HIV. More than half had hypertension (high blood pressure), and more than a quarter had liver fibrosis. All the participants living with HIV were receiving antiretroviral treatment, and 87% had an undetectable viral load (defined as 200 or less). The researchers provided no data on whether the people with HIV in the trial had a history of HIV-associated neurocognitive disorder.

Interestingly, just one out of four people living with HIV in the trial reported going hungry. But those who experienced food insecurity were less likely to have an undetectable viral load—80% versus 88%. Overall, 40% of people with HIV in the study reported depression, but the rate was much higher among participants who reported any food insecurity: Nearly two out of three HIV-positive people who reported not having enough food met criteria for depression, compared to just one third of those with consistent access to food.

When it came to cognitive impairment, 15% of people in the overall study met qualifications for

cognitive impairment, and most of those were in the food-secure group. Two years later, fewer participants (12%) met the criteria for cognitive impairment, but 20 of those were new to that state.

At baseline, food insecurity overall was not associated with cognitive impairment, and neither was HIV. Only people with extreme food insecurity seemed more likely to experience cognitive issues.

But when the researchers checked back two years later, every instance of food insecurity was associated with a 50% increased likelihood of cognitive impairment. There did not appear to be a relationship between HIV status and cognitive impairment, however.

People who reported going hungry throughout the trial had the highest rates of cognitive impairment, with fourfold higher odds of struggling on cognitive tests. It may be that those cognitive impairments weren't just about hunger, however, write the authors. People who were hungry were also more likely to use cocaine, which is associated with cognitive impairment, as are other stressors like racism, poverty and HIV stigma.

Click here to read the study abstract.
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