Food Insecurity Linked to Increased Risk of Fatty Liver Disease

Inadequate access to healthy food was also associated with a higher chance of developing liver fibrosis.

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Middle-aged individuals with insecure access to food had a much higher risk of developing non-alcoholic fatty liver disease (NAFLD) compared with people who did not report food insecurity, according to study results reported in The American Journal of Clinical Nutrition.

Among people with reduced access to nutritionally rich food, increased intake of cheap, calorie-dense meals can lead to obesity, which is linked to fatty liver disease. Arising from the accumulation of fat in the liver, NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. As a result of inflammation, NAFLD can lead to the buildup of scar tissue (fibrosis), cirrhosis (advanced scarring) and even liver cancer.

Marianna Baum, PhD, of Florida International University in Miami, and colleagues conducted a study to find out whether food insecurity is linked to NAFLD among people with or without HIV and hepatitis C.

The researchers analyzed a population of low-income, middle-aged adults from the Miami Adult Studies on HIV who did not drink excessive amounts of alcohol. The team used the USDA's Household Food Security Survey to establish food security and MRI scans to identify steatosis (fat accumulation) and fibrosis in the liver and also performed metabolic assessments.

The study population included 603 individuals, a third of whom (32%) experienced food insecurity. NAFLD, fibrosis and advanced fibrosis were found in 16%, 15% and 5% of the cohort, respectively. With every 5 kg/m2 increase in body mass index, the odds of developing NAFLD rose by a factor of 3.83 for individuals who reported food insecurity compared with 1.32 for those who did not report food insecurity.

After adjusting for confounding variables, food insecurity was linked to an increased risk of developing liver fibrosis and advanced fibrosis. What's more, the link between food insecurity and fibrosis was observed regardless of HIV and hepatitis C status.

“People who experience food insecurity, particularly those vulnerable to chronic diseases and viral infections, may be at increased risk for liver-related morbidity and mortality,” wrote the researchers. “Improving access to adequate nutrition and preventing obesity among low-income groups may lessen the growing burden of NAFLD and other chronic diseases.”

Click here to read the study abstract in The American Journal of Clinical Nutrition.

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