



Low-Income Adolescents Are at Higher Risk for Fatty Liver Disease

MASLD was also associated with food insecurity and being overweight, and Latino teens were at higher risk.

October 14, 2024 By [Sukanya Charuchandra](#)

Adolescents who grow up in low-income households or with a parent with a low education level and those who lack adequate health food have a significantly higher risk for [metabolic dysfunction-associated steatotic liver disease \(MASLD\)](#), according to findings published in [The American Journal of Gastroenterology](#). Latino teens may be especially at risk for fatty liver disease.

MASLD, the new name for non-alcoholic fatty liver disease, and its more severe form, metabolic dysfunction-associated steatohepatitis (MASH), are responsible for a growing proportion of advanced liver disease worldwide. Over time, the buildup of fat in the liver can lead to fibrosis, [cirrhosis](#) and [liver cancer](#). Disease management largely relies on lifestyle changes such as weight loss and exercise. The first medication approved for MASLD, [Rezdiffra \(resmetirom\)](#), is indicated only for adults.

Zobair Younossi, MD, MPH, of the Inova Health System in Virginia, and colleagues explored the potential links between MASLD, income and food insecurity among adolescents in the United States. Around 10% of U.S. households report food insecurity for children and teens.

The researchers used data from the [National Health and Nutrition Examination Survey 2017-2018](#). The study population included 771 adolescents, about evenly divided by sex. Just over half (51%) were white, 24% were Latino, 13% were Black, and 12% belonged to other racial and ethnic groups. Food insecurity was assessed using the [U.S. Department of Agriculture Child Food Security Survey Module](#), while MASLD was measured using transient elastography imaging. Food security was reported by about 10%, and 10% had MASLD.

The researchers noted significant links between MASLD and food insecurity, household income and education levels. MASLD was present in 17% of adolescents experiencing food insecurity compared with 9% of those with adequate access to food. Similarly, more adolescents living in low-income households had MASLD compared with those in higher income households (15% versus 7%). Further, more adolescents raised by a person with a lower education level had MASLD than those raised by people with a higher education level (18% versus 8%).

Food-insecure adolescents who lived in low-income households were three times more likely to develop fatty liver disease than adolescents who lived in higher income households. On the other hand, food-secure adolescents in low-income households did not have a higher risk of MASLD than those in high-income households.

The odds of having MASLD increased by 163% among youth with hypertension, by 241% among Latino teens compared with other racial/ethnic groups, and by 138% for young men compared with young women. What's more, each 1-unit increase in body mass index raised the odds of having MASLD by 25% among adolescents.

"Food insecurity is associated with MASLD among U.S. low-income adolescents especially Hispanic male individuals with obesity and hypertension," the researchers concluded. "Policies addressing inequities are needed."

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