

Biomarkers Could Predict Liver Fibrosis in Latino Adolescents

A combination of biomarkers could predict liver fibrosis early in Latino adolescents with obesity—without the need for a biopsy.

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A pair of biomarkers could help predict [liver fibrosis](#) in Latino adolescents with metabolic dysfunction-associated steatotic liver disease ([MASLD](#)), according to a study by researchers at [Children's Hospital Los Angeles](#) (CHLA).

Often referred to as a “[silent disease](#),” MASLD (formerly known as non-alcoholic fatty liver disease) is responsible for a growing proportion of advanced [liver disease](#). It is also the most common pediatric liver disease in the world, mirroring a global rise in [obesity](#).

Lifestyle factors often play a role in the development of MASLD. For example, obesity is often associated with the condition. In fact, experts recommend that children between ages 9 and 11 who have overweight or obesity should be screened for MASLD.

About 10% to 15% of Latino adolescents with obesity develop MASLD compared with 5% to 10% of the general adolescent population, according to CHLA. This is likely because Latino adolescents have higher rates of obesity, which causes fat deposition and liver [inflammation](#).

Over time, MASLD can lead to liver fibrosis—the excessive buildup of scar tissue in the liver due to repeated damage or inflammation. Currently, invasive biopsies or imaging are used to diagnose liver fibrosis.

“There is an urgent need for more accessible, noninvasive and cheaper screening methods, particularly for high-risk populations, such as Latino adolescents with obesity,” said study author Michael Goran, PhD, the director of the nutrition and obesity program at Saban Research Institute. “We want to identify this disease early while the liver damage of MASLD can still be reversed.”

[Published in the Journal of Pediatric Gastroenterology and Nutrition](#), the CHLA-led study identified two biomarkers that could identify liver fibrosis early enough to reverse the damage to the liver, particularly in Latino adolescents with obesity.

Using data and patient samples from a study of 93 Latino adolescents with obesity, researchers found that the combined presence in plasma of the biomarkers dihydroxyacetone phosphate (DHAP) and alanine transaminase (ALT) could predict liver fibrosis early enough to reverse liver damage.

“The combination of ALT and DHAP holds significant promise as a potentially low-cost, noninvasive screening tool for fibrosis in Latino adolescents with obesity,” corresponding author Rachel Schenker, MD, said in the news release about the study. “Future studies need to investigate if this could be an effective screening tool for the entire population.”

For more, check out Hep’s [Health Basics on MASLD Prevention](#). It reads in part:

Lifestyle factors often contribute to the buildup of fat in the liver, and making some changes can help prevent the development of MASLD and its more severe form, metabolic dysfunction-associated steatohepatitis (MASH, formerly known as non-alcoholic steatohepatitis, or NASH).

Maintain a healthy weight. Overweight and obesity are leading risk factors for fatty liver disease. [Body mass index \(BMI\)](#) is a commonly used indicator of healthy weight. A BMI over 25 indicates overweight; a BMI over 30 indicates obesity. However, some experts think waist circumference and other indicators may be more informative.

Eat a healthy diet. A healthy diet includes all the basic food groups, with a focus on plant-based foods such as fruits, vegetables and whole grains. Keep processed meats, saturated fats and added sugar and salt to a minimum.

Exercise regularly. The federal government’s [Physical Activity Guidelines for Adults](#) recommend at least 150 minutes of moderate-intensity aerobic activity (e.g., brisk walking) every week and weight training/muscle strengthening activities that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms) on two or more days a week. Recent research shows that exercising in short intervals is as effective as exercising for larger stretches of time.

Get regular, good-quality sleep. Our bodies need adequate sleep to function. Insufficient sleep is associated with overeating and weight gain. What’s more, adequate sleep improves mood and overall quality of life. The [American Academy of Sleep Medicine](#) recommends that adults

should get at least seven hours of sleep a night.

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