# Even Modest Weight Loss Linked to Improvement in Liver Fibrosis

Improvements were seen after weight loss regardless of initial body mass index or diabetes status.

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Losing even a small amount of weight can meaningfully improve liver damage in people with metabolic dysfunction-associated steatotic liver disease (MASLD), according to study findings published in The American Journal of Gastroenterology.

MASLD 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 serious complications, including fibrosis, cirrhosis and liver cancer.

With only two approved medications, MASLD management still largely relies on lifestyle changes, such as weight loss, diet and exercise. But the effects of weight changes on liver damage are not well understood. Dujinthan Jayabalan, MD, of the University of Western Australia, and colleagues sought to better understand these effects in people with biopsy-proven MASLD or MASH.

For this systematic review and meta-analysis, the team accessed various databases, including PubMed, EMBASE, MEDLINE and Google Scholar, to identify controlled trials that included data on percentage changes in body weight in people with MASLD or MASH who had paired liver biopsies before and after weight loss. The researchers looked at the proportion of people whose MASH completely resolved without fibrosis worsening as well as the proportion whose fibrosis improved by at least one stage without MASH worsening (the dual benchmark used to evaluate medications for MASH).

The analysis included 26 studies with a total of 1,963 patients. Weight changes were generally modest, ranging from a 1.5% gain to a 9.8% loss. Overall, 12% of people achieved resolution of MASH without worsening fibrosis, but among those who lost more than 3% of their body weight, that proportion rose to 25%. What's more, 17% experienced fibrosis improvement by at least one stage without worsening MASH.

The impact of weight loss on liver fibrosis did not depend on initial body mass index, diabetes status or Latino ethnicity (a group more prone to MASLD), suggesting that lifestyle interventions could help broadly, not just for select populations, according to the study authors. Though not the

focus of this analysis, recent research indicates that GLP-1 agonist weight-loss medications like semaglutide (Wegovy) or tirzepatide (Zepbound) could play a role along with traditional interventions, such as diet and exercise. Wegovy received accelerated approval as a treatment for MASH last year.

“Even modest observed weight loss is associated with MASH resolution,” the researchers wrote. “The proportions observed serve as benchmark estimates of histological response for future clinical trial design.”

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