What Kinds of Aerobic Exercise Reduce Liver Fat?

Liver fat reduction was similar with high-intensity interval exercise and moderate-intensity continuous training.

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Both high-intensity interval training alternating with rest periods and continuous moderate-intensity exercise were found to improve liver fat content to a similar extent in people with fatty liver disease, according to results published in The Journal of Clinical Endocrinology & Metabolism.

Arising from the accumulation of fat in the liver, non-alcoholic fatty liver disease (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 and even liver cancer. Often associated with obesity, diabetes and abnormal blood lipid levels, fatty liver disease is considered a manifestation of metabolic syndrome. With no effective approved medical therapies, disease management is dependent on lifestyle changes such as weight loss and exercise, but it is not clear which type of exercise is best.

Angelo Sabag, PhD, of Western Sydney University in Australia, and colleagues conducted a systematic review of relevant studies through December 2020 to compare the impact of two kinds of aerobic exercise—high-intensity interval training (HIIT) alternating with rest periods and moderate-intensity continuous training (MICT)—on changes in liver fat among adults with NAFLD.

The researchers scanned 28,268 studies and shortlisted 19 randomized trials that included a total of 745 participants. They excluded studies that did not evaluate the aerobic exercise intervention for at least two weeks. Further, the team included only trials in which liver fat was assessed using magnetic resonance–based techniques.

Both high-intensity interval training and moderate-intensity continuous training (a traditional aerobic workout) significantly lowered liver fat content. People who engaged in HIIT saw a 2.85% reduction in liver fat, while MICT reduced liver fat by 3.14%. The difference between the two exercise interventions was not statistically significant. The total duration of the workout in minutes and the number of calories expended were not linked to liver fat changes.

“HIIT elicits comparable improvements in liver fat to MICT despite often requiring less energy and time commitment,” the study authors concluded.

“It is useful information to know that by training harder in less time with HIIT, you can achieve the same results as MICT, which is ideal for those with a busy lifestyle and little time,” Sabag said in a press release. “Another interesting finding was that even if people didn’t exercise at volumes sufficient to satisfy the recommended physical activity guidelines, they could still achieve clinically significant improvements in liver fat so long as they exercised regularly above a moderate intensity.”

More studies are needed to understand the effect of different variables, such as exercise intensity, on changes in liver fat.

Click here to read the study abstract in The Journal of Clinical Endocrinology & Metabolism.

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