# Alcohol Use and Metabolic Factors Work in Concert to Drive Liver Disease

This finding calls into question the importance of the one differentiation between alcoholic and non-alcoholic fatty liver disease.

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The level of an individual's alcohol intake works hand in hand with various metabolic factors, such as LDL cholesterol and insulin resistance, to drive severe liver disease.

Metabolic syndrome encompasses a cluster of conditions that include high blood pressure, high blood sugar, high cholesterol, excess belly fat and high triglycerides. The syndrome is associated with a higher risk of cardiovascular disease, stroke and diabetes.

Publishing their findings in the journal Hepatology, researchers conducted an analysis on data regarding 6,732 individuals without liver disease who participated in the Finnish population-based Health 2000 Study between 2000 and 2001.

Eighty-four study members experienced a serious liver-related health event during the follow-up period. The investigators found that factors that predicted such health events included being older, being female, alcohol use, diabetes, LDL cholesterol and insulin resistance.

Among men who drank more than 15 servings of alcohol per week and women who drank more than 10 drinks weekly, diabetes was the only factor that significantly predicted a serious liver-related health event. Among those who consumed less than these respective thresholds or did not drink alcohol, being older, alcohol use, smoking, abdominal obesity, LDL cholesterol and insulin resistance significantly predicted such health events.

Currently, scientists consider alcoholic liver disease (ALD) and non-alcoholic fatty liver disease (NAFLD) distinct conditions. However, the only true difference between the two is an individual's alcohol consumption level—if higher, alcohol is considered the main driver of the severe liver disease condition. This differentiation presumes that metabolic syndrome, which is considered the main driver of NAFLD, does not factor into the development of ALD and that alcohol use does not drive NAFLD. However, according to this research, even alcohol use that falls below the threshold used to differentiate ALD and NAFLD can drive severe liver disease.

"We suggest that liver disease should perhaps not be considered in terms of mutually exclusive

entities of ALD and NAFLD, because in a large number of patients with liver disease, the effect of alcohol is difficult, and sometimes impossible, to separate from the effect of metabolic factors," the study's lead author, Fredrik Åberg, MD, PhD, of the Helsinki University Hospital in Finland, said in a press release. "Our study brings support to this suggestion and calls for a more holistic approach, where alcohol use and metabolic factors are taken into account at the same time in order to identify individuals with a high risk for severe liver complications."

Åberg and his coauthors recommend that an assessment of liver-disease risk simultaneously take into account abnormal lipid levels, abdominal obesity, insulin resistance, diabetes and alcohol use.

To read a press release about the study, click here.

To read the study abstract, click here.

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