

# A Short Study on Non-alcoholic Fatty Liver Disease Treatment and Cardiovascular Risk

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## Abstract

NAFLD (non-alcoholic fatty liver disease) is a type of chronic liver disease that is linked to insulin resistance and the metabolic syndrome. The condition can advance from simple steatosis to steatohepatitis and eventually cirrhosis. Over the last few years, compelling data has established a strong relationship between NAFLD and cardiovascular disease, ranging from coronary artery disease to subclinical carotid atherosclerosis. Cardiovascular mortality is the leading cause of death among NAFLD patients, according to long-term follow-up studies. Furthermore, NAFLD has been linked to endothelial dysfunction, increased pulse wave velocity, increased coronary artery calcifications, and increased carotid intima media thickness, all of which are known CVD markers. NAFLD has been linked to a number of CVD risk factors, including insulin resistance, abdominal obesity, dyslipidemia, hyperuricemia, chronic renal disease, and type2 diabetes, and is considered a part of the metabolic syndrome.

**Keywords:** NAFLD • Cardiovascular • Non-alcoholic • Endothelial

## Introduction

Non-alcoholic fatty liver disease (NAFLD) is the fastest-growing cause of chronic liver disease in the United States, with an increasing prevalence worldwide. It is a group of liver illnesses that includes everything from basic steatosis to non-alcoholic steatohepatitis (NASH), a degenerative form of liver disease. In certain people, it can lead to progressive fibrosis, cirrhosis, and hepatocellular cancer. NAFLD is frequently linked to insulin resistance, and it is strongly linked to type 2 diabetes and obesity [1]. Patients with NAFLD are at risk of developing NASH and, eventually, cirrhosis; they are also more likely to develop cardiovascular illnesses, such as coronary heart disease and stroke. Independent of established cardiovascular risk factors and metabolic syndrome, NAFLD raises the risk of cardiovascular disease. Genetic predisposition, insulin resistance and atherogenic dyslipidemia, oxidative stress, chronic inflammation, reduced levels of adiponectin, and altered production of pro and anticoagulant factors have all been proposed as mechanisms for the development of accelerated atherosclerosis in patients with NAFLD. At the same moment, all of these systems are active. NAFLD is significantly linked to hepatic and adipose tissue insulin resistance, regardless of stage [2]. In fact, the amount of fat in the liver can be used as a standalone predictor of insulin resistance. Increased cardiovascular risk is linked to non-alcoholic fatty liver disease, abdominal obesity, and insulin resistance, while the specific underlying relationship is yet unknown. Hepatic necroinflammation, which is observed in NASH, is an atherogenic process that may explain why NASH patients have a higher CV risk than those with simple steatosis. Elevated liver enzymes are a symptom of hepatic necroinflammation in the liver, and they may serve as a marker for people who are at a higher risk of CVD [3]. Several investigations have found that patients with NASH had a significantly increased carotid artery intimal medial thickness, which supports the necroinflammation theory. Overall non-alcoholic fatty liver disease (NAFLD) is one of the most common causes of liver disease. It's a disorder in which excess fat is accumulated in the liver and, if left untreated, can lead to cirrhosis and liver failure. NAFLD is more common in adults with particular diseases, such as obesity and type 2 diabetes, and unlike alcohol-related liver disease, it is not caused by excessive alcohol consumption. The liver eliminates toxins and creates bile, a protein that breaks down fat into fatty acids so it can be digested, in a healthy body. Fatty liver disease harms the liver and stops it

from functioning properly, but it can be prevented from worsening with lifestyle modifications. Weight loss, a mix of calorie reduction, exercise, and healthy food, is the primary line of treatment for NAFLD. Fruits and vegetables, high-fiber foods including legumes and whole grains, and whole grains are all part of a fatty liver disease diet. Reduce your intake of some foods and beverages that are heavy in added sugar, salt, refined carbs, and saturated fat. There will be no alcoholic beverages. The amount of weight you need to shed to treat NAFLD is determined on how much excess body fat you have [4]. Based on your overall health, your healthcare team can assist you in determining an acceptable weight loss target. A diet high in fibre, protein, and unsaturated fats that is nutrient-dense and whole-food based is generally suggested. For people with NAFLD, this is a reliable resource.

## Conclusion

Over the last few years, significant data has emerged demonstrating a strong relationship between NAFLD and an elevated risk of cardiovascular disease in those with or without metabolic syndrome. NAFLD is now understood to be a risk factor for poor cardiovascular outcomes, such as death and morbidity from major vascular events. NAFLD patients may benefit from increased surveillance and early treatment treatments in general. Despite data associating NAFLD to an elevated risk of cardiovascular disease, the predictive relevance of NAFLD in CHD risk stratification remains unknown. To see if adding NAFLD to the already known risk score methods improves cardiovascular disease risk prediction, more large follow-up studies are needed. Finally, more study is needed to better understand the mechanism between NAFLD and cardiovascular disease, as well as to determine whether hereditary features in NAFLD carry the same cardiovascular risk as NAFLD associated with metabolic syndrome.

## References

1. Angulo P. "Non-alcoholic fatty liver disease". *N Engl J Med*. 346; (2002): 1221-1231.
2. Kotronen, A., and Yki-Järvinen H. "Fatty liver: a novel component of the metabolic syndrome". *Arterioscler Thromb Vasc Biol*. 28; (2008): 27-38.
3. Satapathy, SK., and Sanyal AJ. "Epidemiology and natural history of non-alcoholic fatty liver disease". *Semin Liver Dis*. 35; (2015): 221-235.
4. Adams, LA., and Ratziu V. "Non-alcoholic fatty liver - perhaps not so benign". *J Hepato*. 62; (2015): 1002-1004.

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