

Fast Food Consumption Linked to Fatty Liver Disease

People who ate more fast food, as well as those with diabetes or obesity, had a higher risk for NAFLD.

March 2, 2023 By [Sukanya Charuchandra](#)

Fast food consumption is associated with a greater risk of developing [non-alcoholic fatty liver disease \(NAFLD\)](#), according to study findings reported in [Clinical Gastroenterology & Hepatology](#). Obesity and diabetes also played a role in liver fat accumulation.

“Our findings are particularly alarming as fast food consumption has gone up in the last 50 years, regardless of socioeconomic status,” Ani Kardashian, MD, of the Keck School of Medicine at the University of Southern California in Los Angeles, said in a [press release](#). “We’ve also seen a substantial surge in fast food dining during the COVID-19 pandemic, which is probably related to the decline in full-service restaurant dining and rising rates of food insecurity. We worry that the number of those with fatty livers has gone up even more since the time of the survey.”

Arising from the accumulation of fat in the liver, NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. The condition is often associated with obesity and diabetes. As a result of inflammation, NAFLD can lead to the buildup of scar tissue, cirrhosis and even liver cancer. With no effective approved medical therapies, disease management is dependent on lifestyle changes such as weight loss and exercise.

While fast food consumption has been linked to a higher risk for diabetes and cardiovascular disease, its impact on the development of fatty liver disease is not as well understood.

“Dietary intake has been hypothesized to be one of the most influential modifiable factors for NAFLD, yet there are major gaps in evidence linking diet with steatosis, particularly among high-risk groups, limiting public health efforts around dietary prevention and risk mitigation strategies to reduce fatty liver,” the study authors wrote.

Kardashian’s team analyzed data from the [National Health and Nutrition Examination Survey \(NHANES\)](#), a nationally representative survey designed to assess the health and nutritional status of adults and children in the United States. They used self-reported fast food consumption data from nearly 4,000 adults as well as transient elastography imaging to assess steatosis, or liver fat

accumulation. For the study, fast food included pizza or anything bought at a drive-through or self-service restaurant.

Among 3,954 participants, 2,037 (52%) consumed some fast food. Individuals who ate more fast food were more likely to be younger and male. They were also more likely to have obesity and more likely to consume sugary beverages.

Nearly one third of participants (29%) said they obtained at least 20% of their daily caloric intake from fast food, and these individuals were more likely to have excess liver fat. In particular, people with obesity or diabetes who got at least 20% of their daily calories from fast food had much higher levels of fat in their liver compared with people who ate little or no fast food.

“The severe rise in liver fat in those with obesity or diabetes is especially striking and probably due to the fact that these conditions cause a greater susceptibility for fat to build up in the liver,” said Kardashian.

However, even people without obesity or diabetes experienced an increase in liver fat when fast food made up one fifth of their daily calories. Those who got less than 20% of their daily calories from fast food did not experience a rise in liver fat levels.

“If people eat one meal a day at a fast food restaurant, they may think they aren’t doing harm,” said Kardashian. “However, if that one meal equals at least one fifth of their daily calories, they are putting their livers at risk.”

The researchers hope that these findings can help guide counseling and policy, especially when addressing the needs of people with diabetes and obesity. Public health policy that promotes the consumption of nutritious food is needed in the United States, they advised.

Click here to read the study abstract in [Clinical Gastroenterology & Hepatology](#).

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