



Caffeine May Reduce Severity of NAFLD in Those With Type 2 Diabetes

Increased coffee intake may decrease liver fibrosis among those with NAFLD and other chronic liver conditions.

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Caffeine, polyphenols and other components of coffee may help reduce the severity of [non-alcoholic fatty liver disease](#) (NAFLD) in people with [type 2 diabetes](#) with overweight, according to a study by the University of Coimbra in Portugal. The study was [published in Nutrients](#).

Though not caused by excess alcohol consumption, NAFLD can result in the buildup of fat in the [liver](#), which can lead to [liver fibrosis](#), [cirrhosis](#) and [liver cancer](#).

The study found that participants with higher [coffee](#) intake had healthier livers. What's more, those with higher [caffeine](#) levels were less likely to develop liver fibrosis, and higher levels of non-caffeine coffee components correlated with reduced fatty liver index scores. The study also suggested that higher coffee intake in patients with type 2 diabetes and overweight could result in less severe NAFLD.

"Due to changes in modern diet and lifestyle, there is an increase in obesity rates and incidence of both [type 2 diabetes] and NAFLD, which can ultimately develop into more severe and irreversible conditions, burdening health care systems," said study corresponding author John Griffith Jones, PhD, a senior researcher at the University of Coimbra in a [Coffee & Health article](#).

According to the European Food Safety Authority, moderate coffee consumption can be defined as three to five cups per day.

Researchers surveyed 156 middle-age borderline-obese participants about their coffee intake; of these, 98 had type 2 diabetes and submitted 24-hour urine samples. The samples were used to measure caffeine and non-caffeine metabolites, or natural by-products resulting from the body's breakdown of coffee.

Researchers found that caffeine is associated with "modest but significant protection against NAFLD." They [further concluded](#), "Our study indicates that higher cumulative amounts of both caffeine and non-caffeine metabolites measured in a 24 hour urine collection are associated with a less severe NAFLD profile. Finally, the profile of urine caffeine metabolites is sensitive to NAFLD

severity and may serve as a noninvasive marker of hepatic CYP2E1 expression, an important driver of NAFLD progression.”

“Our research is the first to observe that higher cumulative amounts of both caffeine and non-caffeine metabolites in urine are associated with a reduced severity of NAFLD in overweight people with [type 2 diabetes],” Jones said.

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