

Coffee and tea may contribute to a healthy liver, researchers say

August 17 2013



Surprise! Your morning cup of tea or coffee may be doing more than just perking you up before work.

An international team of researchers led by Duke-NUS Graduate Medical School (Duke-NUS) and the Duke University School of Medicine suggest that increased <u>caffeine</u> intake may reduce fatty liver in people with non-alcoholic <u>fatty liver disease</u> (NAFLD).

Worldwide, 70 percent of people diagnosed with diabetes and obesity have NAFLD, the major cause of fatty liver not due to <u>excessive alcohol</u> <u>consumption</u>. It is estimated that 30 percent of adults in the United States have this condition, and its prevalence is rising in Singapore. There are no effective treatments for NAFLD except diet and exercise.



Using cell culture and mouse models, the study authors - led by Paul Yen, M.D., associate professor and research fellow, and Rohit Sinha, Ph.D of the Duke-NUS Graduate Medical School's Cardiovascular and Metabolic Disorders Program in Singapore - observed that caffeine stimulates the metabolization of lipids stored in <u>liver cells</u> and decreased the fatty liver of mice that were fed a high-fat diet. These findings suggest that consuming the equivalent <u>caffeine intake</u> of four cups of coffee or tea a day may be beneficial in preventing and protecting against the progression of NAFLD in humans.

The findings will be published in the September issue of the journal *Hepatology*.

"This is the first detailed study of the mechanism for caffeine action on lipids in liver and the results are very interesting," Yen said. "Coffee and tea are so commonly consumed and the notion that they may be therapeutic, especially since they have a reputation for being "bad" for health, is especially enlightening."

The team said this research could lead to the development of caffeinelike drugs that do not have the usual side effects related to caffeine, but retain its therapeutic effects on the liver. It could serve as a starting point for studies on the full benefits of caffeine and related therapeutics in humans.

In addition to Yen and Sinha, collaborators included Christopher Newgard, PhD, director of the Sarah W. Stedman Nutrition and Metabolism Center at Duke University School of Medicine, where the metabolomics analysis of the data was conducted.

Provided by Duke University Medical Center



Citation: Coffee and tea may contribute to a healthy liver, researchers say (2013, August 17) retrieved 26 April 2024 from https://medicalxpress.com/news/2013-08-coffee-tea-contribute-healthy-liver.html

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