

Higher coffee consumption associated with lower liver cancer risk

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A new large, prospective population-based study confirms an inverse relationship between coffee consumption and liver cancer risk. The study also found that higher levels of gamma-glutamyltransferase (GGT) in the blood were associated with an increased risk of developing the disease. These findings are published in the July issue of *Hepatology*.

Researchers led by Gang Hu at the University of Helsinki set out to examine the associations between coffee consumption and serum GGT with the risk of liver cancer in a large prospective cohort. Residents of Finland drink more coffee per capita than the Japanese, Americans, Italians, and other Europeans, so Hu and colleagues studied 60,323 Finnish participants ages 25 to 74 who were cancer-free at baseline. The Finns were included in seven independent cross-sectional population surveys conducted between 1972 and 2002 and followed up through June 2006.

The participants completed a mail-in questionnaire about their medical history, socioeconomic factors and dietary and lifestyle habits. For a subset of participants, clinical data was available, including serum levels of GGT. Data on subsequent cancer diagnoses was collected from the country-wide Finnish Cancer Registry.

Based on their answers to the question: "How many cups of coffee do you drink daily?" the participants were divided into five categories: 0-1 cup, 2-3 cups, 4-5 cups, 6-7 cups, and 8 or more cups per day. After a median follow-up period of 19.3 years, 128 participants were diagnosed

with liver cancer.

The researchers noted a significant inverse association between coffee drinking and the risk of primary liver cancer. They found that the multivariable hazards ratio of liver cancer dropped for each group that drank more coffee. It fell from 1.00, to .66, to .44, to .38 to .32 respectively. "The biological mechanisms behind the association of coffee consumption with the risk of liver cancer are not known," the authors point out.

They also found that high levels of serum GGT were associated with an increased risk of liver cancer. The hazard ratio of liver cancer for the highest vs. lowest quartile of serum GGT was 3.13. "Nevertheless," they report, "the inverse association between coffee consumption and the risk of liver cancer was consistent in the subjects at any level of serum GGT."

An accompanying editorial by Carlo La Vecchia of Milan says that Hu's new study solidly confirms the inverse relationship between coffee drinking and liver cancer risk, though we still don't know if it is causal. "Furthermore, the study by Hu et al. provides original and important quantitative evidence that the levels of GGT are related to subsequent incidence of liver cancer, with an overall relative risk of 2.3," he says.

La Vecchia notes, however, that, "It remains difficult, however, to translate the inverse relation between coffee drinking and liver cancer risk observed in epidemiological studies into potential implications for prevention of liver cancer by increasing coffee consumption."

Source: Wiley-Blackwell

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