Red Meat Consumption Linked to Higher NAFLD Risk

Eating red meat and organ meat was associated with higher risk of fatty liver disease.

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Consuming larger quantities of red meat and organ meat, such as liver or kidney, was associated with a higher risk of developing non-alcoholic fatty liver disease (NAFLD), according to findings published in The American Journal of Gastroenterology. A similar link was not observed for chicken or fish.

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. As a result of inflammation, NAFLD can lead to the buildup of scar tissue (fibrosis), cirrhosis and even liver cancer. With no effective approved medical therapies, disease management is dependent on lifestyle changes such as weight loss and exercise.

Given the growing global prevalence of NAFLD, studies are needed to better understand how diet affects NAFLD risk. Diets rich in sugary drinks and trans fats have been linked to higher NAFLD-related mortality, while Mediterranean-style diets have been shown to lower the risk of fatty liver disease.

Maryam Hashemian, MD, PhD, of Utica College in New York, and colleagues studied the potential link between meat consumption and NAFLD risk among participants in the Golestan Cohort Study. This cohort included 50,045 individuals between ages 40 and 75 living in Iran. Between 2004 and 2008, baseline information was collected using lifestyle and diet questionnaires along with biological specimens and body measurements.

In 2011, a random subgroup of 1,612 participants was included in a liver disease study. Meat consumption levels were assessed, and NAFLD status was determined using ultrasound. After excluding some people due to their diet, caloric intake and alcohol consumption, a total of 1,340 participants were ultimately analyzed for this study.

During annual follow-up, 505 individuals (38%) were diagnosed with NAFLD; of these, 124 (9%) had high levels of alanine aminotransferase (ALT), an enzyme indicating liver dysfunction. Those with NAFLD were more likely to be younger, female and nonsmokers, and they had a larger waistline and higher body mass index.

The researchers calculated total red meat intake, including unprocessed and processed meat as well as organ meat (for example, liver, kidney or heart); total white meat intake consisted of fish and chicken. Total red meat and white meat intake were 17 and 53 grams per day, respectively. Comparatively, people in the United States consume an average of 86 grams of red meat per day.

The researchers reported that eating a large amount of red meat and organ meat was associated with a higher risk of NAFLD. On the other hand, they did not find significant links between the consumption of white meat, chicken or fish and NAFLD risk.

Even in a population on the low end of red meat consumption, people who ate more red meat had worse odds of developing NAFLD than those who ate less.

“We found that even low consumption of red meat and organ meat, but not white meat, is associated with increase odds of NAFLD,” wrote the researchers. “This underlines the importance of dietary composition, in addition to calorie restriction and weight loss, in preventing fatty liver disease.”

Click here to read the study in The American Journal of Gastroenterology.

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