

High Fructose Corn Syrup Linked to Liver Scarring

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(PhysOrg.com) -- High fructose corn syrup, which is linked to obesity, may also be harmful to the liver, according to Duke University Medical Center research.

“We found that increased consumption of high fructose corn syrup was associated with scarring in the liver, or fibrosis, among patients with non-alcoholic fatty liver disease (NAFLD),” said Manal Abdelmalek, MD, MPH, associate professor of medicine in the Division of Gastroenterology/Hepatology at Duke University Medical Center.

Her team of researchers at Duke, one of eight clinical centers in the Nonalcoholic Steatohepatitis Clinical Research Network, looked at 427 adults enrolled in the network. They analyzed dietary questionnaires collected within three months of the adults’ liver biopsies to determine their high fructose corn syrup intake and its association with liver scarring.

The researchers found only 19 percent of adults with NAFLD reported no intake of fructose-containing beverages, while 52 percent consumed between one and six servings a week and 29 percent consumed fructose-containing beverages on a daily basis.

An increase in consumption of fructose appeared to be correlated to increased [liver fibrosis](#) in patients with NAFLD.

“We have identified an environmental risk factor that may contribute to the metabolic syndrome of [insulin resistance](#) and the complications of the metabolic syndrome, including liver injury,” Abdelmalek said.

Research Abdelmalek published in the Journal of Hepatology in 2008 showed that, within a small subset of patients, high fructose corn syrup was associated with NAFLD. Her latest research,

published online in Hepatology, goes one step further and links high fructose corn syrup to the progression of liver injury.

“Non-alcoholic fatty liver disease is present in 30 percent of adults in the United States,” Abdelmalek said. “Although only a minority of patients progress to cirrhosis, such patients are at increased risk for [liver failure](#), [liver cancer](#), and the need for liver transplant,” she explained.

“Unfortunately, there is no therapy for non-alcoholic [fatty liver disease](#),” she said. “My hope is to see if we can find a factor, such as increased consumption of high fructose corn syrup, which, if modified, can decrease the risk of liver disease.”

The idea is similar to what cardiologists have done for heart patients, Abdelmalek explained. They discovered that high-fat diets are bad for your heart, so they have promoted low-fat diets to decrease the risk of heart disease, she said.

“We haven’t made it that far with liver disease yet,” Abdelmalek said. “We know that alcohol is not good for your liver, and therefore encourage patients to limit alcohol consumption. But what do you do when people have non-alcoholic liver disease?”

“Our findings suggest that we may need to go back to healthier diets that are more holistic,” Abdelmalek said. “High fructose corn syrup, which is predominately in soft-drinks and processed foods, may not be as benign as we previously thought.”

The consumption of fructose has increased exponentially since the early 1970s, and with this rise, an increase in obesity and complications of obesity have been observed, Abdelmalek said.

“There is an increasing amount of data that suggests high fructose corn syrup is fueling the fire

of the obesity epidemic, but until now no one has ever suggested that it contributes to liver disease and/or liver injury.” Abdelmalek said the next step is more studies looking at the mechanisms of [liver injury](#).

“We need to do formal studies that evaluate the influence of limiting or completely discontinuing [high fructose corn syrup](#) from one’s diet and see if there are health benefits from doing so,” she said.

Provided by Duke University

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