High-Fat, High-Cholesterol Diet Can Lead to NASH

Non-alcoholic steatohepatitis, or NASH, is a form of non-alcoholic fatty liver disease.

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Consuming a high-fat, high-cholesterol diet can set off a harmful immune response that can give rise to non-alcoholic steatohepatitis (NASH), a form of non-alcoholic fatty liver disease (NAFLD) that can progress to cirrhosis or liver cancer.

Publishing their findings in the journal Hepatology, researchers conducted studies on mice, which they fed diets with varying degrees of fat and cholesterol.

The study author found that a diet high in both fat and cholesterol impacted the behavior of immune cells known as macrophages in the liver, leading to a cascading series of events that gave rise to the type of liver inflammation characteristic of NASH.

More specifically, such a diet had a harmful effect on the macrophage genes that regulate liver inflammation and scarring. Such shifts were driven in particular by oxidized LDL cholesterol.

On the bright side, the researchers identified a new type of macrophage that combats liver inflammation.

“Not only does this study define how fat and cholesterol shape the progression of liver inflammation and scarring, but it also identifies potential pathways that can be targeted for future therapies,” Hugo Rosen, MD, chair of the department of medicine at the Keck School Medicine at the University of Southern California in Los Angeles, said in a press release.“That could bring us closer to finding a treatment for a disease that impacts millions of lives around the world.”

To read a press release about the study, click here.

To read the study abstract, click here.
