Gut Bacteria May Help Determine Which Alcoholics Get Hepatitis

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Gut bacteria may hold the key to why some alcoholics get severe liver damage and some don't, even when they drink the same amount of alcohol over the same period of time, according to a recent animal study published in the journal Gut and reported by Reuters.

Excessive alcohol consumption can cause severe liver lesions that can lead to inflammation, or alcoholic steatohepatitis (ASH). However, depending on the person, the amount of alcohol it takes to cause this kind of liver injury varies widely from person to person. Recently, researchers in France set out to find potential reasons why.

For the study, researchers tested the intestinal microbes of 38 alcoholics admitted to the facility. They found that alcoholics who developed liver disease had different gut bugs than those who didn't. Specifically, that people with more alcohol-induced liver lesions had far more Bifidobacteria and Steptococci in their systems than people with no liver problems.

Next, the researchers transplanted the gut bacteria from two people diagnosed with alcoholism, one of whom had severe ASH and one who didn't into humanized mice. They then watched to see how the animals would respond when fed alcohol.

The scientists found that mice with microbes from the human with liver disease developed worse inflammation, more liver tissue death and greater intestinal permeability than the other animals. They also discovered that when they transplanted gut microbes from a human without alcoholic fatty liver disease (AFLD) to the same mice, their liver lesions actually improved.

The findings could lead to future probiotic treatments or preventive therapies for alcoholic liver disease, said study authors, especially for people who have difficulty stopping their alcohol addiction.