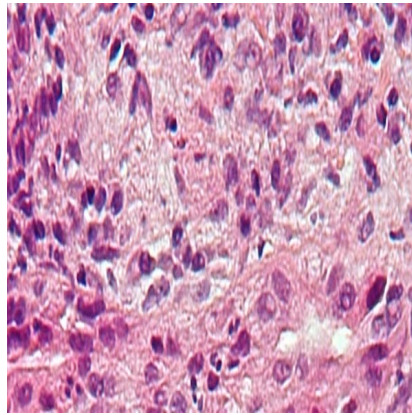




## Probiotics Prevent Brain Complications of Cirrhosis



Hepatic encephalopathy is a serious complication of advanced liver disease. As many as 45 percent of cirrhosis patients will experience a deterioration of brain function, since the damaged liver is unable to remove toxins from the blood. A study recently published in the journal *Clinical Gastroenterology and Hepatology* reports that probiotics can be effective at preventing encephalopathy related to liver disease, without the side effects associated with current treatment standards.

Prognosis is poor for patients with liver cirrhosis who develop hepatic encephalopathy. At one year, the mortality rate is 58 percent; at three years, it is 77 percent. The need for safe and effective treatments for cirrhosis patients has motivated research on the abilities of microbial agents to modify disease processes in the gut. Research is supported by organisations such as the American Gastroenterological Association (AGA) Center for Gut Microbiome Research and Education.

### Treatment Targets Gut Health

Hepatic encephalopathy develops due to the interactions of microbial communities in the gut and the brain. The current care standard is the administration of a non-absorbable disaccharide called lactulose, which is not always well tolerated by patients. Side effects including diarrhoea, gas and bloating can cause some patients to discontinue therapy. There is also a narrow therapeutic window for the use of lactulose.

Probiotics work by modifying microbial communities in the gut, with the potential to influence gastroenterological health. The results of an Indian study indicate that probiotics represent an alternative therapy which is as safe and effective as lactulose, but more well-tolerated and perhaps less expensive.

### Large Trial Reveals Probiotic Advantage

Researchers from Govind Ballabh Pant Hospital in New Delhi compared probiotic treatment with placebo in cirrhosis patients who were at risk for developing hepatic encephalopathy but had not yet exhibited any obvious episode of brain dysfunction. The prospective, single-centre trial randomised patients to one of the two open-label treatment modalities.

Results showed an advantage of the probiotics versus placebo, with lower incidence of hepatic encephalopathy in patients who were treated with probiotics. Additionally, none of the patients who received probiotics had to discontinue therapy during the trial, and no side effects were associated with the treatment.

David W. Victor III, MD, a hepatologist practicing at the Methodist J.C. Walter Jr. Transplant Center at Houston

Methodist Hospital in Texas, contributed an editorial to accompany the published report. "By virtue of its size, study duration and design, as well as the thorough nature of the baseline and follow-up assessments, this study represents an important contribution to the hepatic encephalopathy literature," he wrote. Both the study and Dr. Victor's editorial appear in the June 2014 issue of Clinical Gastroenterology and Hepatology.

[Source: Science Daily](#)

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