



Lactulose and Tai Chi Show Promise Preventing Falls for Cirrhosis Patients

Results from LiveSMART trial could help people with advanced liver disease.

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Lactulose and tai chi can prevent falls in patients with cirrhosis, according to results from the LiveSMART Trial.

Michigan Medicine hepatologists reported the findings as a late breaking abstract at The Liver Meeting 2025 in Washington, DC.

In a two-stage, 24-week controlled trial, patients who received lactulose therapy for 12 weeks, followed by participation in tai chi for an additional 12 weeks, experienced fewer falls versus a control group.

“Falls are common and often fatal for patients with cirrhosis,” said Elliot Tapper, MD, Andrews Family Research Professor of Hepatology at the University of Michigan Medical School and lead author. “The LiveSMART trial demonstrates that we now have two proven tools ready to prevent falls.”

The rate of injurious falls for the patients who received both lactulose and Tai-Chi was 4%, compared to 12% for patients receiving enhanced usual care. The rate of non-injurious falls was similarly improved (19% vs 32%).

“Every fall is a red flag and the difference between one with an injury or not can be pure luck,” Tapper said. “Reducing falls is so important to health and well-being.”

The patients enrolled in this multicenter trial had cirrhosis and portal hypertension without prior overt hepatic encephalopathy. Both lactulose and tai chi separately improved patient outcomes.

Cirrhosis, characterized by scarring of the liver, affects over 2 million Americans in the United States.

Falls are one complication associated with the disease. Others include confusion, muscle cramps and disrupted sleep.

Previous work by this research team into possible quality-of-life improvements for sufferers of

cirrhosis found that [stretching and meditation could reduce night cramps](#).

Other past trials investigated [mindfulness interventions for caregivers](#) of cirrhosis patients and the effects of [pickle juice consumption on cirrhotic muscle cramping](#).

“This work was inspired by and designed with patient partners. No research we have ever done has been as meaningful,” Tapper said.

“We hope to expand the impact of these interventions and continue other patient co-designed trials to improve quality and quantity of life for patients living with cirrhosis.”

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