

HEPATIC ENCEPHALOPATHY

DID YOU KNOW?

Nearly Half of Those with Cirrhosis Will Develop Overt Hepatic Encephalopathy

HEPATIC ENCEPHALOPATHY (HE) 101

HE is a serious condition that occurs when the liver cannot properly remove toxins from the blood. This results in a buildup of these substances, particularly ammonia, in the brain. This buildup affects brain function and can cause a wide range of neurological and psychological symptoms.

HE can be covert (or mild) or overt (more serious) and is often graded using the West Haven Criteria, explained below.

	GRADE	SYMPTOMS
COVERT HE	0	Forgetfulness and confusion
	1	Mood swings; disruption of sleep cycle
OVERT HE	2	Uncharacteristic behavior; slurred speech; hand tremors; disorientation; lethargy
	3	Marked confusion; stupor; incoherent speech; unresponsive
	4	Coma

WHO IS AT RISK?

Those with cirrhosis are at significant risk for hepatic encephalopathy. It is estimated that up to 80% of those with cirrhosis experience at least a mild form of HE. Up to 45% will experience overt hepatic encephalopathy (OHE).

HE can also be caused by acute liver failure or abnormal blood flow (portosystemic shunts) that bypasses the liver (either due to surgery or otherwise). Individuals who experience HE once are at a significantly high risk of recurrence.

WHAT TRIGGERS AN HE EPISODE?

HE episodes do not usually happen randomly. There is often a triggering event. These triggers could include gastrointestinal bleeding, an infection, constipation, dehydration, low potassium or sodium, kidney dysfunction, and overuse of sedatives, narcotics or alcohol.

HOW IS HE TREATED?

Covert HE is typically not treated as it's usually not noticeable. However, there are medical treatments for OHE. **Lactulose** is a non-absorbable sugar that acts as a laxative and is considered a first-line treatment. It reduces ammonia by pulling it into the colon leading to its excretion in a bowel movement. **Xifaxan** is an antibiotic, often used in combination with Lactulose, that does not affect the entire body but slows bacteria growth in the gut. These bacteria are believed to be linked to symptoms of OHE.

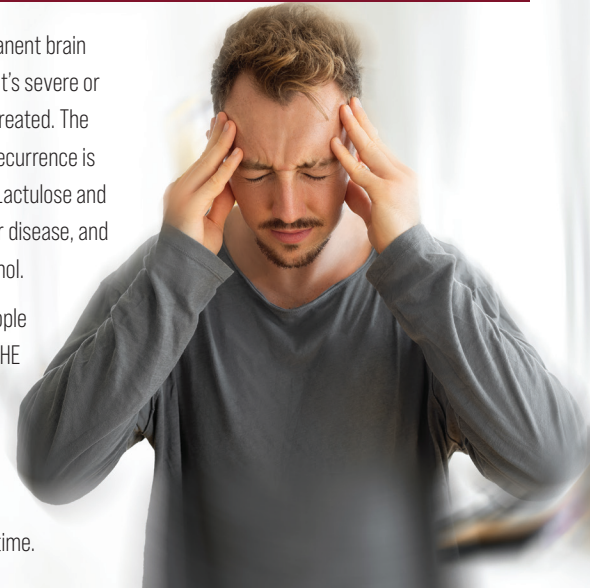
Other approaches are identifying and treating the condition that triggers the OHE episode and making lifestyle changes that include 1) adequate protein intake, 2) use of vegetable or dairy product proteins, and 3) eating small, frequent meals.

OHE can lead to hospitalization.

CAN BRAIN DAMAGE BE PERMANENT?

OHE can lead to permanent brain damage, especially if it's severe or recurrent and left untreated. The best way to prevent recurrence is the long-term use of Lactulose and Xifaxan, control of liver disease, and the avoidance of alcohol.

Studies show that people who've had multiple OHE episodes often have persistent issues with memory, attention, problem-solving, and reaction time.



AVOIDING HE

Several steps can be taken to reduce the chance of the onset of HE. These include starting lactulose in high-risk patients, avoiding sedatives, narcotics, and dehydration, monitoring protein intake, monitoring and managing sodium and potassium consumption, and watching for signs of muscle wasting.

