

How to Prevent Hepatic Encephalopathy

Take lactulose and rifaximin

Lactulose helps pull ammonia from the blood stream into the gut, where it is excreted.

Rifaximin kills bacteria that produce ammonia.

Expected side effects of lactulose are: mild diarrhea, gas, bloating, burping, stomach pain, nausea, and cramps.

*If you or your loved one is having difficulty getting rifaximin, please talk to your provider.



Hepatic encephalopathy (HE) is a reversible worsening of brain function in patients with liver disease. One of the contributing factors to HE is a build up of ammonia in the blood and brain. If left untreated, HE can lead to coma and death.

Call your doctor if you develop these serious side effects due to lactulose:



- severe, ongoing diarrhea
- vomiting
- hives
- difficulty breathing
- seizures
- muscle cramps and weakness
- irregular heartbeat
- mood changes

What not to eat:



- Limit red meat & pork (6oz/week), as it may worsen ammonia levels
- Avoid organ meats
- Limit salt to <2 grams per day (that is less than a teaspoon!) because it can worsen swelling and dehydration



*Follow all other diet restrictions per your medical team

What not to do



- Do not drink alcohol, because it causes liver damage and HE
- Do not drive unless cleared by your doctor
- Do not get infected; avoid people who are sick

Increase the lactulose dosage when:

You have not had a bowel movement in 24 hours, and display these signs and symptoms (s/s):



- difficulty troubleshooting
- mood and personality disturbances
- sleep disturbances



Go to the emergency room when:

An increased dose of lactulose is ineffective and you display these s/s:

- decreased energy
- trouble with basic problem solving or math
- slurred speech
- strange behavior
- flapping of the hands (asterixis).

Call 911 if you see that your loved one is lethargic, difficult to arouse, and severely confused.

Triggers for HE

Triggers are different for everyone but here are some common ones:

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| • dehydration | • medications (opiates or benzodiazepines) |
| • gastrointestinal bleeding | • kidney failure |
| • constipation | • infection |
| • Too much animal protein (red meat) | • TIPS |
| | • low sodium levels |

Sometimes people develop HE without a trigger

Safety concerns

Patients taking lactulose are more at risk for falls since they often have to rush to the bathroom. Placing a commode next to the bed or creating a short, clear path to the bathroom can help prevent falls.



Sources

Hudson, M., & Schuchmann, M. (2019). Long-term management of hepatic encephalopathy with lactulose and/or rifaximin: a review of the evidence. European journal of gastroenterology & hepatology, 31(4), 434.

Pazgan-Simon, M., Zuwała-Jagiętka, J., Serafińska, S., & Simon, K. (2015). Nutrition principles and recommendations in different types of hepatic encephalopathy. Clinical and experimental hepatology, 1(4), 121.

Saab, S., Suraweera, D., Au, J., Saab, E. G., Alper, T. S., & Tong, M. J. (2015). Probiotics are helpful in hepatic encephalopathy: a meta-analysis of randomized trials. Liver International, 36(7), 986–993. <https://doi.org/10.1111/liv.13005>