

Could My Patient Have Hepatic Encephalopathy (HE)?

HE can be one of the first complications of decompensated cirrhosis, causing both mental and physical symptoms¹

Patients with cirrhosis should be counseled on the risk of HE and be routinely assessed for related signs and symptoms²

Considerations for diagnosing HE



Patient history, physical exam, and testing¹⁻⁴

- Take a **thorough history** from the patient, if possible, or from caregivers
- Check for **physical signs** of chronic liver disease and HE
- Identify changes in **mental status** and **sleep patterns** from baseline
- Assess **cognitive function** and **neuromotor deficits**



Patients with **covert HE** lack disorientation and asterixis but show subtle cognitive changes detectable on testing¹



Overt HE symptoms can range from confusion and lethargy to complete disorientation, and even progression to coma¹



Precipitating factors that may trigger HE¹⁻³

- Gastrointestinal bleeding
 - Electrolyte disorder
 - Constipation
- Infection
 - Dehydration
 - Diuretic overdose
- Use of certain drugs (eg, sedatives, pain medication)



Differential diagnosis^{1,2}

- **Exclude other conditions** that can cause neuropsychiatric abnormalities
- **Current medications and toxicology screen** (eg, opioids, benzodiazepines, alcohol)



Stroke, dementia, or complications of diabetes can present similarly to overt HE¹



The most common presenting signs during a diagnosis of overt HE included⁴:

- **Confusion** (78%)
- **Altered mental status** (57%)
- **Disorientation** (48%)
- **Lethargy** (46%)
- **Asterixis** (45%)



Extrapyramidal dysfunction is also common with overt HE, including muscular rigidity, slowness of speech, bradykinesia, and tremor¹

Grade HE severity using the West Haven Criteria¹

Grade I (covert)

- Euphoria or anxiety
- Trivial lack of awareness
- Shortened attention span
- Impaired ability to add or subtract
- Altered sleep patterns



Grade II (overt)

- Lack of energy or interest
- Disorientation for time
- Personality change and/or inappropriate behavior
- Dyspraxia
- Asterixis (flapping tremor)



Grade III (overt)

- Extreme tiredness (still responsive to stimuli)
- Confusion
- Disorientation for time and space
- Bizarre behavior



Grade IV (overt)

- Coma (complete unresponsiveness)

Ask both the patient and caregiver directed questions to differentiate HE

ASK PATIENT

Have you had any recent mental or cognitive issues?

- Do you feel more confused or “foggy” than usual?
- Is it difficult to pay attention? Finish tasks you normally can?
- Has it been taking you longer to think or respond to questions?
- Do your symptoms fluctuate throughout the day?

Have you had any new physical symptoms?

- Any changes in your sleep? Are you sleeping during the day?
- Do you find any daily activities more challenging?
- Any shakiness in your hands or other involuntary movements?

ASK CAREGIVER

Do they have any new symptoms?

- Any personality fluctuations? Unusual behavior?
- New or unusual anxiety/irritability compared to normal?
- Do they seem more confused? Getting lost more often?
- Did symptoms start or worsen after a change in medication?

Are they less able to do everyday activities?

- Do they forget things more often? Can they manage basic finances?
- How independent are they? Are they lethargic during the day?
- Do they have problems with coordination? Driving?

One study found caregivers helped identify 25% of overt HE episodes⁴

IF YOU SUSPECT HE, CONSIDER GUIDELINE-RECOMMENDED MANAGEMENT



Severity of symptoms and presence of precipitating factors dictate the need for emergency department evaluation and hospitalization⁵



Initiate or adjust HE treatment as needed to resolve current episode and help prevent recurrence⁵



Routine monitoring for those at risk of HE allows for prompt identification and management²

References:
1. Vilstrup H et al. *Hepatology*. 2014;60(2):715-735. 2. Shawcross DL et al. *Eur J Gastroenterol Hepatol*. 2016;28(2):146-152. 3. Kumral D et al. *J Hosp Med*. 2019;14(3):157-160. 4. Landis CS et al. *Dig Dis Sci*. 2016;61(6):1728-1734. 5. Bajaj JS et al. *Am J Gastroenterol*. 2026;121(3):588-618.