# MANAGING YOUR HEPATIC ENCEPHALOPATHY

## What Is Hepatic Encephalopathy?

Hepatic encephalopathy refers to changes in behavior, mental state, and nervous system in people with liver failure. It's not a disease but a group of symptoms seen in people whose livers don't work well. High levels of ammonia in the bloodstream and brain are thought to cause these changes. Bacteria in the stomach and intestines make ammonia. Usually, the liver normally metabolizes the ammonia (makes ammonia harmless). However, people with liver disease have more ammonia be-cause their liver doesn't work. Ammonia enters the blood, gets to the brain, and causes symptoms by interfering with brain function.

This condition occurs in more than 50% of all people with liver cirrhosis. Untreated, it can lead to coma and death. It's not contagious and cannot be passed from parents to children.

### What Causes Hepatic Encephalopathy?

Disorders that destroy the liver and cause liver failure can lead to hepatic encephalopathy. Some of these disorders are viral hepatitis (such as hepatitis B and hepatitis C), severe infections, autoimmune diseases, cancer, and Reye syndrome. Medicines such as nonsteroidal antiinflammatory drugs and toxins such as alcohol are other causes. People with cirrhosis can get encephalopathy from using sedatives and analgesics. Gastrointestinal bleeding can also increase the risk of hepatic encephalopathy.

## What Are the Symptoms of Hepatic Encephalopathy?

Symptoms include being disoriented, forgetful, and confused. People feel sleepy and have mood changes, lethargy, and memory loss. Coma can occur. Others include jaundice, problems

speaking, tremors, being agitated, and uncoordinated movements. People usually have signs of liver disease such as jaundice, enlarged breasts and small testicles (men), fluid in the abdomen (belly), and swelling in the legs.

Hepatic encephalopathy is divided into grades 1 to 4. Grade 1 involves mild confusion, poor attention, being irritable, and decreased ability to do mental tasks. In grade 2, people have lethargy, drowsiness, personality changes, and great trouble doing mental tasks. In grade 3, people are sleepy (but can be aroused), cannot do mental tasks, and are disoriented (place and time). In grade 4, coma occurs.

#### **How Is Hepatic Encephalopathy Diagnosed?**

The health care provider will do a complete physical examination. The health care provider may order blood tests and x-rays to rule out other problems, because hepatic encephalopathy mimics symptoms of other disorders. These disorders include alcohol withdrawal, sedative overdose, meningitis, low blood sugar, brain cancer, and blood clots in the brain.

## **How Is Hepatic Encephalopathy Treated?**

Treatment goals are to find and treat causes, such as drugs, GI bleeding, and metabolic problems. Almost all people need hospitalization. Gastrointestinal bleeding must be stopped and other causes must be eliminated. A drug called lactulose acts as a laxative and helps empty the intestines, so bacteria cannot make ammonia. Sometimes, an antibiotic called neomycin is used. This drug kills bacteria in the intestine so that there is less ammonia.

### DOs and DON'Ts in Managing Hepatic Encephalopathy

✓ **DO** remember that hepatic encephalopathy may be reversible. However, the chance of death is high if coma occurs.

- ✓ **DO** call your health care provider if a family member with liver disease has behavior, personality, or mental changes.
- ⊗ **DON'T** drink alcohol, especially if you have cirrhosis.
- ⊗ **DON'T** forget that common over-the-counter and prescription sleeping drugs can cause the disorder in people with liver disease.

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**NOTES** 

## FOR MORE INFORMATION

Contact the following sources:

- American Gastroenterological Association: Tel: (301) 654-2055; Website: http://www.gastro.org
- National Digestive Diseases Information Clearinghouse: Tel: (800) 891-5389; Website: http://www.niddk.nih.gov/health/digest/nddic.htm

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