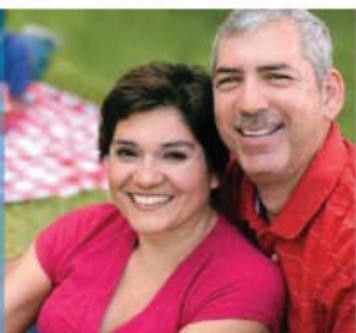


# Living With Hepatic Encephalopathy (HE)

information



*Your Liver. Your Life.*

## What is hepatic encephalopathy (HE)?

HE is a condition that occurs in people with advanced cirrhosis or severe liver damage. The damaged liver cannot remove the toxins (ammonia) that a healthy liver normally would. These toxins then travel through your body until they reach your brain. They can then affect the brain and cause HE.

### **How will I know if I have HE?**

The symptoms can be different for each person. Some individuals may not have any symptoms and the condition is noticed by family members and/or friends. The symptoms can depend on the extent of your liver disease. You may get confused about who or where you are. It may seem as if you are not yourself, and you may not be aware of what you are doing. HE may also change your normal sleep patterns. You may feel wide awake at night and sleep all day.

But with treatment, HE can be controlled, and symptoms can improve and even stop. So it's very important that you take care of yourself and continue any treatment to keep it from coming back.

*If you think that you or a loved one may have HE, talk to a doctor right away.*

## How are HE and liver disease connected?

Your liver filters everything that enters your body, such as food, drinks, and medicine. After your intestines break these down into basic substances, your liver then separates the toxins from the useful substances. Your body then removes the toxins, while the liver sends the nutrients and vitamins into your bloodstream for your body to use.

If your liver is damaged, it can't filter out everything it's supposed to. That means that toxins can build up and get into your brain. The buildup of these toxins in the brain can lead to HE.

*Continue reading this brochure for ways to treat HE, along with more information about the signs of HE.*

## What are the signs of HE?

HE has several stages. At first, people with HE may not even know they have it. To individuals with HE, things seem fine. But things may not seem fine to family or friends.

People with uncontrolled HE may not be able to drive a car or work a steady job. They may also need to rely on a caregiver to take care of them. In serious cases, hospitalization, coma, and even death can occur.

Knowing the signs of HE can help slow it down before it gets worse. Let a doctor know right away if you or a loved one is beginning to show these signs or has shown them before.

### **Mental symptoms of HE**

- ✓ Forgetfulness and confusion
- ✓ Poor judgment
- ✓ Being extra nervous or excited
- ✓ Not knowing where you are or where you are going
- ✓ Inappropriate behavior or personality changes

### **Physical symptoms of HE**

- ✓ Breath with a musty or sweet odor
- ✓ Change in sleep patterns (often awake at night, sleeping during the day)
- ✓ Worsening of handwriting or loss of other small hand movements
- ✓ Movements or shaking of hands or arms
- ✓ Slurred speech
- ✓ Slowed or sluggish movement

## What are the stages of HE?

### STAGE **Mild HE**

**1** Patients may have sleep problems and trouble concentrating. They may have large mood swings. They may have difficulty writing.

### STAGE **Moderate HE**

**2** Patients may not have much energy. They keep forgetting things and have problems with basic math. They may behave strangely and slur their speech. You may notice flapping or shaking hands and difficulty with balance.

### STAGE **Severe HE**

**3** Patients are very sleepy and sometimes pass out. They can't do basic math at all. They act strange and can be very fearful and jumpy.

### STAGE **Final Stage**

**4** The final stage of HE is coma—the patient is unconscious.

## What can cause HE to get worse?

When HE symptoms return and worsen, it's also known as an "HE recurrence." It is not known for certain why some people experience HE recurrences, but several possible triggers are listed below:

- ✓ Dehydration—not getting enough water or electrolytes
- ✓ Low levels of sodium and potassium in the blood (this can happen when you are dehydrated)
- ✓ Bleeding in the stomach and intestines
- ✓ Infections
- ✓ Constipation
- ✓ Too much protein in the diet
- ✓ Drugs that act on the central nervous system, such as sedatives, opioids, etc
- ✓ Liver injury from other drugs
- ✓ Kidney failure
- ✓ A hepatic portal shunt—this is a tube that is placed in a vein in the liver to relieve pressure
- ✓ Liver cancer
- ✓ Progression of underlying liver condition/cirrhosis of liver

## How important is it to treat HE?

It is unlikely that your HE will get better without treatment. Tell your doctor about any warning signs as soon as you notice them.

Your doctor may give you a medicine for your HE. If so, it's very important to take it exactly as you're told, for as long as you're told to take it.

## How is HE treated?

There are a few simple steps you can take to help improve the symptoms of HE.

Your doctor may have you:

- ✓ Raise your sodium and potassium levels (these are salts your body needs)
- ✓ Get treatment for certain infections
- ✓ Stop or adjust certain medications
- ✓ Get treatment for any urinary blockages

You may also have to change your diet. If you are eating too much protein, you may be told to eat less protein that comes from meat. Instead, it may be better for you to get protein through fruits and vegetables. This should be discussed with your physician.

## What medications are used to treat HE?

There are 2 types of medicine that are used most often to treat HE: lactulose and antibiotics.

**Lactulose** is a complex sugar. It works by causing you to have more bowel movements or diarrhea. This will help to flush the toxins out of your system. Lactulose may also help reduce the amount of toxins that are made in your intestines.

Lactulose has been shown to help during HE recurrences and also to make them less likely to happen.

**Antibiotics** also work by reducing the amount of toxins that are made in your intestines. They stop the growth of certain bacteria that create toxins as you digest food. By reducing bacteria, antibiotics reduce the amount of toxins.

There are several different antibiotics that are used to treat HE. Your doctor will choose the one that is best for you. Antibiotics have been shown to help prevent HE recurrences and keep patients from being hospitalized for HE. Some individuals may need a combination of the lactulose and antibiotics. Talk to your doctor about the best way to approach and manage your HE.

## 8 things you should remember about HE

- 1 HE occurs in people who have cirrhosis or another type of severe liver damage.
- 2 HE seems to be caused by toxins that build up in the blood and then reach the brain.
- 3 Symptoms of HE can be both mental and physical.
- 4 HE can start slowly. Symptoms of HE may not be noticed at first.
- 5 HE will not get better on its own. Symptoms will likely get worse without treatment.
- 6 Treatments for HE aim to control the condition, improve well-being and quality of life and keep people out of the hospital. Hospital admissions for HE can be lengthy and costly.
- 7 Lactulose and antibiotics are used to treat HE and prevent toxins from building up.
- 8 With timely and proper treatment, the progression of HE can be slowed and sometimes even stopped.



*Your Liver. Your Life.*

American Liver Foundation

[www.liverfoundation.org](http://www.liverfoundation.org)

**1-800-GO-LIVER**

*Visit [www.he123.org](http://www.he123.org) for more information on  
Hepatic Encephalopathy.*

Printing of this brochure was made possible with  
generous support from Salix.

©2016 American Liver Foundation. All rights reserved.

HED.0060.USA