National Viral Hepatitis Roundtable

What is hepatitis E?

Hepatitis E is a serious liver disease that is caused by infection with the hepatitis E virus (HEV).

How common is hepatitis E?

While acute symptomatic infection is rare in the United States, hepatitis E is more common in developing countries in Central and Southeast Asia, the Middle East, Africa, and Central America. Worldwide, hepatitis E causes around 20 million infections each year, resulting in about 70,000 deaths annually.

How does someone become infected with hepatitis E?

Infection with hepatitis E occurs when the virus is taken in by mouth from contact with objects, food, or drinks that have been contaminated by the feces (stool) of an infected person.

Transmission through food and water can occur in areas where water supplies have become contaminated with fecal material through sewage overflows or inadequate or broken sewage systems, or where water is inadequately chlorinated. Hepatitis E infection can then be transmitted through drinking the water or eating uncooked food (such as raw shellfish) and unpeeled fruits and vegetables that were washed in the contaminated water. Boiling or cooking food or liquids for at least 1 minute at 185°F (85°C) will kill the virus, although freezing food or liquids will not. Foods can become contaminated where they are grown, harvested, processed, or handled if at any point fecal material from an infected person is transferred to them. For example, infected field hands might not properly wash their hands after going to the bathroom, and then handle the vegetables or fruits that are being harvested. Infected restaurant workers might fail to properly wash their hands after going to the bathroom and then handle food that has already been cooked or foods that won't be cooked like salads and fresh fruit. If even a tiny amount of fecal material is transferred from the worker's hands to the food, the person who eats the food could become infected. When eaten raw, shellfish cultivated in polluted water is also a possible source of infection. Transmission through food and water occurs more often in countries where there are inadequate water supplies and poor sanitation and hygiene. The food and drinks which are the most likely to be contaminated are vegetables, fruits, shellfish, ice, and water.

It's uncommon to get hepatitis E directly from another person. There is no evidence that hepatitis E can be transmitted by having sex with someone or by getting a blood transfusion.

Who is at increased risk for becoming infected with hepatitis E?

The people in the U.S. who are the highest risk of becoming infected with hepatitis E are those who travel to countries where hepatitis E is common, eating food products infected with HEV and being exposed to HEV via human or animal contact.

How can you know if you are infected?

A doctor can diagnose infection by taking a blood sample.

How serious is hepatitis E infection?

Hepatitis E infection usually only causes a short-term illness which will go away by itself in a few weeks. However, while you are infected, it can make you severely ill. Rarely, hepatitis E develops into a very severe disease that is fatal in about 2% of cases. The infection causes more severe disease in women who are pregnant, particularly in women in their third trimester, and can sometimes cause liver failure and death. In people who have decreased immune function, particularly organ transplant recipients who are on drugs that suppress immune function, hepatitis E can sometimes cause a long-term infection which could cause liver damage.

How is hepatitis E treated?

Because there are no specific treatments for hepatitis E infection other than ribavirin, the general recommendation is for plenty of rest, adequate nutrition, and lots of fluids. Physicians will also advise people who are infected to avoid alcohol and to check with them before taking prescription drugs, supplements, or over-the-counter medications, since some of these can damage the liver. In people who have developed long-term hepatitis E infection due to suppressed immune function, the use of the antiviral drug ribavirin in low doses (600 to 800 milligrams per day) over a three month period has been shown to clear the infection.

What are the symptoms of hepatitis E infection?

Common symptoms of hepatitis E infection are:

• Fever
• Fatigue which may be very severe
• Appetite loss
• Nausea and vomiting
• Dark urine
• Clay-colored bowel movements
• Abdominal pain on the right side of the belly, under the rib cage
• Joint pain
• Jaundice (a yellowing of the skin or eyes)
• Unintended weight loss.
• Pain; in particular, sore muscles

How can hepatitis E infection be prevented?

There is currently no FDA-approved vaccine for Hepatitis E, although a vaccine has been approved in China. Since hepatitis E is much more common in developing countries in Central and Southeast Asia, the Middle East, Africa, and Central America, your best protection if you visit these countries is to avoid potentially contaminated foods and liquids:

• Avoid drinking water and ice that you don't know is clean.
• Avoid eating uncooked shellfish.

Robert Gish, MD formed the medical consulting firm [Robert G. Gish Consultants LLC](#) in 2013 to assist liver and liver transplant programs with their operational, outreach, compliance, financial planning and program development.

His firm also provides consultations with Pharma and a means of interaction between the pharmaceutical industry and CME organizations in addition to promoting liver health policies throughout the world. Robert G. Gish, MD, is co-director of the Center for Hepatobiliary Disease and Abdominal Transplantation (CHAT) at the University of California, San Diego, ─ a multidisciplinary program designed to offer adult and pediatric patients in the western United States a single destination for the diagnosis and treatment of liver disease from common to complex. Dr. Gish represents the American Association for the Study of Liver Disease on the NVHR Steering Committee.
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