



Media centre

Hepatitis E

Fact sheet N°280

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Key facts

- Every year there are an estimated 20 million hepatitis E infections, over 3 million acute cases of hepatitis E, and 56 600 hepatitis E-related deaths.
- Hepatitis E is usually self-limiting but may develop into fulminant hepatitis (acute liver failure).
- The hepatitis E virus is transmitted via the faecal-oral route, principally via contaminated water.
- Hepatitis E is found worldwide, but the prevalence is highest in East and South Asia.
- China has produced and licensed the first vaccine to prevent hepatitis E virus infection, although it is not yet available globally.

Hepatitis E is a liver disease caused by the hepatitis E virus: a non-enveloped, positive-sense, single-stranded ribonucleic acid (RNA) virus.

The hepatitis E virus is transmitted mainly through contaminated drinking water. It is usually a self-limiting infection and resolves within 4–6 weeks. Occasionally, a fulminant form of hepatitis develops (acute liver failure), which can lead to death.

Globally, there are approximately 20 million incidents of hepatitis E infections every year.

Geographical distribution

Outbreaks and sporadic cases of hepatitis E occur around the world. These outbreaks frequently occur in resource-limited countries with limited access to essential water, sanitation, hygiene and health services, and may affect several hundred to several thousand persons. In recent years, some of these outbreaks have occurred in areas of conflict and humanitarian emergencies, such as war zones, and in camps for refugees or internally displaced populations (IDP). An estimated 20 million infections and 3.3 million acute cases occur annually worldwide with an estimated 56 600 deaths.

Hepatitis E is found worldwide and different genotypes of the hepatitis E

virus determine differences in epidemiology. For example, genotype 1 is usually seen in developing countries and causes community-level outbreaks while genotype 3 is usually seen in the developed countries and does not cause outbreaks.

The highest seroprevalence rates (number of persons in a population who test positive for the disease) are observed in regions where low standards of sanitation increase the risk for transmission of the virus. Over 60% of all hepatitis E infections and 65% of all hepatitis E deaths occur in East and South Asia, where seroprevalence rates of 25% are common in some age groups. In Egypt, half the population aged above five years is serologically positive for the hepatitis E virus.

Transmission

The hepatitis E virus is transmitted mainly through the faecal-oral route due to faecal contamination of drinking water. Other transmission routes have been identified, which include:

- foodborne transmission from ingestion of products derived from infected animals;
- transfusion of infected blood products;
- vertical transmission from a pregnant woman to her fetus.

Although humans are considered the natural host for the hepatitis E virus, antibodies to the hepatitis E virus or closely related viruses have been detected in primates and several other animal species.

Hepatitis E is a waterborne disease, and contaminated water or food supplies have been implicated in major outbreaks. The ingestion of raw or uncooked shellfish has also been identified as the source of sporadic cases in endemic areas.

The risk factors for hepatitis E are related to poor sanitation in large areas of the world and shedding of the hepatitis E virus in faeces.

Symptoms

The incubation period following exposure to the hepatitis E virus ranges from three to eight weeks, with a mean of 40 days. The period of communicability is unknown.

The hepatitis E virus causes acute sporadic and epidemic viral hepatitis. Symptomatic infection is most common in young adults aged 15–40 years. Although infection is frequent in children, the disease is mostly asymptomatic or causes a very mild illness without jaundice (anicteric) that goes undiagnosed.

Typical signs and symptoms of hepatitis include:

- jaundice (yellow discolouration of the skin and sclera of the eyes, dark urine and pale stools);

- anorexia (loss of appetite);
- an enlarged, tender liver (hepatomegaly);
- abdominal pain and tenderness;
- nausea and vomiting;
- fever.

These symptoms are largely indistinguishable from those experienced during any acute phase of hepatic illness and typically last for one to two weeks.

In rare cases, acute hepatitis E can result in fulminant hepatitis (acute liver failure) and death. Fulminant hepatitis occurs more frequently during pregnancy. Pregnant women are at greater risk of obstetrical complications and mortality from hepatitis E, which can induce a mortality rate of 20% among pregnant women in their third trimester.

Cases of chronic hepatitis E infection have been reported in immunosuppressed people. Reactivation of hepatitis E infection has also been reported in immunocompromised people.

Diagnosis

Cases of hepatitis E are not clinically distinguishable from other types of acute viral hepatitis. Diagnosis of hepatitis E infection is, therefore, usually based on the detection of specific IgM and IgG antibodies to the virus in the blood. Additional tests include reverse transcriptase polymerase chain reaction (RT-PCR) to detect the hepatitis E virus RNA in blood and/or stool, but this assay may require specialised laboratory facilities.

Hepatitis E should be suspected in outbreaks of waterborne hepatitis occurring in developing countries, especially if the disease is more severe in pregnant women, or if hepatitis A has been excluded.

Treatment

There is no available treatment capable of altering the course of acute hepatitis. Prevention is the most effective approach against the disease.

As hepatitis E is usually self-limiting, hospitalization is generally not required. However, hospitalization is required for people with fulminant hepatitis and should also be considered for symptomatic pregnant women.

Prevention

The risk of infection and transmission can be reduced by:

- maintaining quality standards for public water supplies;
- establishing proper disposal systems to eliminate sanitary waste.

On an individual level, infection risk can be reduced by:

- maintaining hygienic practices such as hand washing with safe water, particularly before handling food;
- avoiding drinking water and/or ice of unknown purity;
- adhering to WHO safe food practices.

In 2011, the first vaccine to prevent hepatitis E infection was registered in China. Although it is not available globally, it could potentially become available in a number of other countries.

Guidelines for epidemic measures

In epidemics, WHO recommends:

- determining the mode of transmission;
- identifying the population specifically exposed to increased risk of infection;
- eliminating a common source of infection;
- improving sanitary and hygienic practices to eliminate faecal contamination of food and water.

WHO response

The WHO Strategic Advisory Group of Experts (SAGE) on Immunization established a working group on hepatitis E in 2013 to report on a number of issues including existing evidence on the burden of hepatitis E and on the safety, immunogenicity, efficacy, and cost-effectiveness of the licensed hepatitis E vaccine. SAGE will convene in October 2014 and evaluate the report of the working group to make recommendations to the Director-General.

The Global Hepatitis Network Hepatitis E Working Group has worked with a group of Member States to create a manual for response to hepatitis E outbreaks. The publication of this manual is expected in the second half of 2014.

In addition to points above, WHO is working in the following areas to prevent and control viral hepatitis:

- raising awareness, promoting partnerships and mobilizing resources;
- formulating evidence-based policy and data for action;
- preventing transmission; and
- executing screening, care and treatment.

WHO also organizes World Hepatitis Day on 28 July every year to increase awareness and understanding of viral hepatitis.

World Hepatitis Day

[World Hepatitis Day 2014: Think again](#)

Hepatitis infographics

[Hepatitis A & E](#)

pdf, 90kb

[Hepatitis B, C, D](#)

pdf, 94kb

Features

[Egypt steps up efforts against hepatitis C](#)

Feature story, July 2014

Publications

[Global policy report on the prevention and control of viral hepatitis](#)

[Prevention and Control of Viral Hepatitis Infection: Framework for Global Action](#)

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[WHO's work on hepatitis](#)

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