

# HEPATITIS E

## Disease Overview

Hepatitis E virus is the main cause of enterically transmitted non-A and non-B hepatitis. Hepatitis E is responsible for approximately half of acute sporadic hepatitis in endemic developing countries. There are several genotypes. Genotypes 1 and 2 are common in developing countries, high rates of jaundice, are transmitted through fecal waterborne measures and mostly impact young adults and pregnant women. Genotypes 3 and 4 are common in developed countries-mostly in endemic areas and are mostly foodborne transmission, lower rates of jaundice and affects older adults

## Symptoms

Sudden onset of abdominal pain, anorexia, dark urine, fever, hepatomegaly, jaundice, malaise, nausea and vomiting without evidence of a chronic form. May cause severe complications and death in women infected in the third trimester of pregnancy.

## Reservoir

Humans are natural reservoirs. Some animal species in endemic areas may be sources of zoonotic infection (cattle, sheep and goats).

## Mode of transmission

Fecal-oral route. Common source outbreaks are related to consumption of contaminated water. Food borne transmission also occurs for genotype 3 and 4.

Person-to-person transmission probably occurs although secondary household cases are uncommon during outbreaks.

Blood-borne transmission is rare but has been documented in some cases involving blood transfusions.

Zoonotic transmission has been considered as the likely mode of transmission in non endemic areas, domestic pigs and wild boars are the main reservoirs. Transmission may also occur from other animals (such as deer).

## Incubation period

Range is 15-64 days.

## Period of communicability

Not known, but viral excretion in stool has been demonstrated from one week prior to 30 days after the onset of jaundice. Chronic infected are chronic shedders.

## Risk Factors

Increased risk for persons acquiring and/or severe illness:

- Travel to areas where infection is endemic with inadequate water supply and environmental treatment.

- Consumption of undercooked pork or deer meat.
- Immunocompromised
- Pre-existing chronic liver disease.

## Surveillance Case Definition

**Confirmed case** is laboratory confirmation of infection.

**Probable case** is acute clinical illness in a person without laboratory confirmation of infection who is epidemiologically linked to a confirmed case

## Diagnosis and Laboratory Guidelines

Testing is done by the National Microbiology laboratory in Winnipeg. Tests include:

- Detection of IgM and IgG antibody by enzyme immunoassay (EIA) (turnaround time 15 calendar days)
- Molecular detection of Hepatitis E virus by Real Time and conventional RT-PCR (turnaround time 15 calendar days)
- Genotyping of Hepatitis E virus by conventional RT-PCR followed by sequencing (turnaround time 19 calendar days)

## Reporting

Per Policy 2.2 Disease and Event notification to OCMOH and Disease and Event Reporting section

- Routine Surveillance (RDSS) for all confirmed cases

## Case Management

### Education

Case or relevant caregiver should be informed about:

- Nature of infection, length of communicable period and mode of transmission
- Enteric disease precautions
- Hand washing

### Investigation

Interview cases and include travel history (acute cases of hepatitis E are reported in travelers returning from endemic regions although sporadic cases have also been reported in patients with no known epidemiological risk factors). Review food history.

### Exclusion/Social Distancing

Follow exclusion period guidelines per Hepatitis A for cases identified in individuals in high-risk groups.

## **Treatment**

Symptomatic treatment.

## **Immunization**

Not applicable

## **Contact Management**

### **Education**

As per case management

### **Investigation**

Identify contacts with significant exposure to cases (household, and other close personal contacts).

Advise symptomatic contacts to seek medical attention and laboratory diagnostic testing.

### **Exclusion/Social Distancing**

Symptomatic contacts should follow routine enteric precautions during the first two weeks of illness and for up to 7 days after jaundice onset or 14 days after first symptom onset, whichever is longer.

### **Prophylaxis**

Not applicable

### **Immunization**

Not applicable

## **Outbreak Management**

Activate the local plan when an outbreak is declared.