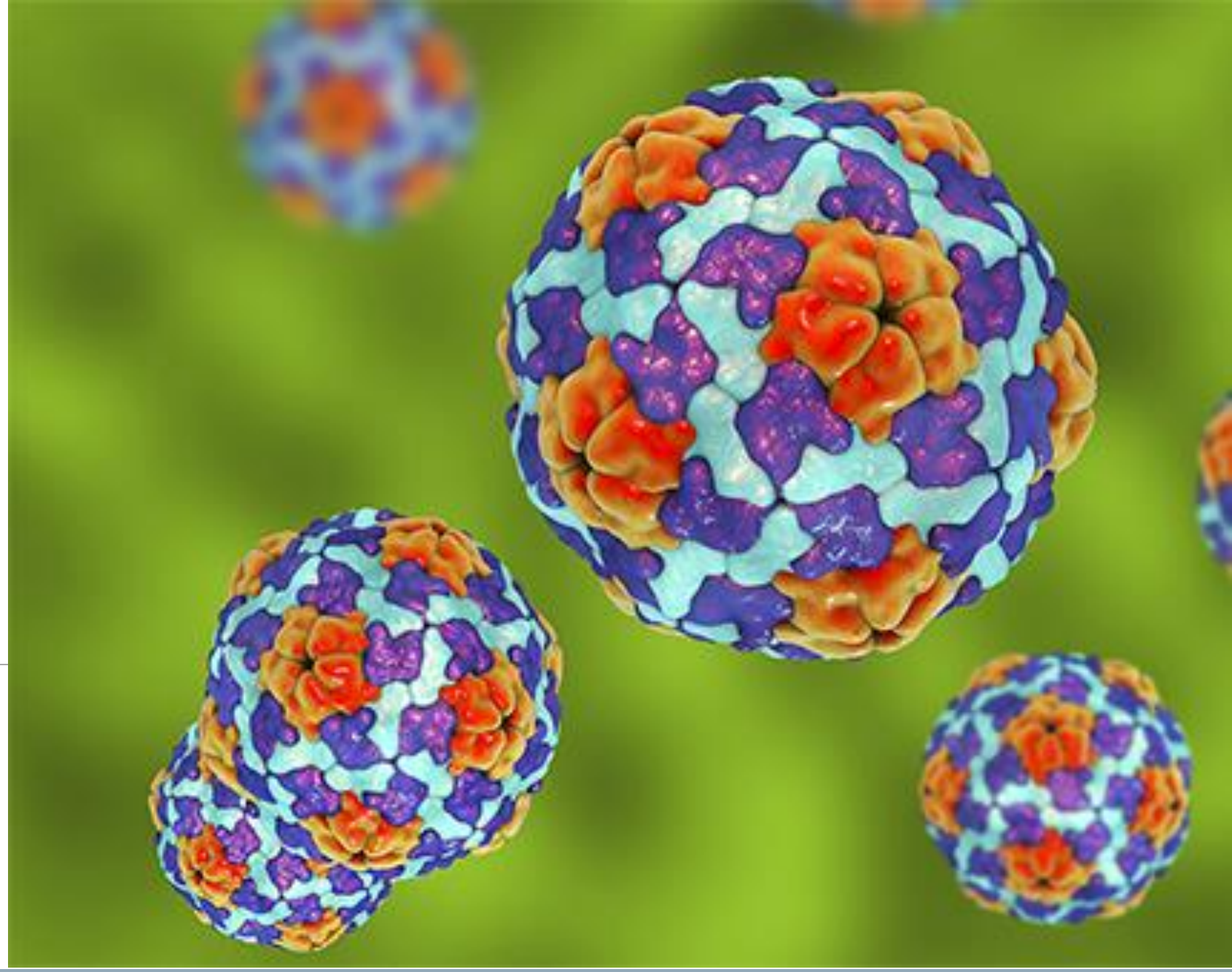
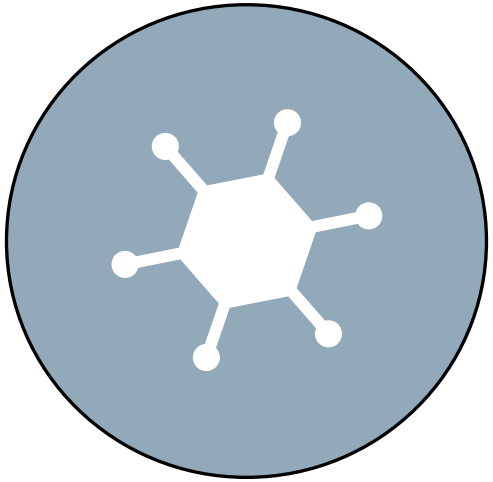
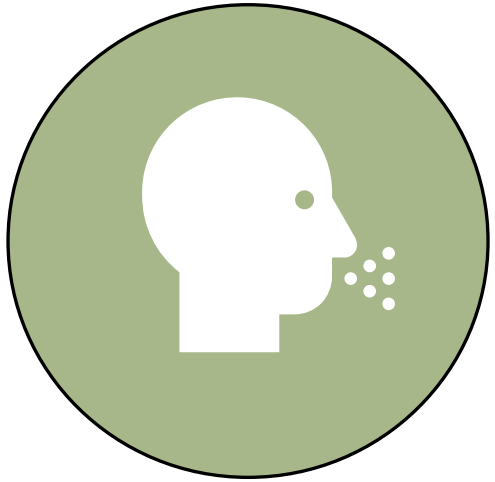
Hepatitis A
Overview



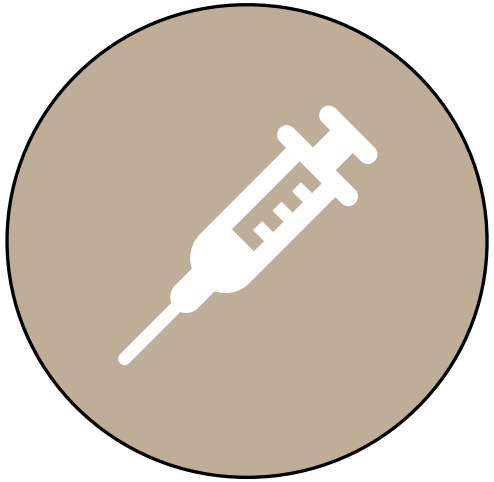
Hepatitis A



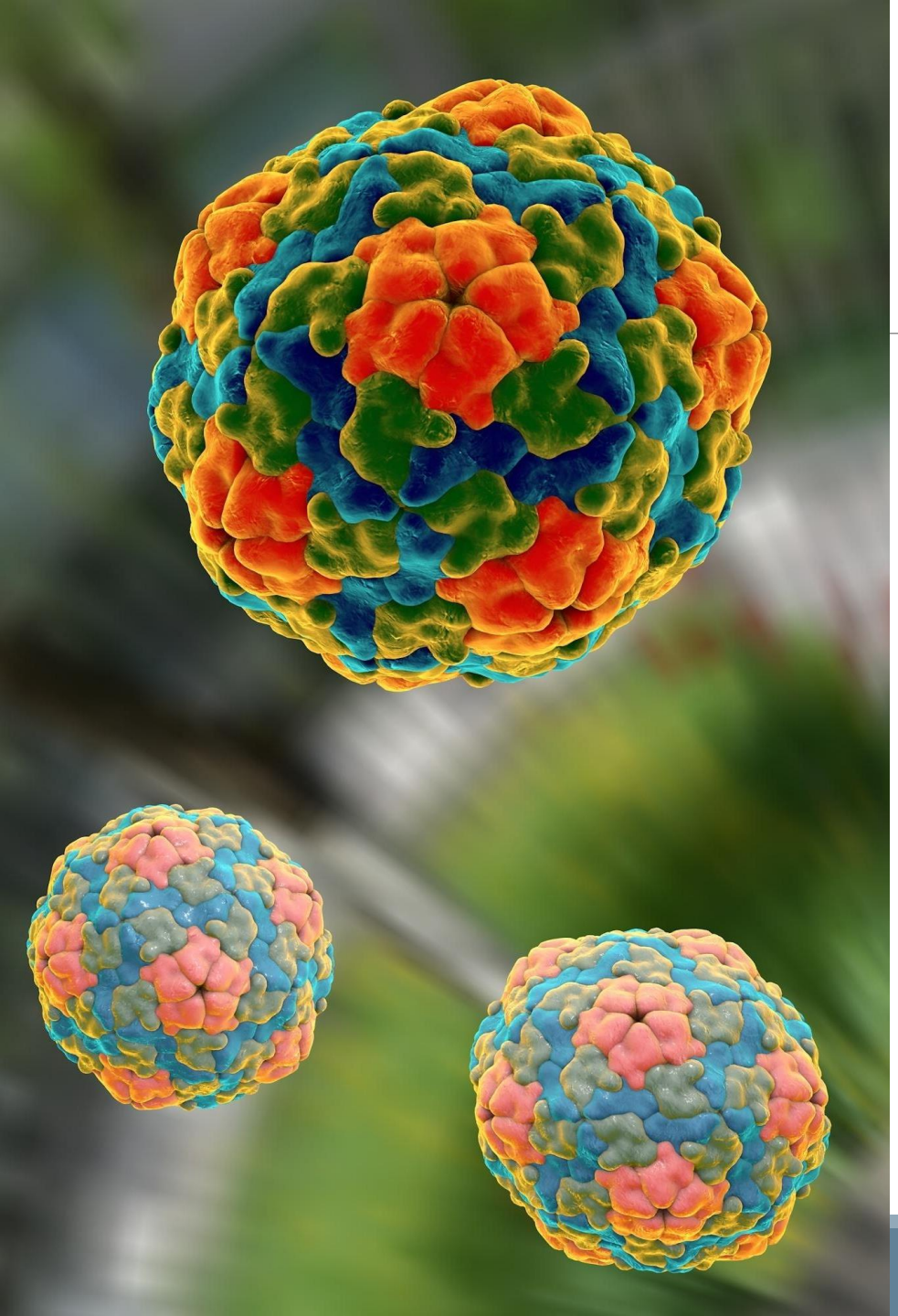
CAUSES



SYMPTOMS



TREATMENT



Hepatitis A

Contagious liver infection caused by the hepatitis A virus; a RNA virus classified as a picornavirus.

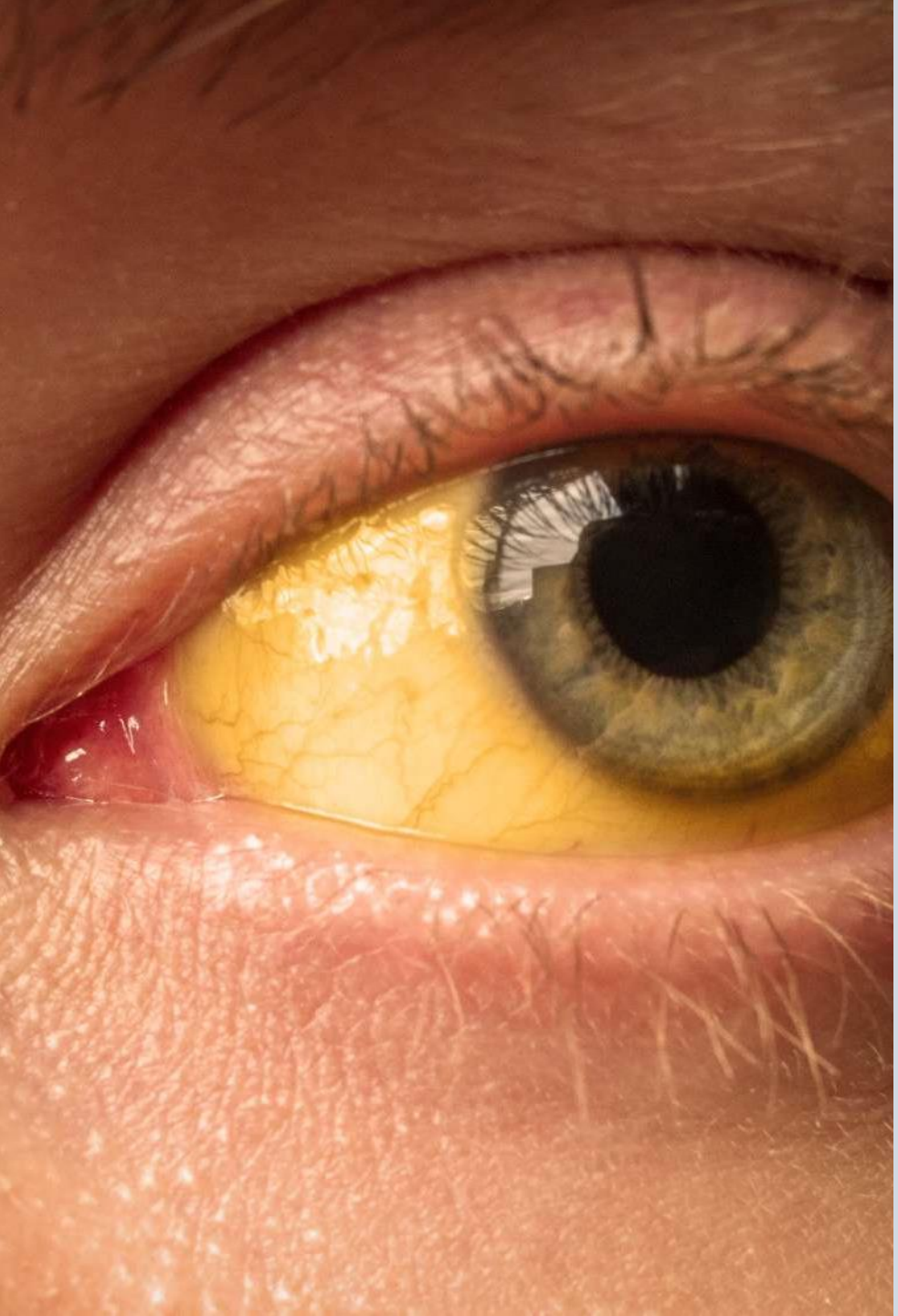
First descriptions of hepatitis are generally attributed to Hippocrates

- Outbreaks of jaundice were reported in the 17th and 18th centuries, particularly in association with military campaigns.

In the pre-vaccine era, primary methods used for preventing hepatitis A were hygienic measures and passive protection with immune globulin (IG).

First isolated in 1979, where the development of serologic tests helped differentiate hepatitis A from other types of non-B hepatitis.

Single-antigen HepA vaccine was licensed for use in the United States in 1995 (Havrix) and 1996 (Vaqta). In 2001, a combination HepA-HepB vaccine (Twinrix) was licensed.



Causes

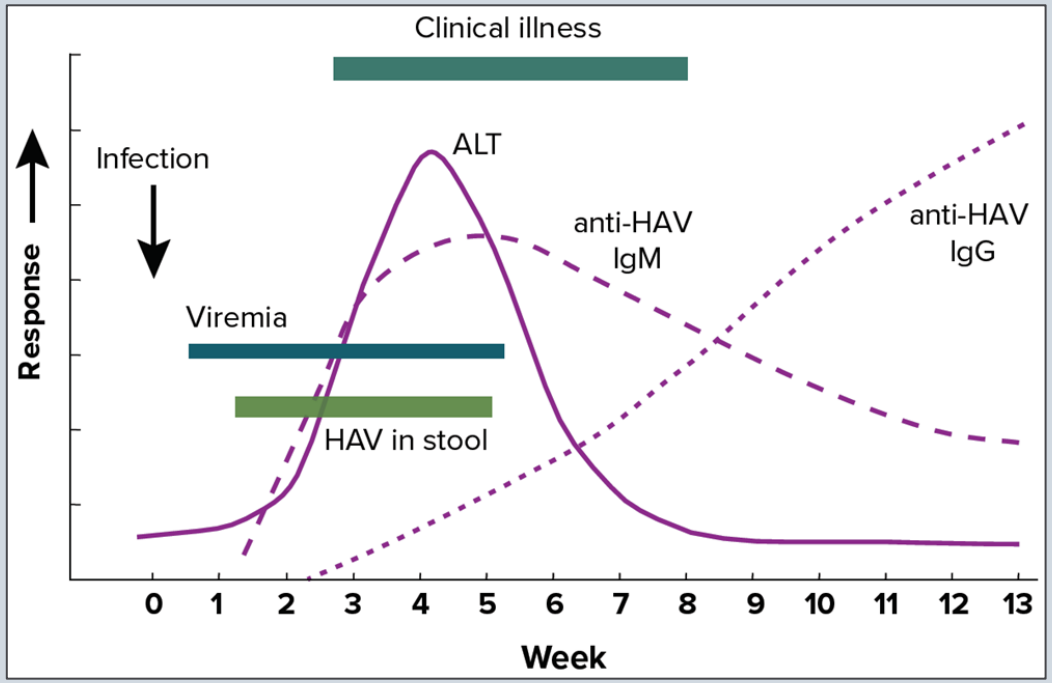
Humans are the only natural host.

Through person-to-person contact.

- Hepatitis A can be spread from close, personal contact with an infected person
  - Sex
  - Caring for someone who is ill
  - Drug use

Eating contaminated food or drink

- Contamination of food with the Hepatitis A virus can happen at any point:
  - Growing, harvesting, processing, handling, and after cooking.
  - Happens more often in countries where Hepatitis A is common.

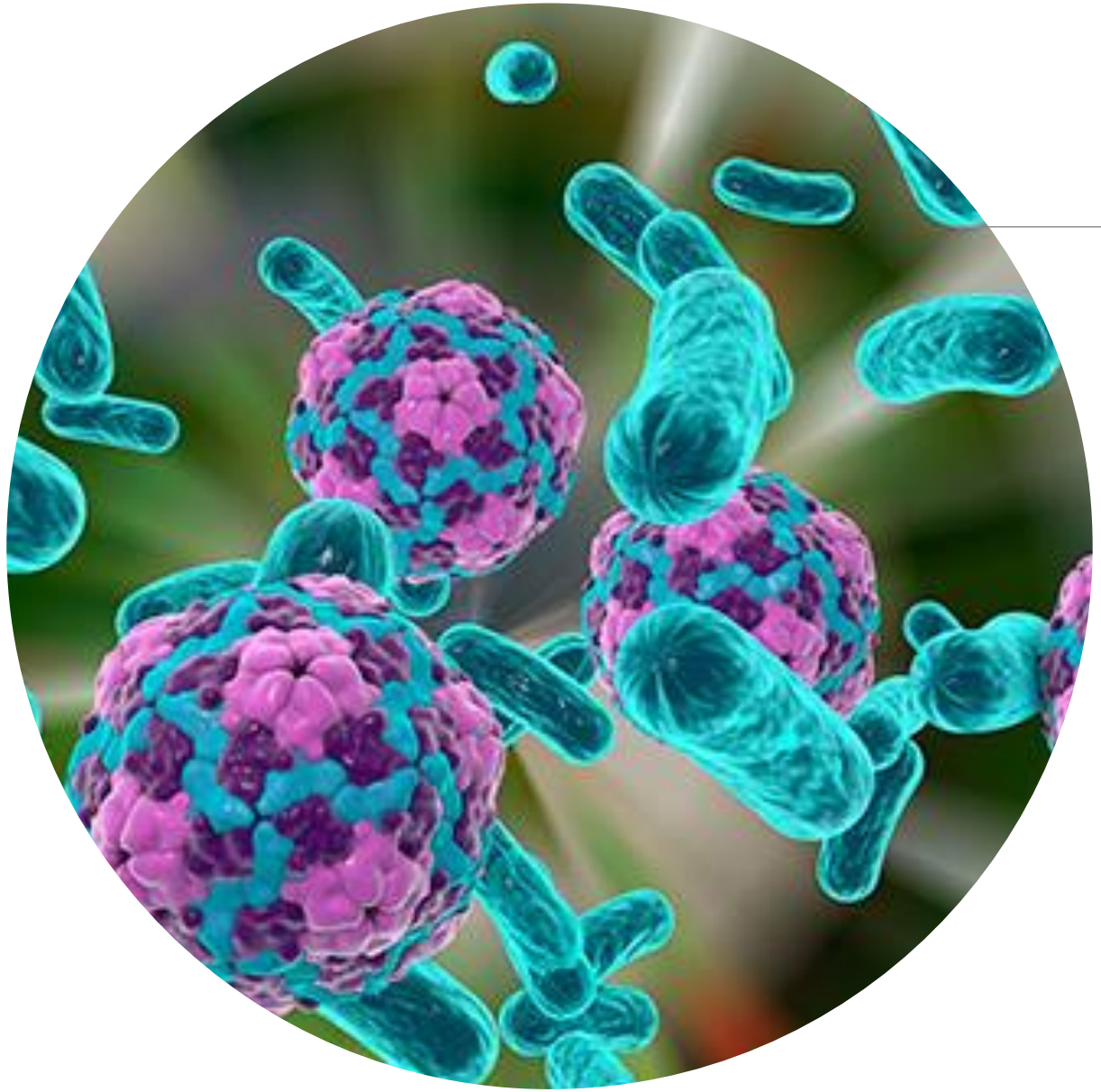


Transmission - Highly Contagious… and Rogue!

Viral shedding persists for 1 to 3 weeks, and infected persons are likely to transmit HAV 1 to 2 weeks before the onset of illness

- When HAV concentration in stool is the highest

Risk then decreases and is minimal the week after onset of symptoms



Pathogenesis

Fecal-oral transmission.

Viral replication in the liver.

Virus present in blood and feces 10 to 12 days after infection.

Virus excretion may continue for up to 3 weeks after onset of symptoms.

Clinical Features

Incubation Period 28 (ranges from 15 to 50 days).

Symptoms

- Abrupt onset of fever, malaise, anorexia, nausea, abdominal discomfort, diarrhea, fatigue, dark urine, and jaundice.

Clinical illness usually does not last longer than 2 months.

- Though 10% to 15% of persons have prolonged or relapsing signs/symptoms for up to 6 months.

Likelihood of symptomatic illness is directly related to age.

- 6 years or less, most (70%) infections are asymptomatic.
- Older children or adults – Usually symptomatic, with jaundice occurring in more than 70% of patients.

Risk Factors/Groups

Children living in high endemicity areas.

Children and adults living in intermediate endemicity areas.

Susceptible persons traveling to, or working in, HAV-endemic countries.

Injection drug users.

Close contacts (e.g., household, sexual) of hepatitis A patients. Cases have resulted from contact with newly adopted children from HAV-endemic countries.

Those working with infected primates or with HAV in research laboratories.

Persons with chronic liver disease who have an elevated risk of death from fulminant hepatitis A.

Complications

More Common in older children, adolescents, and adults

Relapsing hepatitis

Cholestatic Hepatitis A

- Total blockage/suppression of bile
- High bilirubin levels

Fulminant Hepatitis

- Most severe rare complication
- Sever liver function impairment that can result in hepatic coma and a decrease in synthesizing capacity of the liver
- Mortality rates up to 80%

Treatment/Prevention

Treatment

- Doctors usually recommend rest, adequate nutrition, and fluids.
- Hospitalization can occur for more severe cases.

Prevention

- Education on proper sanitation, hand hygiene, and fecal disposal.
- Proper water treatment and distribution systems, and sewage disposal.
- PrEP – Hepatitis A vaccination
- PEP – Hepatitis A should be given as soon as possible, but no later than 2 weeks after exposure

Hepatitis A Vaccines

HepA (Havrix, Vaqta)

- Pediatric formulations of Havrix and Vaqta are approved for persons 12 months through 18 years
- Adult formulations are approved for persons 19 years and older
- 2-dose series (2nd dose given: 6-12 mo after [Havrix] 6-18 mo after [Vaqta])

HepA-HepB Combo (Twinrix)

- Licensed for persons 18 years and older
- 3 dose series at 0, 1, and 6 mos

Hepatitis A Vaccination Schedule

- All children age 12 through 23 months and all children and adolescents age 2 through 18 years who have not previously received HepA vaccine
  - 2-dose series at 0, 6–18 months (Vaqta)
  - 2-dose series at 0, 6–12 months (Havrix)
- Adults age 19 years or older with risk factors
  - 2-dose series at 0, 6–18 months (Vaqta)
  - 2-dose series at 0, 6–12 months (Havrix)
  - 3-dose series at 0, 1, 6 months (Twinrix)
  - 3-dose series with doses at 0, 7, 21–30 days, and booster 12 months after dose 1 (Twinrix, accelerated)

https://www.cdc.gov/vaccines/pubs/pinkbook/hepa.html#:~:text=The%20first%20descriptions%20of%20hepatitis,in%20association%20with%20military%20campaigns.

School Exclusion

Reporting

- IMMEDIATELY notify LHD regarding evaluation and treatment of close contacts; encourage good hand hygiene
- Contact LHD for a “letter to parents”

Exclusion

- Exclude until 7 days after jaundice onset and medically cleared
- Exclude from food handling for 14 days

Source: MDHHS - Managing Communicable Diseases in Schools

Sources

CDC Pink Book - Hepatitis A

CDC - Viral Hepatitis - Hepatitis A

Control of Communicable Diseases Manual – 20th Edition- pages 253-57

MDHHS - Managing Communicable Diseases in Schools