



Hepatitis A Public Health Investigation Guidance



Hepatitis A (HAV) is an acute, self-limiting viral illness associated with abrupt onset of fever, malaise, jaundice, anorexia, nausea, abdominal discomfort, and dark urine.

Development of clinical symptoms is highly age dependent; among older children and adults, infection is typically symptomatic with 70% presenting with jaundice. In children less than six years of age, 70% of infections are asymptomatic. Older persons and persons with chronic liver disease are more likely to have severe disease and HAV prevention in these groups is particularly vital.

Definition of immunity

Persons are considered immune if they have:

- received two doses of HAV vaccine; or
- a history of IgM or total anti-HAV positivity during or up to four months after consistent clinical illness; or
- are IgG anti-HAV positive.

Post-vaccination testing is not indicated because of the vaccine's high efficacy. Most adults will be protected within two to four weeks after one dose of vaccine.

HAV vaccine was licensed in 1995 and has been routinely recommended for children in California and other high incidence states since 1999 and children in all states since 2005. Most pre-adolescents in California are immune.

Modes of transmission

HAV is primarily transmitted via the fecal-oral route (e.g., consuming fecally contaminated foods or liquids). HAV is present in the blood and feces 10-12 days after infection. HAV is rarely transmitted by blood (e.g., via transfusion) or saliva.

Incubation period

A range of 15-50 days with a mean of 28 days.

Period of communicability

Most immunocompetent adults shed virus in the stool and are infectious from two weeks before through one week after the onset of jaundice or elevation of liver enzymes, when concentration of virus in the stool is highest. In absence of jaundice, persons should be considered infectious for two weeks before through one week after the onset of hepatitis symptoms.

HAV can be detected in the stool for <10 weeks after illness onset, particularly in infants and young children.

Clinical Description

- Acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain); **and**
- **either** jaundice, or elevated serum alanine aminotransferase (ALT) **or** aspartate aminotransferase (AST) levels.

Laboratory Criteria for Diagnosis

Immunoglobulin M (IgM) antibody to HAV (anti-HAV) positive.

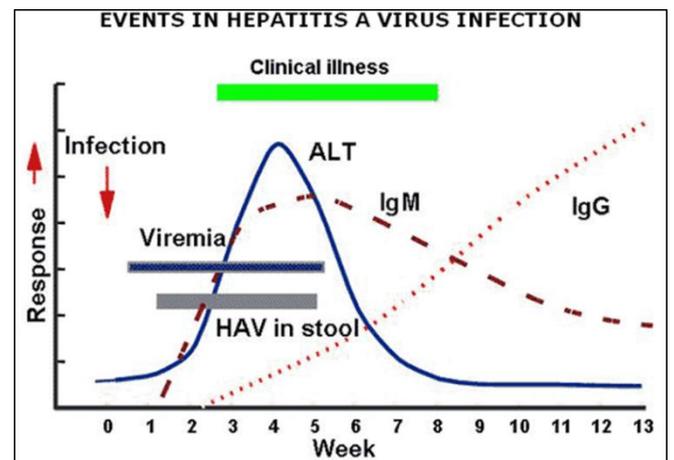
Confirmed case definition

A case who meets the clinical case definition; **and**

- is laboratory confirmed; **or**
- has an epidemiologic link with a person who has laboratory-confirmed hepatitis A (i.e., household or sexual contact with an infected person during the 15-50 days before the onset of symptoms).

Laboratory testing

IgM anti-HAV is present at the onset of illness. It usually disappears <4 months, but may persist ≥ 6 months. IgM anti-HAV is also occasionally detectable in adults 2 weeks after receiving HAV vaccine. IgG anti-HAV is detectable shortly after the appearance of IgM and remains for the person's lifetime.



False positive IgM anti-HAV

A positive IgM anti-HAV test result in a person without typical symptoms of HAV may indicate:

- asymptomatic acute HAV infection; or
- previous HAV infection with persistent IgM; or
- a false-positive test result.

IgM anti-HAV testing should be limited to persons with evidence of clinical hepatitis and should not be used as a screening tool or as part of testing panels in the workup of nonacute liver function abnormalities because of the risk of false positive test results in such persons.

If a positive IgM anti-HAV report is received on a patient without HAV symptoms or a history of recent contact with an HAV infected person, repeat IgM anti-HAV testing and a review ALT or AST levels (often >500 units/L in acute hepatitis) should be considered before recommendations are made for postexposure prophylaxis.

Pre-exposure prophylaxis (general)

HAV vaccination, given in a two dose schedule, is routinely recommended for children 12 months through 18 years of age and for persons at increased risk of HAV infection. There is no recommendation for routine HAV vaccination of food handlers or healthcare workers.

Pre-exposure prophylaxis (international travel)

Susceptible persons traveling to countries with high or intermediate HAV endemicity should be vaccinated or receive immune globulin (IG) (0.02 mL/kg) before travel. A first dose of single-antigen HAV vaccine given up to the date of departure should protect most healthy persons.

For optimal protection, elderly adults, persons with chronic liver disease or other chronic medical conditions, or immunocompromised persons traveling to an endemic country <2 weeks should receive the initial dose of vaccine and IG (separate injections at different injection sites). Travelers <1 year of age should receive IG, which will provide protection for up to three months. [A list of regions where hepatitis A is endemic](#) is available at: <https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/hepatitis-a>

Combined HAV/HBV vaccine “accelerated” schedule

The first **two doses** of the combined HAV/HBV vaccine (Twinrix®) accelerated schedule provide equivalent protection to the only the **first dose** in the standard, single-antigen adult HAV vaccine series and the first two doses in the standard adult HBV vaccine series. Therefore, this schedule offers no particular benefit and CDC recommends the regular schedule when possible.

Close contact definition

Household/sexual contacts, drug sharers, childcare center staff/attendees, and others with ongoing close contact.

Hepatitis A postexposure prophylaxis (PEP)

[CDPH guidance on HAV PEP](#) is available at: <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/HepatitisA-PEPQuicksheet.pdf>

Risk for HAV transmission in different settings

HAV transmission risk varies by setting. Secondary attack rates are 15-30% in households and higher rates of transmission are associated with infected children. In contrast, attack rates are low among restaurant patrons who have been exposed to infected food handlers.

Healthcare settings

PEP is not routinely indicated for staff who have provided care for an HAV-infected patient.

When providing care for HAV-infected patients, contact precautions are recommended (in addition to standard precautions) for diapered and incontinent patients for at least one week after symptom onset.

PEP is indicated for persons who have had close contact with cases if an epidemiological investigation indicates that HAV transmission has occurred among patients or between patients and staff.

Food service settings

HAV-infected food handlers should be excluded for one week after jaundice onset (or if no jaundice, during peak aminotransferase activity or symptom onset). Other potentially exposed food handlers in the same setting should be given PEP.

Because transmission to patrons is unlikely, PEP is not routinely indicated for patrons, but may be considered if, while infectious, the food handler:

- directly handled uncooked or cooked foods; **and**
- had diarrhea or poor hygienic practices at work (it should be ensured that handwashing facilities are available); **and**
- patrons can be identified and treated no later than two weeks after exposure (see algorithm, page3).

Note: If repeated exposures might have occurred (e.g., in an institutional cafeteria), stronger consideration of PEP may be warranted.

In a common source outbreak, PEP is not indicated for exposed persons after cases have begun to occur because the two week period during which PEP is known to be effective will have been exceeded.

If a common source is suspected in two or more cases, the CDC Hepatitis Reference Laboratory can perform molecular typing. Contact CDPH at 510-620-3737 for more information.

Childcare settings

Exclude HAV-infected staff and attendees for one week after onset of jaundice (or if no jaundice, onset of symptoms. If asymptomatic, use time of peak ALT/AST).

PEP is indicated for previously unvaccinated staff/attendees if a case of HAV is diagnosed in staff/attendees or if HAV cases are diagnosed in two or more households of attendees.

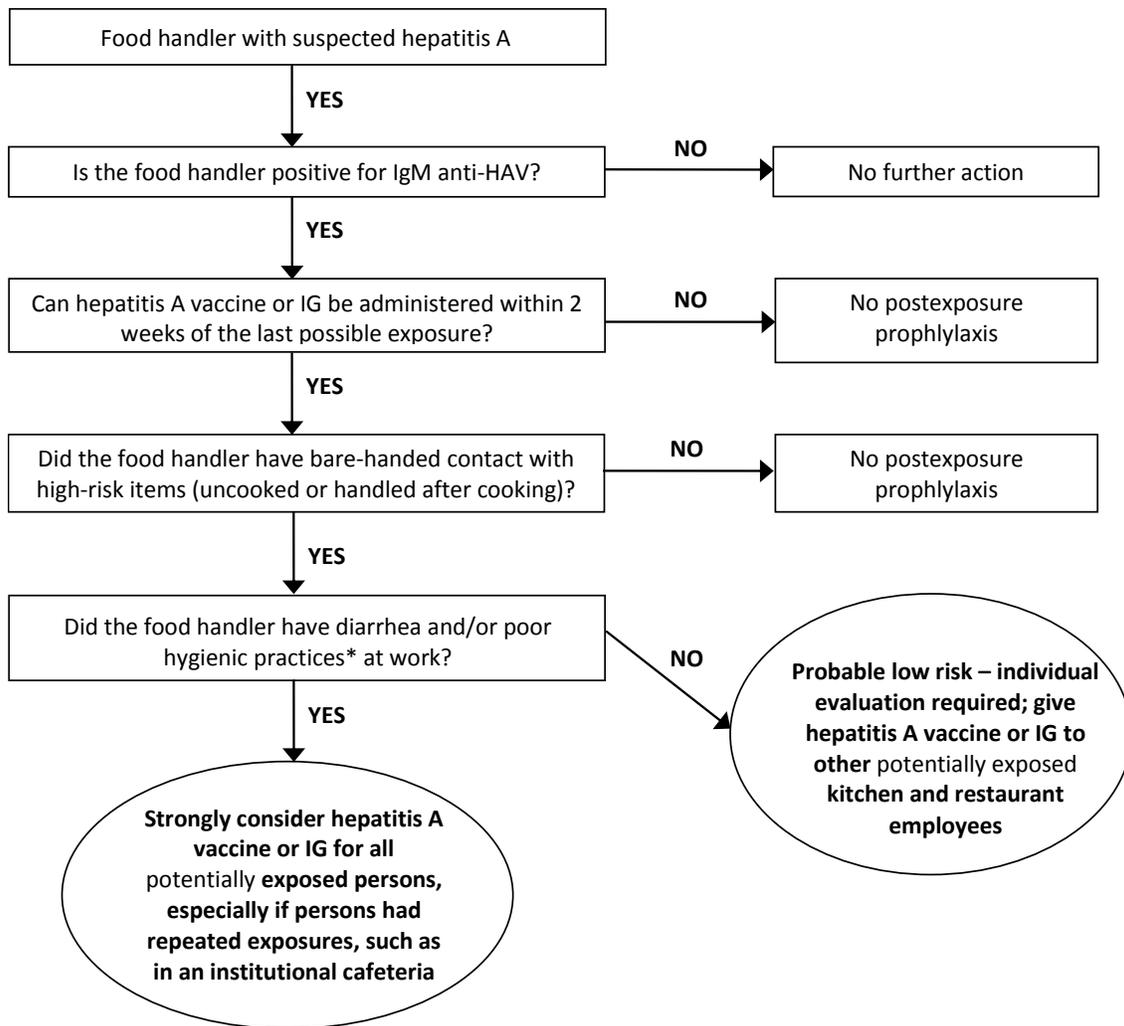
If the children are too old to need diapering, provide PEP to classroom contacts of the index patient. If HAV cases occur in ≥ 3 attendee households, PEP should be considered for members of households that have attendees in diapers.

Schools and other work settings

PEP is not routinely indicated when a single HAV case occurs in elementary or secondary schools or work settings other than those specified above.

PEP is indicated for persons who have close contact with cases if an epidemiological investigation indicates that transmission has occurred among students at a school.

Algorithm for determining the need for postexposure prophylaxis after exposure to food prepared by a food handler with hepatitis A infection



Algorithm adapted from: Fiore AE. Hepatitis A Transmitted by Food. Clinical Infectious Diseases 2004; 38:705-15.

*Hygiene assessments are subjective; a visit to the food handling area and interviews with the infected food handler, coworkers, and supervisors are often helpful. Additional factors include glove use, availability of functioning hand washing facilities, hygiene training, previous assessments of sanitation practices in the facility that employs the infected food handler, and presence of medical conditions in the infected food handler that might make hygiene more difficult to maintain.