

Hepatitis A

Traveler Summary

Key Points

- Hepatitis A is a viral infection of the liver that occurs worldwide (especially in developing countries) and is acquired through consumption of fecally contaminated food or water or through close contact with infected persons via the fecal-oral route (including oral-anal sex).
- Risk is increased for travelers going to countries with poor general sanitation or those who engage in unsafe oral or anal sex practices with infected persons.
- Symptoms are generally mild and may include nausea, loss of appetite, stomach pain, weakness, fever, dark urine, and jaundice (yellow eyes and skin).
- Consequences of infection rarely occur but can include liver failure, especially in older adults and people with underlying liver disease.
- Prevention includes observing food and beverage precautions, hand hygiene (frequent, thorough handwashing), and safer-sex practices.
- Hepatitis A (HepA) vaccine is routinely given as 2 doses, 1 each at 0 and 6 to 18 months. A single dose at any time before departure will provide protection for healthy persons. A combination hepatitis A and hepatitis B (HepA-HepB) vaccine is also available.
- Vaccine side effects are most commonly injection-site reactions and mild systemic reactions.
- Duration of vaccine protection following a completed series is at least 40 years; no booster is required.
- Postexposure prevention for persons exposed to hepatitis A virus (HAV) includes HepA vaccine, plus immune globulin (IG) in certain individuals (ideally within 2 weeks of exposure).

Introduction

Hepatitis A infection, caused by HAV, is an infection of the liver that occurs worldwide and is acquired through consumption of fecally contaminated food or water or through contact with infected persons via the fecal-oral route (including oral-anal sex), resulting in liver inflammation and dysfunction. HAV may also be found in blood but at a concentration less than that found in feces. Infection with HAV results in lifelong immunity.

Risk Areas

HAV infection occurs worldwide but is most common in developing countries with inadequate sanitation, limited access to clean water, and poor hygienic conditions (especially in Africa, Asia, Central and South America, the Middle East, and the Western Pacific). Most developed countries with good sanitary conditions and hygienic practices (e.g., countries in western Europe, Australia, Canada, Japan, New Zealand, and the US) have lower rates of HAV infection; however, risk may be increased in certain areas with variable sanitary conditions or due to consumption of imported HAV-contaminated food from global sources.

Transmission

HAV is mainly transmitted through the consumption of contaminated foods (e.g., raw or undercooked shellfish, fresh or frozen fruits and vegetables) or inadequately cooked foods or through the fecal-oral route, usually from direct person-to-person contact (e.g., household or oral-anal sexual contact). The virus is also spread via food or water contaminated by acutely infected food handlers. The virus can be shed in stool several weeks before and up to 3 weeks (up to 6 months in children) after onset of symptoms. Blood-borne transmission is uncommon but is possible through transfusion of contaminated blood or blood products obtained from infected persons during the infectious phase.

HAV is relatively resistant to heat and freezing; thus, it survives well in the environment outside the human host. The virus can persist on hands for several hours and in room-temperature food for considerably longer.

Risk Factors

Risk is high for travelers going to developing countries and highest for travelers going to countries with intermediate or high levels of transmission and for those who will have a prolonged stay, live in or visit rural areas, trek in remote, undeveloped backcountry areas, eat or drink frequently in high-risk settings with poor sanitation, have close physical contact with local persons (especially

young children) in settings with poor sanitary conditions, or have unsafe oral or anal sex with infected persons. In any affected country, even the most hygienic restaurant could be risky because of a food handler who is a symptom-free carrier of HAV. Risk is also increased for travelers who will travel outside prearranged, fixed itineraries (including common tourist packages), although cases can also occur with standard tourist itineraries or accommodations. Consumption of undercooked shellfish in low-infection rate countries may also cause disease.

Children may serve as a source of infection for staff members or attendees of childcare centers (low risk) or unvaccinated household or other close contacts upon return home.

In the US, homelessness and use of injection or noninjection drugs are risk factors for outbreaks of HAV infection. Also, outbreaks frequently occur among men who have sex with men.

Symptoms

Symptoms most commonly appear within 15 to 50 days (average: 28 days) following exposure and include abrupt onset of fever, nausea, loss of appetite, stomach pain, weakness, dark urine, and jaundice (yellow eyes or skin). HAV infection can range from mild illness (lasting 1-2 weeks) to severe disease (lasting several months). In children younger than 6 years, HAV usually causes either symptom-free infection or very mild illness, without jaundice, lasting 1 to 2 weeks in healthy persons; adults are more likely to have symptomatic infection.

Consequences of Infection

Serious illness rarely occurs, but complications can include severe liver inflammation, which may progress to liver failure in older adults and persons with underlying liver disease. Prolonged or worsening symptoms, lasting from 6 months to a year, may occur in some infected older children and adults. Death is rare in previously healthy individuals but can reach up to nearly 2% in adults older than 50 years. Older age and chronic liver disease increase risk of death due to HAV infection.

Need for Medical Assistance

Travelers who develop symptoms of or who have been exposed to an individual with acute HAV infection or exposed during an outbreak situation should seek medical attention. Due to the long incubation period, HepA vaccination (alone or with IG) may prevent or reduce the duration and severity of HAV infection, if given as soon as possible after exposure (ideally within 2 weeks).

Prevention

Nonvaccine

Observe food and beverage precautions and hand hygiene (frequent, thorough handwashing), regardless of vaccination status; see *Food and Beverage Precautions*. Also observe safer-sex practices.

IG, a human blood-derived product that can be used for all ages, is given as temporary protection if HepA vaccine cannot be used or is unavailable. Some older adults and persons with certain medical conditions may receive IG in addition to HepA vaccine.

Vaccine

HepA vaccines (inactivated) are given as routine childhood vaccinations and to certain at-risk persons. Following 2 doses, most persons will be protected for at least 40 years. A combined HepA-HepB vaccine is also available for persons 18 years and older. HAV infection results in lifelong protection against the disease after recovery.

For travel, HepA vaccination is recommended for:

- Susceptible travelers 6 months and older, traveling to, working in, or living in developing countries and areas of intermediate or high risk for HAV transmission, especially persons who plan frequent trips or have prolonged stays. Some experts recommend that travelers consider HepA vaccination regardless of destination.
- Susceptible travelers going to some developing countries who engage in risk behaviors (see Transmission, above).

Side Effects

The most common side effects of HepA vaccine are mild and transient and include injection-site reactions (e.g., pain, redness, warmth, swelling, and tenderness) and systemic reactions (e.g., fever, loss of appetite, drowsiness, irritability, and headache).

Persons with underlying medical conditions or those who have concerns about the vaccine should speak to their health care provider before vaccine administration.

Timing

HepA vaccine is given as follows:

- Routine, for persons 1 year and older:
 - Havrix: 2 doses, 1 each at 0 and 6 to 12 months.
 - Vaqta: 2 doses, 1 each at 0 and 6 to 18 months.
- Unvaccinated travelers:
 - Children aged 6-11 months: 1 dose (noncountable toward completion of the routine series) followed later by 2 additional age-appropriate doses according to the routine schedule
 - Persons 1 year and older: 2 doses at least 6 months apart
- A single dose at any time before departure, even on the way to the airport, will provide full protection for healthy persons; dose 2 should be given 6 to 18 months later depending on brand.

HepA-HepB combination vaccine is given as follows:

- Persons 18 years and older: 3 doses, 1 each at 0, 1, and 6 months.
- If earlier protection is needed for travel, an accelerated schedule may be given: 4 doses, 1 each on days 0, 7, and 21 to 30 and a booster dose at 12 months. This regimen should be considered for departures occurring in less than 6 months (if hepatitis B virus protection is also needed) and should not be used unless at least 2 doses can be given prior to departure.

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