



# Hepatitis A Postexposure Prophylaxis Guidance



## Postexposure prophylaxis (PEP)

Susceptible people (see below for definition of immunity) exposed to hepatitis A virus (HAV) should receive a dose of single-antigen HAV vaccine or immune globulin (IG) (0.02 mL/kg) or both as soon as possible within 2 weeks of last exposure. The efficacy of combined HAV/HBV vaccine for PEP has not been evaluated.

HAV vaccine is preferred over IG for PEP in persons 1-40 years of age but may also be used at older ages, especially when IG is unavailable or in short supply; data on vaccine efficacy at older ages are limited. In addition, infants as young as six months of age may be given single antigen HAV vaccine for PEP if IG is unavailable or in short supply.

When many people have been exposed or supplies of IG are scarce, IG PEP should be targeted to exposed people who are immunocompromised, have chronic liver disease, or are less than six months of age. HAV vaccine should be offered as PEP for other exposed people. Persons administered IG for whom HAV vaccine is also recommended for other reasons should receive a dose of vaccine simultaneously with IG.

One source of IG is FFF Enterprises, which can be reached 24/7 at: 1-800-843-7477.

For additional information on HAV PEP, see: [www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm)

## Definition of HAV immunity

Persons are considered immune if they:

- have received two doses of HAV vaccine; or
- have 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 immunogenicity. Most adults will be protected within two to four weeks after one dose of vaccine. HAV vaccine has been routinely recommended for California children since 1999, and most pre-adolescent children in California are immune to HAV.

## Persons exposed to HAV >2 weeks prior to consult

The efficacy of PEP when given >2 weeks of exposure is unknown. IG is not recommended >2 weeks after exposure, but vaccine may be given at any time to susceptible people to protect against future exposures.

People exposed to HAV should **NOT** be tested for HAV infection unless they are symptomatic. False positive HAV IgM test results are common when asymptomatic people are tested. HAV IgG test results are often not available promptly enough to guide decisions on PEP and PEP should not be delayed for HAV immunity testing.

## Incompletely immunized people

Persons who have not received all recommended doses of HAV vaccine should complete their series according to schedule. However, at least 94% of adults have protective levels of antibody after a first dose of single antigen HAV vaccine or combined HAV/HBV vaccine. If incompletely vaccinated persons need PEP, second or third doses of vaccine should be given per the recommended schedule.

## Pediatric vs. adult formulations of HAV vaccine

Both single antigen HAV vaccines are available in a pediatric formulation containing half the dose and volume of the corresponding adult formulation. When adult formulation is unavailable, adults may be given two doses of the same pediatric HAV vaccine (2 pediatric doses = one adult dose).

## HAV vaccine contraindications and precautions

- HAV vaccine should not be administered to persons with a history of a severe allergic reaction to a previous dose of HAV vaccine or a vaccine component.
- Exposed pregnant women may be given HAV PEP. Although the safety of HAV vaccination during pregnancy has not been determined, because HAV vaccine is produced from inactivated HAV, the theoretical risk to the fetus is expected to be low.
- Because HAV vaccine is inactivated, no special precautions need to be taken when vaccinating immunocompromised persons.

### **Administration of HAV vaccine with other vaccines**

HAV vaccine may be administered simultaneously with Td, Tdap, DTaP, poliovirus (oral and inactivated), Hib, hepatitis B, MMR, cholera, Japanese encephalitis, rabies, or yellow fever vaccines.

### **Clinical symptoms**

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.

### **Modes of transmission**

Primarily fecal-oral transmission (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 without conditions shed virus in the stool and are infectious from two weeks before through one week after the onset of illness. HAV can be detected in the stool for longer periods (up to 10 weeks after illness onset), particularly in infants and young children.

### **Clinical case definition**

An acute illness with:

- a) discrete onset of symptoms; **and either**
- b) jaundice or elevated serum aminotransferase (ALT or 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 HAV (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 or longer. IgM anti-HAV is also occasionally detectable in adults two 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: 1) asymptomatic acute HAV infection; 2) previous HAV infection with persistent IgM anti-HAV; or 3) a false-positive test result.

IgM anti-HAV testing should be limited to persons with evidence of clinical hepatitis but 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 report of positive IgM anti-HAV is received on a patient who does not exhibit HAV symptoms or have a history of recent contact with an HAV infected person, repeat IgM anti-HAV testing should be considered before recommendations are made for PEP for contacts.

### **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 currently 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 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 who are traveling to an endemic country within two weeks should receive the initial dose of vaccine and IG (separate injections at different injection sites). Travelers in whom the vaccine is contraindicated should receive IG, which will provide protection for up to three months.

For a list of endemic countries, see:

<http://www.cdc.gov/travel/yellowBookCh4-HepA.aspx#362>