



# Hepatitis A Postexposure Prophylaxis Guidance

Iowa Department of Public Health – November 21, 2017

## Post Exposure Prophylaxis (PEP)

Susceptible people exposed to hepatitis A virus (HAV) should receive:

- A dose of single-antigen HAV vaccine: and/or
- **0.1mL/kg\*** intramuscular (IM) immune globulin (IG)

*\*In July 2017, the recommended dose for IMIG (GamaSTAN®S/D) for HAV pre and post exposure prophylaxis was increased by the manufacturer due to declining HAV antibody levels in the U.S. blood supply.*

PEP should be administered as soon as possible and less than 2 weeks after the last exposure. The efficacy of combined HAV/HBV vaccine for PEP has not been studied, therefore it is not recommended.

HAV vaccine is preferred over IG for PEP for persons aged 1-40 years. The effectiveness of vaccine for PEP has been studied only in this age group and data on vaccine efficacy at older ages are limited. However, other countries and states recommend vaccine for PEP in people greater than 40 years of age and there is evidence HAV vaccine is immunogenic in older people. Therefore, IDPH also recommends HAV vaccine for persons 41-59 years of age. For persons greater than 59 years of age, vaccine may be administered simultaneously (in different anatomical sites) with IG to potentially provide longer-term protection.

Age/years	<1†	1-40	41-59	60-74†	75+
Healthy	IG only	Vaccine	Vaccine	IG and Vaccine	IG and Vaccine
Other §¥	IG	IG	IG	IG	IG

†When IG is unavailable or in short supply, single-antigen HAV vaccine may be used for PEP in healthy people 60-74 years of age and in infants greater than 6 months of age. In this situation, if administration of IG will be delayed greater than 36 hours after identification of an exposed person, vaccine alone should be immediately administered.

### Persons who should receive IG for HAV PEP:

Per CDC, the following persons should receive IG:

- Children aged less than 12 months;
- Immunocompromised persons§;
- Persons with chronic liver disease; and
- Persons for whom vaccine is contraindicated\*

Persons indicated to receive both IG and HAV vaccine should receive the dose of vaccine simultaneously with IG.

§Definition of Immunocompromised: CDC HAV guidance does not provide a definition of immunocompromised; however, guidance is available from the California Department of Public Health and IDSA (<http://www.idsociety.org/Templates/Content.aspx?id=32212256011>) which defines patients with high-level immunosuppression as those:

- with combined primary immunodeficiency disorder (e.g., severe combined immunodeficiency);
- who are receiving cancer chemotherapy;
- on treatment for Acute Lymphoblastic Leukemia within and until 6 months after completion of immunosuppressive chemotherapy;
- within 2 months after solid organ transplantation;
- who have received a bone marrow transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed graft-versus-host disease;
- with HIV infection with a CD4 T-lymphocyte count <200 cells/mm<sup>3</sup> (aged >5years) and percentage <15 (all ages) (some experts include HIV-infected person who lack recent confirmation of immunologic status or measles immunity);
- receiving daily corticosteroid therapy with a dose ≥20mg (or >2 mg/kg/day for patients who weigh <10kg) of prednisone or equivalent for ≥14 days; or
- receiving certain biologic immune modulators, such as a tumor necrosis factor-alpha (TNF-α) blocker or rituximab.

Vaccine may be given in addition to IG to potentially provide longer-term protection for immunosuppressed persons but vaccine response may be limited. Clinical guidance should be obtained if patient's immune status is unclear.

### \*HAV vaccine contraindications and precautions

*Adapted with permission from guidance developed by the California Department of Public Health – July 2017*

- HAV vaccine should not be administered to persons with a history of a severe allergic reaction to a previous dose of HAV vaccine or vaccine component.
- Pregnant women may be given HAV vaccine as 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.

### **Additional Information:**

#### Definition of HAV immunity:

Persons are considered immune to HAV if they have:

- received two doses of HAV vaccine; or
- a history of IgM or total anti-HAV positivity during or <4 months after clinically consistent illness; or
- are IgG anti-HAV positive.

Pre- or post-vaccination testing are not indicated. Most adults will be protected within 2-4 weeks after one dose of vaccine. HAV vaccine has been routinely recommended for children since the early 2000's, and many children and adolescents in Iowa are immune to HAV.

#### Persons exposed to HAV more than 2 weeks prior to being identified as exposed

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

#### Incompletely immunized people

Most persons have protective levels of antibody after one dose of HAV vaccine. Persons who have had one prior dose of vaccine may receive their second dose as PEP if it has been at least 6 months since their first dose.

#### Pediatric vs. adult formulations of HAV vaccine

Single-antigen HAV vaccines are available in a pediatric formulation containing half the dose and volume of the adult formulation. When the adult formulation is unavailable, adults may be given two doses of the same pediatric HAV vaccine (2 pediatric doses = 1 adult dose).

#### Laboratory testing

IgM anti-HAV is present at illness onset and usually disappears within 4 months, but may persist for up to 6 months or more. IgM anti-HAV may also be detectable 2 weeks after receiving HAV vaccine. IgG anti-HAV is detectable shortly after IgM appears and remains detectable for the person's lifetime.

#### False positive IgM anti-HAV test results

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 symptomatic persons and should not be used as a screening tool or part of testing panels for nonacute liver function abnormalities because of the risk of false positive test results.

If a positive IgM anti-HAV report is received on a patient without hepatitis symptoms or history of recent contact with an HAV-infected person, consider a review of current ALT or AST levels (often greater than 500 units/L in acute hepatitis) before PEP recommendations are made for contacts.