

HEPATITIS A

POST-EXPOSURE PROPHYLAXIS GUIDELINES

GENERAL INFORMATION

Hepatitis A virus (HAV) symptoms may appear two to seven weeks after exposure to the infected source, but usually occur about four weeks after exposure. People who have been infected are contagious from about two weeks before the symptoms appear and continue to be contagious for about one week after the onset of jaundice. After they recover from HAV they have lifelong immunity and do not continue to carry the virus.

Post-exposure prophylaxis (PEP) with hepatitis A vaccine or immune globulin (IG) will reduce the risk of illness in persons exposed to the hepatitis A virus if administered within 14 days of exposure. The sooner PEP is administered, the more protective it will be.

Federally funded vaccine may be used for PEP. Federally funded vaccine is not available for second doses of vaccine unless the recipient would otherwise be provided the second dose as part of the routine hepatitis A immunization protocol.

PEP Options for individuals having close personal contact with a confirmed case of hepatitis A (see next section for specific demographic information):

- **Hepatitis A vaccine** – all persons aged 1 year and older, unless contraindicated
 - A single dose can protect a person for more than 10 years and a complete 2 dose series (administered at least 6 months apart) is assumed to provide lifelong protection. PEP with vaccine is not necessary for those who have completed the 2-dose immunization schedule or who have received one dose of vaccine within 6 months of exposure
- **Immune globulin** (“IG”, trade name GamaSTAN® S/D, manufactured by Grifols) for infants or in addition to vaccine for certain persons.
 - IG requires an order from the health department MD/APN
 - Passive protection post-exposure, at 0.1mL/kg. Its use is **prioritized** for contacts at high risk of contracting the disease who are not expected to respond normally to vaccination due to age or immunocompromise or those who are at individually high risk of life-threatening infection due to chronic liver disease
 - Practical concerns for limited IG availability have led to the use of vaccine if IG is unavailable in a timely manner, which is especially common in large outbreaks

What types of contacts need PEP within 14 days of exposure?

At risk contacts are those **previously unvaccinated** persons who may have been exposed to the virus during the infectious period of a serologically-confirmed case patient (2 weeks before symptom onset through 1 week after symptom onset), including:

- Household contacts (persons who spend the night in the home during the infectious period)
- Persons who ate food prepared at home by an infectious case during their infectious period

- Decision to vaccinate depends upon whether the infectious person handled food served uncooked or after it was cooked, whether poor hygiene is suspected and whether case had diarrhea at the time
- Sexual contacts
- Persons who shared drugs (injection or non-injection) or drug equipment
- Caregivers (e.g., of an infected child or ill person), *excluding* healthcare personnel using appropriate infection prevention precautions
- Food handlers who work in an establishment if a fellow food handler is diagnosed
- Child care center contacts – PEP for all previously unvaccinated staff and attendees, **if**:
 - One or more cases are diagnosed in child attendees or employees, *or*
 - Cases are diagnosed in 2 or more households of attendees
 - In above situations: if no infants in diapers are in the facility, limit PEP to contacts of the patient
 - If an outbreak of >3 cases linked to a child care center occurs, consider extending vaccine PEP to include the household members of center attendees who wear diapers
- Consider PEP for all previously unvaccinated residents and employees of facilities in settings where close personal contact occurs regularly and hygiene standards are difficult to maintain (e.g., corrections facility [or ward, if wards are kept separate], homeless shelter, psychiatric facilities, group home or residential facilities for the disabled)

Vaccine and IG considerations by age and health status:

- **All susceptible contacts age 1 year and older: Administer hepatitis A vaccine**
 - No vaccine needed for persons who have received a complete 2-dose hepatitis A vaccine series (documented in writing) or who have received a single dose of hepatitis A vaccine within the past 6 months.
 - No documented immunization history: administer a single dose of hepatitis A vaccine (monovalent) as soon as possible. The only contraindication to vaccination is a history of anaphylaxis to a previous dose of the vaccine or a vaccine component.
 - History of incomplete hepatitis A vaccination, i.e., 1 dose >6 months earlier: vaccinate to complete series for long term protection.
- **Certain unimmunized contacts aged >1 year: IG (0.1mL/kg IM), in addition to vaccine:**
 - **Persons 40-59 years of age** if a sexual, household, or drug equipment-sharing contact of a case and **if** IG is not in short supply (case by case determination if IG is in short supply)
 - **Persons 60+ years of age** if sexual, household, or drug equipment-sharing contact of a case
 - **Immunocompromised persons and persons with chronic liver disease** (see definitions lists on page 3) ages 12 months and older, if a sexual, household, or drug equipment-sharing contact of a case.
- **Susceptible infants <12 months: administer IG (0.1mL/kg) only (NO Hep A Vaccine).**
 - Wait at least 3 months to administer MMR and varicella vaccines typically given at 1 year of age to prevent vaccine interference. MMR or varicella vaccines inadvertently

administered earlier would be invalid and would need to be repeated >3 months after IG *and* >28 days after the invalid dose(s).

- **Certain *previously vaccinated* persons:**
 - Give PEP IG and vaccine to any previously vaccinated **stem cell transplant** patient who is an at-risk contact, if they were not re-vaccinated post-transplant
 - Give PEP IG and vaccine to any person with **HIV**, regardless of previous vaccination
 - Consider PEP IG and vaccine for at-risk contacts who are severely **immunocompromised** or persons who receive IG regularly for an immunocompromising condition (consult with Regional Medical Director).

Definitions:

Immunocompromised, includes persons

- With congenital or acquired immunodeficiency
- With HIV infection
- With chronic renal failure/undergoing hemodialysis
- Who have received solid organ, bone marrow, or stem cell transplants
- Who have iatrogenic immunosuppression, e.g., diseases requiring treatment with immunosuppressive drugs/biologics (e.g., TNF-alpha inhibitors), including long-term systemic corticosteroids and radiation therapy. Immune status relative to the dose of immunosuppressive drugs should be assessed by the provider.
- Who are otherwise less capable of developing a normal response to immunization (e.g., persons
- With diabetes mellitus, elderly, hemodialysis patients)

Chronic liver disease, includes persons with

- Hepatitis B virus infection
- Hepatitis C virus infection
- Cirrhosis from any cause
- Fatty liver disease (hepatic steatosis)
- Alcoholic liver disease
- Autoimmune hepatitis
- Alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal) or persistently elevated for 6 months

Exposures not routinely needing PEP, but PEP may be recommended if additional factors present:

- Patrons of establishments where a food handler is diagnosed are not normally considered in need of PEP because the risk of transmission is very low.
 - May be considered if the food handler directly handled uncooked or cooked foods without gloves and had diarrhea or poor hygiene.
 - Also may consider if food handler worked in a setting where repeated exposures may have occurred (e.g., institutional cafeteria).
- Healthcare workers are not routinely considered at risk because standard hand hygiene is protective.
 - **DO** administer PEP to co-workers in a unit or facility if a healthcare worker is diagnosed with hepatitis A.

- PEP to patients may be considered if a healthcare worker worked while likely infectious, without gloves and had diarrhea or poor hygiene.
- Classmates or work mates if the patient acquired HAV outside the class or work setting are not routinely recommended for PEP. Administer vaccine if evidence of transmission in that setting is present.

What to do with an exposed person more than 14 days since exposure:

- **Vaccinate** persons who may be at ongoing risk, or are part of a risk group. Such persons should be educated that vaccination will help in the future but may not prevent them from becoming ill due to a past exposure.
- If at-risk patient meets criteria for IG and is outside at continued risk due to ongoing exposure, consult with Regional Medical Director.

Determination to use IG should be made by an APN or MD in consultation with the Immunization Program, if needed. The State Director of Pharmacy should be notified of the use of all IG.

Health Teaching:

- Household and close contacts
 - Fecal/oral precautions
 - Wash hands after elimination, and before preparing food and eating
 - Keep nails short
- Daycare Facilities
 - Prompt and proper diaper changing
 - Proper disposal of diapers and disinfection of changing
 - Hand washing after elimination, diaper changing, before eating, before food preparation
 - Disinfection of toys and play equipment in areas with diagnosed children
 - Educate that all children 12 months and up are now recommended to be vaccinated routinely against hepatitis A
- Food Service Facilities
 - Environmental inspection and emphasis on personal hygiene, hand washing and sanitation
 - Remove food handler with diarrhea from direct food handling duties
 - Management to notify health department if secondary cases indicated in food handlers (fever, malaise, anorexia, abdominal pain, or nausea)
 - Contact health provider immediately if symptoms develop in co-infected cases (similar time frame) or in secondary cases (within six weeks)

- **Follow-up:**

- If hepatitis A vaccine is initiated for post-exposure, instruct patient that they may obtain a second dose after 6 months or longer to complete the series for lifelong immunity.
- The second dose of vaccine is not necessary for post-exposure prophylaxis and is not provided by the health department to persons for whom the health department would not otherwise provide hepatitis A vaccine.

DOSAGE OF IMMUNE GLOBULIN (IG) FOR PROPHYLAXIS OF HEPATITIS A

Dosage is 0.1mL/kg 1 kg = 2.2 lbs Weight Immune Globulin

11 lbs.....	0.5 ml
22 lbs.....	1.0 ml
33 lbs.....	1.5 ml
44 lbs.....	2.0 ml
55 lbs.....	2.5 ml
66 lbs.....	3.0 ml
77 lbs.....	3.5 ml
88 lbs.....	4.0 ml
99 lbs.....	4.5 ml
110 lbs.....	5.0 ml
121 lbs.....	5.5 ml
132 lbs.....	6.0 ml
143 lbs.....	6.5 ml
154 lbs.....	7.0 ml
165 lbs.....	7.5 ml
176 lbs.....	8.0 ml
187 lbs.....	8.5 ml
198 lbs.....	9.0 ml
209 lbs.....	9.5 ml
220 lbs.....	10.0 ml
231 lbs.....	10.5 ml
242 lbs.....	11.0 ml
253 lbs.....	11.5 ml
264 lbs.....	12.0 ml
275 lbs.....	12.5 ml

REFERENCES:

CDC Division of Viral Hepatitis, Hepatitis A Professional Resources,

<https://www.cdc.gov/hepatitis/hav/profresourcesa.htm>

“Post Exposure Prophylaxis Guideline for Hepatitis A” memo from Dr. Michelle Fiscus, February 20, 2019.