

Centers for Disease Control and Prevention
National Center for Immunization and Respiratory Diseases



Hepatitis A

September 2018

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Hepatitis A Clinical Features

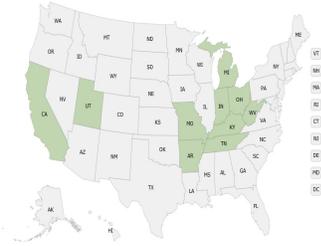
- Incubation period 28 days (range 15–50 days)
- Illness not specific for hepatitis A
- Likelihood of symptomatic illness directly related to age
- Children generally asymptomatic, adults symptomatic

Hepatitis A Epidemiology

Reservoir	Human
Transmission	Fecal–oral
Temporal pattern	None
Communicability	2 weeks before to 1 week after onset of jaundice

Hepatitis A Outbreak

- Hepatitis A outbreaks in 10 states have occurred primarily among persons who:
 - Use injection and non-injection drugs,
 - Are homeless,
 - Are their close direct contacts



Hepatitis A-Containing Vaccines

- Inactivated vaccine, 2 single-component products
 - Haverix (GSK)
 - Vaqta (Merck)
- Both products have pediatric and adult formulations
 - Pediatric formulation contains 720 EL.U. per 0.5-mL dose
 - Adult formulation contains 1,440 EL.U. per 1.0-mL dose

Hepatitis A-Containing Vaccines

- Administer the appropriate formulation based on age
 - Pediatric formulations: 1 through 18 years of age
 - Adult formulations: 19 years and older
- Schedule:
 - 2 doses separated by at least 6 months

Vaccine Supply

- Large outbreaks of Hepatitis A among adults in several US cities resulted in increased demand for vaccine and constrained vaccine supply
- In response, CDC has
 - Collaborated with manufacturers to understand options for managing supplies in the public and private sector and increasing national supply
 - Increased vaccine availability on CDC's adult vaccine contracts
- Available vaccine supplies have increased and progress has been made regarding ongoing outbreaks
- Manufacturers have supply to meet current demand
- CDC and vaccine manufacturers are monitoring the demand and need for adult Hepatitis A vaccine
- Note, supply constraints do not apply to the pediatric Hepatitis A vaccine supply

CDC website: Current Vaccine Shortages and Delays. Accessed 4/3/2018 <https://www.cdc.gov/vaccines/hbp/clinical-resources/shortages.html#note1>

Hepatitis A-Containing Vaccines

- **Twinrix (HepA-HepB) combination vaccine contains:**
 - Hepatitis A 720 EL.U. (pediatric dose)
 - Hepatitis B 20 mcg (adult dose)
- **Approved for persons 18 years of age and older**
- **Schedules**
 - 3 dose: 0, 1, 6 months
 - or
 - 4 dose: 0, 7, 21–30 days and booster dose at 12 months after first dose

Twinrix and Single-Component Hepatitis A Vaccine

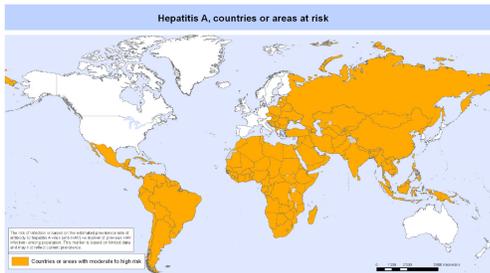
- **Adult formulation hepatitis A vaccine may be used to complete a schedule begun with Twinrix and vice versa***
- **Acceptable schedules**
 - 2 Twinrix and 1 hepatitis A (adult formulation)
 - 1 Twinrix and 2 hepatitis A (adult formulation)
- **Maintain spacing recommended for Twinrix**

*Use the pediatric formulation of single-component vaccine for persons 18 years of age and older.
Use the adult formulation of single-component vaccine for persons 19 years of age or older.

ACIP HepA Vaccine Recommendations: Adult

- **Administer vaccine to adults at increased risk, including:**
 - Travel to or work in areas with high or intermediate endemicity
 - Close, personal contact with an international adoptee from an area with high or intermediate endemicity
 - Men who have sex with men
 - Injection or non-injection drug use
 - Clotting factor disorders
 - Work with nonhuman primates or in a hepatitis A research laboratory setting
 - Chronic liver disease
 - Healthy adults who have recently been exposed to hepatitis A

Hepatitis A and International Travel



World Health Organization map of countries of area of risk for hepatitis A. Accessed 4/3/2018. http://gammaserver.cdc.gov/images/Global_Health_11/HS/HSMap_and_Legend

Hepatitis A Vaccination for International Travelers: Children and Adults

- **One dose of a monovalent hepatitis A vaccine protects most healthy people 1–40 years of age**
- **Administer hepA vaccine to persons 1 year of age and older**
 - Start the series as soon as travel is being considered to an area outside the U.S. where protection against hepatitis A is recommended
 - The series should be completed for life-long protection—even if the trip is over
 - Post-vaccination testing is not recommended

MMWR 2007;56(No. 43):1280-4

Summary: Hepatitis A Vaccine Recommendations and International Travel

Age	
Infants 6 months of age or younger	Immunoglobulin (IG)
Infants 6 through 11 months of age	Vaccine ¹ (or IG ²)
Healthy persons 1 year of age or older	Vaccine
Special Populations	
Persons with a vaccine contraindication	IG
Immunocompromised persons	Vaccine with addition of IG ³
Persons with chronic liver disease	Vaccine
Pregnant women	Vaccine

¹This recommendation has been adopted by the CDC Director and will become official once published in MMWR
²Based on provider guidance, risk assessment and availability of vaccine or IG
³If measles is not endemic in the region

Hepatitis A Vaccination for International Travelers

- Persons at risk of severe disease from hepatitis A planning to travel in 2 weeks or sooner should receive the first dose of vaccine and also can receive immunoglobulin

MMWR 2007;56(No. 41):1080-4

Vaccination for Close Contacts of Newly Arriving International Adoptees

- Hepatitis A vaccination for unvaccinated persons who anticipate close personal contact during the first 60 days after arrival of an international adoptee from a country of high or intermediate endemicity
- Administer dose 1 as soon as adoption is planned—ideally 2 or more weeks before the arrival of the adoptee

MMWR 2009;58(No. 36):1006-7

Hepatitis A Vaccination Additional Recommendations

- **Not routinely recommended for:**
 - Health care personnel
 - Child care center staff
 - Sewer workers or plumbers
- **Food handlers may be considered based on local circumstances**

Hepatitis A Serologic Testing

- **Prevaccination**
 - Not indicated for children
 - May be considered for some adults and older adolescents
- **Postvaccination**
 - Not indicated

Hepatitis A Vaccine Administration

- **Follow proper injection practices**
 - Use aseptic technique
 - Use a new needle and syringe for each injection
- **Route: IM injection**
 - Needle gauge: 22 – 25 gauge
 - Needle length*: 1 – 1.5 inch depending on the patient's age and/or weight

*Professional judgement should be used to determine the proper needle length and site. Influencing factors include injection technique, local reaction, number of vaccines to be administered, patient age, size and muscle mass.

Vaccine Administration

- **Site***:
 - 1–3 years: Vastus lateralis muscle is preferred; deltoid muscle may be used if the muscle mass is adequate
 - 4 years and older: Deltoid muscle is preferred; vastus lateralis muscle may be used

*Professional judgement should be used to determine the proper needle length and site. Influencing factors include injection technique, local reaction, number of vaccines to be administered, patient age, size, and muscle mass.

Hepatitis A Vaccine Standing Orders for Adults

The image shows two standing order forms for Hepatitis A vaccine. The left form is titled 'STANDING ORDERS FOR Administering Hepatitis A Vaccine to Children and Teens' and the right form is titled 'STANDING ORDERS FOR Administering Hepatitis A Vaccine to Adults'. Both forms contain detailed instructions regarding patient eligibility, dosage, and scheduling.

Immunization Action Coalition website accessed 4/8/2018 children <http://www.immunize.org/categ.cfm?cat=63077a.pdf> & adult <http://www.immunize.org/categ.cfm?cat=63077.ad>

Vaccine Administration Errors

- **Adult formulation administered to a child**
 - MORE antigen than the recommended dose was administered
 - If the dose meets minimum age and interval, it may be counted
- **Pediatric formulation administered to an adult**
 - LESS antigen than the recommended dose was administered
 - The dose does not count and should be repeated ASAP
 - There is no time/spacing interval that must be met
- **HepB instead of HepA vaccine**

Hepatitis A Vaccine Contraindications and Precautions

- Severe allergic reaction to a vaccine component or following a prior dose
- Moderate or severe acute illness

Hepatitis A Vaccine Adverse Reactions

- Local reactions 20–50%
- Systemic reactions (malaise, fatigue) less than 10%
- No serious adverse reactions reported

Hepatitis A Vaccine Storage and Handling

- Store hepatitis A vaccine in a refrigerator between 2°C–8°C (36°F–46°F)
- Store in the original packaging with the lids closed in a clearly labeled bin and/or area of the storage
- Store pediatric and adult formulations separately, away from each other and other look or sound-alike vaccines (e.g., HepB, Hib)

HepA (Havrix) Pediatric Formulation
 Age: 12 months through 18 years
 Use: Any dose in the series
 Route: Intramuscular (IM) injection

HepA (Vaqta) Pediatric Formulation
 Age: 12 months through 18 years
 Use: Any dose in the series
 Route: Intramuscular (IM) injection

HepA (Havrix) Adult Formulation
 Age: 19 years and older
 Use: Any dose in the series
 Route: Intramuscular (IM) injection

HepA (Vaqta) Adult Formulation
 Age: 19 years and older
 Use: Any dose in the series
 Route: Intramuscular (IM) injection

Vaccine storage label example
 Available at www.cdc.gov/vaccines/imz/admin/storage/guide/vaccine-storage-labels.pdf