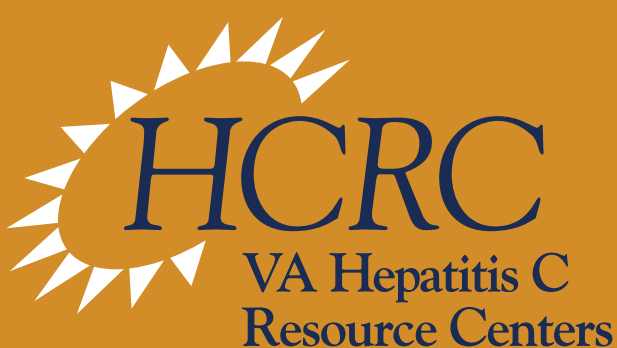


VACCINATION AGAINST HEPATITIS A & B

A Summary of Current Recommendations



Office of Clinical Public Health Programs
Public Health Strategic Health Care Group

VACCINES FOR HEPATITIS A & B

Hepatitis A: Two inactivated vaccines available
Hepatitis B: Two recombinant vaccines available
Hepatitis A and B: One combination vaccine

WHO TO VACCINATE FOR HEPATITIS A AND/OR HEPATITIS B¹⁻¹⁰

- Patients without prior immunity to hepatitis A or B (i.e. anti-HAV or anti-HBs and anti-HBc negative) who fall into one or more of the following groups as listed in table on **Who To Vaccinate**.
- AND
- Patients without an allergy to any component of the hepatitis A or B vaccine or to yeast with the hepatitis B vaccine.

WHY VACCINATE HEPATITIS C PATIENTS AGAINST HEPATITIS A & B?

- Patients coinfectd with hepatitis C virus (HCV) and hepatitis A virus (HAV) or hepatitis B virus (HBV) are at increased risk for severe liver disease.
- Patients with HCV may be at increased risk for acquiring HBV.
- Vaccination against hepatitis A and B is beneficial in all patients with chronic liver disease. However, responses are better in patients with early compared to advanced disease.

VACCINATION APPROACH BASED ON SEROLOGY

* Anti-HAV: antibodies to hepatitis A antigen, either IgG or total (IgG plus IgM).

** Anti-HBs: antibody to hepatitis B surface antigen

Note: A positive anti-HBc (antibody to hepatitis B core antigen) in the absence of anti-HBs may not indicate immunity, and recommendations for vaccinations in this situation are not available.

RECOMMENDED VACCINATION SCHEDULE FOR ADULTS[§]

§ If the series is delayed between doses, it is NOT necessary to restart the series. Continue from the last dose given.

* Vaccination begun with hepatitis A vaccine from one manufacturer may be completed with hepatitis A vaccine from another manufacturer.^{2,3}

Havrix[®]1440 EL.U./1.0 mL or Vaqta[®] 50 U/1.0 mL given intramuscularly in the deltoid muscle.

† Enderix-B[®] 20 mcg/1.0 mL or Recombivax HB[®] 10 mcg/1.0 mL given intramuscularly in the deltoid muscle. Enderix-B[®] can be used to complete a vaccination course initiated with Recombivax HB[®].

‡ For hemodialysis patients:

Enderix-B[®]: two 20 mcg/1.0 mL injections given at 0, 1, 2 and 6 months or Recombivax HB[®] 40 mcg/mL given at 0, 1, and 6 months, intramuscularly in the deltoid muscle.

± Twinrix[®] (combination of Havrix[®] 720 EL.U. and Enderix-B[®] 20 mcg vaccine in 1 mL) given intramuscularly in the deltoid muscle.

NONRESPONDERS^{8,9}

In immunocompromised patients and in hemodialysis patients, serologic testing may be necessary to determine antibody response. Additional booster doses of hepatitis A and/or hepatitis B vaccine or restarting the vaccination series may be needed.

REFERENCES

- Centers for Disease Control and Prevention. Prevention of Hepatitis A Through Active or Passive Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(RR07):1-23
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- Vaqta[®] (Hepatitis A Vaccine, Inactivated) package insert. Whitehouse Station, NJ; Merck & Co., Inc; 2007.
- Centers for Disease Control and Prevention. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP) Part II: Immunization of Adults. MMWR 2006; 55(RR16):1-25.
- Enderix-B[®] [Hepatitis B Vaccine, (Recombinant)] package insert. Research Triangle Park, NC; GlaxoSmithKline; 2006.
- Recombivax HB[®] (Hepatitis B Vaccine, Recombinant) package insert. Whitehouse Station, NJ; Merck & Co., Inc; 2007.
- Twinrix[®] [Hepatitis A Inactivated and Hepatitis B (Recombinant) Vaccine] package insert. Research Triangle Park, NC; GlaxoSmithKline; 2007.
- Recommendations of the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the HIV Medicine Association of the Infectious Diseases Society of America (HIVMA/IDSA). Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. June 18, 2008; 1-286.
- Centers for Disease Control and Prevention. Recommendations for Preventing Transmission of Infections Among Chronic Hemodialysis Patients. MMWR 2001;50(RR05): 20-36.
- Centers for Disease Control and Prevention. FDA Approval of an Alternate Dosing Schedule for a Combined Hepatitis A and B Vaccine (Twinrix[®]). MMWR 2007;56(40):1057.

WHO TO VACCINATE	Hepatitis A Vaccine	Hepatitis B Vaccine
Persons with chronic liver disease		
• Alcoholic cirrhosis	●	●
• Chronic hepatitis B	●	●
• Chronic hepatitis C	●	●
• Autoimmune hepatitis	●	●
• Primary biliary cirrhosis	●	●
• Patients undergoing liver transplantation	●	●
Persons with HIV infection		●
Injection drug users	●	●
Persons engaged in high risk sexual activity		
• Men who have sex with men	●	●
• Persons with >1 sexual partner in a six-month period	●	●
Persons and military personnel traveling to endemic areas	●	●
Persons at occupational and/or transmission risk		
• Food handlers and kitchen workers	●	
• Certain institutional workers	●	
• Employees of day-care centers	●	
• Laboratory workers handling live hepatitis A	●	
• Police officers		●
• Personnel providing first-aid or medical assistance		●
• Healthcare personnel		●
Subpopulations at increased risk of exposure		
• Residence of communities experiencing an outbreak of hepatitis A	●	
• Sexual partners of HBV-infected persons		●
• Infants born to HBV-infected mothers		●
• Persons living with someone who has hepatitis B		●
• Patients on hemodialysis		●
• Recipients of frequent blood transfusions or clotting factors	●	●
• Prisoners		●
• Alaskan natives	●	●
• Pacific Islanders		●

Anti-HAV*	-	-	+	+
Anti-HBs**	-	+	-	+
	HAV & HBV Combination Vaccine (Twinrix [®]) or Individual Vaccines	HAV Vaccine (Havrix [®] or Vaqta [®])	HBV Vaccine (Enderix-B [®] or Recombivax HB [®])	No vaccine

	Month 0	Month 1	Month 6
Hepatitis A vaccine ^{*#}	●		●
Hepatitis B vaccine ^{†‡}	●	●	●
Hepatitis A and B combination vaccine ^{±α}	●	●	●

α In select patients, consider accelerated dosing of Hepatitis A and B combination vaccine (Day 0, Day 7, Day 21-30, Booster at 12 months).

For further information, consult the VA hepatitis C website at www.hepatitis.va.gov and the NIH Consensus Statement at consensus.nih.gov

