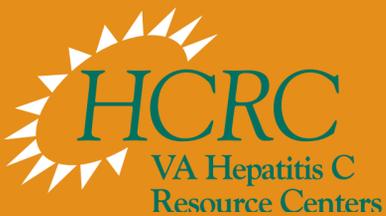


VACCINATION AGAINST HEPATITIS A & B

A Summary of Current Recommendations

Veterans Health Administration

National Hepatitis C Program and Hepatitis C Resource Centers



VACCINES FOR HEPATITIS A & B

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

WHO TO VACCINATE FOR HEPATITIS A AND/OR HEPATITIS B¹⁻⁶

- 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 FOR HEPATITIS A & B?

- Patients coinfecting 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

- * Vaccination begun with hepatitis A vaccine from one manufacturer may be completed with hepatitis A vaccine from another manufacturer.^{3,8}
- # 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.
- ‡ 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.

NONRESPONDERS¹⁻⁹

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

- CDC. Prevention of Hepatitis A Through Active or Passive Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48 (RR12):1-37.
- Havrix[®] (Hepatitis A Vaccine, Inactivated) package insert. Philadelphia, PA; SmithKline Beecham; 2003.
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- CDC. Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States through Universal Childhood Vaccination: Recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR 1991;40 (RR13):1-19.
- Enderix-B[®] [Hepatitis B Vaccine, (Recombinant)] package insert. Philadelphia, PA; SmithKline Beecham; 2003.
- Recombivax HB[®] [Hepatitis B Vaccine, (Recombinant)] package insert. Whitehouse Station, NJ; Merck & Co., Inc; 2003.
- Twinrix[®] [Hepatitis A Inactivated and Hepatitis B (Recombinant) Vaccine] package insert. Philadelphia, PA; SmithKline Beecham; 2003.
- Centers for Disease Control and Prevention. Recommendations and Reports: Hepatitis A and B Vaccines. MMWR 2003;52 (RR01): 34-36.
- Centers for Disease Control and Prevention. Recommendations for Preventing Transmission of Infections Among Chronic Hemodialysis Patients. MMWR 2001;50(RR05): 20-36.

WHO TO VACCINATE

Chronic liver disease

- Alcoholic cirrhosis
- Chronic hepatitis B
- Chronic hepatitis C
- Autoimmune hepatitis
- Primary biliary cirrhosis
- Patients undergoing liver transplantation

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 known to be HBsAg positive
- 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

Hepatitis A Vaccine

Hepatitis B Vaccine

	Hepatitis A Vaccine	Hepatitis B Vaccine
Chronic liver disease	●	●
Injection drug users	●	●
Persons engaged in high risk sexual activity	●	●
Persons and military personnel traveling to endemic areas	●	●
Persons at occupational and/or transmission risk	●	●
Subpopulations at increased risk of exposure	●	●

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±	●	●	●

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

