HepB
Hepatitis B Vaccine

Pathophysiology	**Hepatitis B Virus (HBV)** Transmitted by parenteral or mucosal exposure to HBsAg-positive blood and body fluids Incubation 45-160 days
Vaccine Description	Recombinant hepatitis B vaccine
Dose & Route:	Intramuscular. Hepatitis B vaccine administered by any route or site other than IM in the anterolateral thigh or deltoid muscle should not be counted as valid.

Recommended Doses of Currently Licensed Formulations of Hepatitis B Vaccine, by Age Group and Vaccine Type

TABLE 2. Recommended doses of hepatitis B vaccine, by group and vaccine type

	Single-antigen vaccine				Combination vaccine			
	Recombivax		Engerix		Pediarix*		Twinrix†	
Age group (yrs)	Dose (μg)	Vol (mL)	Dose (μg)	Vol (mL)	Dose (μg)	Vol (mL)	Dose (μg)	Vol (mL)
Birth–10	5	0.5	10	0.5	10*	0.5	N/A	N/A
11–15	10§	1	N/A	N/A	N/A	N/A	N/A	N/A
11–19	5	0.5	10	0.5	N/A	N/A	N/A	N/A
≥20	10	1	20	1	N/A	N/A	20†	1
Hemodialysis patients and other immune-compromised persons								
<20	5	0.5	10	0.5	N/A	N/A	N/A	N/A
≥20	40	1	40	2	N/A	N/A	N/A	N/A

Abbreviation: N/A = not applicable.
* Pediarix is approved for use in persons aged 6 weeks through 6 years (prior to the 7th birthday).
† Twinrix is approved for use in persons aged ≥18 years.
§ Adult formulation administered on a 2-dose schedule.

TABLE. Recommended doses and schedules of hepatitis B vaccine for adults aged ≥18 years and persons aged 11–19 years, by vaccine type and age group*

HepB vaccine*/Age group, yrs	Dose (μg)	Volume (mL)	Schedule
Recombivax HB			
11–15	10	1	2 doses at 0 and 4–6 mos†
11–19	5	0.5	3 doses at 0, 1, and 6 mos†
≥20	10	1	
Adults on hemodialysis and other immunocompromised adults aged ≥20	40	1	
Engerix-B			
11–19	10	0.5	3 doses at 0, 1, and 6 mos
≥20	20	1	
Adults on hemodialysis and other immunocompromised adults aged ≥20	40	2	4 doses at 0, 1, 2, and 6 mos§
Heplisav-B			
≥18¶	20	0.5	2 doses at 0 and 1 mos
Twinrix (HepA-HepB combination vaccine)			
≥18	20	1	3 doses at 0, 1, and 6 mos (standard) or 4 doses at 0 d, 7 d, 21–30 d, and 12 mos (accelerated)
PreHevbrio (ACIP-recommended in 2022)			
≥18¶	10	1	3 doses at 0, 1, and 6 mos

Abbreviations: ACIP = Advisory Committee on Immunization Practices; HepA = hepatitis A; HepB = hepatitis B.
* If the HepB vaccination schedule is interrupted, the series does not need to be restarted. If a 3-dose series is interrupted after the first dose, the second dose should be administered as soon as possible; the second and third doses should be separated by an interval of ≥8 weeks. If only the third dose has been delayed, it should be administered as soon as possible. The final dose of a 3-dose series must be administered ≥8 weeks after the second dose and ≥16 weeks after the first dose; the minimum interval between the first and second doses is 4 weeks. Inadequate doses of hepatitis B vaccine or doses received after a shorter-than-recommended dosing interval should be readministered, using the correct dosage or schedule. Vaccine doses administered ≤4 days before the minimum interval or age are considered valid. Because of the unique accelerated schedule for Twinrix (https://www.fda.gov/media/119351/download), the 4-day guideline does not apply to the first 3 doses of this vaccine when administered on a 0-day, 7-day, 21–30-day, and 12-month schedule. PreHevbrio (https://www.fda.gov/media/154561/download) is a three-antigen HepB vaccine approved by the Food and Drug Administration in 2021 and recommended by ACIP in 2022.
† A 2-dose schedule of Recombivax HB adult formulation (10 μg) (https://www.fda.gov/media/74274/download) is licensed for children and adolescents aged 11–15 years. When scheduled to receive the second dose, persons aged ≥16 years should be switched to a 3-dose series, with doses 2 and 3 consisting of the pediatric formulation administered on an appropriate schedule.
§ Engerix-B (https://www.fda.gov/media/119403/download) for adults on hemodialysis and is administered as a series of 4 doses (2 mL each) as a single 2-mL dose or as two 1-mL doses on a 0-, 1-, 2-, and 6-month schedule. Recombivax HB for adults on dialysis is a 3-dose series.
¶ The safety and effectiveness of Heplisav-B and PreHevbrio have not been established in adults on hemodialysis. Data are not available to assess the effects of Heplisav-B and PreHevbrio on breastfed infants or on maternal milk production and excretion. Data on Heplisav-B (https://www.fda.gov/media/108745/download) and PreHevbrio are currently insufficient to inform vaccine-associated risks in pregnancy. Thus, providers should vaccinate pregnant persons needing HepB vaccination with Engerix-B, Recombivax HB, or Twinrix.

Administration Schedule	Dose Recommended Age Minimum Interval 1 ..... …..Birth……*Monovalent HepB vaccine only 2……1-2 months.....4 weeks from dose 1 3……6-18 months.....At least 8 weeks after 2nd dose and at least 16 weeks after 1st dose and infants must be at least 24 weeks of age • All children and adolescents < 19 years and not previously vaccinated with hepatitis B series based on shared clinical decision making should be vaccinated at the earliest opportunity**.** • It is permissible to administer 4 doses of hepatitis B vaccine (e.g., when combination vaccines are given after the birth dose). • Adolescents and adults (≥ 18 years) may receive a 2- dose series of Hep B (Heplisav-B) at least 4 weeks apart. • **Adolescents and adults (≥ 18 years) may receive a 3- dose series of Hep B (PreHevbrio) on a 0-, 1-and 6-month schedule.** • Adults aged ≥ 20 years at risk for hepatitis B infection or lack a risk factor but want protection should receive 1 mL x 3 doses typically given at 0, 2 & 6 months.

Contraindications and Precautions	• Anaphylactic reaction following a prior dose of HepB • Persons with hypersensitivity to yeast, yeast products or any vaccine component • Defer vaccination in persons with moderate or severe acute illness until illness subsides. • Prefilled syringes might contain natural rubber latex, which might cause allergic reactions in persons who are latex-sensitive • **The safety and effectiveness of Heplisav-B and PreHevbrio have not been established in adults on hemodialysis.** • **Data are not available to assess the effects of Heplisav-B and PreHevbrio on breastfed infants or on maternal milk production and excretion.** • **Data on Heplisav-B and PreHevbrio are currently insufficient to inform vaccine-associated risks in pregnancy. Thus, providers should vaccinate pregnant persons needing HepB vaccination with Engerix-B, Recombivax HB, or Twinrix.**
Special Instructions **Perinatal HepB website:** https://dph.georgia.gov/epidemiology/viral-hepatitis/hepatitis-b/perinatal-hepatitis-b	Infants born to hepatitis B positive (*HBsAg)* women must receive hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth regardless of birth weight. Intervention — Recommended Age 1st dose .....Birth (within 12 hours) HBIG .....Birth (within 12 hours) 2nd dose……1-2 months 3rd dose…….6 months PVT*……9-18 months *PVT: Post vaccination Test-includes Hepatitis B Surface Antigen/ HBsAg (infection) and Hepatitis B Surface Antibody/Anti-HBs (antibody protection) Protocol available in the Georgia Immunization Program Manual For infants weighing less than **2000 grams** at birth: • If the mother is *HBsAg negative*, the 1st dose should be given **at birth or at next doctor's visit** • If the mother is *HBsAg positive or her status is unknown*, the infant should receive the 1st dose within 12 hours of birth regardless of birth weight, dose #2 at age 1 month, dose #3 at 2-4 months, and dose #4 at age 6 months. The infant should be tested at 9-12 months of age for infection and antibody. If the mother is *HBsAg positive*, the infant should also receive HBIG at birth within 12 hours of birth.

Special Populations	• Chronic liver disease • Hepatitis C virus infection • Percutaneous or mucosal risk of exposure to blood • Adults younger than age 60 years with diabetes mellitus or 60 years or older with diabetes mellitus based on individual clinical decision • Adults in pre-dialysis care or receiving hemodialysis or peritoneal dialysis • Current or recent injection drug use • Health care and public safety workers at risk for exposure to blood-contaminated body fluids • Sexual exposure risk; persons seeking evaluation or treatment for a STI; and men who have sex with men • Adults receiving care in settings where a high proportion of adults have risk for hepatitis B infection such as STD treatment center, drug abuse treatment and prevention services, hemodialysis and end-stage renal disease programs, institutions for developmentally disabled persons, health care settings targeting services to injection drug users or MSM, HIV testing and treatment facilities, and correctional facilities • Travel to countries with high or intermediate hepatitis B endemicity