

Hepatitis B Vaccine Updates for Adults

	Vaccine Name	Dosage	Number of Doses	Route of Administration
Single-antigen vaccines	Energix-B® [Hepatitis B Vaccine (Recombinant)]	1.0 mL	3 doses	Intramuscular
	Recombivax HB® [Hepatitis B Vaccine (Recombinant)]	1.0 mL	3 doses	Intramuscular
	HEPLISAV-B® [Hepatitis B Vaccine (Recombinant), Adjuvanted]	0.5 mL	2 doses	Intramuscular
Three-antigen vaccine	PREHEVBRIO® [Hepatitis B Vaccine (Recombinant)]	1.0 mL	3 doses	Intramuscular
Combination vaccine	TWINRIX® [Hepatitis A and Hepatitis B Vaccine (Recombinant)]	1.0 mL	3 doses OR 4 doses - accelerated	Intramuscular

Updates with Hepatitis B Vaccines:

- In 2017, the FDA licensed a 2-dose single-antigen vaccine (Heplisav-B) that does not contain preservatives.
- In 2021, the FDA licensed a three-antigen vaccine (PreHevbrio), which targets the subtypes of hepatitis B virus.
- Safety and efficacy are established with 2 of the single-antigen vaccines (Energix-B and Recombivax) and the combination vaccine (Twinrix) for adults on hemodialysis, immunocompromised adults ≥ 20 years, and pregnant persons.

Updates to Recommendations:

- Universal recommendation for all adults 19 – 59 years to receive the vaccine series.
 - The significance of this recommendation is that providers no longer have to be screened for risk factors for hepatitis B prior to a recommendation to receive the vaccine. This should make the vaccine series more accessible and result in decreased cases of hepatitis B.
- Adults ≥ 60 years with risk factors for hepatitis B should receive the vaccine series.
- Adults ≥ 60 years without risk factors for hepatitis B may receive the vaccine series. It is recommended to utilize shared clinical decision making.

*Risk factors for hepatitis B include:

- Persons at risk for infection by sexual exposure
- Persons at risk for infection by percutaneous or mucosal exposure to blood including:
 - Health care and public safety personnel
 - Current or recent injection drug use
 - Household contacts of people testing positive for HBsAg
 - Persons on maintenance dialysis and those who are predialysis
 - Persons with diabetes, at the discretion of the provider
 - International travelers to countries with high or intermediate levels of endemic HBV infection
 - Persons with hepatitis C virus infection
 - Persons with chronic liver disease
 - Persons with HIV infection
 - Persons who are incarcerated

**For vaccine formulations that are a 3-dose series, the minimum intervals are: 4 weeks between the 1st and 2nd doses, ≥ 16 weeks between the 1st and 3rd doses, and ≥ 8 weeks between the 2nd and 3rd doses. It is important to note that if

the intervals between any of the doses are longer than these time frames, the vaccine series does not have to be restarted.

It is generally recommended that the vaccine series be completed by the same manufacturer.

Warnings and Precautions:

Patients should NOT receive hepatitis B vaccines if they have a history of severe allergic reaction to any hepatitis B vaccines, any component of the formulation. Additional considerations include severe allergic or hypersensitivity reactions to yeast for the Recombivax HB and Heplisav-B vaccine. The Twinrix vaccine should not be administered to those with a history of severe allergic or hypersensitivity reactions to both yeast and neomycin.

Adverse Reactions:

For all hepatitis B vaccines, most common side effects reported in adults were injection site pain, swelling, and local reactions. The most frequent systemic reactions include fever, fatigue, headache, malaise, and weakness.

How Long to Work and Duration of Protection:

It is generally thought that adequate anti-HBs are achieved 1-2 months after the patients have received their last dose of their hepatitis B vaccine series.

Evidence supports that the hepatitis B vaccine provides protection for at least 30 years even if the patient's anti-HBs levels are low or undetectable. There are on-going studies to determine if booster doses of HepB vaccines will be needed.

Availability and Cost:

Hepatitis B vaccines are available at many retail pharmacies, community health clinics, health departments, and other community locations.

Most private health insurance plans and Medicare Part B cover the cost of hepatitis B vaccines.

There may be different assistance programs that can assist with vaccine cost for those who are not able to afford them.

Storage:

For all vaccines, regardless of whether available as a vial or syringe, it should be stored refrigerated, not frozen, at 2-8° C (36-46° F). Both Recombivax HB and PreHevbrio should also be stored protected from light.

Helpful resource for clinical questions - https://www.immunize.org/askexperts/experts_hepb.asp#adult

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Published on behalf of the [ASHP Section of Ambulatory Care Practitioners Advisory Group on Ambulatory Care Pharmacotherapy](#).

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