



## Immunization

# Hepatitis B (HepB) birth dose and Perinatal HepB Prevention Program

In the United States in 2022, an estimated [1.89 million people](#) are living with hepatitis B, which [increases the risk of premature death](#) from cirrhosis and liver cancer by as much as 25%. Hepatitis B virus (HBV) is highly infectious and can remain viable and transmissible on environmental surfaces for at least seven days, even in the absence of visible blood. People living with chronic infection (e.g., those with persistent hepatitis B surface antigen [HBsAg] for at least six months following acute infection) serve as the main reservoir for HBV transmission.

In 1991, the United States adopted a strategy for universal HepB vaccination of infants, giving rise to the “birth dose” of HepB vaccine. What has followed in the years since has been a national standard of care [to eliminate HBV transmission](#) to people throughout their lifespan and includes:

1. [Routine screening](#) (HBsAg) for all pregnancies and [immunoprophylaxis\\*](#) for infants born to people who are [HBsAg-positive](#). (*Hepatitis B immune globulin [HBIG] and HepB vaccine, administered within 12 hours of birth*).
  - a. If the birthing parent’s HBsAg status is unknown, the infant should receive HBIG and HepB vaccine within 12 hours after birth, and the facility should order a HBsAg on the birthing person before discharge.
2. Universal HepB vaccination of infants [beginning at birth](#).
3. [Routine HepB vaccination](#) for unvaccinated and undervaccinated children and adolescents.
4. Vaccination of adults for Hepatitis B (MMWR 4.1.22, [Routine vaccination for unvaccinated adults age 19-59 years, and vaccination for adults age 60 years and older with certain risk factors](#)).

[CDC advises](#) administering recommended vaccines if immunization history is incomplete or unknown.

The focus of the HepB birth dose and on-time completion of the HepB vaccination series during the first year of life is crucial. Risk of chronic infection is related to age at infection. Chronic infection develops in approximately 90% of infants after acute infection at birth,

25%-50% of children newly infected at ages 1-5 years, and only 5% of people newly infected as adults.

### Colorado's Perinatal Hepatitis B Prevention Program

The Colorado Department of Public Health and Environment's (CDPHE) Immunization Branch houses the [Perinatal Hepatitis B Prevention Program](#) (PHBPP) and promotes the national standard of care, along with partners from [CDC](#), [Immunize.org](#), and the [American Academy of Pediatrics](#) (AAP). Together, these groups and others advocate for hospitals and birthing centers to provide a universal HepB birth dose and treat any infant born to a person who has a positive or unknown HBsAg blood test with [HBIG and HepB vaccine](#), which has been shown to:

- [Prevent 94% of transmission](#) to infants born to HBsAg-positive people.
- Protect infants from infected family members and other caregivers.
- Provide a safety net to prevent perinatal transmission when medical errors occur.

CDPHE's PHBPP coordinator provides case management for any pregnant or recently pregnant person who is [HBsAg-positive](#) and their infant(s) and can serve as a resource for providers. All positive test results (HBsAg, IgM anti-HBc, HBeAg, or HBV DNA) from laboratories and facilities must be reported to CDPHE within [four days](#), as required by the rules and regulations pertaining to epidemic and communicable disease control set forth by the Colorado Board of Health in [6 CCR 1009-1](#). Once a report is received, the PHBPP coordinator determines if the person is within the parameters of the program and will follow up either prenatally or postpartum. The infant is monitored until [post vaccination serologic testing](#) (PVST) is completed, which assesses the child for infection and immunity and directs further care.

At times, the PHBPP coordinator is made aware of exposed infants who have not received the following standards of care, including: 1) being provided the HepB birth dose and the vaccination series on time (or on a [catch up schedule](#)); 2) being provided HBIG within 12 hours of birth (standard) or within seven days after birth (in unusual circumstances) and ONLY if the infant weighs 2,000 grams or more; and 3) ensure the infant receives [PVST](#).

If after education, effort, and offered support following the **known** exposure to hepatitis B, a family remains non-compliant with providing vaccine prophylaxis for the infant and, as a result child abuse/neglect is suspected, providers (as mandatory reporters) should submit a report to [child protective services](#) (CPS) by calling 844-264-5437.

If providers have clinical questions related to **Hepatitis B vaccine**, email the Clinical Resources Unit of CDPHE's Immunization Branch at [cdphe\\_vacs@state.co.us](mailto:cdphe_vacs@state.co.us). Send **questions related to the Perinatal Hepatitis B Prevention Program** and submit [HBIG forms](#) (required for birthing facilities within 24 hours following delivery Leovi Madera, Perinatal Hepatitis B Prevention Program (PHBPP) Case Coordinator, at [leovi.madera@state.co.us](mailto:leovi.madera@state.co.us).