Newborn Girls Less Likely to Receive Hepatitis B Vaccine

Overall, parental refusal of hepatitis B vaccine also rose significantly since 2018.

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Newborn girls were less likely to receive the hepatitis B vaccine, which prevents hepatitis B virus (HBV) and chronic liver disease, according to a new study published in Pediatrics. Overall, newborn vitamin K injections, which prevent potentially fatal bleeding, and hepatitis B vaccine decline rates more than doubled from 2018 to 2025.

Since 1991, the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices has recommended routine hep B screening during pregnancy and HBV vaccination of children at birth with periodic reviews of data confirming the safety and effectiveness of the practice.

In 2025, the CDC recommended a change in the hep B vaccine schedule. Instead of vaccinating all children at birth, children of mothers who test negative for HBV would receive their first dose of the vaccine at age 2 months.

“This change conflicts with American Academy of Pediatrics guidance and may confuse families, reinforce vaccine misinformation and exacerbate declining vaccination rates,” wrote the study’s authors.

Hep B is a highly contagious virus that spreads through bodily fluids, including blood and semen. Thus, pregnant women with HBV can pass it on to their infants during childbirth. Vaccines are the best way to prevent the spread of infection. Untreated HBV, or chronic hep B, can cause serious liver complications, including cirrhosis and liver cancer.

To learn more about HBV, read Hep’s Hepatitis B Basics.

The number of new hep B cases in the United States declined from about 260,000 per year in the 1980s, before the vaccine was widely available, to 21,000 in 2016, with the greatest decline seen in children and adolescents, according to a 2023 study published in public health reports.

For the present study, researchers from the Children's Hospital of Philadelphia and the University of Pennsylvania analyzed rates of vitamin K and HBV administration at birth among 93,163 newborns in the local health system between 2018 and 2025.

Rates of vitamin K prophylaxis and hep B vaccination at birth declined yearly. Although hep B vaccine decline increased among both sexes, female newborns were less likely to receive the HBV vaccine. In 2018, the absolute incidence of female HBV vaccine refusal was 86.4 per 1,000 births; in 2025, the refusal rose to 173.7 per 1,000 births. Male newborn HBV vaccine refusal incidence was 77.9 per 1,000 births in 2018 and 166.3 per 1,000 births in 2025. For vitamin K administration, the gap was wider between male and female newborns.

"VK prophylaxis decline rates doubled between 2018 and 2025 among both sexes, but two thirds of newborns not administered VK prophylaxis were female," wrote the study's authors.

The study's authors point to sociocultural, religious and individual factors impacting parental decisions for preventive newborn care. However, the sex gap in newborn hepatitis B vaccination is not widely understood, and "minimal data describe such decision-making through a sex-specific lens," according to the authors.

To read more about HBV vaccination rates and news related to changing vaccine schedules, click #HBV vaccine.
