



## The Importance of the Hepatitis B Virus (HBV) Vaccine for Infants

### Key points:

- Many women are unaware that they have HBV infection, and relying only on testing during pregnancy will miss infected women.
- HBV is readily transmitted to infants during delivery, and 90% of infected infants will develop a chronic incurable infection with 25% dying from cirrhosis or liver cancer.
- The HBV vaccine has been available for over 40 years with billions of doses given, and it has been shown to be safe and well-tolerated.
- The HBV vaccine given at birth is 75-95% effective in preventing perinatal HBV infection.

### Perinatal Screening for HBV Does not Occur Consistently

- Approximately 0.7% to 0.9% pregnant women in the US have chronic HBV infection. This corresponds to over 25,000 infants at risk of chronic HBV infection each year.<sup>1</sup>
- About a third of people with HBV infection do not have identified risk factors.<sup>2</sup>
- Up to half a million (~14%) pregnant persons are not tested with HBsAg to prevent perinatal HBV transmission each year.<sup>3</sup>
- Maternal records on HBV infections status are sometimes unavailable, incorrect, misinterpreted or falsely negative. Between 1999 and 2002 there were over 500 perinatal HBV infections due to these types of situations.<sup>4</sup>

### Infants Born to Mothers with HBV Infection are at High Risk for Chronic HBV Infection

- Hepatitis B virus (HBV) is effectively transmitted from mother to infant via infected blood and body fluids **during delivery**.<sup>5</sup>
- The likelihood of transmission depends on maternal viral load. The risk of infection is highest (90%) in mothers who are HBsAg-positive, HBeAg-positive.<sup>5,6</sup>
- There are roughly 1000 cases of perinatally acquired HBV in the US each year.<sup>5</sup>
- 90% of infants infected with HBV will develop chronic infection.<sup>5,7</sup>
- There is no medication that will cure chronic HBV infection.
- About 25% of infants with chronic infection will die from hepatocellular carcinoma or liver cirrhosis later in life without treatment.<sup>5,6</sup>



## The HBV Vaccine is Safe and Effective in Preventing Perinatal HBV Infection

- The HBV vaccine has been available in the US since 1982.<sup>5</sup>
- The infant dose of the HBV vaccine is safe and well-tolerated.<sup>5, 8, 9</sup>
- In a study comparing 3302 infants receiving HBV vaccine within 21 days of birth and 2353 infants who did not, HBV vaccine was not associated with an increase in the number of febrile episodes, sepsis evaluations or allergic or neurologic events.<sup>8</sup>
- A dose of HBV vaccine given within 24 hours of birth is 75% to 95% effective at preventing infection in infants born to infected mothers.<sup>5</sup>
- The combination of HBV vaccine and hepatitis B immune globulin (HBIG) given within 12 hours of birth is 85% to 95% effective in preventing perinatal transmission of HBV in infants born to infected mothers.<sup>6</sup>

## The Risk of Horizontal Transmission from Infected Household and Daycare Contacts

- HBV can survive on surfaces for up to 7 days.<sup>10</sup>
- Infection can occur via shared items (ex. toothbrush), from contaminated surfaces or from exposure to blood or body fluids.<sup>10</sup>
- In endemic areas up to one-third of infections in children are due to horizontal transmission.<sup>11</sup>
- Approximately 20% of children infected with HBV between 1-5 years of age develop a chronic infection.<sup>10</sup>

The information contained herein should not be used as a substitute for a physician's independent judgement as to appropriate medical care and treatment. There may be variations in treatment that are recommended based on individual facts and circumstances.

## References

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