



Frequently Asked Questions about

The Hepatitis B Vaccine

Why do infants need the hepatitis B vaccine? Why not immunize only children at highest risk of hepatitis B infection?

- The hepatitis B vaccine protects infants from developing a chronic (permanent) viral infection that can lead to liver failure, liver cancer, or other serious liver disorders later in life. An infant is much more likely than an adult to develop a chronic hepatitis B virus (HBV) infection when exposed to the virus. Medical experts estimate that of the infants infected with hepatitis B at birth, most (70% to 90%) will develop a chronic liver infection, and as many as 25% will die later in life from liver cancer or other liver disease caused by HBV.^{1,3}
- Newborns are at high risk for hepatitis B infection if their mothers are infected with the virus. These infants should be given the hepatitis B vaccine within 12 hours of birth, in addition to a dose of protective antibodies called Hepatitis B Immune Globulin (HBIG). However, most children who become infected with hepatitis B are born to mothers who are not infected with hepatitis B.²⁻⁵ Because there is no way to know which children will eventually be exposed, medical experts recommend that all children be vaccinated to protect against developing a hepatitis B infection and its consequences.
- Although hepatitis B virus is known to spread through contact with blood and other body fluids, approximately one-third of hepatitis B infections among children and adolescents occur in those with no known risk of infection, and many carriers of the virus show no apparent symptoms. In addition, healthcare providers may not always ask their patients about possible risk factors for HBV, and patients may not always tell their healthcare providers if they do have risk factors.
- Immunizing infants and all previously unimmunized children and adolescents against hepatitis B will protect them from catching the virus from family members, playmates, or others who are carriers of the virus.

Will my child need a booster shot of hepatitis B vaccine later?

The answer to this question is not yet known for certain. Studies have shown that as many as 13 years after the vaccine was given, immunized people remained protected. Ongoing studies are examining whether people immunized against hepatitis B will ever need a booster shot.⁶⁻⁸

Is the hepatitis B vaccine safe?

- Yes, the hepatitis B vaccine is very safe. Because vaccines are given widely and given to healthy people, they are held to the highest standards of safety. The vaccine was recommended in 1991 by the Centers for Disease Control and Prevention and the American Academy of Pediatrics for all infants and previously unimmunized children and adolescents. Since then, more than 86 million doses of hepatitis B vaccine have been given to children in the United States.⁹

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- Serious side effects (such as a serious allergic reaction) are extremely rare, occurring in only about 0.002% (2 out of 100,000) of people who receive this vaccine.
- Concerns have been raised about the theoretical risk of harm from thimerosal, a preservative formerly used in the hepatitis B vaccine that contains mercury. However, there is no evidence that any child has been harmed by exposure to the amounts of thimerosal in vaccines.¹⁰ Thimerosal has been used in small amounts in some vaccines for nearly 70 years. Recent changes in manufacturing techniques have allowed all routinely recommended vaccines, including hepatitis B vaccine, to be produced free of thimerosal or with only trace amounts.¹¹ Some vaccines, including all those that contain living virus (live-virus vaccines), never contained thimerosal.

I have heard that the hepatitis B vaccine may cause disease of the nervous system such as multiple sclerosis (MS). Is that true?

- No. Numerous studies have examined the issue and shown that there is no link between hepatitis B and MS. In 1998, the World Health Organization asked the Viral Hepatitis Prevention Board to review all scientific data. These experts concluded that the evidence did not show that the vaccine causes MS.¹² In 2002, after further review of all available data, the Institute of Medicine (a prestigious medical research organization that provides objective, timely, and authoritative health information to the government and the public) published a report concluding that the vaccine does not cause MS. There still was not enough evidence, however, for the organization to conclude that vaccine does not cause other nervous system diseases.¹³
- The National Multiple Sclerosis Society has also said, after a review of all available data by their Medical Advisory Board, that no scientific data show a causal relationship between the hepatitis B vaccine and MS.¹⁴

Sources:

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