



## Hepatitis B Vaccine

Revised: August 15, 2024.

## Drug Levels and Effects

### Summary of Use during Lactation

The Centers for Disease Control and Prevention and several health professional organizations state that vaccines given to a nursing mother do not affect the safety of breastfeeding infants and that breastfeeding is not a contraindication to the hepatitis B vaccine. Hepatitis B vaccine is recommended along with hepatitis B immune globulin to be given by injection to infants of mothers who are positive for hepatitis B surface antigen. No differences exist in infection rates between breastfed and formula-fed infants born to hepatitis B-infected women, as long as the infant receives these preventative measures at birth.[1] Breastfeeding improves the infant's response to hepatitis B immunization.[2] Mothers with hepatitis B are encouraged to breastfeed their infants after their infants receive these preventative measures.[3,4] Breastfeeding also appears to reduce infant side effects associated with routine childhood immunization. Breastfed infants should be vaccinated according to the routine recommended schedules.[5-7]

### Drug Levels

*Maternal Levels.* Relevant published information was not found as of the revision date.

*Infant Levels.* Relevant published information was not found as of the revision date.

### Effects in Breastfed Infants

Breastfeeding can enhance the response of the infant to certain vaccine antigens.[2,5,6,8] Breastfed infants are also less likely to have fever and may be less likely to experience anorexia and reduced energy intake after routine childhood immunization than those who are not breastfed.[9,10]

Breastfed infants of hepatitis B surface antigen positive mothers have a different response in the development of immunoglobulin subtypes after vaccination with hepatitis B vaccine than do formula-fed infants.[11] However, breastfeeding does not interfere with the infant's antibody response to hepatitis B vaccine.[12]

### Effects on Lactation and Breastmilk

Relevant published information was not found as of the revision date.

**Disclaimer:** Information presented in this database is not meant as a substitute for professional judgment. You should consult your healthcare provider for breastfeeding advice related to your particular situation. The U.S. government does not warrant or assume any liability or responsibility for the accuracy or completeness of the information on this Site.

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## References

1. Xiao F, Lan A, Mo W. Breastfeeding from mothers carrying HBV would not increase the risk of HBV infection in infants after proper immunoprophylaxis. *Minerva Pediatr* 2020;72:109-15. PubMed PMID: 28353321.
2. Liu H, Li L, Li Y, et al. Vaginal delivery and breastfeeding benefit infant immune response to hepatitis B vaccine: A prospective cohort study. *J Clin Transl Hepatol* 2023;11:899-907. PubMed PMID: 37408801.
3. Visvanathan K, Dusheiko G, Giles M, et al. Managing HBV in pregnancy. Prevention, prophylaxis, treatment and follow-up: Position paper produced by Australian, UK and New Zealand key opinion leaders. *Gut* 2016;65:340-50. PubMed PMID: 26475631.
4. Dionne-Odom J, Tita AT, Silverman NS. #38: Hepatitis B in pregnancy screening, treatment, and prevention of vertical transmission. *Am J Obstet Gynecol* 2016;214:6-14. PubMed PMID: 26454123.
5. Kroger A, Bahta L, Long S, et al. CDC. General Best Practices for Immunization. Available at: <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>
6. Kimberlin DW, Brady MT, Jackson MA, et al. Red Book: 2018 Report of the Committee on Infectious Diseases. 31st ed. Elk Grove Village, IL: American Academy of Pediatrics. 2018.
7. Gruslin A, Steben M, Halperin S, et al. Immunization in pregnancy: No. 220, December 2008. *Int J Gynaecol Obstet* 2009;105:187-91. PubMed PMID: 19367691.
8. Pabst HF. Immunomodulation by breast-feeding. *Pediatr Infect Dis J* 1997;16:991-5. PubMed PMID: 9380478.
9. Pisacane A, Continisio P, Palma O, et al. Breastfeeding and risk for fever after immunization. *Pediatrics* 2010;125:e1448-52. PubMed PMID: 20478932.
10. López-Alarcón M, Garza C, Habicht JP, et al. Breastfeeding attenuates reductions in energy intake induced by a mild immunologic stimulus represented by DPTH immunization: possible roles of interleukin-1beta, tumor necrosis factor-alpha and leptin. *J Nutr* 2002;132:1293-8. PubMed PMID: 12042449.
11. Azzari C, Resti M, Rossi ME, et al. Modulation by human milk of IgG subclass response to hepatitis B vaccine in infants. *J Pediatr Gastroenterol Nutr* 1990;10:310-5. PubMed PMID: 2324890.
12. Wang JS, Zhu QR, Wang XH. Breastfeeding does not pose any additional risk of immunoprophylaxis failure on infants of HBV carrier mothers. *Int J Clin Pract* 2003;57:100-2. PubMed PMID: 12661791.

## Substance Identification

### Substance Name

Hepatitis B Vaccine

### Drug Class

Breast Feeding

Lactation

Milk, Human

Vaccines