



Haemophilus Vaccines

Revised: October 31, 2018.

Drug Levels and Effects

Summary of Use during Lactation

Although there is some conflicting information on the effect of breastfeeding on infants' antibody response to *Haemophilus influenzae* type b vaccines, there is no evidence that breastfeeding reduces protection against the disease. 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 for mothers or infants and that breastfeeding is not a contraindication to the *Haemophilus influenzae* vaccine.[1][2][3]

Breastfeeding alone appears to increase antibodies against *Haemophilus influenzae* and reduce the incidence of *Haemophilus influenzae* type b meningitis.[4][5][6] Breastfeeding also appears to reduce infant side effects associated with routine childhood immunization. Breastfed infants should be vaccinated according to the routine recommended schedules.

Drug Levels

Maternal Levels. A study compared colostrum and milk antibody levels following maternal immunization with *Haemophilus influenzae* type b polysaccharide vaccine at 3 time periods. Women who were immunized at 24 to 26 weeks of pregnancy had higher antibody levels in colostrum (average 21 mg/L) and in breastmilk at 3 or 6 months after delivery (average 3.1 mg/L) than women who were immunized 1 to 8 months before pregnancy (average 0.13 mg/L at 3 or 6 months postpartum) or those who had not been immunized (average 0.91 mg/L in colostrum, and 0.09 mg/L at 3 or 6 months postpartum).[7]

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

Effects in Breastfed Infants

Breastfed infants are less likely to have fever[8] and may be less likely to experience anorexia and reduced energy intake[9] after routine childhood immunization than those who are not breastfed.

In 2 studies, breastfed infants had higher antibody titers against *Haemophilus influenzae* type b than formula-fed infants at 7 and 12 months of age after vaccination with a *Haemophilus influenzae* type b conjugate vaccine.[1][10] In another study, infants breastfed for longer than 90 days had a better antibody response to the vaccine at 13 months of age than those breastfed less than 90 days.[11]

In a study of 408 infants immunized with *Haemophilus influenzae* type b polysaccharide-tetanus toxoid conjugate vaccine, no difference in antibody titer was observed at 7 months between infants breastfed for less than 4 weeks and those who were breastfed for 24 weeks or more. Likewise, no difference in antibody response was found when infants were grouped by breastfeeding less than 1 month or greater than 1 month.[12] Another study of 252 infants who each received one of 4 *Haemophilus influenzae* type b vaccines found no difference in antibody titers among those who were breastfed and those who were not.[13]

Among 272 infants who were vaccinated with Hib PRP-OMP vaccine at 2 and 4 months postpartum, 101 were breastfed and 171 were formula fed. Of the breastfed infants, 79% were breastfed at least 80% at 7 weeks and 59% at 7 months of age. Breastfed infants had lower IgG titers than formula-fed infants at both 7 weeks and 7 months of age. Although the difference was statistically significant after adjustment for confounding variables, no invasive *Haemophilus influenzae* type b infections occurred in any of the infants in the study.[14]

Effects on Lactation and Breastmilk

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

References

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Substance Identification

Substance Name

Haemophilus Vaccines

Drug Class

Breast Feeding

Lactation

Vaccines