



Botulinum Poisoning

Revised: June 15, 2024.

Drug Levels and Effects

Summary of Use during Lactation

Little information is available on the transfer of the botulinum toxin into breastmilk. It is unlikely that botulinum toxin enters breastmilk because of its high molecular weight. Infants of breastfeeding mothers should be monitored closely for signs and symptoms of botulism such as low muscle tone, a weak cry, gastrointestinal symptoms, or difficulty feeding and swallowing. The Centers for Disease Control and Prevention recommends that if the decision is made to temporarily stop breastfeeding, the mother should express her milk and throw it away until administration of the antitoxin.

Breastfeeding can continue while receiving botulinum antitoxin. Breastfed infants should be monitored closely for signs and symptoms of adverse impacts from botulinum antitoxin if given to the infant including flu-like symptoms, such as fevers, chills, and malaise.

Drug Levels

Maternal Levels. Type A botulinum toxin was detected in the blood and stools of a nursing mother after ingesting fermented salmon eggs. The mother was given 2 vials of trivalent botulism antitoxin, 1 intravenously and 1 intramuscularly. A milk sample obtained 4 hours after administration of the antitoxin had no detectable botulinum toxin nor botulism organisms.[1]

Infant Levels. Type A botulinum toxin was detected in the blood and stools of a nursing mother after ingesting fermented salmon eggs. No botulinum toxin was detected in the infant's blood or stool on the day the mother was admitted to the hospital and no botulism organisms were detected in the infant's stools.[1]

Effects in Breastfed Infants

The three breastfeeding women who breastfed their children while ill with botulism are briefly described in the literature. One mother with severe type A foodborne botulism breastfed her infant aged 8 months while acutely ill with cranial nerve palsies, weakness, and shortness of breath that required intubation and respiratory support for 2 weeks. Neither *C. botulinum* nor botulinum toxin were identified in her breastmilk, which was obtained for testing on the third day of her illness, 4 hours after she received trivalent ABE botulinum antitoxin. The infant

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.

Attribution Statement: LactMed is a registered trademark of the U.S. Department of Health and Human Services.

was reportedly breastfed throughout the mother's illness, including before the mother received antitoxin, and did not develop any signs or symptoms of botulism. The infant did not receive antitoxin, *C. botulinum* was not identified in the infant's stool, and botulinum toxin was not identified in the infant's stool or serum collected on the third day of the mother's illness. Another study involved an infant aged 2 months who breastfed while the mother was acutely ill with botulism. The mother was reported to have died from type A botulism; however, the signs and symptoms she experienced were not specified. The infant did not develop any signs or symptoms of botulism. The study did not specify whether the infant received testing. Another infant aged 2 months breastfed without becoming symptomatic while the mother was acutely ill with type B botulism. The mother had cranial nerve palsies and generalized weakness, and required a tracheostomy. The infant received antitoxin (timing of antitoxin not specified) and remained asymptomatic. The study did not specify whether the infant received testing.[2,3]

Effects on Lactation and Breastmilk

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

References

1. Middaugh J. Botulism and breast milk. *N Engl J Med* 1978;298:343. PubMed PMID: 622098.
2. Rao AK, Sobel J, Chatham-Stephens K, et al. Clinical guidelines for diagnosis and treatment of botulism, 2021. *MMWR Recomm Rep* 2021;70:1-30. PubMed PMID: 33956777.
3. Douthirt C. An outbreak of botulism in Tucumcari, New Mexico. *Southwest Med* 1938:51-3.

Substance Identification

Substance Name

Botulinum Poisoning

Drug Class

Breast Feeding

Lactation

Milk, Human

Foodborne Diseases

Poisoning