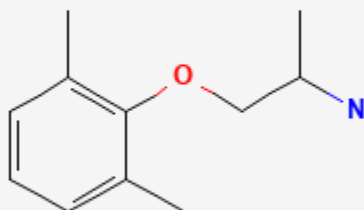




## Mexiletine

Revised: July 15, 2023.

CASRN: 31828-71-4



## Drug Levels and Effects

### Summary of Use during Lactation

Maternal doses of mexiletine up to 600 mg daily produce low levels in milk and would not be expected to cause any adverse effects in breastfed infants.

### Drug Levels

*Maternal Levels.* A woman taking mexiletine 200 mg orally every 8 hours had milk levels measured during the first 4.5 days postpartum. The highest peak milk mexiletine level was 959 mcg/L and the lowest trough milk level was about 310 mcg/L.[1]

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One woman taking mexiletine 200 mg orally three times daily had milk mexiletine levels of 600 and 900 mcg/L at unspecified times after doses at 2 and 6 weeks postpartum.[2]

Data from these two cases indicate that the dosage that the maximum dosage the infant receives from breastmilk is less than 2% of the mother's weight-adjusted dosage.

A woman who was nursing her 9-month-old infant was given mexiletine 200 mg three times daily for seven doses. Five milk samples were obtained over an 8-hour period, just before a dose and 2, 4, 6 and 8 hours after the dose. The trough sample had a mexiletine concentration of 1.06 mg/L, the peak was 1.9 mg/L at 2 hours after the dose, and an 8-hour sample had 1.24 mg/L. Following a second pregnancy, at 3 months postpartum, 7 breast milk samples were collected over an 8-hour period, just before the seventh dose of 200 mg and 1, 2, 3, 4, 6, and 8 hours after the dose. The trough level was 0.89 mg/L, the peak of 2.82 mg/L occurred at 1 hour after the dose, and the 8-hour level was 0.96 mg/L. The relative infant dose of the infants were 1.4% and 2.6% of the mother's weight-adjusted dosage, although the first infant was only about 50% breastfed. If it had been fully breastfed, the relative infant dose would have been 2.8%. Additionally, the authors estimated that the infants would receive 2.7% and 5.1% of the starting infant dose of mexiletine.[3]

*Infant Levels.* One woman taking mexiletine 200 mg orally three times daily. Her breastfed infant's serum levels were undetectable (<50 mcg/L) at unspecified times after doses at 2 and 6 weeks postpartum.[2]

## Effects in Breastfed Infants

Failure to thrive in a 17-day-old breastfed infant may possibly have been caused by maternal use of mexiletine or atenolol (or both). The authors felt that mexiletine was unlikely to have caused the problem.[4]

A mother breastfed two infants after two pregnancies. The first infant was exposed to mexiletine for only 3 days at 9 months of age and was about 50% breastfed. The second infant was exposed to mexiletine in milk for 3 days at 3 months of age. All maternal dosages were 200 mg three times daily. No adverse effect was observed during sampling in either child. No adverse effect was observed by the mother when the first 2-year-old child was breastfed three to five times a day starting at 10 months while she was taking mexiletine.[3]

## Effects on Lactation and Breastmilk

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

## References

1. Lewis AM, Patel L, Johnston A, et al. Mexiletine in human blood and breast milk. *Postgrad Med J*. 1981;57:546–7. PubMed PMID: 7329891.
2. Timmis AD, Jackson G, Holt DW. Mexiletine for control of ventricular dysrhythmias in pregnancy. *Lancet*. 1980;2:647–8.
3. Monfort A, Morin C, Jutras M, et al. Transfer of mexiletine into breast milk: A case report. *Breastfeed Med*. 2023;18:489–93. PubMed PMID: 37184533.
4. Lownes HE, Ives TJ. Mexiletine use in pregnancy and lactation. *Am J Obstet Gynecol*. 1987;157:446–7. PubMed PMID: 3618696.

## Substance Identification

### Substance Name

Mexiletine

## **CAS Registry Number**

31828-71-4

## **Drug Class**

Breast Feeding

Lactation

Milk, Human

Antiarrhythmics