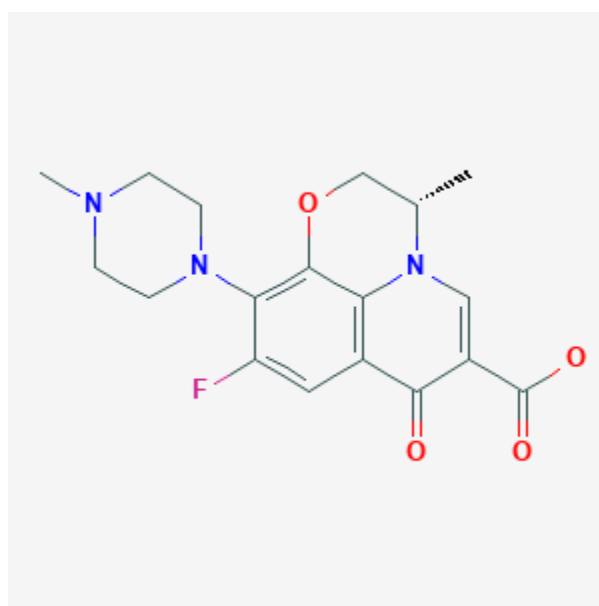




Levofloxacin

Revised: October 31, 2018.

CASRN: 100986-85-4



Drug Levels and Effects

Summary of Use during Lactation

Levofloxacin is the S-enantiomer of the fluoroquinolone, ofloxacin. No information is available on the clinical use of levofloxacin during breastfeeding. However, amounts in breastmilk appear to be low and would not be expected to cause any adverse effects in breastfed infants. Fluoroquinolones such as levofloxacin have traditionally not been used in infants because of concern about adverse effects on the infants' developing joints. However, recent studies indicate little risk.[1][2] The calcium in milk might prevent absorption of the small amounts of fluoroquinolones in milk,[3] but insufficient data exist to prove or disprove this assertion. Use of levofloxacin is acceptable in nursing mothers with monitoring of the infant for possible effects on the gastrointestinal flora, such as diarrhea or candidiasis (thrush, diaper rash). Avoiding breastfeeding for 4 to 6 hours after a dose should decrease the exposure of the infant to levofloxacin in breastmilk. Maternal use of an eye drop that contains levofloxacin presents negligible risk for the nursing 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 .

Drug Levels

Maternal Levels. Ten lactating women (time postpartum not stated) were given the racemic mixture, ofloxacin, 400 mg orally every 12 hours for 3 doses. Milk ofloxacin was measured after the third dose. The highest levels averaging 2.4 mg/L occurred 2 hours after the dose. Average milk levels then fell as follows: 1.9 mg/L at 4 hours; 1.25 mg/L at 6 hours; 0.64 mg/L at 9 hours; 0.29 mg/L at 12 hours; and 0.05 mg/L at 24 hours after the dose.[4] Using the peak milk level data from this study, an exclusively breastfed infant would receive an estimated maximum of 0.36 mg/kg daily with this maternal dosage regimen.

One woman was given levofloxacin 500 mg daily intravenously for 9 days, then orally for 17 days. Twenty-six breastmilk samples were obtained beginning on day 10 of therapy and continued for 6 days after the discontinuation of therapy. A pharmacokinetic model that was developed predicted that a peak milk level of 8.2 mg/L would occur 5 hours after the dose. The milk levels fell with an estimated half-life of 7 hours. Traces of levofloxacin were still detectable in breastmilk 65 hours after the dose. The authors calculated that an exclusively breastfed infant whose mother was taking 500 mg daily would receive 1.25 mg daily in breastmilk which is far below the dose of levofloxacin used in children.[5]

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

Effects in Breastfed Infants

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

Effects on Lactation and Breastmilk

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

Alternate Drugs to Consider

(Systemic) [Ciprofloxacin](#); (Ophthalmic) [Ciprofloxacin](#), [Ofloxacin](#)

References

1. Gurpinar AN B, Balkan E, Kilic N et al. The effects of a fluoroquinolone on the growth and development of infants. *J Int Med Res.* 1997;25:302-6. PubMed PMID: 9364293.
2. van den Oever HL, Versteegh FG, Thewessen EA et al. Ciprofloxacin in preterm neonates: case report and review of the literature. *Eur J Pediatr.* 1998;157:843-5. PubMed PMID: 9809826.
3. Fleiss PM. The effect of maternal medications on breast-feeding infants. *J Hum Lact.* 1992;8:7. Letter. PubMed PMID: 1558663.
4. Giamarellou H, Kolokythas E, Petrikkos G et al. Pharmacokinetics of three newer quinolones in pregnant and lactating women. *Am J Med.* 1989;87(suppl 5A):49S-51S. PubMed PMID: 2589384.
5. Cahill JB Jr, Bailey EM, Chien S et al. Levofloxacin secretion in breast milk: a case report. *Pharmacotherapy.* 2005;25:116-8. PubMed PMID: 15767227.

Substance Identification

Substance Name

Levofloxacin

CAS Registry Number

100986-85-4

Drug Class

Breast Feeding

Lactation

Anti-Infective Agents

Antibacterial Agents

Quinolones

Fluoroquinolones