

Chloroquine (Lexi-Tox)

Special Alerts

Chloroquine: Coronavirus disease 2019 (COVID-19) Updated July 2021

Most recent update(s): An emergency use authorization for chloroquine in the treatment of COVID-19 was issued by the FDA in March 2020 and subsequently revoked in June 2020 due to safety concerns and lack of efficacy (FDA 2020). [National Institutes of Health \(NIH\)](#) and [Infectious Diseases Society of America COVID-19 guidelines](#) recommend against the use of chloroquine, with or without azithromycin, for the treatment of COVID-19.

As part of our response to the evolving COVID-19 pandemic, published literature and guidelines from major health organizations are continuously monitored for potential content updates. At this time, only investigational medications with data determined to be of relatively high quality and/or consistently showing positive clinical outcomes to support dosing recommendations will be included in the monograph, outside of this Special Alert field.

Further information may be found at:

ClinicalTrials.gov: <https://clinicaltrials.gov/ct2/results?cond=Covid19&term=chloroquine&cntry=&state=&city=&dist=>

IDSA: <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>

NIH: <https://www.covid19treatmentguidelines.nih.gov/>

Diagnosis and Management

For complete information outlining diagnosis and management, refer to [4-Aminoquinolines](#).

Brand Names: Canada

TEVA-Chloroquine

Pharmacologic Category

[Aminoquinoline \(Antimalarial\)](#); [Antimalarial Agent](#)

CAS Registration

- 54-05-07

Breastfeeding Considerations

Chloroquine and its desethylchloroquine (DECQ) metabolite are present in breast milk.

Per product labeling, 11 lactating women with malaria were given a single oral dose of chloroquine 600 mg. The maximum daily dose to the breastfeeding infant was calculated to be 0.7% of the maternal dose. Additional information has been published and results are variable, likely due to various maternal doses and dosing regimens, routes of administration, and assay methods (Akintonwa 1988; Boelaert 2001; Deturmeny 1984; Edstein 1986; Ette 1987; Law 2008; Ogunbona 1987). Using data from available

studies, the relative infant dose (RID) of chloroquine and its metabolite was calculated to be 0.9% to 9.5% (chloroquine) and 0.19% to 2.5% (DECO). These RID calculations used a modified formula, based on average milk concentrations (not C_{max}) and total days of maternal therapy (not a single daily dose) to take into consideration the intermittent dosing and long half-life of chloroquine (Law 2008). In general, breastfeeding is considered acceptable when the RID of a medication is <10% (Anderson 2016; Ito 2000).

Due to the potential for serious adverse reactions in the breastfeeding infant, the manufacturer recommends a decision be made to discontinue breastfeeding or to discontinue the drug, considering the importance of treatment to the mother.

Available guidelines consider the amount of chloroquine exposure to the breastfeeding infant to be acceptable when used in normal maternal doses for malaria prophylaxis or treatment (CDC Yellow Book 2020; WHO 2002). The amount of chloroquine obtained by a breastfeeding infant from breast milk would not provide adequate protection if therapy for malaria in the infant is needed (CDC Yellow Book 2020). Breastfed infants should be treated with chloroquine when otherwise indicated.

Infants exposed to chloroquine via breast milk should be monitored for hemolysis and jaundice, particularly premature infants or infants <1 month of age; avoid breastfeeding infants who are G-6-PD deficient (WHO 2002).

Dosage Forms: US

Tablet, Oral:

Generic: 250 mg [equivalent to chloroquine base 150 mg], 500 mg [equivalent to chloroquine base 300 mg]

Dosage Forms: Canada

Tablet, Oral:

Generic: 250 mg [equivalent to chloroquine base 150 mg]

Index Terms

Chloroquine Phosphate

References

Akintonwa A, Gbajumo SA, and Mabadeje AF, "Placental and Milk Transfer of Chloroquine in Humans," *Ther Drug Monit*, 1988, 10(2):147-9.[\[PubMed 3381230\]](#)

Anderson PO, Saubaran JB. Modeling drug passage into human milk. *Clin Pharmacol Ther*. 2016;100(1):42-52. doi: 10.1002/cpt.377.[\[PubMed 27060684\]](#)

Boelaert JR, Yaro S, Augustijns P, Meda N, Schneider YJ, Schols D, Mols R, De Laere EA, Van de Perre P. Chloroquine accumulates in breast-milk cells: potential impact in the prophylaxis of postnatal mother-to-child transmission of HIV-1. *AIDS*. 2001;15(16):2205-2207.[\[PubMed 11684948\]](#)

Centers for Disease Control and Prevention (CDC), "CDC Health Information for International Travel 2018," New York: Oxford University Press, 2018.

Deturmeny E, Viala A, Durand A, Nosny Y. Chloroquine transfer to milk. A case. *Therapie*. 1984;39(4):438-440.[\[PubMed 6484889\]](#)

Edstein MD, Veenendaal JR, Newman K, Hyslop R. Excretion of chloroquine, dapsone and pyrimethamine in human milk. *Br J Clin Pharmacol*. 1986;22(6):733-735.[\[PubMed 3567020\]](#)

Ette EI, Essien EE, Ogonor JI, Brown-Awala EA. Chloroquine in human milk. *J Clin Pharmacol*. 1987;27(7):499-502.[\[PubMed 3655001\]](#)

Ito S. Drug therapy for breast-feeding women. *N Engl J Med*. 2000;343(2):118-26.[\[PubMed 10891521\]](#)

Laloo DG, Shingadia D, Bell DJ, Beeching NJ, Whitty CJM, Chiodini PL; PHE Advisory Committee on Malaria Prevention in UK Travellers. UK malaria treatment guidelines 2016. *J Infect*. 2016;72(6):635-649. doi: 10.1016/j.jinf.2016.02.001.[\[PubMed 26880088\]](#)

Law I, Ilett KF, Hackett LP, et al, "Transfer of Chloroquine and Desethylchloroquine Across the Placenta and Into Milk in Melanesian Mothers," *Br J Clin Pharmacol*, 2008, 65(5):674-9.[\[PubMed 18279478\]](#)

Ogunbona FA, Onyeji CO, Bolaji OO, Torimiro SE. Excretion of chloroquine and desethylchloroquine in human milk. *Br J Clin Pharmacol*. 1987;23(4):473-476.[\[PubMed 3580253\]](#)

World Health Organization (WHO). Breastfeeding and maternal medication, recommendations for drugs in the eleventh WHO model list of essential drugs. 2002. Available at: http://www.who.int/maternal_child_adolescent/documents/55732/en/

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