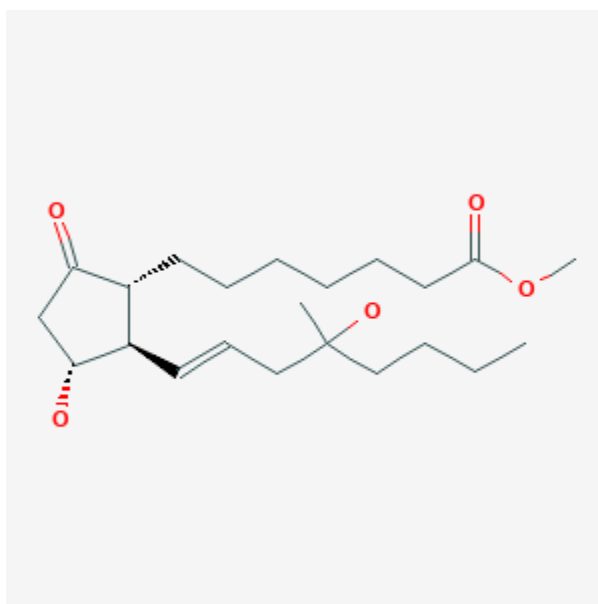




Misoprostol

Revised: October 31, 2018.

CASRN: 59122-46-2



Drug Levels and Effects

Summary of Use during Lactation

Misoprostol is a prostaglandin E1 analogue. Prostaglandin E1 and other prostaglandins appear normally in colostrum and milk.[1] Because of the extremely low levels of misoprostol in breastmilk, amounts ingested by the infant are trivial and would not be expected to cause any adverse effects in breastfed infants. No special precautions are required.

Drug Levels

After absorption, misoprostol is rapidly converted into misoprostol acid in the liver. Studies of misoprostol measure misoprostol acid in the colostrum or milk.

Maternal Levels. Twenty women received misoprostol 600 mcg orally during the first 4 days postpartum. Twelve of them collected a total of 24 colostrum samples at various times during the first 5 hours after the dose. The average misoprostol concentration was highest in colostrum 1 hour after the dose at 20.9 ng/L. Average concentrations fell to 17.8 ng/L at 2 hours after the dose, 9.4 ng/L at 3 hours, 2.8 ng/L at 4 hours and <1 ng/L at 5 hours after the dose.[2]

Ten women who averaged 3.9 days postpartum received a single oral dose of misoprostol 200 mcg. Milk samples were obtained from one breast from 0.5 to 5 hours after the dose. The mean and median peak milk levels were 7.6 and 3.6 ng/L, respectively, at 1.1 hours after the dose. In 2 women, the peak milk level occurred 2 hours after the dose. By 5 hours, the median milk level was 0.2 ng/L. The half-life in milk averaged 1.1 hours.[3]

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

(Oxytocic) Ergonovine, Methylergonovine; (Ulcers) Famotidine, Ranitidine, Omeprazole, Pantoprazole

References

1. Shimizu T, Yamashiro Y, Yabuta K. Prostaglandin E1, E2, and F2 alpha in human milk and plasma. *Biol Neonate.* 1992;61:222-5. PubMed PMID: 1610950.
2. Abdel-Aleem H, Villar J, Gulmezoglu AM et al. The pharmacokinetics of the prostaglandin E1 analogue misoprostol in plasma and colostrum after postpartum oral administration. *Eur J Obstet Gynecol Reprod Biol.* 2003;108:25-8. PubMed PMID: 12694965.
3. Vogel D, Burkhardt T, Rentsch K et al. Misoprostol versus methylergometrine: pharmacokinetics in human milk. *Am J Obstet Gynecol.* 2004;191:2168-73. PubMed PMID: 15592308.

Substance Identification

Substance Name

Misoprostol

CAS Registry Number

59122-46-2

Drug Class

Breast Feeding

Lactation

Abortifacient Agents, Nonsteroidal

Anti-Ulcer Agents

Prostaglandins

Oxytocics

Gastrointestinal Agents