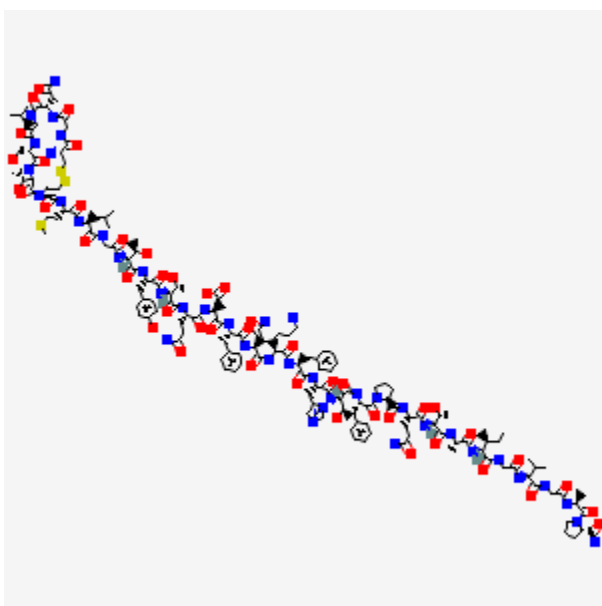




Calcitonin

Revised: June 15, 2024.

CASRN: 21215-62-3



Drug Levels and Effects

Summary of Use during Lactation

Little information is available on the clinical use of calcitonin during breastfeeding; however, calcitonin is a normal component of human milk where may play a role in development of enteric neurons in the breastfed infant.[1-3] Because it is a large peptide, absorption by the infant is unlikely because it is probably destroyed in the infant's gastrointestinal tract. If calcitonin is required by the mother, it is not a necessarily reason to discontinue breastfeeding calcitonin therapy is sometimes used to treat symptomatic postpartum osteoporosis, which is often treated in part by stopping lactation to reduce calcium loss.[4,5] There is no evidence that exogenous calcitonin decreases serum prolactin or lactation in nursing mothers.

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.

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Drug Levels

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

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

Effects in Breastfed Infants

A woman with discoid lupus was taking subcutaneous calcitonin 0.5 mL every other day, azathioprine 100 mg daily, warfarin 2.5 mg every 2 days, prednisone 10 mg daily, calcitriol 0.25 mcg every 2 days, acetaminophen 650 mg twice daily, and calcium, vitamin E, and vitamin C. She was specifically evaluated for the safety of azathioprine during lactation, but continued to nurse for 12 months. Infant follow-up at 15 months of age found normal growth and development.[6]

Effects on Lactation and Breastmilk

Calcitonin products contain a warning that it should be avoided in nursing mothers because of animal data indicating that calcitonin can lower serum prolactin. The only human data consist of small studies performed in men and nonlactating women, some with normal and some with elevated serum prolactin. Several of the studies found a decrease in serum prolactin after calcitonin infusion.[7-10] Another small study found that IV infusion of human calcitonin did not lower serum prolactin in healthy volunteers who had normal serum prolactin at baseline.[11] The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

References

1. Koldovský O. Hormones in milk. *Vitam Horm* 1995;50:77-149. PubMed PMID: 7709605.
2. Bucht E, Telenius-Berg M, Lundell G, et al. Immunoextracted calcitonin in milk and plasma from totally thyroidectomized women. Evidence of monomeric calcitonin in plasma during pregnancy and lactation. *Acta Endocrinol (Copenh)* 1986;113:529-35. PubMed PMID: 3788423.
3. Ballard O, Morrow AL. Human milk composition: Nutrients and bioactive factors. *Pediatr Clin North Am* 2013;60:49-74. PubMed PMID: 23178060.
4. Segal E, Hochberg I, Weisman Y, et al. Severe postpartum osteoporosis with increased PTHrP during lactation in a patient after total thyroidectomy and parathyroidectomy. *Osteoporos Int* 2011;22:2907-11. PubMed PMID: 21243337.
5. Michalakakis K, Peitsidis P, Ilias I. Pregnancy- and lactation-associated osteoporosis: A narrative mini-review. *Endocr Regul* 2011;45:43-7. PubMed PMID: 21314210.
6. Moretti ME, Verjee Z, Ito S, et al. Breast-feeding during maternal use of azathioprine. *Ann Pharmacother* 2006;40:2269-72. PubMed PMID: 17132809.
7. Carman JS, Wyatt RJ. Reduction of serum-prolactin after subcutaneous salmon calcitonin. *Lancet* 1977;1:1267-8. PubMed PMID: 68374.
8. Isaac R, Merceron R, Caillens G, et al. Effects of calcitonin on basal and thyrotropin-releasing hormone-stimulated prolactin secretion in man. *J Clin Endocrinol Metab* 1980;50:1011-5. PubMed PMID: 6768762.
9. Ziliotto D, Luisetto G, Heynen G, et al. Decrease in serum prolactin levels after acute intravenous injection of salmon calcitonin in normal subjects. *Horm Metab Res* 1981;13:64-7. doi:10.1055/s-2007-1019173
10. Žofková I, Nedvídková J. Hypercalcaemia and calcitonin inhibit prolactin secretion. *Exp Clin Endocrinol* 1984;84:294-8. PubMed PMID: 6441727.
11. Stevenson JC, Evans IM, Colston KW, et al. Serum-prolactin after subcutaneous human calcitonin. *Lancet* 1977;2:711-2. PubMed PMID: 71517.

Substance Identification

Substance Name

Calcitonin

CAS Registry Number

9007-12-9; 47931-85-1; 21215-62-3

Drug Class

Breast Feeding

Lactation

Milk, Human

Bone Density Conservation Agents

Neuropeptides

Peptide Hormones