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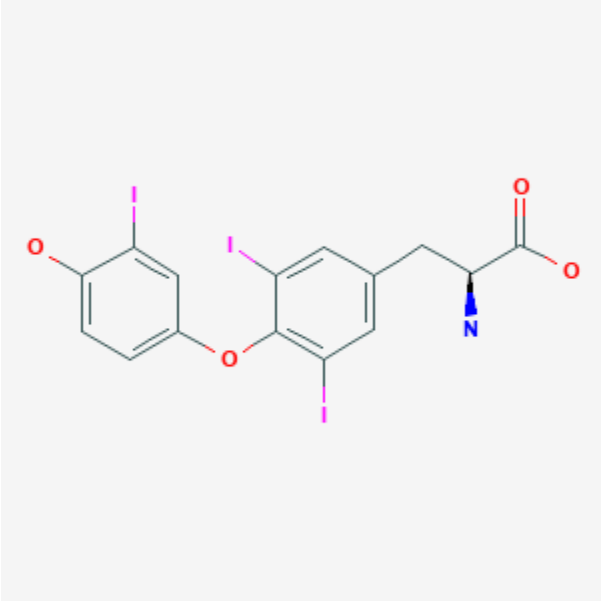
Liothyronine

Revised: October 31, 2018.

CASRN: 6893-02-3



Drug Levels and Effects

Summary of Use during Lactation

Liothyronine (T3) is a normal component of human milk. If replacement doses of liothyronine are required by the mother, it is not necessarily a reason to discontinue breastfeeding. However, because no information is available on the use of exogenous liothyronine during breastfeeding, an alternate drug may be preferred. The American Thyroid Association recommends that subclinical and overt hypothyroidism should be treated with levothyroxine in lactating women seeking to breastfeed.[1] Liothyronine dosage requirement may be increased in the postpartum period compared to prepregnancy requirements patients with Hashimoto's thyroiditis.[2]

Drug Levels

Milk levels of liothyronine have not been measured after exogenous administration of T3 in humans. Liothyronine is a normal component of human milk. Although somewhat controversial, liothyronine, unlike

levothyroxine (T4), might pass into milk in amounts that affect infant thyroid status.[3][4][5][6][7] Average liothyronine levels range from 01 to 4 mcg/L.[8]

Maternal Levels. In a study of 56 mothers with thyroid disorders, 50 had hypothyroidism and were being treated with levothyroxine; 5 mothers had controlled hyperthyroidism with no medications and 1 had hyperthyroidism treated with a medication. Milk levels of thyroid hormones were free T4 4.5 ng/L, total T4 29.6 mcg/L, free T3 2.3 ng/L and total T3 0.35 mcg/L. The average milk to serum level ratios over the period were free T4 0.32, total T4 0.3, free T3 0.78 and total T3 0.26. Levels of free and total T3 and total T4 in milk were positively correlated with their respective plasma levels.[9]

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. However, the thyroid hormone content of human milk from the mothers of very preterm infants appears not to be sufficient to affect the infants thyroid status.[10]

Effects on Lactation and Breastmilk

Adequate thyroid hormone serum levels are required for normal lactation. Replacing deficient thyroid levels should improve milk production caused by hypothyroidism. Supraphysiologic doses of liothyronine would not be expected to further improve lactation.

Alternate Drugs to Consider

Levothyroxine

References

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Substance Identification

Substance Name

Liothyronine

CAS Registry Number

6893-02-3

Drug Class

Breast Feeding

Lactation

Thyroid Hormones