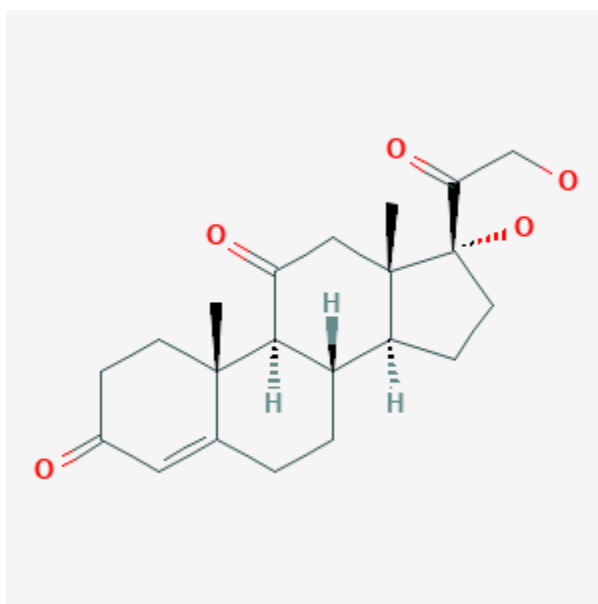




Cortisone

Revised: October 31, 2018.

CASRN: 53-06-5



Drug Levels and Effects

Summary of Use during Lactation

Cortisone is a normal component of breastmilk that passes from the mother's bloodstream into milk and might have a role in intestinal maturation, the intestinal microbiome, growth, body composition or neurodevelopment, but adequate studies are lacking.[1] Concentrations follow a diurnal rhythm, with the highest concentrations in the morning at about 7:00 am and the lowest concentrations in the late afternoon and evening.[2][3] Cortisone has not been studied in breastmilk after exogenous administration in pharmacologic amounts. Although it is unlikely that dangerous amounts of cortisone would reach the infant, a better studied alternate drug might be preferred. Local injections, such as for tendinitis, would not be expected to cause any adverse effects in breastfed infants, but might occasionally cause temporary loss of milk supply.

Cortisone concentrations in breastmilk are not affected by storage for 36 hours at room temperature, during multiple freeze-thaw cycles, nor Holder pasteurization (62.5 degrees C for 30 minutes).[4][5]

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Drug Levels

Maternal Levels. A study of 23 mothers found that cortisone was the predominant corticosteroid in breastmilk with an average concentration of 3.4 mcg/L over 24 hours. Concentrations were highest in the morning between 4:00 am and 10:00 am and lowest in the evening between 4:00 pm to 10:00 pm.[3]

Cortisone was measured in the breastmilk of 22 women who delivered preterm infants between 28 and 32 weeks of gestation. The average cortisone concentration in breastmilk was 4.48 mcg/L with considerable variation. Mothers who gave birth before 30 weeks of gestation had an average cortisone concentration of 4.26 mcg/L and those who delivered after 30 weeks had an average concentration of 4.70 mcg/L.[6]

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

Effects in Breastfed Infants

None reported with any corticosteroid.

Effects on Lactation and Breastmilk

Published information on the effects of cortisone on serum prolactin or on lactation in nursing mothers was not found as of the revision date. However, medium to large doses of depot corticosteroids injected into joints have been reported to cause temporary reduction of lactation.[7][8]

A study of 46 women who delivered an infant before 34 weeks of gestation found that a course of another corticosteroid (betamethasone, 2 intramuscular injections of 11.4 mg of betamethasone 24 hours apart) given between 3 and 9 days before delivery resulted in delayed lactogenesis II and lower average milk volumes during the 10 days after delivery. Milk volume was not affected if the infant was delivered less than 3 days or more than 10 days after the mother received the corticosteroid.[9] An equivalent dosage regimen of cortisone might have the same effect.

A study of 87 pregnant women found that betamethasone given as above during pregnancy caused a premature stimulation of lactose secretion during pregnancy. Although the increase was statistically significant, the clinical importance appears to be minimal.[10] An equivalent dosage regimen of cortisone might have the same effect.

Alternate Drugs to Consider

Methylprednisolone, Prednisolone, Prednisone

References

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Substance Identification

Substance Name

Cortisone

CAS Registry Number

53-06-5

Drug Class

Breast Feeding

Lactation

Corticosteroids, Systemic

Glucocorticoids

Anti-Inflammatory Agents