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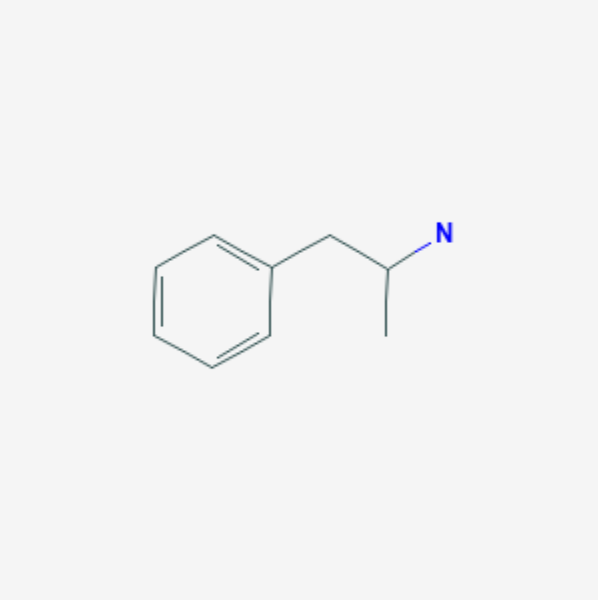
Amphetamine

Revised: October 31, 2018.

CASRN: 300-62-9



Drug Levels and Effects

Summary of Use during Lactation

In dosages prescribed for medical indications, some evidence indicates that amphetamine does not affect nursing infants adversely. The effect of amphetamine in milk on the neurological development of the infant has not been well studied. Large dosages of amphetamine might interfere with milk production, especially in women whose lactation is not well established. Breastfeeding is generally discouraged in mothers who are actively abusing amphetamines.[1][2][3] One expert recommends that amphetamine not be used therapeutically in nursing mothers.[4]

Drug Levels

Maternal Levels. A nursing woman was taking racemic amphetamine 5 mg orally 4 times daily at 10 am, noon, 2 pm and 4 pm for narcolepsy. Trough milk levels of 55 and 68 mcg/L were found before the 10 am dose on days

10 and 42 postpartum, respectively. Milk levels were 118 and 138 mcg/L before the 2 pm doses on days 10 and 42, respectively.[5]

A woman took 35 mg of amphetamine daily for narcolepsy and exclusively breastfed her infant for 6 months. Breastmilk samples were taken just before her morning dose at 2, 5 and 9 weeks postpartum. Breastmilk levels of amphetamine were 74, 82 and 82 mcg/L, respectively. These values represent a weight-adjusted dosage of 1.9% to 2.1% of the maternal dosage and an absolute infant dosage of 11.1 to 12.4 mcg/kg daily.[6]

Infant Levels. Amphetamine was measured in a 12-hour urine collection in a breastfed infant whose mother was taking racemic amphetamine 5 mg 4 times daily. The infant's urinary excretion of amphetamine ranged from 0.1 to 0.3% of the mother's urinary excretion.[5]

The infant of a mother who was taking amphetamine 35 mg daily for narcolepsy during pregnancy and postpartum was exclusively breastfed for 6 months. Infant blood samples were taken just before the mother's morning amphetamine dose at 2, 5 and 9 weeks postpartum. Infant serum concentrations at these times were 3.1, 2 and 1.4 mcg/L, respectively. These values represented 15%, 7% and 5% of simultaneous maternal serum concentrations.[6]

Effects in Breastfed Infants

One infant whose mother was being treated for narcolepsy with racemic amphetamine 5 mg 4 times daily was exposed to the drug in milk for the (unspecified) duration of breastfeeding. There were no signs of abnormal development during the first 2 years of life.[5]

The infant of a mother who was taking amphetamine 35 mg daily for narcolepsy during pregnancy and postpartum was exclusively breastfed for 6 months. The infant experienced no adverse reactions and grew normally.[6]

Effects on Lactation and Breastmilk

In 2 papers by the same authors, 20 women with normal physiologic hyperprolactinemia were studied on days 2 or 3 postpartum. Eight received dextroamphetamine 7.5 mg intravenously, 6 received 15 mg intravenously and 6 who served as controls received intravenous saline. The 7.5 mg dose reduced serum prolactin by 25 to 32% compared to control, but the difference was not statistically significant. The 15 mg dose significantly decreased serum prolactin by 30 to 37% at times after the infusion. No assessment of milk production was presented.[7][8] The authors also quoted data from another study showing that a 20 mg oral dose of dextroamphetamine produced a sustained suppression of serum prolactin by 40% in postpartum women. The maternal prolactin level in a mother with established lactation may not affect her ability to breastfeed.

In a retrospective Australian study, mothers who used intravenous amphetamines during pregnancy were less likely to be breastfeeding their newborn infants at discharge than mothers who abused other drugs (27% vs 42%). The cause of this difference was not determined.[9]

A mother took amphetamine 35 mg daily for narcolepsy during pregnancy and postpartum. She exclusively breastfed her infant for 6 months with no evidence of an adverse effect on milk production.[6]

Alternate Drugs to Consider

(Therapeutic use) Dextroamphetamine, Lisdexamfetamine, Methylphenidate

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Substance Identification

Substance Name

Amphetamine

CAS Registry Number

300-62-9

Drug Class

Breast Feeding

Lactation

Adrenergic Agents

Central Nervous System Stimulants

Dopamine Agents

Sympathomimetics