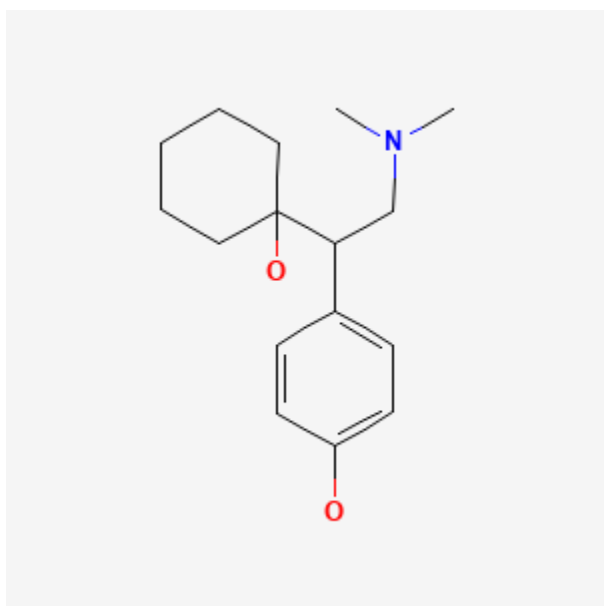




## Desvenlafaxine

Revised: January 15, 2024.

CASRN: 93413-62-8



## Drug Levels and Effects

### Summary of Use during Lactation

Modest doses of desvenlafaxine are excreted into breastmilk, but serum drug levels of breastfed infants are less than 10% of simultaneous maternal levels. Total drug exposure of breastfed infants is about half of that experienced by breastfed infants whose mothers are taking venlafaxine.[1]. With the related drug venlafaxine, newborn infants of mothers who took the drug during pregnancy sometimes experienced poor neonatal adaptation as seen with other antidepressants such as SSRIs or SNRIs. Similar effects may occur with desvenlafaxine. Monitor breastfed infants for excessive sedation and adequate weight gain if this drug is used during lactation, especially newborn or preterm infants.

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## Drug Levels

Desvenlafaxine (O-desmethylvenlafaxine) is an active metabolite of venlafaxine with similar antidepressant activity.[2]

*Maternal Levels.* Ten lactating women with postpartum depression who were an average of 4.3 (range 0.9 to 12.7) months postpartum were taking extended-release desvenlafaxine (Pristiq) from 4 to 35 days in doses of 50 to 150 mg daily or an average of 1.2 mg/kg daily (95% CI: 0.93 to 1.5 mg/kg daily). Each woman provided up to 8 milk samples over a 24-hour period. Peak milk concentrations occurred at an average of 3.3 hours after the dose. An exclusively breastfed infant in this study would have received an estimated 85 mcg/kg daily or 6.8% (95% CI: 5.5 to 8.1%) of the maternal weight-adjusted dosage.[1]

A nursing mother was taking oral desvenlafaxine 250 mg and amisulpride 100 mg twice daily. Eight breastmilk samples were obtained over a 24-hour period with a breast pump. The average breastmilk concentration was 1.9 mg/L which equated to an infant dose of 0.29 mg/kg daily or 7.8% of the maternal weight-adjusted dosage.[3]

*Infant Levels.* Ten infants with an average age of 4.3 (range 0.9 to 12.7) months were breastfed (8 exclusively) during maternal use of desvenlafaxine in doses of 50 to 150 mg daily or an average of 1.2 mg/kg daily. The infants had an average serum desvenlafaxine level of 16 mcg/L, which averaged 4.8% of the simultaneous maternal serum concentration taken at about 6.5 hours after the maternal dose. Considering only the exclusively breastfed infants, infant exposure would have averaged 5.8% of the maternal serum concentration.[1]

A nursing mother was taking oral desvenlafaxine 250 mg and amisulpride 100 mg twice daily for 12.6 weeks. Her partially breastfed infant was 5 months old. The infant's serum desvenlafaxine concentration 3.1 hours after the mother's daily dose was 13 mcg/L or 1.7% of the maternal serum concentration.[3]

## Effects in Breastfed Infants

Ten infants ranging in age from 0.9 to 12.7 months were breastfed (8 exclusively) during maternal use of desvenlafaxine in doses of 50 to 150 mg daily or an average of 1.2 mg/kg daily. Mothers were also taking lorazepam (n = 6), quetiapine (n = 5), lamotrigine (n = 2), levonorgestrel (n = 2), domperidone (n = 1), and temazepam (n = 1). Infants were studied after an average of 9 days of exposure (range 4 to 35 days) of desvenlafaxine exposure via breastmilk. At the time of the study, 7 of the 10 infants were at a lower growth percentile than at the time of birth. Examination by a pediatrician found that all infants were healthy and had Denver developmental scores that matched their age on the day of the study.[1]

A woman with depressive type schizoaffective disorder was taking lurasidone 40 mg at night and desvenlafaxine 50 mg daily after giving birth. She exclusively breastfed her infant. The infant's growth and development was good during a follow-up period of 39 days.[4]

## Effects on Lactation and Breastmilk

In an outpatient study that followed 1395 patients who received long-term desvenlafaxine therapy, 2 patients developed elevated serum prolactin levels and one developed galactorrhea.[5] The clinical relevance of these findings in nursing mothers is not known. The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

An observational study looked at outcomes of 2859 women who took an antidepressant during the 2 years prior to pregnancy. Compared to women who did not take an antidepressant during pregnancy, mothers who took an antidepressant during all 3 trimesters of pregnancy were 37% less likely to be breastfeeding upon hospital discharge. Mothers who took an antidepressant only during the third trimester were 75% less likely to be breastfeeding at discharge. Those who took an antidepressant only during the first and second trimesters did not

have a reduced likelihood of breastfeeding at discharge.[6] The antidepressants used by the mothers were not specified.

A retrospective cohort study of hospital electronic medical records from 2001 to 2008 compared women who had been dispensed an antidepressant during late gestation (n = 575) to those who had a psychiatric illness but did not receive an antidepressant (n = 1552) and mothers who did not have a psychiatric diagnosis (n = 30,535). Women who received an antidepressant were 37% less likely to be breastfeeding at discharge than women without a psychiatric diagnosis, but no less likely to be breastfeeding than untreated mothers with a psychiatric diagnosis.[7] None of the mothers were taking desvenlafaxine.

In a study of 80,882 Norwegian mother-infant pairs from 1999 to 2008, new postpartum antidepressant use was reported by 392 women and 201 reported that they continued antidepressants from pregnancy. Compared with the unexposed comparison group, late pregnancy antidepressant use was associated with a 7% reduced likelihood of breastfeeding initiation, but with no effect on breastfeeding duration or exclusivity. Compared with the unexposed comparison group, new or restarted antidepressant use was associated with a 63% reduced likelihood of predominant, and a 51% reduced likelihood of any breastfeeding at 6 months, as well as a 2.6-fold increased risk of abrupt breastfeeding discontinuation. Specific antidepressants were not mentioned.[8]

## Alternate Drugs to Consider

Nortriptyline, Paroxetine, Sertraline

## References

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## Substance Identification

### Substance Name

Desvenlafaxine

## CAS Registry Number

93413-62-8

## Drug Class

Breast Feeding

Lactation

Milk, Human

Antidepressive Agents

Serotonin-Norepinephrine Reuptake Inhibitors