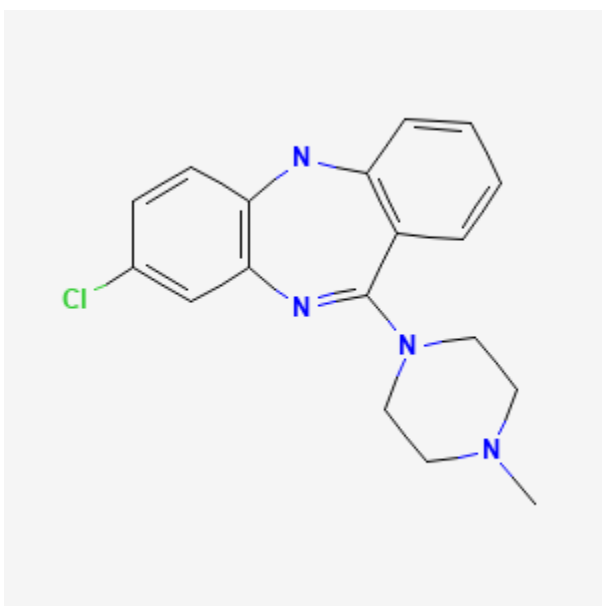




Clozapine

Revised: May 15, 2022.

CASRN: 5786-21-0



Drug Levels and Effects

Summary of Use during Lactation

Because there is little published experience with clozapine during breastfeeding, and sedation and adverse hematologic effects have been reported in breastfed infants, other agents are preferred.[1-3] If breastfeeding is undertaken by a mother who is taking clozapine, close monitoring of the infant for excessive sedation and periodic monitoring of the infant's white blood cell count is advisable. Several authoritative sources recommend that women taking clozapine not breastfeed if clozapine is required.[4-6]

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. A woman taking oral clozapine 50 mg daily had a milk clozapine level of 63.5 mcg/L one day postpartum. At 3 days postpartum, her dose was increased to 100 mg daily and at 7 days postpartum, clozapine in milk was 115.6 mcg/L. Her infant was not breastfed and timing of the samples with respect to the doses was not stated.[7]

Infant Levels. One woman who took clozapine 100 mg daily in late pregnancy and postpartum partially breastfed her infant for 5 days. The umbilical cord blood clozapine concentration was 56% of the mother's plasma level at birth and infant's serum concentration was 6.5% of the mothers at 33 hours postpartum, implying no drug accumulation, but the timing of the sample with respect to the times of the dosage and nursing was not reported. [8]

Effects in Breastfed Infants

Among 4 infants who were breastfed by mothers taking clozapine, 1 infant experienced drowsiness and 1 infant experienced agranulocytosis possibly caused by clozapine. Details of the cases are lacking.[9]

A healthy female infant was born to a mother who took clozapine 100 mg daily throughout pregnancy and lactation. She was breastfed (extent not stated) up to 1 year of age. The infant developed normally except for speech which was delayed considerably. She did not achieve normal, fluent speech until the age of 5 years. The delayed speech development was possibly related to clozapine in breastmilk, but it could have been the result of exposure to the drug during gestation or could have been unrelated to clozapine.[10]

One woman who took clozapine 100 mg daily in late pregnancy and postpartum partially breastfed her infant for 5 days. No neurodevelopmental disorders were detected in the infant after 32 months of follow-up.[8]

A woman with schizophrenia gave birth and breastfed twice while taking clozapine. The first time, she and the family reported no negative effects on the infant. In the second occasion, she was followed by psychiatrists. She gave birth while taking clozapine 100 mg daily. It was slowly tapered and olanzapine was begun and titrated to a dose of 20 mg daily. Because of hallucinations, clozapine was restarted and titrated to a dose of 50 mg daily while continuing to breastfeed. Regular follow-up over a year by a pediatrician indicated no agranulocytosis, seizures or neurodevelopmental disorders.[11]

A woman with schizophrenia took clozapine 75 mg daily during pregnancy and postpartum. The woman breastfed (extent not stated) her infant. The infant was followed for 6 months, examined monthly by a pediatrician and had hemograms every 2 weeks. No hematologic or other adverse reactions were seen during this time and the mother noted no adverse effects in the infant.[12]

Patients enlisted in the National Pregnancy Registry for Atypical Antipsychotics who were taking a second-generation antipsychotic drug while breastfeeding (n = 576) were compared to control breastfeeding patients who were not treated with a second-generation antipsychotic (n = 818). Of the patients who were taking a second-generation antipsychotic drug, 60.4% were on more than one psychotropic. A review of the pediatric medical records, no adverse effects were noted among infants exposed or not exposed to second-generation antipsychotic monotherapy or to polytherapy.[13] The number of women taking clozapine was not reported.

Effects on Lactation and Breastmilk

Unlike the phenothiazines, clozapine has a minimal effect on maternal serum prolactin levels.[14,15] However, a woman who had been taking clozapine plus high-dose haloperidol developed hyperprolactinemia and severe galactorrhea 2 weeks after stopping haloperidol and 4 days after starting valproic acid. A dose of cabergoline normalized her serum prolactin and galactorrhea ceased for the following 2 months of observation.[16]

The maternal prolactin level in a mother with established lactation may not affect her ability to breastfeed.

Patients enlisted in the National Pregnancy Registry for Atypical Antipsychotics who were taking a second-generation antipsychotic drug while breastfeeding (n = 576) were compared to control breastfeeding patients who had primarily diagnoses of major depressive disorder and anxiety disorders, most often treated with SSRI or SNRI antidepressants, but not with a second-generation antipsychotic (n = 818). Among women on a second-generation antipsychotic, 60.4% were on more than one psychotropic compared with 24.4% among women in the control group. Of the women on a second-generation antipsychotic, 59.3% reported “ever breastfeeding” compared to 88.2% of women in the control group. At 3 months postpartum, 23% of women on a second-generation antipsychotic were exclusively breastfeeding compared to 47% of women in the control group.[13] The number of women taking clozapine was not reported.

Alternate Drugs to Consider

Haloperidol, Olanzapine, Quetiapine, Risperidone

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Substance Identification

Substance Name

Clozapine

CAS Registry Number

5786-21-0

Drug Class

Breast Feeding

Lactation

Milk, Human

Antipsychotic Agents