

Sleep in the Perinatal Period

Katherine Palm-Cruz, MD



Managing Sleep Disturbances in the Perinatal Period

Sleep disturbances

→ very common during pregnancy: Up to 78% of women (worse in third trimester)

→ fragmented sleep common postpartum

Poor sleep during pregnancy associated with: depression, SGA, pre-eclampsia, gestational diabetes, increased inflammation, and preterm birth

Address/Treat any contributing medical conditions:

- RLS
- Sleep apnea
- Nighttime GERD
- Back pain

Assess/Treat any comorbid mental health conditions:

- Depression
- Anxiety
- Bipolar disorder
- PTSD (nightmares)
- Substance use

Psychological/Behavioral Interventions – first line treatment

- **Sleep hygiene**
 - Regular sleep schedule in calm, dark environment
 - Bed should be only for sleep (avoid screen use in bed)
 - Eliminate caffeine after noon
- **Pregnancy comfort measures**
 - Use pillows to take pressure off knees/back
 - Reduce liquid intake in evenings to minimize nighttime trips to bathroom
- **Cognitive Behavioral Therapy for Insomnia**
- **Exercise** (at least a few hours or longer before bed) – associated with longer sleep continuity in pregnancy
- **Postpartum**
 - Ensure adequate time for sleep – split infant night care between caregivers (use formula/pump so others can assist with feeding)
 - Ask about bed-sharing with infant which can interfere with sleep and recommend avoiding, especially if using sedating medications.

If hypnotic medications are necessary – use low dose for short period along with behavioral interventions

See medication chart for details on medications

Insomnia Medications and the Perinatal Period

Medication	Pregnancy	Lactation	Dose	Side Effects for Mother
<p><u>Benzodiazepines</u> *Lorazepam preferred benzodiazepine in pregnancy</p>	<p>See information on benzodiazepines in Perinatal Anxiety Medications Table</p> <p>In general, do not appear to be associated with congenital malformations (although some reports do suggest a possible association, especially when benzodiazepines are used concurrently with antidepressants) Appear to be associated with increased risk of spontaneous abortion Possibly associated with preterm birth</p>	<p>See information on benzodiazepines in Perinatal Anxiety Medications Table</p> <p>Lorazepam preferred benzodiazepine in breastfeeding – produces low levels in breastmilk</p>	varies	<p>*FDA boxed warnings in general population: -abuse, misuse, addiction, physical dependence, and withdrawal -Opiate and benzodiazepine combination</p> <p>*Side effects: Sedation, poor coordination, risk of falls, memory impairment</p>
<p><u>“Z Drugs”</u> Nonbenzodiazepine Benzodiazepine Receptor Agonists *Zolpidem preferred Z drug in pregnancy</p>				<p>*Likely increased risk of falls *Impaired cognitive function *headache, drowsiness, dizziness, and nausea. *Complex Sleep Behaviors: sleepwalking, sleep driving, sleep cooking</p>
Zolpidem	<p>Based on limited human data no increased risk of congenital malformations. Inconclusive data about increase of risk for preterm birth, small for gestational age, low birthweight *FDA warning for respiratory distress/sedation in neonates when used late in third trimester</p>	Doses in breastmilk are low and adverse effects are not expected. Monitor infant for sedation	5mg	
Eszopiclone	Limited data is based on zopiclone studies and is not expected to increase risk of congenital malformations. Less data than zolpidem.	No data about use in breastfeeding – recommend starting with a different medication	1-3mg	
Zaleplon	Limited data does not show increased risk of congenital malformations.	Produces low levels in breastmilk and has a short half-life. Adverse effects to infant are not expected.	5-20mg	

The following medications for insomnia have no data in human pregnancy and lactation and thus should be avoided if possible: **suvorexant, lemborexant, ramelteon**

Medication	Pregnancy	Lactation	Dose	Side Effects for Mother
Antihistamines Doxylamine Hydroxyzine Diphenhydramine	Limited published data in pregnancy. Most data does not show a consistent association with birth defects. There are some isolated associations reported of cardiac malformations and non-cardiac malformations, but data has not been consistent.	Passes into breastmilk – associated with dose dependent sedation and irritability. Higher doses could decrease milk supply	Doxylamine 25mg Hydroxyzine 25-50mg Diphenhydramine 25-50mg	*sedation *dizziness *impaired coordination *GI distress *thickened bronchial secretions
Melatonin	Recommend avoiding in pregnancy until more data is available since exogenous melatonin could theoretically interfere with fetal circadian rhythms.	Melatonin is a normal component of breastmilk, but it is unclear the effect of exogenous melatonin. There was a case report of bleeding possibly related to melatonin		*vivid dreams *irritability *headache *sedation
Doxepin	Very limited data, but not expected to increase malformations. Increased risk of poor neonatal adaptation syndrome.	Not recommended per LactMed due to infant sedation risk and reports of adverse effects in infants	3-6 mg	*sedation *dry mouth *dizziness *anticholinergic effects
Trazodone	Based on very limited data in pregnancy, does not appear to be associated with congenital malformations, but may be associated with increased risk of spontaneous abortion.	Limited data, but produces low levels in breastmilk and not expected to cause adverse effects	25-100mg	*drowsiness *dizziness *orthostatic hypotension *GI symptoms
Mirtazapine	*antidepressant – consider in patients with insomnia comorbid with depression. Can also help with nausea Limited data in pregnancy, but does not appear to be associated with increased risk of congenital malformations. There are conflicting reports about slight possible increase in spontaneous abortion, preterm and low birth weight. Also risk of postnatal adaptation	Limited data, but doses of up to 120mg produce low levels in breast milk and not expected to cause adverse effects	7.5mg – 15mg (for insomnia, up to 45mg for depression)	*somnolence *increased appetite *constipation
Quetiapine	* due to side effects, recommend not using for insomnia alone, unless there is another indication for quetiapine (psychosis, bipolar disorder, antidepressant augmentation, treatment refractory anxiety) *based on limited data, no increased risk of congenital malformations. *possible increased risk of gestational diabetes * FDA warning for all atypical antipsychotics (including quetiapine): 3 rd trimester exposure increases risk of adverse effects in infant – EPS, sedation, breathing and feeding difficulties, sedation, agitation, tremor	Doses of up to 400mg produce low levels in breastmilk	*depends on indication (doses can range from 25mg – 800mg)	*metabolic side effects (weight gain, increased risk of diabetes, elevated lipids) *extrapyramidal side effects *sedation

Sleep Resources

VA based CBT-I app

<https://mobile.va.gov/app/cbt-i-coach>

Patient handout on pregnancy and sleep

<https://www.sleepfoundation.org/pregnancy>