### Antidepressant Medication Chart

This chart is intended for clinicians who provide primary care to pregnant and postpartum women.

<table>
<thead>
<tr>
<th>Antidepressants</th>
<th>Usual Daily Dose (1)</th>
<th>Benefits</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DRUG CLASS: Selective Serotonin Reuptake Inhibitors (SSRIs)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Citalopram (Zoloft®) | 20-60mg | • No adverse morphologic consequences for infant found | • Behavioral consequences for infant unknown  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Escitalopram (Lexapro®) | 20-60mg | • More studies in human pregnancy, including meta-analysis and reanalysis of fetal outcomes | • Fetal and maternal side effects include tachycardia and uterine retraction  
• Maternal side effects include sedation, weight gain, dry mouth, constipation, and orthostatic hypotension  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Fluoxetine (Prozac®) | 50-200mg | • Relatively well-studied in human pregnancy  
• No adverse behavioral consequences for infants found  
• Fewer reports of neonatal side effects than other antidepressants | • Fetal and maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Paroxetine (Paxil®) | 50-150mg | • More studies in human pregnancy, including meta-analysis and reanalysis of fetal outcomes | • Fetal and maternal side effects include tachycardia and uterine retraction  
• Maternal side effects include sedation, weight gain, dry mouth, constipation, and orthostatic hypotension  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Sertraline (Zoloft®) | 20-60mg | • Balanced antidepressant, may be effective when selective agents are not | • May increase risk of miscarriage  
• Behavioral consequences for infant unknown  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| **DRUG CLASS: Tricyclic Antidepressants (TCAs)** | | | |
| Desipramine (Norpramin®) | 100-300mg | • More studies in human pregnancy, including meta-analysis and reanalysis of fetal outcomes | • Fetal and maternal side effects include tachycardia and uterine retraction  
• Maternal side effects include sedation, weight gain, dry mouth, constipation, and orthostatic hypotension  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Nortriptyline (Pamelor®) | 50-150mg | • More studies in human pregnancy, including meta-analysis and reanalysis of fetal outcomes | • Fetal and maternal side effects include tachycardia and uterine retraction  
• Maternal side effects include sedation, weight gain, dry mouth, constipation, and orthostatic hypotension  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| **DRUG CLASS: Serotonin Norepinephrine Reuptake Inhibitors (SNRIs)** | | | |
| Duloxetine (Cymbalta®) | 40-60mg | • Balanced antidepressant, may be effective when selective agents are not | • May increase risk of miscarriage  
• Behavioral consequences for infant unknown  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Venlafaxine (Effexor®) | 75-300mg | • Balanced antidepressant, may be effective when selective agents are not | • May increase risk of prematurity  
• Behavioral consequences for infant unknown  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| **DRUG CLASS: Other** | | | |
| Bupropion (Wellbutrin®) | 300-450mg | • No adverse morphologic consequences for infant found  
• Helps with smoking cessation (never tested in pregnancy) | • May increase risk of prematurity  
• Behavioral consequences for infant unknown  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants  
• Potential for substantial exposure to breastfed infants |
| Mirtazapine (Remeron®) | 15-45mg | • No adverse morphologic consequences for infant found  
• Helps manage agitation in women who are not gaining weight  
• Less likely to masculinize female infant  
• Maternal side effects include nausea, vomiting, diarrhea, fatigue, and dry mouth  
• May be useful if sedation desired  
• Potential for substantial exposure to breastfed infants  
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• Potential for substantial exposure to breastfed infants |

**Breastfeeding**

- **Relative infant dose:**
  - Citalopram: 3.6%  
  - Escitalopram: 5.5%  
  - Paroxetine: 1.3%  
  - Fluoxetine: 6.8%  
  - Sertraline: 1.9%  
  - Venlafaxine: 6.4%  
  - Duloxetine: 2.2%  
  - Nortriptyline: 2.1%  
  - Bupropion: 0.6-2%  
  - Mirtazapine: 1.9%

- **Half-life:**
  - Citalopram: 1.9%  
  - Paroxetine: 1.3%  
  - Fluoxetine: 6.8%  
  - Sertraline: 1.9%  
  - Venlafaxine: 6.4%  
  - Duloxetine: 2.2%  
  - Nortriptyline: 2.1%  
  - Bupropion: 0.6-2%  
  - Mirtazapine: 1.9%

- **Reported side effects in breastfed infants:**
  - Citalopram: 3%  
  - Escitalopram: 5.5%  
  - Paroxetine: 1.3%  
  - Fluoxetine: 6.8%  
  - Sertraline: 1.9%  
  - Venlafaxine: 6.4%  
  - Duloxetine: 2.2%  
  - Nortriptyline: 2.1%  
  - Bupropion: 0.6-2%  
  - Mirtazapine: 1.9%

Data current as of April 2008.
Breastfeeding and Medications: Maternal Considerations

1. Avoid random switching of medications based on data alone. Choose drugs for which published data is available, rather than those recently introduced.

2. Most drugs are quite safe in breastfeeding mothers. The risk of not breastfeeding and instead using infant formula is much higher for the infant.

3. If the Relative Infant Dose (RID) is less than 10%, most medications are quite safe to use. The RID of the vast majority of drugs is <1%.

4. Choose drugs with a short half-life, high protein binding, low oral availability, or high molecular weight.

5. Medications used in the first 3–4 days postpartum generally produce sub-clinical levels in the infant due to the limited volume of milk.

6. Avoid using medications when possible. Herbal drugs, high dose vitamins, unusual supplements, etc. that are simply not necessary should be avoided.


Breastfeeding and Medications: Neonatal Considerations

1. Evaluate the infant for risks: Be slightly more cautious with premature infants or neonates. Be less concerned about older infants.

2. Inquire about the infant: Always inquire about the infant’s age, size, and stability. This is perhaps the most important criterion to be evaluated prior to using the medication.

3. Infant age: Premature and newborn infants are at somewhat greater risk. Older mature infants can metabolize and clear medications much easier.

4. Infant stability: Unstable infants with poor GI stability may increase the risk of using medications.

5. Pediatric Approved Drugs: These generally are less hazardous if long-term history of safety is recognized.


Notes


Clinicians may consider initiating treatment with these agents at half of the lowest recommended therapeutic dose. Treatment decisions should be based on patient characteristics and clinical judgment. Recommended dosages can be found in the most recent editions of the Physician’s Desk Reference and the Drug Information Handbook.

(2) A relative infant dose < 10% is generally considered safe to breastfeed; however, all infants must be observed for adverse events during maternal drug therapy.

(3) Reported side effects in breastfeeding infants are based on case reports and case series.

* All SSRIs antidepressants (citalopram, escitalopram, fluoxetine, paroxetine, sertraline) may be associated with the following risks: possible increased risk of miscarriage; gestational age decreased by an average of one week; possible increased risk of persistent pulmonary hypertension in the newborn with exposure after 20 weeks gestation, although no teratogenicity has been found in prospective, controlled studies or meta-analyses. One case-control study found a possible increased risk of anorexia, cyanosimniasis and omphalocele, and a retrospective prescription events monitoring study found an increased risk of anomalies in general; absolute risks were small.

• Medications vary in the amount and quality of data available about effects in human pregnancy. A better-studied medication may have more reported side effects than a less-studied medication because more is known about it, not necessarily because it is riskier.

• Data presented here are based on studies during human pregnancy. The Food and Drug Administration’s Pregnancy Risk Categories, as found in the Physician’s Desk Reference, are based on a combination of animal and human studies.

General Notes:
This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

• Risks of antidepressants during pregnancy and lactation must be weighed against the risks of untreated symptoms. Treatment needs to be individualized.

• Monitor for dose adjustment through pregnancy. The dose of the medication may need to be increased to maintain response.

• All antidepressants, if abruptly discontinued during pregnancy or at the time of birth, can lead to discontinuation side effects in the fetus or neonate. These signs can include respiratory distress, excessive crying, changes in sleep and behavioral state, difficulty feeding, increased or decreased tone, hyporeflexia, seizures, or cardiac arrhythmias. Discontinuation side effects can be minimized by a partial dose taper during the last month of pregnancy, if the patient is asymptomatic, with a return to full dose after delivery to prevent postpartum recurrence.


• If patient is on other medications, consult with a pharmacist or other appropriate specialists for interaction information.


This chart was compiled by a multidisciplinary work group of leaders in their respective disciplines including OB/GYN, family practice, psychiatry, nursing, genetics, and pharmacy, practicing in Wisconsin and representing WAPC and/or the Wisconsin Section of ACOG.

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