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References

Prescribing in pregnancy and breastfeeding CHAPTER 7 Stimulants in breastfeeding Table 7.6 provides information on individual drugs in breastfeeding based on available published data in mid-2024. Manufacturers' formal advice on drugs in breastfeeding is available in the SPC or European Public Assessment Report for individual drugs. Table 7.6 does not include this advice (which is often uninformative), but instead uses primary reference sources. It is usually advisable to continue the drug prescribed during pregnancy. Switching drugs postpartum for the purpose of breastfeeding is usually not sensible. Table 7.6 should be used as a guide when initiating treatment postpartum. In each case the previous response (and lack of response) to treatment must be considered. References

1. Schoretsantis G, et al. Excretion of antipsychotics into the amniotic fluid, umbilical cord blood, and breast milk: a systematic critical review and combined analysis. *Ther Drug Monit* 2020; 42:245-254.
2. Weissman AM, et al. Pooled analysis of antidepressant levels in lactating mothers, breast milk, and nursing infants. *Am J Psychiatry* 2004; 161:1066-1078.
3. COPE (Centre of Perinatal Excellence). 2023 National Perinatal Mental Health Guideline. 2023; <https://www.cope.org.au/health-professionals/review-of-new-perinatal-mental-health-guidelines/>.
4. Schmidt FM, et al. Agomelatine in breast milk. *Int J Neuropsychopharmacol* 2013; 16:497-499.
5. Hale TW, et al. *Medications and Mothers' Milk*, 20th edn. New York: Springer Publishing Company; 2023.
6. Hoffmann E, et al. Brexanolone injection administration to lactating women: breast milk allopregnanolone levels [30]. *Obstet Gynecol* 2019; 133:115S.
7. Briggs GG, et al. Excretion of bupropion in breast milk. *Ann Pharmacother* 1993; 27:431-433.
8. Chaudron LH, et al. Bupropion and breastfeeding: a case of a possible infant seizure. *J Clin Psychiatry* 2004; 65:881-882.
9. Nonacs RM, et al. Bupropion SR for the treatment of postpartum depression: a pilot study. *Int J Neuropsychopharmacol* 2005; 8:445-449.
10. Haas JS, et al. Bupropion in breast milk: an exposure assessment for potential treatment to prevent post-partum tobacco use. *Tob Control* 2004; 13:52-56.
11. Baab SW, et al. Serum bupropion levels in 2 breastfeeding mother-infant pairs. *J Clin Psychiatry* 2002; 63:910-911. Table 7.6 Stimulants in breastfeeding. Drug Infant plasma concentration Estimated daily infant dose as proportion of maternal dose (RID) Acute

adverse effects in infant Developmental effects in infant Atomoxetine No published data available at the time of writing Dexamfetamine²⁰² Undetectable to 14% of maternal plasma level 2.4 -10.6% None reported None reported but not assessed
 Lisdexamfetamine No published data available at the time of writing
 Methylphenidate^{28,203-205} Undetectable 0.16-0.7% None reported None reported
 Modafinil^{206,207} Armodafanil = 1.5%²⁰⁸ Modafinil not reported Armodafanil = 4.85%²⁰⁸ Modafinil = 5.3% None reported None reported but not assessed RID, relative infant dose.

748 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 7 12. Berle JO, et al. Antidepressant use during breastfeeding. *Curr Womens Health Rev* 2011; 7:28-34. 13. Davis MF, et al. Bupropion levels in breast milk for 4 mother-infant pairs: more answers to lingering questions. *J Clin Psychiatry* 2009; 70:297-298. 14. Neuman G, et al. Bupropion and escitalopram during lactation. *Ann Pharmacother* 2014; 48:928-931. 15. Burt VK, et al. The use of psychotropic medications during breast-feeding. *Am J Psychiatry* 2001; 158:1001-1009. 16. Lee A, et al. Frequency of infant adverse events that are associated with citalopram use during breast-feeding. *Am J Obstet Gynecol* 2004; 190:218-221. 17. Heikkinen T, et al. Citalopram in pregnancy and lactation. *Clin Pharmacol Ther* 2002; 72:184-191. 18. Jensen PN, et al. Citalopram and desmethylcitalopram concentrations in breast milk and in serum of mother and infant. *Ther Drug Monit* 1997; 19:236-239. 19. Spigset O, et al. Excretion of citalopram in breast milk. *Br J Clin Pharmacol* 1997; 44:295-298. 20. Rampono J, et al. Citalopram and demethylcitalopram in human milk; distribution, excretion and effects in breast fed infants. *Br J Clin Pharmacol* 2000; 50:263-268. 21. Schmidt K, et al. Citalopram and breast-feeding: serum concentration and side effects in the infant. *Biol Psychiatry* 2000; 47:164-165. 22. Franssen EJ, et al. Citalopram serum and milk levels in mother and infant during lactation. *Ther Drug Monit* 2006; 28:2-4. 23. Werremeyer A. Ziprasidone and citalopram use in pregnancy and lactation in a woman with psychotic depression. *Am J Psychiatry* 2009; 166:1298. 24. Hendrick V, et al. Weight gain in breastfed infants of mothers taking antidepressant medications. *J Clin Psychiatry* 2003; 64:410-412. 25. Boyce PM, et al. Duloxetine transfer across the placenta during pregnancy and into milk during lactation. *Arch Women's Ment Health* 2011; 14:169-172. 26. Briggs GG, et al. Use of duloxetine in pregnancy and lactation. *Ann Pharmacother* 2009; 43:1898-1902. 27. Lobo ED, et al. Pharmacokinetics of duloxetine in breast milk and plasma of healthy postpartum women. *Clin Pharmacokinet* 2008; 47:103-109. 28. Collin-Lévesque L, et al. Infant exposure to methylphenidate and duloxetine during lactation. *Breastfeed Med* 2018; 13:221-225. 29. Gentile S. Escitalopram late in pregnancy and while breast-feeding (Letter). *Ann Pharmacother* 2006; 40:1696-1697. 30. Castberg I, et al. Excretion of escitalopram in breast milk. *J Clin Psychopharmacol* 2006; 26:536-538. 31. Rampono J, et al. Transfer of escitalopram and its metabolite demethylescitalopram into breastmilk. *Br J Clin Pharmacol* 2006; 62:316-322. 32. Potts AL, et al. Necrotizing enterocolitis associated with in utero and breast milk exposure to the selective serotonin reuptake inhibitor, escitalopram. *J Perinatol* 2007; 27:120-122. 33. Ilett KF, et al. Estimation of infant dose and assessment of breastfeeding safety for escitalopram use in postnatal depression. *Ther Drug Monit* 2005; 27:248. 34. Bellantuono C, et al. The safety of escitalopram during pregnancy and breastfeeding: a comprehensive review. *Hum Psychopharmacol* 2012; 27:534-539. 35. Yoshida K, et al. Fluoxetine in breast-milk and developmental outcome of breast-fed infants. *Br J Psychiatry* 1998; 172:175-178. 36. Lester BM, et al. Possible association between fluoxetine hydrochloride and colic in an infant. *J Am Acad Child Adolesc Psychiatry* 1993; 32:1253-1255. 37. Hendrick V, et al. Fluoxetine and norfluoxetine

concentrations in nursing infants and breast milk. *Biol Psychiatry* 2001; 50:775–782. 38. Hale TW, et al. Fluoxetine toxicity in a breastfed infant. *Clin Pediatr* 2001; 40:681–684. 39. Malone K, et al. Antidepressants, antipsychotics, benzodiazepines, and the breastfeeding dyad. *Perspect Psychiatr Care* 2004; 40:73–85. 40. Heikkinen T, et al. Pharmacokinetics of fluoxetine and norfluoxetine in pregnancy and lactation. *Clin Pharmacol Ther* 2003; 73:330–337. 41. Epperson CN, et al. Maternal fluoxetine treatment in the postpartum period: effects on platelet serotonin and plasma drug levels in breastfeeding mother-infant pairs. *Pediatrics* 2003; 112:e425. 42. Taddio A, et al. Excretion of fluoxetine and its metabolite, norfluoxetine, in human breast milk. *J Clin Pharmacol* 1996; 36:42–47. 43. Brent NB, et al. Fluoxetine and carbamazepine concentrations in a nursing mother/infant pair. *Clin Pediatr (Phila)* 1998; 37:41–44. 44. Kristensen JH, et al. Distribution and excretion of fluoxetine and norfluoxetine in human milk. *Br J Clin Pharmacol* 1999; 48:521–527. 45. Burch KJ, et al. Fluoxetine/norfluoxetine concentrations in human milk. *Pediatrics* 1992; 89:676–677. 46. Morris R, et al. Serotonin syndrome in a breast-fed neonate. *BMJ Case Rep* 2015; 2015:bcr2015209418. 47. Hendrick V, et al. Use of sertraline, paroxetine and fluvoxamine by nursing women. *Br J Psychiatry* 2001; 179:163–166. 48. Piontek CM, et al. Serum fluvoxamine levels in breastfed infants. *J Clin Psychiatry* 2001; 62:111–113. 49. Yoshida K, et al. Fluvoxamine in breast-milk and infant development. *Br J Clin Pharmacol* 1997; 44:210–211. 50. Hagg S, et al. Excretion of fluvoxamine into breast milk. *Br J Clin Pharmacol* 2000; 49:286–288. 51. Arnold LM, et al. Fluvoxamine concentrations in breast milk and in maternal and infant sera. *J Clin Psychopharmacol* 2000; 20:491–492. 52. Kristensen JH, et al. The amount of fluvoxamine in milk is unlikely to be a cause of adverse effects in breastfed infants. *J Hum Lact* 2002; 18:139–143. 53. Wright S, et al. Excretion of fluvoxamine in breast milk. *Br J Clin Pharmacol* 1991; 31:209. 54. Uguz F. Gastrointestinal side effects in the baby of a breastfeeding woman treated with low-dose fluvoxamine. *J Hum Lact* 2015; 31:371–373. 55. Snider DE, Jr, et al. Should women taking antituberculosis drugs breast-feed? *Arch Intern Med* 1984; 144:589–590. 56. Singh N, et al. Transfer of isoniazid from circulation to breast milk in lactating women on chronic therapy for tuberculosis. *Br J Clin Pharmacol* 2008; 65:418–422. 57. Buist A, et al. Mianserin in breast milk (Letter). *Br J Clin Pharmacol* 1993; 36:133–134.

Prescribing in pregnancy and breastfeeding CHAPTER 7 58. Smit M, et al. Mirtazapine in pregnancy and lactation: data from a case series. *J Clin Psychopharmacol* 2015; 35:163–167. 59. Smit M, et al. Mirtazapine in pregnancy and lactation – a systematic review. *Eur Neuropsychopharmacol* 2016; 26:126–135. 60. Buist A, et al. Plasma and human milk concentrations of moclobemide in nursing mothers. *Hum Psychopharmacol* 1998; 13:579–582. 61. Pons G, et al. Moclobemide excretion in human breast milk. *Br J Clin Pharmacol* 1990; 29:27–31. 62. Begg EJ, et al. Paroxetine in human milk. *Br J Clin Pharmacol* 1999; 48:142–147. 63. Stowe ZN, et al. Paroxetine in human breast milk and nursing infants. *Am J Psychiatry* 2000; 157:185–189. 64. Misri S, et al. Paroxetine levels in postpartum depressed women, breast milk, and infant serum. *J Clin Psychiatry* 2000; 61:828–832. 65. Ohman R, et al. Excretion of paroxetine into breast milk. *J Clin Psychiatry* 1999; 60:519–523. 66. Berle JO, et al. Breastfeeding during maternal antidepressant treatment with serotonin reuptake inhibitors: infant exposure, clinical symptoms, and cytochrome p450 genotypes. *J Clin Psychiatry* 2004; 65:1228–1234. 67. Merlob P, et al. Paroxetine during breast-feeding: infant weight gain and maternal adherence to counsel. *Eur J Pediatr* 2004; 163:135–139. 68. Abdul Aziz A, et al. Severe paroxetine induced hyponatremia in a breast fed infant. *J Bahrain Med Soc* 2004; 16:195–198. 69. Hendrick V, et al. Paroxetine use during breast-feeding. *J Clin Psychopharmacol* 2000; 20:587–589. 70. Spigset O, et al. Paroxetine level in breast milk. *J Clin Psychiatry* 1996;

57:39. 71. Uguz F, et al. Short-term safety of paroxetine and sertraline in breastfed infants: a retrospective cohort study from a university hospital. *Breastfeed Med* 2016; 11:487–489. 72. Hackett LP, et al. Transfer of reboxetine into breastmilk, its plasma concentrations and lack of adverse effects in the breastfed infant. *Eur J Clin Pharmacol* 2006; 62:633–638. 73. Llewellyn A, et al. Psychotropic medications in lactation. *J Clin Psychiatry* 1998; 59 Suppl 2:41–52. 74. Mammen OK, et al. Sertraline and nortriptyline levels in three breastfed infants. *J Clin Psychiatry* 1997; 58:100–103. 75. Altshuler LL, et al. Breastfeeding and sertraline: a 24-hour analysis. *J Clin Psychiatry* 1995; 56:243–245. 76. Dodd S, et al. Sertraline analysis in the plasma of breast-fed infants. *Aust N Z J Psychiatry* 2001; 35:545–546. 77. Dodd S, et al. Sertraline in paired blood plasma and breast-milk samples from nursing mothers. *Hum Psychopharmacol* 2000; 15:161–264. 78. Epperson N, et al. Maternal sertraline treatment and serotonin transport in breast-feeding mother-infant pairs. *Am J Psychiatry* 2001; 158:1631–1637. 79. Stowe ZN, et al. The pharmacokinetics of sertraline excretion into human breast milk: determinants of infant serum concentrations. *J Clin Psychiatry* 2003; 64:73–80. 80. Muller MJ, et al. Serotonergic overstimulation in a preterm infant after sertraline intake via breastmilk. *Breastfeed Med* 2013; 8:327–329. 81. Wisner KL, et al. Serum sertraline and N-desmethylsertraline levels in breast-feeding mother-infant pairs. *Am J Psychiatry* 1998; 155:690–692. 82. Verbeeck RK, et al. Excretion of trazodone in breast milk. *Br J Clin Pharmacol* 1986; 22:367–370. 83. Saito J, et al. Trazodone levels in maternal serum, cord blood, breast milk, and neonatal serum. *Breastfeed Med* 2021; 16:922–925. 84. Yoshida K, et al. Psychotropic drugs in mothers' milk: a comprehensive review of assay methods, pharmacokinetics and of safety of breast-feeding. *J Psychopharmacol* 1999; 13:64–80. 85. Misri S, et al. Benefits and risks to mother and infant of drug treatment for postnatal depression. *Drug Saf* 2002; 25:903–911. 86. Yoshida K, et al. Investigation of pharmacokinetics and of possible adverse effects in infants exposed to tricyclic antidepressants in breast- milk. *J Affect Disord* 1997; 43:225–237. 87. Frey OR, et al. Adverse effects in a newborn infant breast-fed by a mother treated with doxepin. *Ann Pharmacother* 1999; 33:690–693. 88. Ilett KF, et al. The excretion of dothiepin and its primary metabolites in breast milk. *Br J Clin Pharmacol* 1992; 33:635–639. 89. Kemp J, et al. Excretion of doxepin and N-desmethyldoxepin in human milk. *Br J Clin Pharmacol* 1985; 20:497–499. 90. Buist A, et al. Effect of exposure to dothiepin and northiaden in breast milk on child development. *Br J Psychiatry* 1995; 167:370–373. 91. Khachman D, et al. Clomipramine in breast milk: a case study (article in French). *J Pharm Clin* 2007; 28:33–38. 92. Uguz F. Poor feeding and severe sedation in a newborn nursed by a mother on a low dose of amitriptyline. *Breastfeed Med* 2017; 12:67–68. 93. Koren G, et al. Can venlafaxine in breast milk attenuate the norepinephrine and serotonin reuptake neonatal withdrawal syndrome. *J Obstet Gynaecol Can* 2006; 28:299–302. 94. Ilett KF, et al. Distribution of venlafaxine and its O-desmethyl metabolite in human milk and their effects in breastfed infants. *Br J Clin Pharmacol* 2002; 53:17–22. 95. Newport DJ, et al. Venlafaxine in human breast milk and nursing infant plasma: determination of exposure. *J Clin Psychiatry* 2009; 70:1304–1310. 96. Ilett KF, et al. Assessment of infant dose through milk in a lactating woman taking amisulpride and desvenlafaxine for treatment-resistant depression. *Ther Drug Monit* 2010; 32:704–707. 97. Misri S, et al. Quetiapine augmentation in lactation: a series of case reports. *J Clin Psychopharmacol* 2006; 26:508–511. 98. Hendrick V, et al. Venlafaxine and breast-feeding. *Am J Psychiatry* 2001; 158:2089–2090. 99. Rampono J, et al. Estimation of desvenlafaxine transfer into milk and infant exposure during its use in lactating women with postnatal depression. *Arch Womens Ment Health* 2011; 14:49–53. 100. Ilett KF, et al. Distribution and excretion of venlafaxine and O-desmethylvenlafaxine in human milk. *Br J Clin Pharmacol* 1998; 45:459–462. 101. Baldelli S, et al. Passage of venlafaxine in human milk during 12 months of

lactation: a case report. *Ther Drug Monit* 2022; 44:707-708.

750 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 7 102. Marshall K, et al. Transfer of the serotonin modulator vortioxetine into human milk: a case series. *Breastfeed Med* 2021; 16:843-845. 103. Teoh S, et al. Estimation of rac-amisulpride transfer into milk and of infant dose via milk during its use in a lactating woman with bipolar disorder and schizophrenia. *Breastfeed Med* 2010; 6:85-88. 104. Uguz F. Breastfed infants exposed to combined antipsychotics: two case reports. *Am J Ther* 2016; 23:e1962-e1964. 105. O'Halloran SJ, et al. A liquid chromatography--tandem mass spectrometry method for quantifying amisulpride in human plasma and breast milk, applied to measuring drug transfer to a fully breast-fed neonate. *Ther Drug Monit* 2016; 38:493-498. 106. Schlotterbeck P, et al. Aripiprazole in human milk. *Int J Neuropsychopharmacol* 2007; 10:433. 107. Lutz UC, et al. Aripiprazole in pregnancy and lactation: a case report. *J Clin Psychopharmacol* 2010; 30:204-205. 108. Watanabe N, et al. Perinatal use of aripiprazole: a case report. *J Clin Psychopharmacol* 2011; 31:377-379. 109. Mendhekar DN, et al. Aripiprazole use in a pregnant schizoaffective woman. *Bipolar Disord* 2006; 8:299-300. 110. Nordeng H, et al. Transfer of aripiprazole to breast milk: a case report. *J Clin Psychopharmacol* 2014; 34:272-275. 111. Frew JR. Psychopharmacology of bipolar I disorder during lactation: a case report of the use of lithium and aripiprazole in a nursing mother. *Arch Womens Ment Health* 2015; 18:135-136. 112. Naughton S, et al. Aripiprazole, brexpiprazole, and cariprazine can affect milk supply: advice to breastfeeding mothers. *Australas Psychiatry* 2023; 31:201-204. 113. Sahoo MK, et al. Safety profile of aripiprazole during pregnancy and lactation: report of 2 cases. *Turk Psikiyatri derg = Turkish journal of psychiatry* 2023; 34:133-135. 114. Yoshida K, et al. Breast-feeding and psychotropic drugs. *Int Rev Psychiatry* 1996; 8:117-124. 115. Patton SW, et al. Antipsychotic medication during pregnancy and lactation in women with schizophrenia: evaluating the risk. *Can J Psychiatry* 2002; 47:959-965. 116. Klinger G, et al. Antipsychotic drugs and breastfeeding. *Pediatr Endocrinol Rev* 2013; 10:308-317. 117. Uguz F. Adverse events in a breastfed infant exposed to risperidone and haloperidol. *Breastfeed Med* 2019; 14:683-684. 118. Mendhekar DN. Possible delayed speech acquisition with clozapine therapy during pregnancy and lactation. *J Neuropsychiatry Clin Neurosci* 2007; 19:196-197. 119. Barnas C, et al. Clozapine concentrations in maternal and fetal plasma, amniotic fluid, and breast milk. *Am J Psychiatry* 1994; 151:945. 120. Shao P, et al. Effects of clozapine and other atypical antipsychotics on infants development who were exposed to as fetus: a post-hoc analysis. *PLoS One* 2015; 10:e0123373. 121. Imaz ML, et al. Clozapine use during pregnancy and lactation: a case-series report. *Front Pharmacol* 2018; 9:264. 122. Goldstein DJ, et al. Olanzapine-exposed pregnancies and lactation: early experience. *J Clin Psychopharmacol* 2000; 20:399-403. 123. Croke S, et al. Olanzapine excretion in human breast milk: estimation of infant exposure. *Int J Neuropsychopharmacol* 2002; 5:243-247. 124. Gardiner SJ, et al. Transfer of olanzapine into breast milk, calculation of infant drug dose, and effect on breast-fed infants. *Am J Psychiatry* 2003; 160:1428-1431. 125. Ambresin G, et al. Olanzapine excretion into breast milk: a case report. *J Clin Psychopharmacol* 2004; 24:93-95. 126. Lutz UC, et al. Olanzapine treatment during breast feeding: a case report. *Ther Drug Monit* 2008; 30:399-401. 127. Whitworth A, et al. Olanzapine and breast-feeding: changes of plasma concentrations of olanzapine in a breast-fed infant over a period of 5 months. *J Psychopharmacol* 2010; 24:121-123. 128. Eli Lilly and Company Ltd. Personal correspondence: olanzapine use in pregnant or nursing women. 2011. 129. Gilad O, et al. Outcome of infants exposed to olanzapine during breastfeeding. *Breastfeed Med* 2010; 6:55-58. 130. Goldstein DJ, et al. Olanzapine use during breast-feeding. *Schizophr Res* 2002; 53 Suppl 1:185. 131. Aydin B, et al. Olanzapine and quetiapine use during breastfeeding: excretion

into breast milk and safe breastfeeding strategy. *J Clin Psychopharmacol* 2015; 35:206–208. 132. Stiegler A, et al. Olanzapine treatment during pregnancy and breastfeeding: a chance for women with psychotic illness? *Psychopharmacology (Berl)* 2014; 231:3067–3069. 133. Var L, et al. Management of postpartum manic episode without cessation of breastfeeding: a longitudinal follow up of drug excretion into breast milk. *Eur Neuropsychopharmacol* 2013; 23 Suppl 1:S382. 134. Manouilenko I, et al. Long-acting olanzapine injection during pregnancy and breastfeeding: a case report. *Arch Womens Ment Health* 2018; 21:587–589. 135. Lee A, et al. Excretion of quetiapine in breast milk. *Am J Psychiatry* 2004; 161:1715–1716. 136. Gentile S. Quetiapine-fluvoxamine combination during pregnancy and while breastfeeding (Letter). *Arch Womens Ment Health* 2006; 9:158–159. 137. Seppala J. Quetiapine (Seroquel) is effective and well tolerated in the treatment of psychotic depression during breast feeding. *Eur Neuropsychopharmacol* 2004; 7 Suppl 1:S245. 138. Kruninger U, et al. Pregnancy and lactation under treatment with quetiapine. *Psychiatr Prax* 2007; 34 Suppl 1:S75–S76. 139. Ritz S. Quetiapine monotherapy in post-partum onset bipolar disorder with a mixed affective state. *Eur Neuropsychopharmacol* 2005; 15 Suppl 3:S407. 140. Rampono J, et al. Quetiapine and breast feeding. *Ann Pharmacother* 2007; 41:711–714. 141. Tanoshima R, et al. Quetiapine in human breast milk – population PK analysis of milk levels and simulated infant exposure. *J Popul Ther Clin Pharmacol* 2012; 19:e259–e298. 142. Yazdani-Brojeni P, et al. Quetiapine in human milk and simulation-based assessment of infant exposure. *Clin Pharmacol Ther* 2010; 87 Suppl 1:S3–S4. 143. Var L, et al. Management of postpartum manic episode without cessation of breastfeeding: a longitudinal follow up of drug excretion into breast milk. *Eur Neuropsychopharmacol* 2013; 23 Suppl 2:S382.

Prescribing in pregnancy and breastfeeding CHAPTER 7 144. Van Boekholt AA, et al. Quetiapine concentrations during exclusive breastfeeding and maternal quetiapine use. *Ann Pharmacother* 2015; 49:743–744. 145. Hill RC, et al. Risperidone distribution and excretion into human milk: case report and estimated infant exposure during breast-feeding. *J Clin Psychopharmacol* 2000; 20:285–286. 146. Aichhorn W, et al. Risperidone and breast-feeding. *J Psychopharmacol* 2005; 19:211–213. 147. Ilett KF, et al. Transfer of risperidone and 9-hydroxyrisperidone into human milk. *Ann Pharmacother* 2004; 38:273–276. 148. Ratnayake T, et al. No complications with risperidone treatment before and throughout pregnancy and during the nursing period. *J Clin Psychiatry* 2002; 63:76–77. 149. Weggelaar NM, et al. A case report of risperidone distribution and excretion into human milk: how to give good advice if you have not enough data available. *J Clin Psychopharmacol* 2011; 31:129–131. 150. Ylikorkala O, et al. Treatment of inadequate lactation with oral sulpiride and buccal oxytocin. *Obstet Gynecol* 1984; 63:57–60. 151. Ylikorkala O, et al. Sulpiride improves inadequate lactation. *BMJ* 1982; 285:249–251. 152. Aono T, et al. Augmentation of puerperal lactation by oral administration of sulpiride. *J Clin Endocrinol Metab* 1970; 48:478–482. 153. Polatti F. Sulpiride isomers and milk secretion in puerperium. *Clin Exp Obstet Gynecol* 1982; 9:144–147. 154. Aono T, et al. Effect of sulpiride on poor puerperal lactation. *Am J Obstet Gynecol* 1982; 143:927–932. 155. Matheson I, et al. Milk concentrations of flupenthixol, nortriptyline and zuclopenthixol and between-breast differences in two patients. *Eur J Clin Pharmacol* 1988; 35:217–220. 156. Kirk L, et al. Concentrations of Cis(Z)-flupenthixol in maternal serum, amniotic fluid, umbilical cord serum, and milk. *Psychopharmacology (Berl)* 1980; 72:107–108. 157. Aes--Jorgensen T, et al. Zuclopenthixol levels in serum and breast milk. *Psychopharmacology (Berl)* 1986; 90:417–418. 158. Schlotterbeck P, et al. Low concentration of ziprasidone in human milk: a case report. *Int J Neuropsychopharmacol* 2009; 12:437–438. 159. Chaudron LH, et al. Mood stabilizers during breastfeeding: a review. *J Clin Psychiatry* 2000; 61:79–90. 160. Wisner KL, et al.

Serum levels of valproate and carbamazepine in breastfeeding mother-infant pairs. *J Clin Psychopharmacol* 1998; 18:167–169. 161. Ernst CL, et al. The reproductive safety profile of mood stabilizers, atypical antipsychotics, and broad-spectrum psychotropics. *J Clin Psychiatry* 2002; 63 Suppl 4:42–55. 162. Meador KJ, et al. Effects of breastfeeding in children of women taking antiepileptic drugs. *Neurology* 2010; 75:1954–1960. 163. Zhao M, et al. [A case report of monitoring on carbamazepine in breast feeding woman]. *Beijing Da Xue Xue Bao* 2010; 42:602–603. 164. Froescher W, et al. Carbamazepine levels in breast milk. *Ther Drug Monit* 1984; 6:266–271. 165. Frey B, et al. Transient cholestatic hepatitis in a neonate associated with carbamazepine exposure during pregnancy and breast-feeding. *Eur J Pediatr* 1990; 150:136–138. 166. Merlob P, et al. Transient hepatic dysfunction in an infant of an epileptic mother treated with carbamazepine during pregnancy and breastfeeding. *Ann Pharmacother* 1992; 26:1563–1565. 167. Veiby G, et al. Early child development and exposure to antiepileptic drugs prenatally and through breastfeeding: a prospective cohort study on children of women with epilepsy. *JAMA Neurol* 2013; 70:1367–1374. 168. Pynnonen S, et al. Carbamazepine and mother's milk (Letter). *Lancet* 1975; 2:563. 169. Meador KJ, et al. Breastfeeding in children of women taking antiepileptic drugs: cognitive outcomes at age 6 years. *JAMA Pediatr* 2014; 168:729–736. 170. Ohman I, et al. Lamotrigine in pregnancy: pharmacokinetics during delivery, in the neonate, and during lactation. *Epilepsia* 2000; 41:709–713. 171. Liporace J, et al. Concerns regarding lamotrigine and breast-feeding. *Epilepsy Behav* 2004; 5:102–105. 172. Gentile S. Lamotrigine in pregnancy and lactation (Letter). *Arch Womens Ment Health* 2005; 8:57–58. 173. Page-Sharp M, et al. Transfer of lamotrigine into breast milk (Letter). *Ann Pharmacother* 2006; 40:1470–1471. 174. Rambeck B, et al. Concentrations of lamotrigine in a mother on lamotrigine treatment and her newborn child. *Eur J Clin Pharmacol* 1997; 51:481–484. 175. Tomson T, et al. Lamotrigine in pregnancy and lactation: a case report. *Epilepsia* 1997; 38:1039–1041. 176. Newport DJ, et al. Lamotrigine in breast milk and nursing infants: determination of exposure. *Pediatrics* 2008; 122:e223–e231. 177. Fotopoulou C, et al. Prospectively assessed changes in lamotrigine-concentration in women with epilepsy during pregnancy, lactation and the neonatal period. *Epilepsy Res* 2009; 85:60–64. 178. Nordmo E, et al. Severe apnea in an infant exposed to lamotrigine in breast milk. *Ann Pharmacother* 2009; 43:1893–1897. 179. Wakil L, et al. Neonatal outcomes with the use of lamotrigine for bipolar disorder in pregnancy and breastfeeding: a case series and review of the literature. *Psychopharmacol Bull* 2009; 42:91–98. 180. Birnbaum AK, et al. Antiepileptic drug exposure in infants of breastfeeding mothers with epilepsy. *JAMA Neurol* 2020; 77:441–450. 181. Kacirova I, et al. A short communication: lamotrigine levels in milk, mothers, and breastfed infants during the first postnatal month. *Ther Drug Monit* 2019; 41:401–404. 182. Kacirova I, et al. Monitoring of lamotrigine concentrations in mothers, colostrum, and breastfed newborns during the early postpartum period. *Biomed Pharmacother* 2022; 151:113167. 183. Bedussi F, et al. Normocytic normochromic anaemia and asymptomatic neutropenia in a 40-day-old infant breastfed by an epileptic mother treated with lamotrigine: infant's adverse drug reaction. *J Paediatr Child Health* 2018; 54:104–105. 184. Newmark RL, et al. Risk-benefit assessment of infant exposure to lithium through breast milk: a systematic review of the literature. *Int Rev Psychiatry* 2019; 31:295–304.

752 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 7 185. Westergren T, et al. Probable topiramate-induced diarrhea in a 2-month-old breast-fed child – a case report. *Epilepsy Behav Case Rep* 2014; 2:22–23. 186. Gentile S. Topiramate in pregnancy and breastfeeding. *Clin Drug Investig* 2009; 29:139–141. 187. Piontek CM, et al. Serum valproate levels in 6 breastfeeding mother-infant pairs. *J Clin Psychiatry* 2000; 61:170–172. 188. Bjornsson E. Hepatotoxicity

associated with antiepileptic drugs. *Acta Neurol Scand* 2008; 118:281–290. 189. Spigset O, et al. Excretion of psychotropic drugs into breast milk: pharmacokinetic overview and therapeutic implications. *CNS Drugs* 1998; 9:111–134. 190. Hagg S, et al. Anticonvulsant use during lactation. *Drug Saf* 2000; 22:425–440. 191. Iqbal MM, et al. Effects of commonly used benzodiazepines on the fetus, the neonate, and the nursing infant. *Psychiatr Serv* 2002; 53:39–49. 192. Buist A, et al. Breastfeeding and the use of psychotropic medication: a review. *J Affect Disord* 1990; 19:197–206. 193. Fisher JB, et al. Neonatal apnea associated with maternal clonazepam therapy: a case report. *Obstet Gynecol* 1985; 66:34S–35S. 194. Davanzo R, et al. Benzodiazepine e allattamento materno. *Med Bambino* 2008; 27:109–114. 195. Kelly LE, et al. Neonatal benzodiazepines exposure during breastfeeding. *J Pediatr* 2012; 161:448–451. 196. Birnbaum CS, et al. Serum concentrations of antidepressants and benzodiazepines in nursing infants: a case series. *Pediatrics* 1999; 104:e11. 197. Tomson T, et al. Breastfeeding while on treatment with antiseizure medications: a systematic review from the ILAE Women Task Force. *Epileptic Disord* 2022; 24:1020–1032. 198. Darwish M, et al. Rapid disappearance of zaleplon from breast milk after oral administration to lactating women. *J Clin Pharmacol* 1999; 39:670–674. 199. Pons G, et al. Excretion of psychoactive drugs into breast milk. Pharmacokinetic principles and recommendations. *Clin Pharmacokinet* 1994; 27:270–289. 200. Matheson I, et al. The excretion of zopiclone into breast milk. *Br J Clin Pharmacol* 1990; 30:267–271. 201. Saito J, et al. Presence of hypnotics in the cord blood and breast milk, with no adverse effects in the infant: a case report. *Breastfeed Med* 2022; 17:349–352. 202. Ilett KF, et al. Transfer of dexamphetamine into breast milk during treatment for attention deficit hyperactivity disorder. *Br J Clin Pharmacol* 2007; 63:371–375. 203. Hackett LP, et al. Methylphenidate and breast-feeding. *Ann Pharmacother* 2006; 40:1890–1891. 204. Bolea-Alamanac BM, et al. Methylphenidate use in pregnancy and lactation: a systematic review of evidence. *Br J Clin Pharmacol* 2014; 77:96–101. 205. Marchese M, et al. Is it safe to breastfeed while taking methylphenidate? *Can Fam Physician* 2015; 61:765–766. 206. Aurora S, et al. Evaluating transfer of modafinil into human milk during lactation: a case report. *J Clin Sleep Med* 2018; 14:2087–2089. 207. Calvo-Ferrandiz E, et al. Narcolepsy with cataplexy and pregnancy: a case-control study. *J Sleep Res* 2018; 27:268–272. 208. Leggett C, et al. Infant exposure to armodafinil through human milk following maternal use of modafinil. *J Hum Lact* 2023; 39:218–222.

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