

Are Antidepressants Safe during Pregnancy & Breastfeeding?

~12% of women experience depression and 13% experience anxiety peri-pregnancy.³³ The decision on how to treat depression and/or anxiety during and after pregnancy requires careful consideration of benefits and harms and collaborative discussions with the patient.

SUMMARY OF KEY POINTS:

- Consider the potential harm to mother and baby if depression is not treated.
- Consider cognitive behavioural therapy and interpersonal psychotherapy for patients with **less severe** depression.
- Consider using an antidepressant for patients with a history of **severe** depression. Most SSRIs are considered safe during pregnancy and lactation (sertraline, escitalopram, citalopram)^{CANMAT 2016}.
- In females with recurrent depression who stop their antidepressant during pregnancy the rate of relapse is ~25-50%. Discuss and individualize antidepressant management depending on previous and current mental health status.

Should antidepressants be discontinued before or during pregnancy?^{1,2,23,34,35}

- The decision depends on the patient's previous and current mental health status.
- Patients may be a candidate for tapering and discontinuing their antidepressant if they have had **mild or no symptoms** for ≥6 months. **Taper:** ↓ dose by 25% every 1-2 weeks. Work with patient & family to monitor closely for signs of relapse & withdrawal symptoms.
- Patients should **not** discontinue their antidepressant if they have a history of severe recurrent depression, psychosis, bipolar illness, suicide attempt, or other psychiatric comorbidities requiring drug therapy. In such patients, the harm of not taking an antidepressant may exceed the harm of taking drug therapy.
- **The rate of relapse is high during pregnancy.** Based on three cohort studies, discontinuation led to a relapse of depression and re-initiation of antidepressant therapy in 22%-57% of women.^{23,34,35}

Is there any harm in not treating depression and/or anxiety during pregnancy & postpartum?^{1,3,4,5,6,7,8,9,10,11}

- **Untreated depression and/or anxiety can put the mother & fetus/baby at risk, with suicide & infanticide being a primary concern.**
- Mothers with depression are more likely to miss prenatal appointments, be malnourished, engage in harmful behaviours e.g. smoking and are less likely to take prenatal vitamins. Postpartum depression can impact their ability to care for and bond with their child.
- In untreated depression, there is a higher risk of spontaneous abortions, miscarriages, gestational hypertension, preeclampsia, preterm deliveries, low birth weight, small for gestational age, cesarean section, low Apgar scores, need for neonatal intensive care, and ↑ length of hospital stay^{1,5,9}. Some antidepressant studies in pregnant women have found these same risks, but most were unable to control for underlying depression.¹
- Infants born to untreated women are at a higher risk of irritability, inactivity, and fewer facial expressions. Cognitive, emotional, and behavioural concerns can surface when an infant is exposed to a chronically depressed mother.

What is the role for non-pharmacological therapies during pregnancy?^{1,4,6,7,31,37,38}

- Non-pharmacological therapies have the same role in patients with depression whether pregnant or not. Non-pharmacological therapies may be considered first line in less severe depression/anxiety and as an adjunct in **more severe** depression/anxiety.
- See RxFiles Depression Newsletter, pg 10.
- Note: electroconvulsive therapy (ECT) is considered safe & effective during pregnancy for patients with severe, refractory depression.

When should antidepressants be considered?^{1,3,4,31}

- Antidepressants can be used for more **severe** depression and/or anxiety, with or without psychotherapy.
- In **less severe** depression/anxiety, antidepressants may be tried if: psychotherapy is not available or has previously failed, the patient prefers pharmacotherapy, the patient has a history of severe depression/anxiety, or has had a good response to previous antidepressants.

Which antidepressants are considered the safest during pregnancy?^{1,3,4,6,12,13,14}

- Antidepressants do not appear to significantly ↑ the risk of congenital malformations more than the general population risk of 2-4%.
- Most **SSRIs** are considered safe. Sertraline, escitalopram, & citalopram may be preferred due to efficacy and safety profile.^{CANMAT 2016} See below for specific concerns with paroxetine and ?fluoxetine; most SSRIs appear to have a similar safety profile.
- Tricyclic antidepressants (TCAs) do not appear to be teratogenic and serum levels can be monitored; however, anticholinergic side effects & risk of overdose need to be considered. **Amitriptyline** and **nortriptyline** are preferred TCAs.
- Newer antidepressants (e.g. levomilnacipran, vortioxetine, vilazodone) do not appear to be teratogenic, but there is limited data available.

Abbreviations: **SSRI**=selective serotonin reuptake inhibitor **TCA**=Tricyclic antidepressants **CANMAT**=Canadian Network for Mood and Anxiety Treatments **CPS**=Canadian Pediatric Society **ECT**=electroconvulsive therapy **PPHN**=persistent pulmonary hypertension of the newborn

Are paroxetine and fluoxetine associated with congenital malformations? ^{1,2,4,6,8,15,26,36}

- Available evidence is inconsistent and has study limitations. A meta-analysis published in 2013 found the following:²⁶
 - N=7, n=1,639,065: increased risk of cardiovascular malformation with paroxetine RR 1.43 (95% CI 1.08-1.88)
 - N=7, n=1,901,183: increased risk of congenital malformations with fluoxetine RR 1.25 (95% CI 1.03-1.51); however, significance varied based on analysis.
- If starting an antidepressant in a woman of childbearing potential or who is pregnant – possibly consider selecting an antidepressant other than paroxetine or fluoxetine, unless the patient has responded to either agent in the past, has failed other agents, &/or has other indications for paroxetine or fluoxetine.
- If a pregnant woman is stabilized on paroxetine or fluoxetine – often continue treatment, especially if the patient has previously failed other antidepressants. Decreasing the dose may help reduce potential risks. Switching to another antidepressant in the first trimester is an option, but switching may result in risk of relapse.

Are SSRIs associated with persistent pulmonary hypertension of the newborn? ^{1,3,8,16,17,18,24,27,31,32}

- The available data (case-control or cohort) is conflicting and has several limitations. If a true association exists, the risk is very small.
- Persistent pulmonary hypertension of the newborn (PPHN) is a rare but serious complication. There are several causes, including meconium aspiration 40% of cases, smoking, obesity, cesarean section, and preterm delivery, to name a few.
 - Depression itself has been linked to increased risk of cesarean section and preterm delivery.
 - PPHN has not been linked to non-SSRI antidepressants.
- There is conflicting evidence regarding the association of SSRIs and PPHN. One systematic review and meta-analysis found an absolute risk of 2.9-3.5 per 1000 births compared to the general population risk of 2 per 1000 births.²⁷

Are antidepressants associated with neonatal behavioural syndrome? ^{1,3,4,7,8,10,19,24} (neonatal adaptation syndrome)

- Neonatal behavioural syndrome has been reported in up to 30% of infants exposed to antidepressants near term. All antidepressants carry this risk; however, it is usually mild and transient.
- Signs and symptoms include tachypnea, cyanosis, jitteriness, tremors, increased muscle tone, feeding disturbances, irritability, temperature instability, hypoglycemia, and, rarely, seizures.
- Usually presents within hours of birth, is mild, and often resolves within two weeks.
- It is not known if it results from neonatal withdrawal or toxicity. In utero nicotine exposure can cause similar symptoms.
- No specific monitoring is recommended.^{CPS} Families should be counselled to observe for the above signs & symptoms.

Which antidepressants are considered safe during breastfeeding? ^{3,6,9,20,21,24,31}

- Postpartum use of any antidepressant is not a contraindication to breastfeeding.^{CPS 2021, CANMAT 2016}
- SSRIs have the most safety data during lactation and are considered to have a better safety profile than TCAs. Some SSRIs may be preferred e.g. sertraline, citalopram, escitalopram.^{CANMAT 2016}
- All SSRIs are excreted into breast milk to varying degrees (all less than 10%, which is considered generally safe):
 - Sertraline, paroxetine, and fluvoxamine have the lowest degree of excretion into breast milk.
 - Citalopram, escitalopram, and fluoxetine have longer t_{1/2}, higher infant doses & greater number of reported infant adverse events.
- TCAs: nortriptyline, amitriptyline, & clomipramine are likely safe during breastfeeding.
- Newer antidepressants (e.g. levomilnacipran, vortioxetine, vilazodone) have limited data to establish safety during lactation.
- Educate mothers to monitor for & report sedation, nausea, reduced suckling, or any other sign of drug toxicity in the infant.

Depression screening considerations in pregnancy & postpartum ^{6,7,8,22,24}

- When should patients be screened for peri-pregnancy depression?**
 - Pre-conception: ask about personal and family history of mental health disorders and treatment.
 - Pregnancy: during the first routine antenatal visit.
 - Postpartum: during routine postnatal visits at 4-6 weeks and 3-4 months postpartum.
 - Anytime throughout the antenatal & postnatal period if concerned about their mental health.
- Which depression screening tools should be used?** (in conjunction with clinical symptoms and history)
 - Edinburgh Postnatal Depression Scale – validated for use during both pregnancy and postpartum
 - Patient Health Questionnaire 9 (PHQ-9)
 - Screening tools do not confirm a diagnosis of depression, but rather identify patients who require further assessment.
- Avoid** using screening tools which focus on somatic symptoms (e.g. Beck Depression Inventory) as it can be difficult to distinguish between symptoms of depression versus pregnancy.^{expert opinion}

Note: Canadian Task Force recommends against routine screening in peri-partum period, benefit vs cost uncertain. However, regularly assessing mental health status and overall well-being in the peri-partum period is important.^{40,41}

What are other important considerations in the management of depression & anxiety during pregnancy? ^{1,3,4}

- Antidepressants may be metabolized more quickly in the 3rd trimester. Increase the dose if needed, but use the lowest effective dose and readjust the postpartum dose as needed or required.
- Monotherapy is preferred over combination therapy.
 - Counsel patients on the risks of stopping antidepressants abruptly.
- Avoid regular benzodiazepine use for anxiety. 1st trimester use linked to oral cleft malformations. 3rd trimester use linked to “floppy baby” syndrome (hypotonia, lethargy, sucking difficulties) & withdrawal syndrome (tremors, irritability, hypertonicity, diarrhea, vomiting, vigorous sucking).

RxFiles Q&A Are Antidepressants Safe during Pregnancy & Lactation Extras:

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Additional articles:

- Andersen JT, Andersen NL, Horwitz H, et al. Exposure to Selective Serotonin Reuptake Inhibitors in Early Pregnancy and the **Risk of Miscarriage**. *Obstet Gynecol*. 2014 Sep 5.
- Berard A, Zhao JP, Sheehy O. **Sertraline use during pregnancy** and the risk of major malformations. *Am J Obstet Gynecol*. 2015 Jun;212(6):795.e1-795.e12.
- Bérard A, Sheehy O, et al. **SSRI and SNRI use during pregnancy** and the risk of **persistent pulmonary hypertension** of the newborn. *Br J Clin Pharmacol*. 2016 Nov 22.
- Bérard A, Zhao JP, Sheehy O. **Antidepressant use during pregnancy** and the risk of major congenital malformations in a cohort of depressed pregnant women: an updated analysis of the Quebec Pregnancy Cohort. *BMJ Open*. 2017 Jan 12;7(1):e013372.
- Brandlistuen RE et al. Behavioural effects of **fetal antidepressant exposure** in a Norwegian cohort of discordant siblings. *Int J Epidemiol* 2015 Apr 14.
- Brown HK, Ray JG, Wilton AS, et al. Association between **serotonergic antidepressant use during pregnancy and autism spectrum disorder** in children. *JAMA*. doi:10.1001/jama.2017.3415
- Caparros-Gonzalez RA, et al. **Hair cortisol levels**, psychological stress and psychopathological symptoms as predictors of **postpartum depression**. *PLoS One*. 2017 Aug 28;12(8):e0182817.
- Chan J, Natekar A, Einarson A, et al. Risks of **untreated depression** in pregnancy. *Can Fam Physician*. 2014 Mar;60(3):242-3.
- Ejaz R, Leibson T, Koren G. **Selective serotonin reuptake inhibitor discontinuation during pregnancy**: at what risk? *Can Fam Physician*. 2014 Dec;60(12):1105-6.
- Furukawa TA. Adverse effects of **antidepressants during pregnancy**. *Evid Based Ment Health*. 2014 Nov;17(4):103-4.
- Gao SY, Wu QJ, Zhang TN, et al. **Fluoxetine and congenital malformations**: a systematic review and meta-analysis of cohort studies. *Br J Clin Pharmacol*. 2017 May 17
- Grigoriadis S, VonderPorten EH, Mamisashvili L, et al. **Antidepressant exposure** during pregnancy and congenital malformations: is there an association? A systematic review and meta-analysis of the best evidence. *J Clin Psychiatry* 2013;74:e293–308.
- Grigoriadis S, VonderPorten EH, Mamisashvili L, et al. The effect of **prenatal antidepressant exposure** on neonatal adaptation: a systematic review and meta-analysis. *J Clin Psychiatry* 2013;74:e309–20.
- Grigoriadis S, Vonderporten EH, Mamisashvili L, et al. **Prenatal exposure to antidepressants and persistent pulmonary hypertension** of the newborn: systematic review and meta-analysis. *BMJ*. 2014 Jan 14
- Grzeskowiak LE, Morrison JL, Henriksen TB, et al. **Prenatal antidepressant exposure and child behavioural outcomes** at 7 years of age: a study within the Danish National Birth Cohort. *BJOG*. 2016 Nov;123(12):1919-1928.
- Guo N et al. Prevalence of **depression among women of reproductive age** in the United States. *Obstet Gynecol* 2018 Apr; 131:671.
- Hannigan LJ, Eilertsen EM, Gjerde LC, et al. **Maternal prenatal depressive symptoms** and risk for early-life psychopathology in offspring: **genetic analyses** in the Norwegian Mother and Child Birth Cohort Study. *Lancet Psychiatry*. 2018 Oct;5(10):808-815.
- Harrington RA, Lee LC, Crum RM, et al. **Prenatal SSRI Use and Offspring With Autism Spectrum Disorder or Developmental Delay**. *Pediatrics*. 2014 Apr 14.
- Herba CM, Tremblay RE, Boivin M, et al. **Maternal Depressive Symptoms and Children's Emotional Problems: Can Early Child Care Help Children of Depressed Mothers?** *JAMA Psychiatry*. 2013 Jun 19:1-9.
- Hiscock H, Cook F, Bayer J, et al. Preventing **early infant sleep and crying problems** and postnatal depression: a randomized trial. *Pediatrics*. 2014 Feb;133(2):e346-54.
- Howell EA, et al. Reducing postpartum depressive symptoms among black and latina mothers: a randomized controlled trial. *Obstet Gynecol*. 2012 May;119(5):942-9.
- Huybrechts KF, Palmsten K, Avorn J, et al. **Antidepressant use in pregnancy** and the risk of cardiac defects. *N Engl J Med*. 2014 Jun 19;370(25):2397-407.
- Huybrechts KF, Bateman BT, et al. Antidepressant use late in pregnancy & risk of persistent **pulmonary hypertension** of the newborn. *JAMA*. 2015 Jun 2;313(21):2142-51.
- Jimenez-Solem E, Andersen JT, Petersen M, et al. **SSRI Use During Pregnancy and Risk of Stillbirth and Neonatal Mortality**. *Am J Psychiatry*. 2013 Jan 30.
- Jones I, Shakespeare J. **Postnatal depression**. *BMJ*. 2014 Aug 14;349:g4500.
- Jordan S, Morris JK, Davies GI, et al. **Selective Serotonin Reuptake Inhibitor (SSRI) Antidepressants in Pregnancy and Congenital Anomalies: Analysis of Linked Databases in Wales, Norway and Funen, Denmark**. *PLoS One*. 2016 Dec 1;11(12):e0165122.
- King BH. Association Between Maternal Use of **SSRI Medications and Autism** in Their Children. *JAMA*. 2017 Apr 18;317(15):1568-1569
- Kivistö J, Lehto SM, Halonen K, et al. Maternal Use of **Selective Serotonin Reuptake Inhibitors and Lengthening of the Umbilical Cord**: Indirect Evidence of Increased Foetal Activity-A Retrospective Cohort Study. *PLoS One*. 2016 Apr 29;11(4).
- Koren G, Nordeng H. Antidepressant use during pregnancy: the **benefit-risk ratio**. *Am J Obstet Gynecol*. 2012 Feb 21.
- Langan RC, Goodbred AJ. **Identification and Management of Peripartum Depression**. *Am Fam Physician*. 2016;93(10):852-858.
- Liu X, Olsen J, Pedersen LH, et al. **Antidepressant Use During Pregnancy** and Asthma in the Offspring. *Pediatrics*. 2015 Mar 9.
- Liu X, Agerbo E, Ingstrup KG, et al. **Antidepressant use during pregnancy and psychiatric disorders** in offspring: Danish nationwide register based cohort study. *BMJ* 2017;358:j3668.
- Malm H, Sourander A, Gissler M, et al. **Pregnancy Complications Following Prenatal Exposure to SSRIs or Maternal Psychiatric Disorders: Results From Population-Based National Register Data**. *Am J Psychiatry*. 2015 Aug 4
- Man KKC, Chan EW, Ip P, et al. **Prenatal antidepressant use and risk of attention-deficit/hyperactivity disorder** in offspring: population based cohort study. *BMJ* 2017;357:j2350.
- Mann R, Adamson J, Gilbody SM. Diagnostic accuracy of case-finding questions to **identify perinatal depression**. *CMAJ*. 2012 Apr 2.
- McDonagh MS, Matthews A, Phillipi C, et al. **Depression Drug Treatment Outcomes in Pregnancy and the Postpartum Period: A Systematic Review and Meta-analysis**. *Obstet Gynecol*. 2014 Sep;124(3):526-34.
- Mezzacappa A, Lasica PA, Gianfagna F, et al. Risk for **Autism Spectrum Disorders According to Period of Prenatal Antidepressant Exposure: A Systematic Review and Meta-analysis**. *JAMA Pediatr*. 2017 Apr 17.
- Molyneaux E, Trevillion K, Howard LM. Antidepressant treatment for **postnatal depression**. *JAMA*. 2015 May 19;313(19):1965-6.
- Myles N, Newall H, Ward H, Large M. Systematic meta-analysis of individual **selective serotonin reuptake inhibitor medications and congenital malformations**. *Aust N Z J Psychiatry*. 2013 Nov;47(11):1002-12.
- Nembhard WN, et al. Maternal and infant genetic variants, **maternal periconceptional use of selective serotonin reuptake inhibitors**, and risk of congenital heart defects in offspring: population based study. *BMJ*. 2017 Mar 6;356:j832.

- Norby U, Forsberg L, Wide K, et al. **Neonatal Morbidity After Maternal Use of Antidepressant Drugs During Pregnancy**. *Pediatrics*. 2016;138(5):e20160181
- O'Connor E, Senger CA, Henninger M, et al. Interventions to Prevent Perinatal Depression: A Systematic Evidence Review for the U.S. Preventive Services Task Force [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2019 Feb. Available from <http://www.ncbi.nlm.nih.gov/books/NBK537819/>
- Patton GC, Romaniuk H, Spry E, et al. Prediction of **perinatal depression** from adolescence and before conception (VIHCS): 20-year prospective cohort study. *Lancet* 2015; online June 11.
- Petersen I, Evans SJ, Gilbert R, et al. **Selective serotonin reuptake inhibitors and congenital heart anomalies**: comparative cohort studies of women treated before and during pregnancy and their children. *J Clin Psychiatry*. 2016 Jan;77(1):e36-42.
- Petersen I, Peltola T, Kaski S, et al. **Depression, depressive symptoms and treatments in women who have recently given birth**: UK cohort study. *BMJ Open*. 2018 Oct 8(10):e022152
- Phipps MG, Raker CA, et al. Randomized controlled trial to **prevent postpartum depression** in adolescent mothers. *Am J Obstet Gynecol*. 2013 Mar;208(3):192.e1-6.
- Radesky JS, Zuckerman B, Silverstein M et al. Inconsolable infant crying and maternal postpartum depressive symptoms. *Pediatrics*. 2013 Jun;131(6):e1857-64.
- Rai D, Lee BK, Dalman C, et al. Parental depression, maternal antidepressant use during pregnancy, and risk of autism spectrum disorders: population based case-control study. *BMJ*. 2013 Apr 19;346:f2059.
- Rai D, Lee B, Dalman C, et al. Antidepressants during pregnancy and **autism** in offspring: population based cohort study. *BMJ* 2017;358:j2811.
- Reefhuis J, Devine O, Friedman JM, et al; National Birth Defects Prevention Study. Specific **SSRIs and birth defects**: bayesian analysis to interpret new data in the context of previous reports. *BMJ*. 2015 Jul 8;351:h3190.
- Sujan AC, Rickert ME, Öberg AS, et al. Associations of **maternal antidepressant use during the first trimester of pregnancy** with preterm birth, small for gestational age, **autism** spectrum disorder, and attention-deficit/hyperactivity disorder in offspring. *JAMA*. doi:10.1001/jama.2017.3413
- Venkatesh KK, Zlotnick C, et al. Accuracy of Brief Screening **Tools for Identifying Postpartum Depression** Among Adolescent Mothers. *Pediatrics*. 2013 Dec 16
- Vigod SN, Tarasoff LA, Bryja B, et al. Relation between **place of residence** and postpartum depression. *CMAJ*. 2013 Aug 6.
- Viktorin A, Uher R, et al. Association of Antidepressant Medication Use During Pregnancy With **Intellectual Disability in Offspring**. *JAMA Psychiatry*. 2017 Jul 12
- Weissman MM et al. Treatment of **maternal depression in a medication** clinical trial and its effect on children. *Am J Psychiatry* 2015 Jan 23.
- Yang A, Ciolino JD, et al. **Neonatal Discontinuation Syndrome in Serotonergic Antidepressant-Exposed Neonates**. *J Clin Psychiatry*. 2017 May;78(5):605-611.

2012 Original References:

- ¹ Yonkers KA et al. The management of depression during pregnancy: a report from the American Psychiatric Association and the American College of Obstetricians and Gynecologists. *Gen Hosp Psychiatry*. 2009 Sep-Oct;31(5):403-13.
- ² Cohen LS et al. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*. 2006 Feb 1;295(5):499-507.
- ³ Canadian Pediatric Society Position Statement. Selective serotonin reuptake inhibitors in pregnancy and infant outcomes. *Pediatric Child Health* 2011; 16(9):562.
- ⁴ American Psychiatric Association. 2010 Practice Guideline for the Treatment of Patients with Major Depressive Disorder, 3rd edition. http://psychiatryonline.org/data/Books/prac/PG_Depression3rdEd.pdf Accessed February 21st, 2012.
- ⁵ Bonari L et al. Risks of untreated depression during pregnancy. *Can Fam Physician*. 2004 Jan;50:37-9.
- ⁶ National Institute for Health and Clinical Excellence. NICE Clinical Guideline 45 – Antenatal and postnatal mental health: Clinical management and service guidance. February 2007. <http://www.nice.org.uk/nicemedia/live/11004/30433/30433.pdf> Accessed February 21st, 2012.
- ⁷ Ryan D, Millis L, Misri N. Depression during pregnancy. *Can Fam Physician*. 2005 Aug;51:1087-93.
- ⁸ Stewart DE. Clinical practice. Depression during pregnancy. *N Engl J Med*. 2011 Oct 27;365(17):1605-11.
- ⁹ Davalos DB, Yadon CA, Tregellas HC. Untreated prenatal maternal depression and the potential risks to offspring: a review. *Arch Womens Ment Health*. 2012 Feb;15(1):1-14.
- ¹⁰ Rubinchik SM, Kablinger AS, Gardner JS. Medications for panic disorder and generalized anxiety disorder during pregnancy. *Prim Care Companion J Clin Psychiatry*. 2005;7(3):100-5.
- ¹¹ El Marroun H et al. Maternal Use of Selective Serotonin Reuptake Inhibitors, Fetal Growth, and Risk of Adverse Birth Outcomes. *Arch Gen Psychiatry*. 2012 Mar 5.
- ¹² Briggs G et al. *Drugs in Pregnancy and Lactation*, 9th edition. 2011.
- ¹³ Galbally M, Snellen M, Lewis AJ. A review of the use of psychotropic medication in pregnancy. *Curr Opin Obstet Gynecol*. 2011 Dec;23(6):408-14.
- ¹⁴ Malm H et al. Selective serotonin reuptake inhibitors and risk for major congenital anomalies. *Obstet Gynecol*. 2011 Jul;118(1):111-20.
- ¹⁵ Einarson A. Motherisk Update: Paroxetine use in pregnancy and increased risk of heart defects. *Canadian Family Physician* 2010;56:767-8.
- ¹⁶ Occhiogrosso M, Omran SS, Altemus M. Persistent pulmonary hypertension of the newborn and selective serotonin reuptake inhibitors: lessons from clinical and translational studies. *Am J Psychiatry*. 2012 Feb 1;169(2):134-40.
- ¹⁷ Kieler H et al. Selective serotonin reuptake inhibitors during pregnancy and risk of persistent pulmonary hypertension in the newborn: population based cohort study from the five Nordic countries. *BMJ*. 2011 Jan 12;344:d8012.
- ¹⁸ Patil AS et al. Antidepressants in pregnancy: a review of commonly prescribed medications. *Obstet Gynecol Surv*. 2011 Dec;66(12):777-87.
- ¹⁹ Kalra S, Einarson A, Koren G. Taking antidepressants during late pregnancy. *Canadian Family Physician* 2005; 51: 1077-8.
- ²⁰ LactMed. <http://toxnet.nlm.nih.gov/>. Accessed February 2012.
- ²¹ Fortinguerra F et al. Psychotropic drug use during breastfeeding: a review of the evidence. *Pediatrics* 2009;124(4):547-556.
- ²² Flynn HA et al. Comparative performance of the Edinburgh Postnatal Depression Scale and the Patient Health Questionnaire-9 in pregnant and postpartum women seeking psychiatric services. *Psychiatry Res*. 2011 May 15;187(1-2):130-4.

2022 Update References:

- ²³ Benard-Laribiere Anne [et al.] Patterns of antidepressant use during pregnancy: a nationwide population-based cohort study [Online] // National Library of Medicine. - *British Journal of Clinical Pharmacology*, June 3, 2018. - October 2022. - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6046485/>.

- ²⁴Canadian Pediatric Society [et al.] Position Statement: Selective serotonin reuptake inhibitors or serotonin-norepinephrine reuptake inhibitors in pregnancy: Infant and childhood outcomes [Online] // Canadian Pediatric Society. - July 29, 2021. - October 2022. - <https://cps.ca/en/documents/position/selective-serotonin>.
- ²⁵Cuomo Alessandro [et al.] Using sertraline in postpartum and breastfeeding: balancing risks and benefits [Online]. - Taylor & Francis Online, July 5, 2018. - October 2022. - <https://www.tandfonline.com/doi/full/10.1080/14740338.2018.1491546>.
- ²⁶Grigoriadis Sophie [et al.] Antidepressant Exposure During Pregnancy and Congenital Malformations: Is There an Association? A Systematic Review and Meta-Analysis of the Best Evidence [Online]. - JCP, April 15, 2013. - October 2022. - <https://www.psychiatrist.com/jcp/depression/antidepressant-exposure-during-pregnancy-congenital/>.
- ²⁷Grigoriadis Sophie [et al.] Prenatal exposure to antidepressants and persistent pulmonary hypertension of the newborn: systematic review and meta-analysis [Online]. - bmj, January 14, 2014. - October 2022. - <https://www.bmj.com/content/348/bmj.f6932>.
- ²⁸Grigoriadis Sophie [et al.] The Effect of Prenatal Antidepressant Exposure on Neonatal Adaptation: A Systematic Review and Meta-Analysis [Online]. - jcp, April 15, 2013. - October 2022. - <https://www.psychiatrist.com/jcp/mental/women/effect-prenatal-antidepressant-exposure-neonatal-adaptation/>.
- ²⁹Huybrechts Krista F. [et al.] Antidepressant Use Late in Pregnancy and Risk of Persistent Pulmonary Hypertension of the Newborn [Online]. - JAMA, June 2, 2015. - October 2022. - <https://jamanetwork.com/journals/jama/fullarticle/2300602>.
- ³⁰Kieler Helle [et al.] Selective serotonin reuptake inhibitors during pregnancy and risk of persistent pulmonary hypertension in the newborn: population based cohort study from the five Nordic countries [Online]. - bmj, January 12, 2012. - October 2022. - <https://www.bmj.com/content/344/bmj.d8012.long>.
- ³¹MacQueen Glenda M. [et al.] Section 6. Special Populations: Youth, [Online] // 2016 Clinical Guidelines for the Management of Adults with Major Depressive Disorder. - CANMAT, September 2016. - October 2022. - file:///C:/Users/bdr520/Downloads/1.-CANMAT-2016-MDD-Guidelines-with-2020-errata-Can-J-Psychiatry-full-issue%20(3).pdf.
- ³²Munk-Olsen Trine [et al.] Association of Persistent Pulmonary Hypertension in Infants With the Timing and Type of Antidepressants In Utero [Online]. - JAMA, December 1, 2021. - October 2022. - <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2786702>.
- ³³National Institute for Health and Care Excellence Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance [Online] // NICE. - December 17, 2014. - <https://www.nice.org.uk/guidance/cg192/resources/antenatal-and-postnatal-mental-health-clinical-management-and-service-guidance-pdf-35109869806789>.
- ³⁴Noh Yunha [et al.] Discontinuation and re-initiation of antidepressants during pregnancy: A nationwide cohort study [Online] // ScienceDirect. - Elsevier, February 1, 2022. - October 2022. - <https://www.sciencedirect.com/science/article/pii/S0165032721011630?via%3Dihub>.
- ³⁵Roca A [et al.] Unplanned pregnancy and discontinuation of SSRIs in pregnant women with previously treated affective disorder [Online] // ScienceDirect. - Elsevier, September 25, 2013. - October 2022. - <https://www.sciencedirect.com/science/article/pii/S0165032713002292?via%3Dihub>.
- ³⁶Yonkers Kimberly A., Blackwell Katherine A. and Forray Ariadna Antidepressant Use in Pregnant and Postpartum Women [Online]. - ncbi, December 2, 2013. - October 2022. - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4138492/>.
- ³⁷American Psychiatric Association Treatment of Patients with Panic Disorder [Online]. - APA, 2009. - October 2022. - https://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/panicdisorder.pdf.
- ³⁸National Institute for Health and Care Excellence Generalised anxiety disorder and panic disorder in adults: management [Online]. - NICE, January 26, 2011. - October 2022. - <https://www.nice.org.uk/guidance/cg113/resources/generalised-anxiety-disorder-and-panic-disorder-in-adults-management-pdf-35109387756997>.
- ³⁹DynaMed Generalized Anxiety Disorder [Online] // DynaMed. - EBSCO Information Services, November 2021. - October 2022. - <https://www.dynamed.com/condition/generalized-anxiety-disorder>.
- ⁴⁰Lang E, Colquhoun H, LeBlanc JC, Riva JJ, Moore A, Traversy G, Wilson B, Grad R; Canadian Task Force on Preventive Health Care. Recommendation on instrument-based screening for depression during pregnancy and the postpartum period. CMAJ. 2022 Jul 25;194(28):E981-E989.
- ⁴¹Premji S, McNeil DA, Spackman E. Observational evidence in support of screening for depression during pregnancy and the postpartum period. CMAJ. 2022 Nov 7;194(43):E1487.