

Depression in pregnancy: considerations for the prenatal provider

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Objectives

- Identify new as well as previously diagnosed depression during the antenatal period
- Offer safe, evidence-based treatment of depression to pregnant and breastfeeding patients

Outline

- Definition
- Risks of untreated depression
- Screening
- Risks of medications
- Initiating treatment
- Post partum depression
- Breastfeeding considerations
- When to refer

Definition

- Perinatal depression: includes major and minor depressive episodes that occur during pregnancy or in the first 12 months after delivery
- Treatment with psychotropic medications is a controversial topic

Depression during pregnancy

- Maternal anxiety
- Life stress
- History of depression
- Lack of social support
- Unintended pregnancy
- Medicaid insurance
- Domestic violence
- Lower income
- Lower education
- Smoking
- Single status

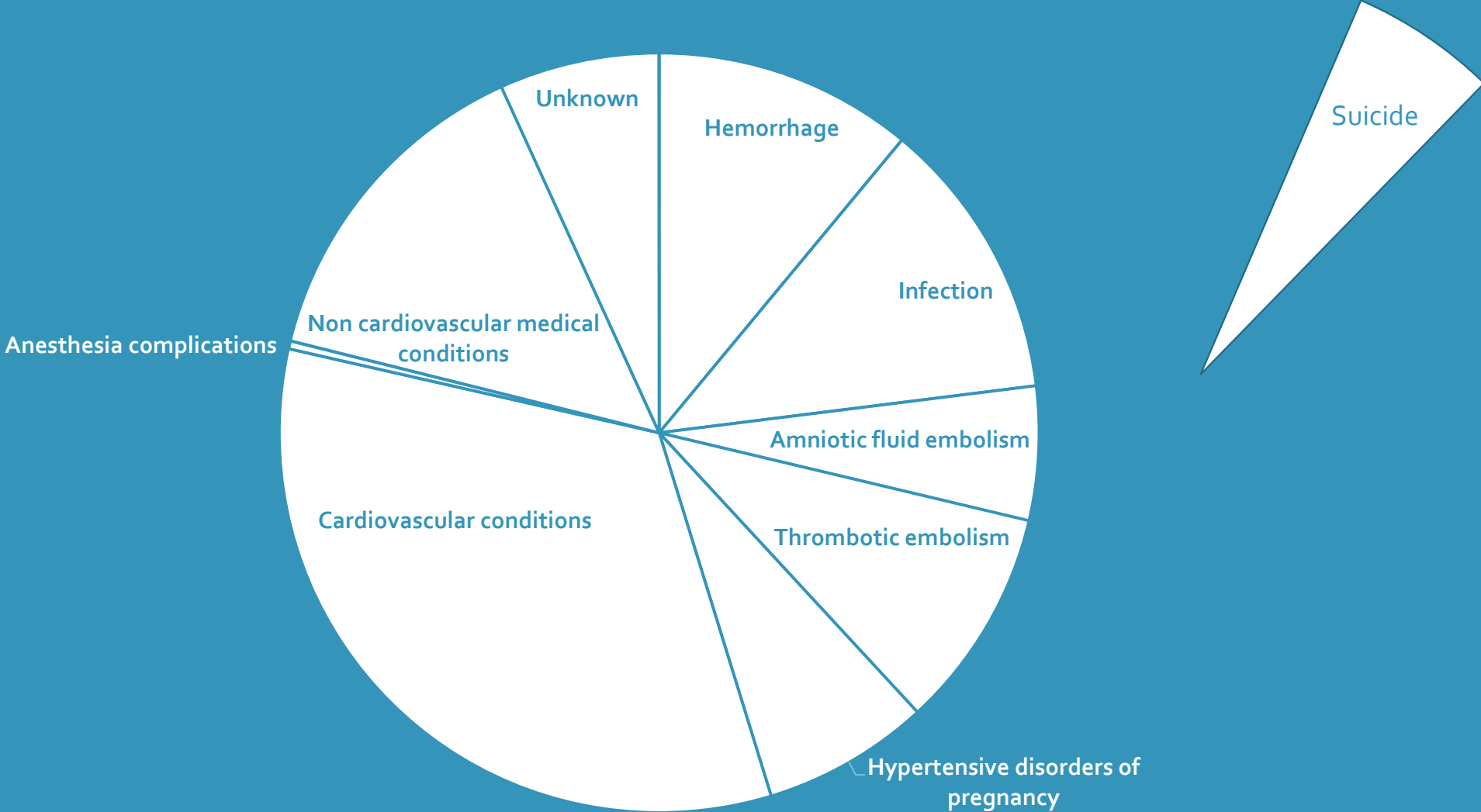
Post partum depression

- Depression during pregnancy
- Anxiety during pregnancy
- Experiencing stressful life events during pregnancy or the early postpartum period
- Traumatic birth experience
- Preterm birth/infant admission to NICU
- Low level of social support
- Previous history of depression
- Breastfeeding problems

Risks of untreated depression

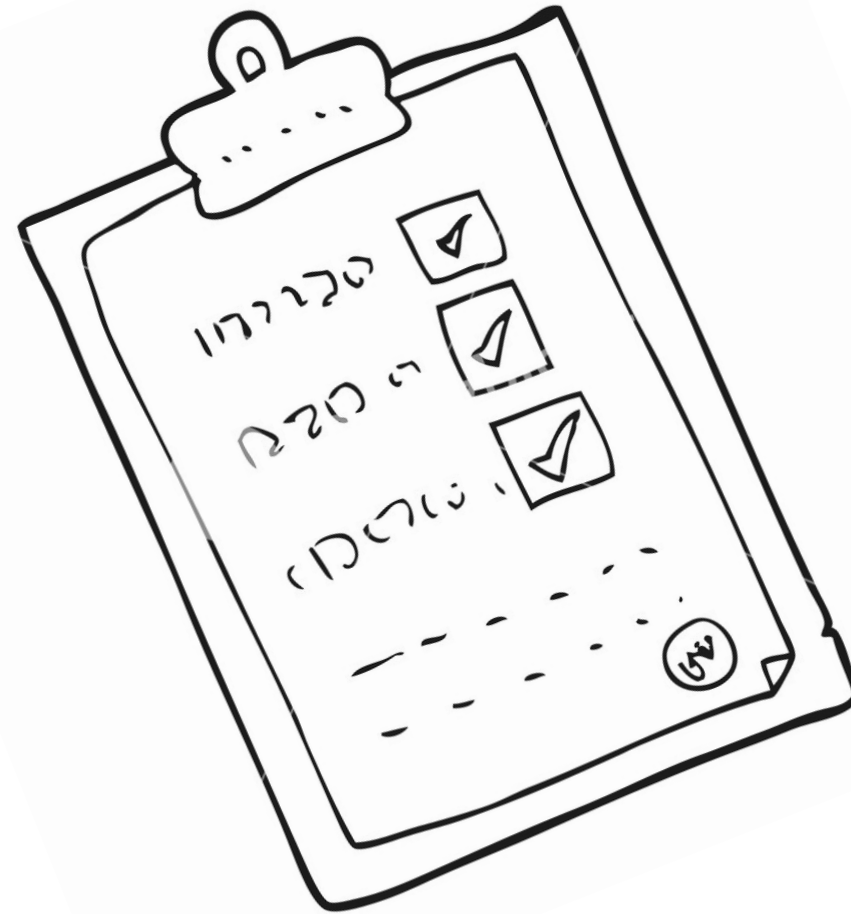
- Associated with unhealthy lifestyle choices (smoking, drinking, drug use)
- ↑ risk pf preterm birth (<32 wks), cesarean delivery
- Major risk factor for post partum depression
- Associated with behavioral problems and psychiatric illness in offspring
- Disruption of maternal-infant bonding and healthy family dynamics
- ↑↑ risk of suicide

PREGNANCY RELATED DEATHS BY CAUSE OF DEATH, UNITED STATES 2011-2015



Petersen EE, Davis NL, Goodman D, et al. *Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015, and Strategies for Prevention, 13 States, 2013–2017*. MMWR Morb Mortal Wkly Rep 2019;68:422–430.

Screening



Screening Tool	Number of Items	Time to Complete (minutes)	Sensitivity and Specificity
Edinburgh Postnatal Depression Scale	10	Less than 5	Sensitivity 59-100% Specificity 49-100%
Postpartum Depression Screening Scale	35	5-10	Sensitivity 91-94% Specificity 72-98%
Patient Health Questionnaire 9 (PHQ-9)	9	Less than 5	Sensitivity 75% Specificity 90%
Beck Depression Inventory	21	5-10	Sensitivity 47.6-82% Specificity 85.9-89%
Beck Depression Inventory-II	21	5-10	Sensitivity 56-57% Specificity 97-100%
Center for Epidemiologic Studies Depression Scale	20	5-10	Sensitivity 60% Specificity 92%
Zung Self-Rating Depression Scale	20	5-10	Sensitivity 45-89% Specificity 77-88%

Edinburgh Postnatal Depression Scale¹ (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____

Baby's Date of Birth: _____ Phone: _____

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy:

- Yes, all the time
 Yes, most of the time This would mean: "I have felt happy most of the time" during the past week.
 No, not very often Please complete the other questions in the same way.
 No, not at all

In the past 7 days:

- | | |
|---|--|
| <p>1. I have been able to laugh and see the funny side of things</p> <p><input type="checkbox"/> As much as I always could
<input type="checkbox"/> Not quite so much now
<input type="checkbox"/> Definitely not so much now
<input type="checkbox"/> Not at all</p> | <p>*6. Things have been getting on top of me</p> <p><input type="checkbox"/> Yes, most of the time I haven't been able to cope at all
<input type="checkbox"/> Yes, sometimes I haven't been coping as well as usual
<input type="checkbox"/> No, most of the time I have coped quite well
<input type="checkbox"/> No, I have been coping as well as ever</p> |
| <p>2. I have looked forward with enjoyment to things</p> <p><input type="checkbox"/> As much as I ever did
<input type="checkbox"/> Rather less than I used to
<input type="checkbox"/> Definitely less than I used to
<input type="checkbox"/> Hardly at all</p> | <p>*7. I have been so unhappy that I have had difficulty sleeping</p> <p><input type="checkbox"/> Yes, most of the time
<input type="checkbox"/> Yes, sometimes
<input type="checkbox"/> Not very often
<input type="checkbox"/> No, not at all</p> |
| <p>*3. I have blamed myself unnecessarily when things went wrong</p> <p><input type="checkbox"/> Yes, most of the time
<input type="checkbox"/> Yes, some of the time
<input type="checkbox"/> Not very often
<input type="checkbox"/> No, never</p> | <p>*8. I have felt sad or miserable</p> <p><input type="checkbox"/> Yes, most of the time
<input type="checkbox"/> Yes, quite often
<input type="checkbox"/> Not very often
<input type="checkbox"/> No, not at all</p> |
| <p>4. I have been anxious or worried for no good reason</p> <p><input type="checkbox"/> No, not at all
<input type="checkbox"/> Hardly ever
<input type="checkbox"/> Yes, sometimes
<input type="checkbox"/> Yes, very often</p> | <p>*9. I have been so unhappy that I have been crying</p> <p><input type="checkbox"/> Yes, most of the time
<input type="checkbox"/> Yes, quite often
<input type="checkbox"/> Only occasionally
<input type="checkbox"/> No, never</p> |
| <p>*5. I have felt scared or panicky for no very good reason</p> <p><input type="checkbox"/> Yes, quite a lot
<input type="checkbox"/> Yes, sometimes
<input type="checkbox"/> No, not much
<input type="checkbox"/> No, not at all</p> | <p>*10. The thought of harming myself has occurred to me</p> <p><input type="checkbox"/> Yes, quite often
<input type="checkbox"/> Sometimes
<input type="checkbox"/> Hardly ever
<input type="checkbox"/> Never</p> |

Administered/Reviewed by _____ Date _____

¹Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786.

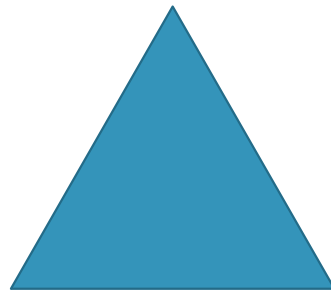
²Source: K.L. Wisner, B.L. Parry, C.M. Plontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

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Society	Date	Timing	Screening Tool
American Academy of Pediatrics (AAP)	Oct 2010	Mother screened at 1-, 2-, 4-, and 6-month well child visits	Edinburgh Postpartum Depression Scale (EPDS) or 2-question screen for depression
American Academy of Family Physicians (AAFP)	Oct 2010	4- to 6-week postpartum visit or the 2-month well-child visit	EPDS or PHQ-9
American Congress of Obstetricians and Gynecologists (ACOG)	May 2015	All pregnant women screened at least once during the perinatal period and again at postpartum visit	Validated screening tool
US Preventive Services Task Force (USPSTF)	Jan 2016	Little evidence regarding the optimal timing for screening	EPDS and the Patient Health Questionnaire (PHQ) in various forms
Centers for Medicaid and Medicare Services (CMS)	May 2016	Screen during the wellchild visit in accordance to the Bright Futures Guidelines [adopted by AAP] is considered a pediatric best practice	Validated screening tool
Postpartum Support International (PSI)	2016	1st prenatal visit, at least once in 2nd and 3rd trimester, 6-week postpartum obstetrical visit (or at first postpartum visit); repeated screening at 6 and/or 12 months in OB and primary care settings; 3, 9, and 12-month pediatric visits	EPDS or PHQ-9

Risks of perinatal
depression

Risks of psychotropic
medications in pregnancy



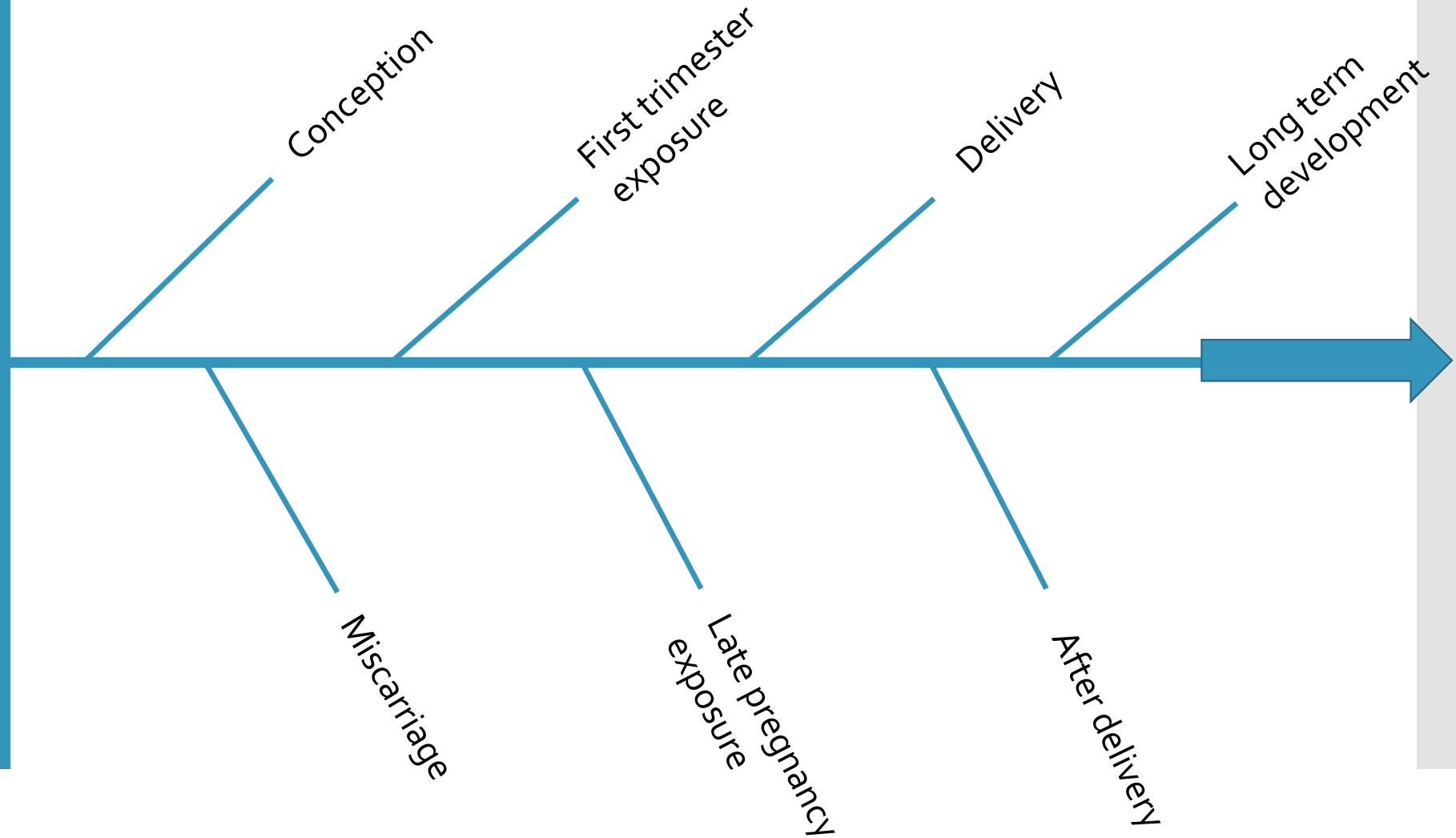
Risks of medications



Medications

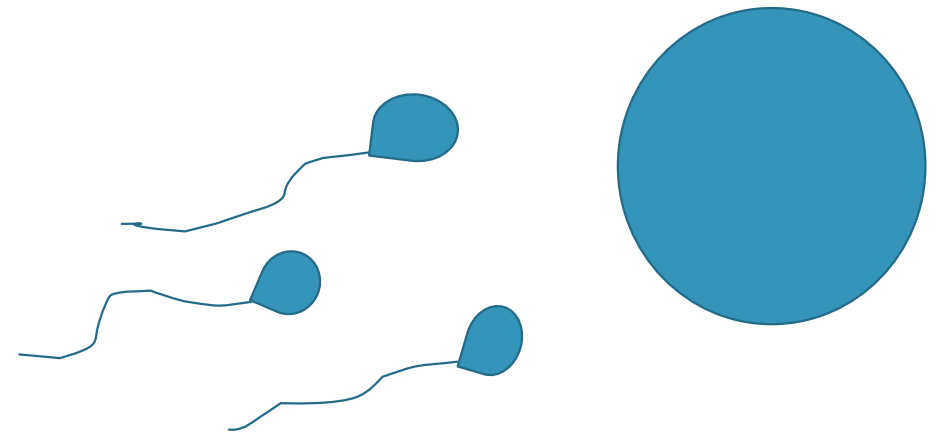
- SSRIs
 - Sertraline
 - Citalopram
 - Fluoxetine
 - ~~Paroxetine~~
- SNRIs
 - Venlafaxine
 - Desvenlafaxine
 - Duloxetine
- TCAs
 - Amitriptyline
 - Nortriptyline
- Other
 - Wellbutrin
 - Mirtazapine

Risks of SSRIs



Conception

- \emptyset association between SSRI use and the probability of getting pregnant in a single menstrual cycle

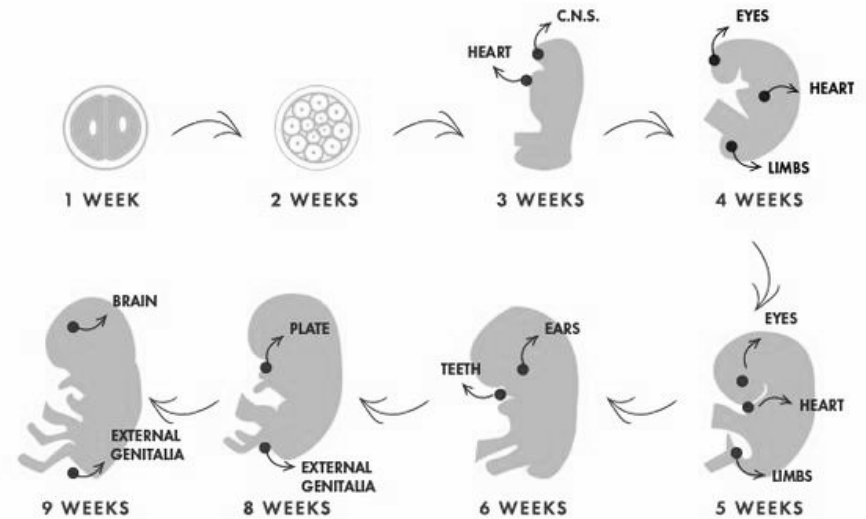


Early pregnancy

- Miscarriage: Conflicting evidence
 - Overall, doesn't seem to ↑ miscarriage risk

First trimester exposure

- SSRIs are not teratogens as a whole
 - Congenital heart disease (paroxetine)



Late pregnancy

- Exposure associated with ↑ risk of PPHN (OR 1.28)

Research

Original Investigation

Antidepressant Use Late in Pregnancy and Risk of Persistent Pulmonary Hypertension of the Newborn

Krista F. Huybrechts, MS, PhD; Brian T. Bateman, MD, MSc; Kristin Palmsten, ScD; Rishi J. Desai, PhD; Elisabetta Patorno, MD, DrPH; Chandrasekar Gopalakrishnan, MD, MPH; Raisa Levin, MS; Helen Mogun, MS; Sonia Hernandez-Diaz, MD, DrPH

Delivery

- ↑ risk of low APGAR (<7) (OR 1.68)
- ↑ risk of NICU admission (OR 1.24)
- ↓ risk of cesarean section
- ↓ risk of preterm birth

After delivery

- Neonatal adaptation syndrome
 - Symptoms start in first 24-48 hours, resolve within days
 - Watch for tremors, jitteriness, restlessness, irritability, changes in tone, respiratory distress

Long term neurodevelopment

- ∅ negative impact on neurodevelopment
 - Reassuring data looking at language, cognition
 - Autism

Research

JAMA Psychiatry | [Original Investigation](#)

Association of Autism Spectrum Disorder With Prenatal Exposure to Medication Affecting Neurotransmitter Systems

Magdalena Janecka, PhD; Arad Kodesh, MD; Stephen Z. Levine, PhD; Shari I. Lusskin, MD; Alexander Viktorin, PhD; Rayees Rahman, BS; Joseph D. Buxbaum, PhD; Avner Schlessinger, PhD; Sven Sandin, PhD; Abraham Reichenberg, PhD

SSRI Summary

∅ effect on
conception

miscarriage

∅ teratogenic as a
class

↑ risk PPHN

↑ risk lower APGAR,
NICU admission

Neonatal
adaptation
syndrome

∅ negative impact
on
neurodevelopment

SNRIs

- ∅ association between SNRIs and increased risk of major congenital malformations
 - Venlafaxine does not cause major congenital malformations
 - Duloxetine has less data available
 - Information that is available is reassuring but definitive conclusion can not be drawn

TCAs

- ∅ increased risk of fetal malformations
- ∅ effect on main neurodevelopmental outcomes
- Associated with neonatal adaptation syndrome

Bupropion

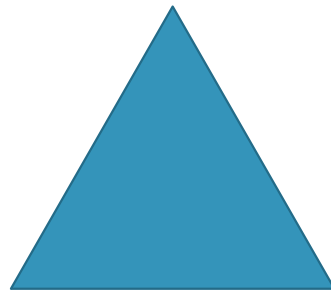
- Possible ↑ rate of miscarriage seen, though smoking may have been a confounder
- 7 studies examining rate of birth defects
 - 136 women took bupropion in first tri, no major malformations
 - Rate of birth defects was 3.6%, comparable to general rate
- Reasonable treatment option for perinatal depression, especially in tobacco users

Mirtazapine

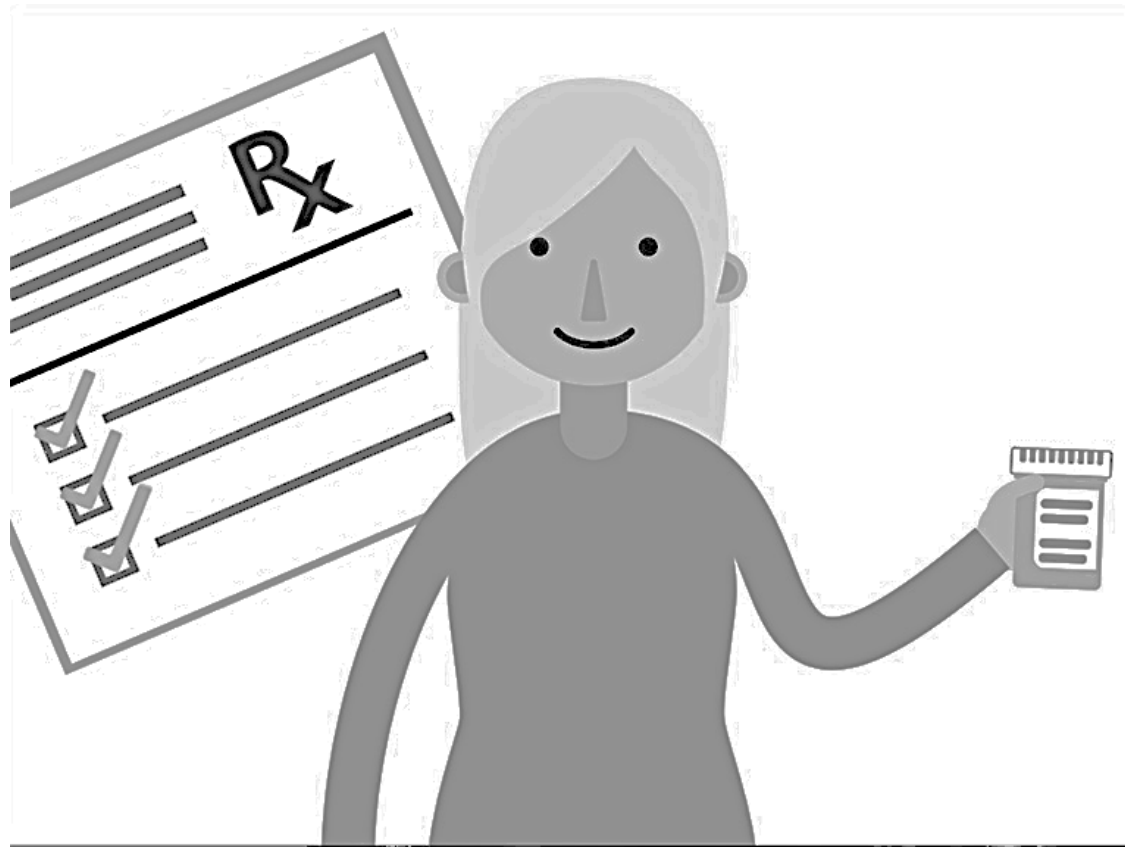
- Systematic review included 31 papers and 390 cases of neonates exposed to mirtazapine
 - ∅ increase in incidence of major malformations
- Can be used to treat hyperemesis gravidarum

Risks of perinatal
depression

Risks of psychotropic
medications in pregnancy



Initiating treatment



Maximize wellness strategies

Psychotherapy is often effective

Consider complementary treatments

Compare risk of medication vs risk of untreated illness

Limit number of exposures

1st consider the SSRI that has worked best for individual in the past

Use the lowest effective medication dose

Pre pregnancy is the ideal time to consider medication taper

Dose adjustment is frequently necessary in the 2nd and 3rd trimesters

If using an SSRI in pregnancy, it should be maintained throughout the duration of pregnancy



Initiating treatment



- If you decide to use an SSRI in pregnancy, the SSRI should be maintained throughout the duration of pregnancy in most cases
 - Discontinuation = high risk of relapse

Complementary and alternative treatments

- Exercise (specifically yoga)
- Phototherapy
- Psychotherapy
- ECT

Postpartum depression

- Risk factors: antenatal depressive symptoms, hx of MDD, previous PPD
- F/U recommended within 3 weeks of delivery (previously 6 weeks) with 2nd visit within 12 weeks
- Repeat Edinburgh
- Screening should include asking about obsessive thoughts and suicidal ideation

“Baby Blues”

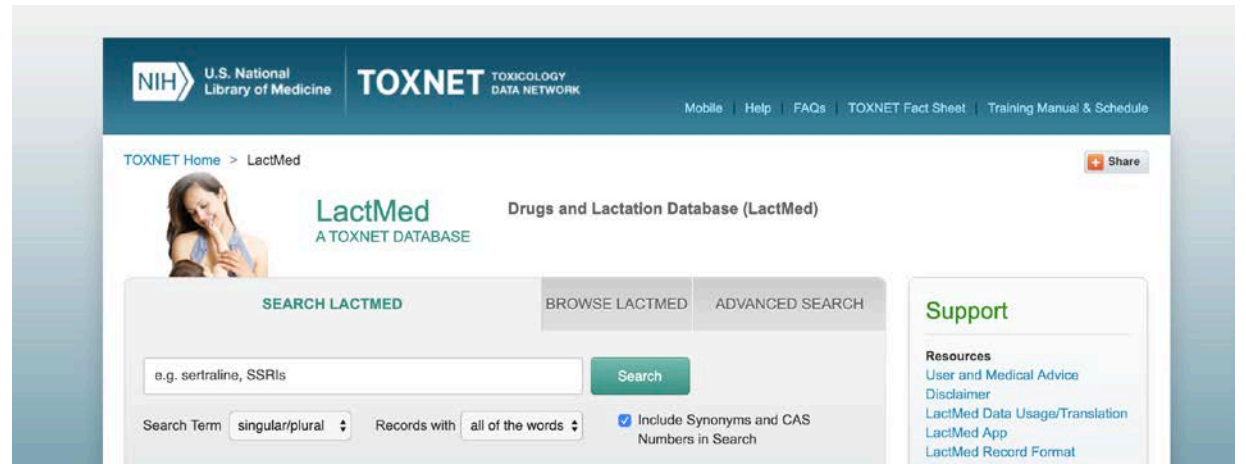
- Transient
- First 10-14 days post partum
- Mood swings, irritability, tearfulness, confusion
- Risk factor for post partum depression

New post partum antidepressant

- Brexanolone (Zulresso)
- Approved by FDA March 2019
- Infusion over 60 hours
- Requires continuous monitoring

Breastfeeding

- Antidepressants vary in the amount secreted into breast milk
- For SSRIs, sertraline < paroxetine < escitalopram < citalopram < fluoxetine
- Effects on infants seen to be minimal, could monitor for irritability, poor weight gain, sedation



The screenshot shows the LactMed database interface. At the top, there is a header for the NIH U.S. National Library of Medicine and TOXNET TOXICOLOGY DATA NETWORK. Below the header, there are navigation links for Mobile, Help, FAQs, TOXNET Fact Sheet, and Training Manual & Schedule. The main content area features the LactMed logo and the text "Drugs and Lactation Database (LactMed)". There is a search bar with the text "e.g. sertraline, SSRIs" and a "Search" button. Below the search bar, there are options for "Search Term" (singular/plural), "Records with" (all of the words), and a checked checkbox for "Include Synonyms and CAS Numbers in Search". On the right side, there is a "Support" section with a "Resources" sub-section containing links for "User and Medical Advice", "Disclaimer", "LactMed Data Usage/Translation", "LactMed App", and "LactMed Record Format".

When to refer

- Swedish Center for Perinatal Bonding and Support
 - Day program
 - Outpatient therapy
 - Reproductive psychology

Summary

- Perinatal depression is common affecting 1 in 7 women
- Screen for perinatal mood disorder at least once in the antepartum period
- There are risks of psychotropic medication, but they might not outweigh the risks of perinatal depression
- SSRIs are most commonly used medications, start with sertraline

References

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