

Mood and Anxiety Disorders in Pregnancy and Postpartum

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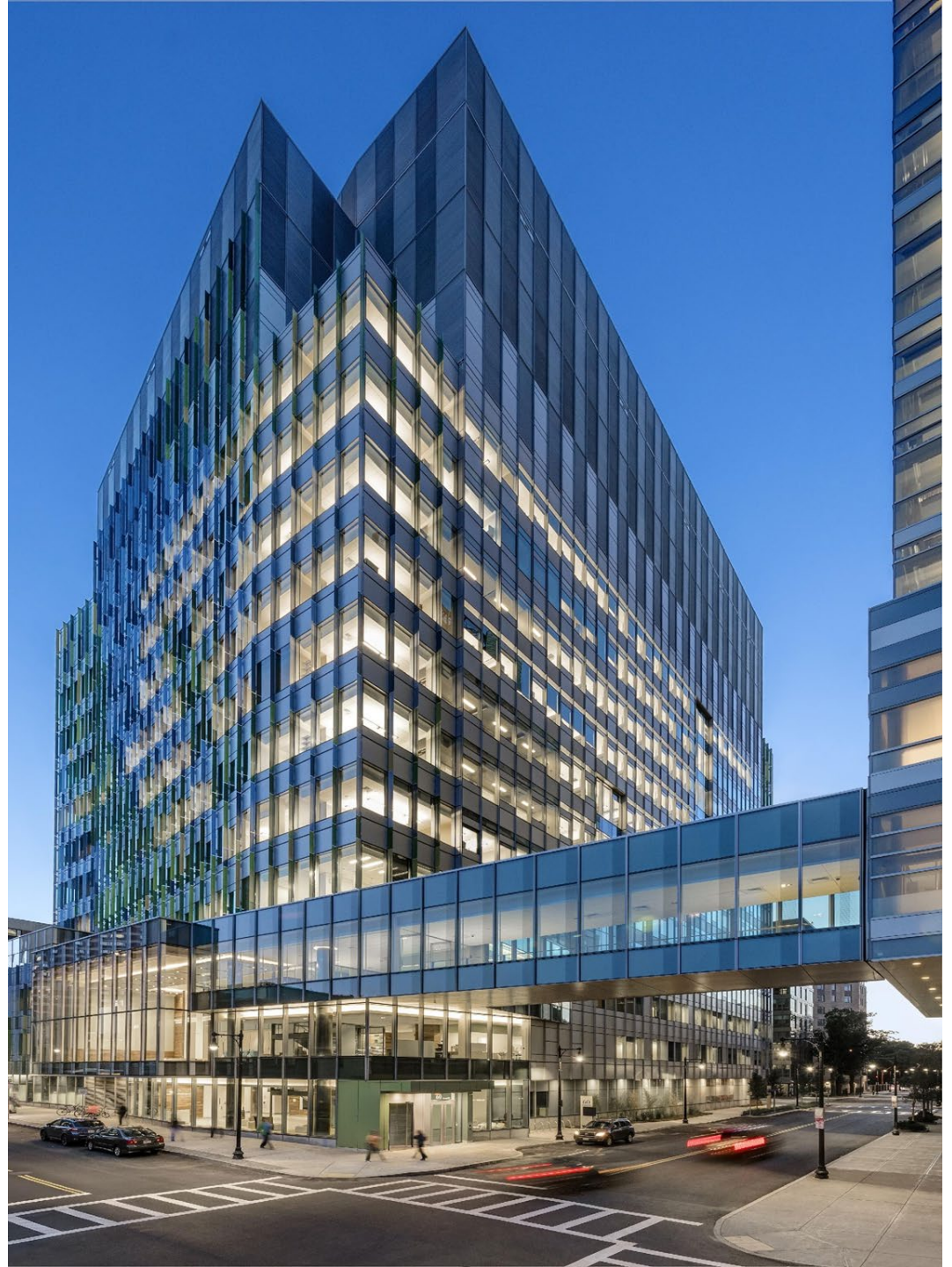
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**HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL**



No Conflicts to Report

Will discuss off-label use of
medications

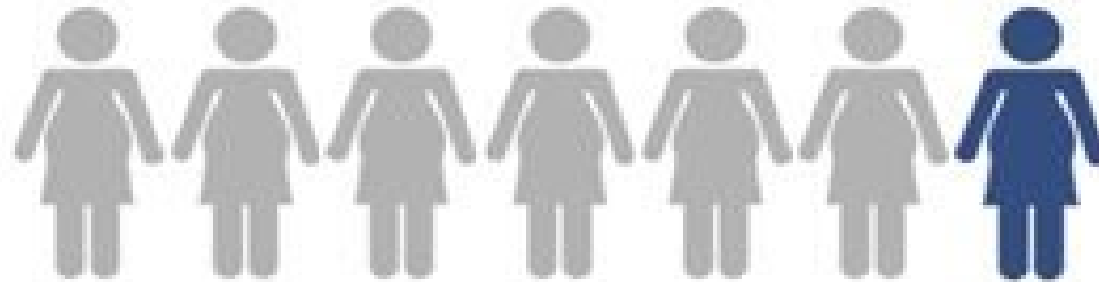
Objectives:

- To provide an overview of the epidemiology of Major Depressive Disorder in women
- To discuss the clinical presentation and general approach to the management of Major Depressive Disorder in women during the perinatal period
- To provide an overview of the epidemiology of Anxiety Disorders in women
- To discuss the clinical presentation and general approach to the management of Anxiety Disorders in women during the perinatal period

Major Depressive Disorder

- 21 million adults in the USA have had at least 1 episode of MDD, this represents 8.3% of the U.S. adults
- Prevalence of MDD is higher in adult females than males, 10.3% vs 6.2%

Perinatal Depression



Perinatal depression affects as many as
one in seven women.

ACOG recommends all pregnant women be screened
at least once during the perinatal period.

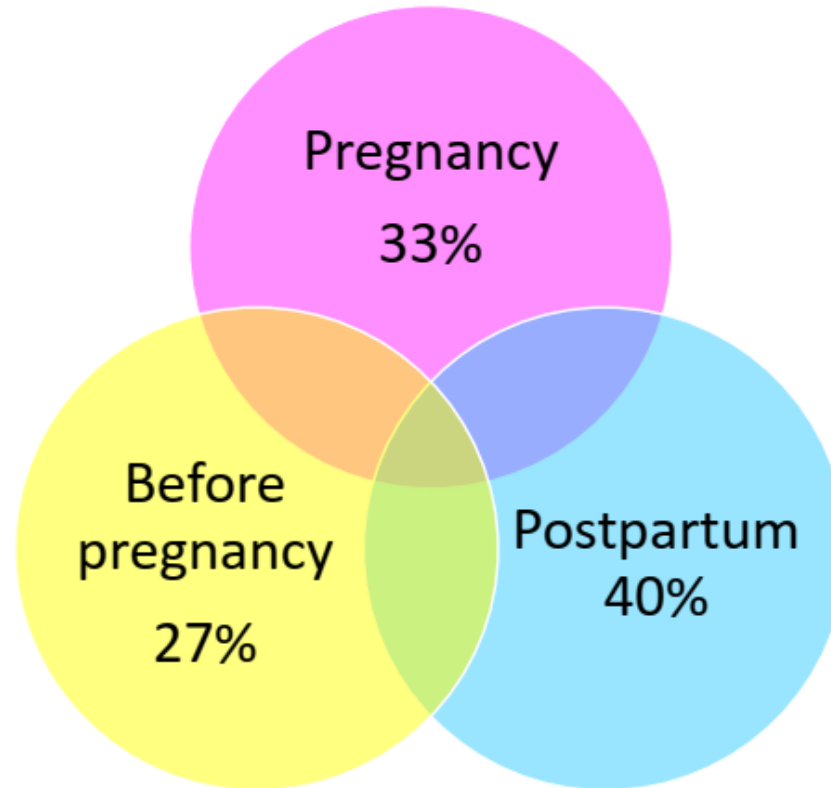


The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Perinatal Depression

- DSM V defines 'postpartum onset' as within 4 weeks of delivery while many research studies use 6-12 months
- Perinatal depression is the most common complication of pregnancy
- Suicide accounts for about 20% of postpartum deaths

Perinatal Depression



- Prior depression is the largest risk factor for perinatal depression
- Reproductive risk factors
 - Personal hx of PPD
 - Family hx of PPD
 - Hx of mood changes related to hormonal changes
- General risk factors
 - Younger age
 - Hx of trauma
 - Hx of sexual abuse
 - Psychosocial stressors
 - IPV
 - Chronic medical conditions
 - Race

Perinatal depression affects patient and family---risks to patient and pregnancy

- Poor participation in prenatal care
- Increased rates of substance use
- Increased rates of preeclampsia, gestational HTN
- Maternal suicide

Perinatal depression affects patient and family---Epigenetics

- Maternal cortisol can affect fetal HPA axis
- Maternal depression is associated with increased methylation affecting glucocorticoid receptor gene expression
- Elevated placental CRH leads to thinning of selective cortical regions & commensurate cognitive and emotional deficits in childhood

Glover et al. Psychoneuroendocrinology 2009; Oberlander et al Epigenetics 2008; Gunnar AJP 2018

Perinatal depression affects patient and family---risks to offspring

- Newborn: excessive crying, increased NICU admission, inconsolable
- Babies: poor growth, increased risk of infection, sleep difficulties
- Children: difficult temperament, autism, higher rates of depression, behavioral disturbance, lower IQ

Marcus et al. Can J Clin Pharmacol 2009; Li et al. Hum Reprod 2009; Henrichs et al. Psychol Med 2010; Zuckerman et al. J Dev Behav Pediatr 1990; Huot et al Ann N Y Acad Sci 2004; Muzik 2009; Bodnar et al. Journal of Clin Psych 2009; Cripe et al. Pedi and Perinatal Epidemiology 2011; Forman et al Dev and Psych 2007; Brennan et al Dev Psychol 2000; Hay et al J Child Psychol Psychiatry 2008

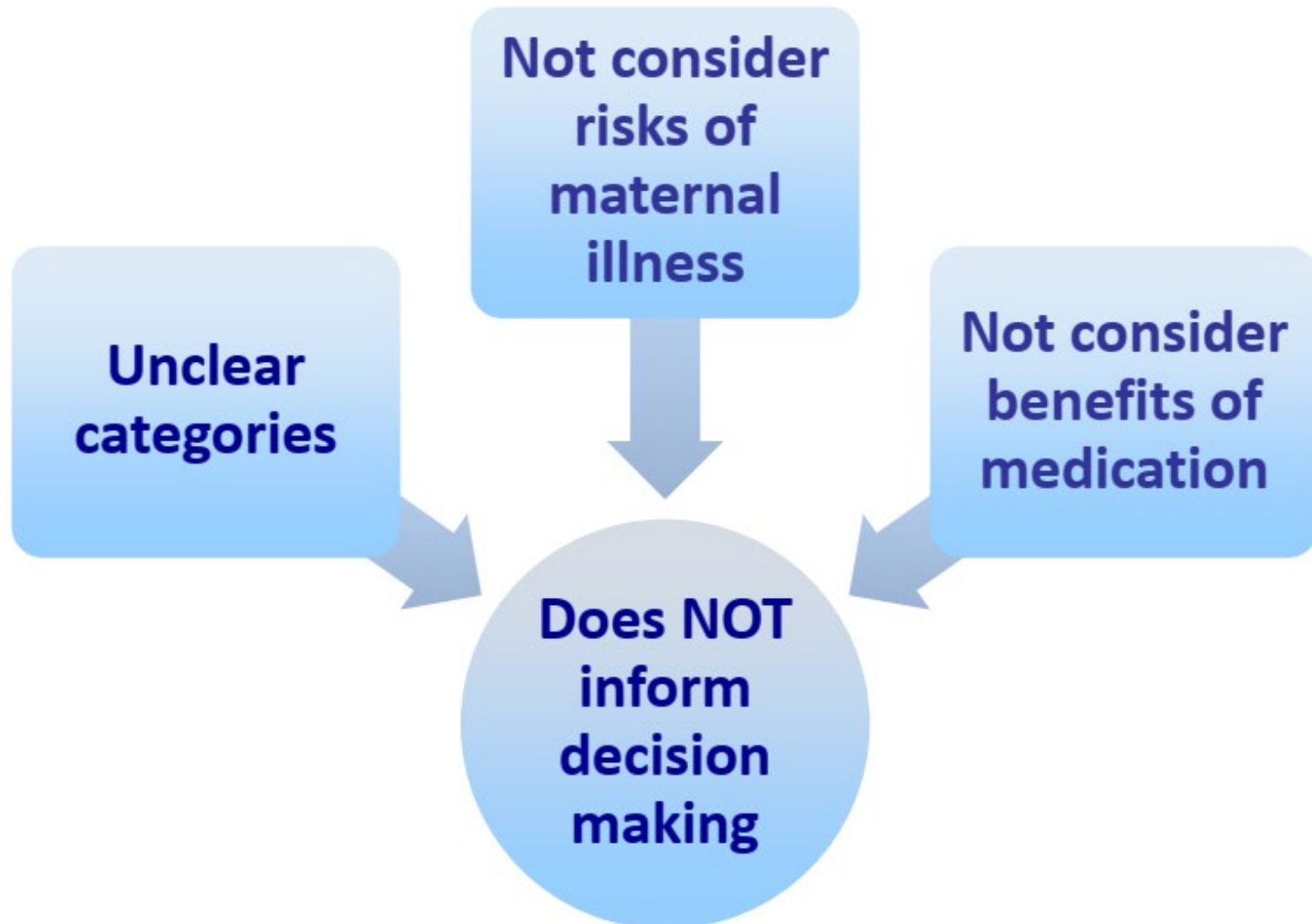
Treatment

- When possible, preconception counseling and planning is key
- Clarify the diagnosis
- Optimize non-pharm options
- Awareness of need to balance risks of medication treatment vs risks of untreated illness
- There are no risk-free choices!

Treatment

- When in pregnancy is the patient?
 - 1st trimester—physical teratogenicity
 - 2nd & 3rd –behavioral, altered mental functioning. Altered pharmacokinetics
 - 3rd and beyond —neonatal side effects, growth, timing of labor, withdrawal, breastfeeding plans
- Med management: lowest effective dose of the fewest medications
 - What has worked in the past?
 - Monotherapy when possible
 - Minimize switching
 - Lowest EFFECTIVE dose

U.S FDA pregnancy risk categorization



Risk of relapse during pregnancy in women who discontinue antidepressants preconception

Continue



Discontinue

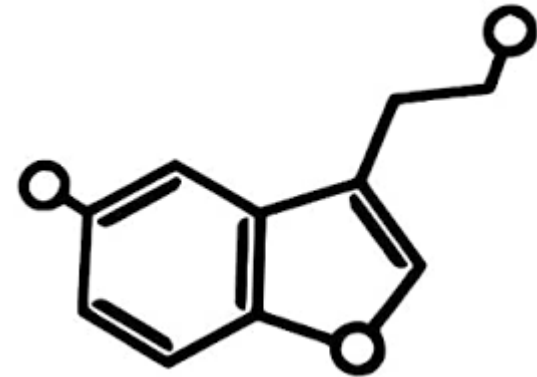


Behavioral measures to reduce PPD

- Early morning sun light exposure
- Light exercise
- Nutritious diet (Ω -3 fatty acids, FA, B-12, Fe, D, Ca)
- Adequate sleep (including unbroken sleep)
- Psychotherapy

SSRI in pregnancy

- No major malformations consistently found
- No consensus on developmental issues, latest data reassuring
- May increase SAB
- Smaller size (in gm)
- Early labor (3-4 days)
- PPHTN
- Preeclampsia
- Neonatal adaptation syndrome
 - Lasts 1-2 days
 - Respiratory distress, irritability, tremor, jitteriness, restlessness, changes in muscle tone, poor sleep, eating difficulties, Sz, prolonged QT
 - Affects about 30% of newborns
 - Taper does not appear to reduce risk



Atypical antidepressants

Bupropion:

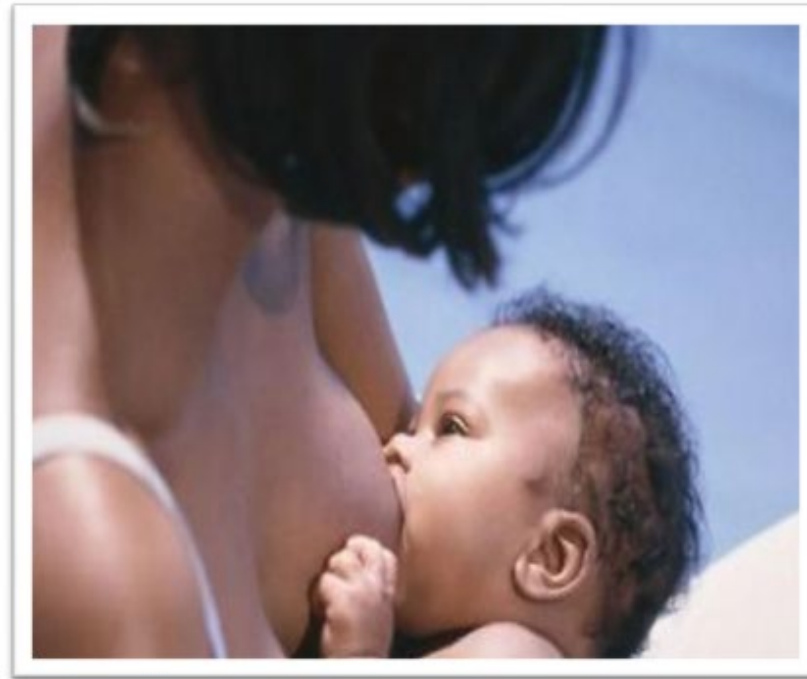
- Less data than SSRIs, but increasing and reassuring data in the past few years
- Not associated with higher risk of major malformations, preterm birth, low birth weight, or neurodevelopmental changes
 - Exception: possible small increase in LVOT obstructions

Atypical antidepressants

Mirtazapine

- Less data than SSRIs, but increasing and reassuring data in the past few years
- Not associated with higher risk of major malformations, pregnancy loss, or neonatal death
- Less data around neurodevelopmental outcomes
- May be particularly favored in cases of nausea/emesis

Breastfeeding generally should not preclude treatment with antidepressants

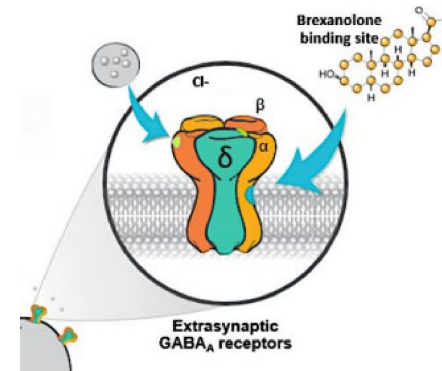


New treatments— Zuranolone

- Allopregnanolone, a neurosteroid that acts at GABA_A receptors which are reduced in PPD
- In trials shows rapid reduction in depressive symptoms compared to placebo
- Indicated for moderate to severe PPD

Maguire J and Mody I, *Neuron*, 2008; Meltzer-Brody et al, *Lancet*, 2018,

Deligiannidis et al 2023 AmJPsych



Anxiety

Women Have Higher Rates of Anxiety Disorders

Increased prevalence in women

- Panic disorder
- Social anxiety
- GAD
- Most phobias
- PTSD

Similar Prevalence in men and women

- OCD

Women are more likely to have comorbid anxiety and depression

Perinatal Anxiety

- Can have PPD, PPA, or both
 - PPA affects at least 1 in 10 women
- OCD:
 - Vast majority of perinatal women have intrusive thoughts
 - High-risk time period for onset or worsening of OCD
- Risks to mom and baby
 - Not as well studied as a separate entity, but overall similar to risks from depression

Risk of harm to baby when mother has thoughts of harming baby

OCD/anxiety/depression

- Good insight
- Thoughts are intrusive and scary
- No psychotic symptoms
- Thoughts cause anxiety



Low risk

Postpartum Psychosis

- Poor insight
- Psychotic symptoms
- Delusional beliefs or distorted reality present



High risk

Anxiety treatments

SSRIs—see above

Benzos

- Not associated with major malformations or neurodevelopmental changes
- Possible increased risk of:
 - Low birth weight
 - Neonatal withdrawal syndrome/sedation, rare risk of floppy infant
 - Miscarriage in the first trimester (weaker evidence)
- Guidelines:
 - Fewer active metabolites (lorazepam > clonazepam)
 - Not hepatically metabolized (lorazepam > alprazolam)
 - Avoid longer acting if possible (e.g. diazepam)

...but it's always risk v risk!

Summary:

- Maternal mental health affects the patient, child, and family
- Roughly 30-50% of pregnancies in the USA are unplanned
- Assume that all women of reproductive age can become pregnant at any time in treatment
- Screening for mood disorders is essential
- Consider the risks of untreated psychiatric illness when making treatment plan
 - Don't reflexively stop or switch!

Resources:

- **MCPAP for Moms Mcpapformoms.org**
- **MGH Center for Women's Mental Health
Womensmentalhealth.org**
- **Reprotox Reprotox.org**
- **Postpartum Support International Postpartum.net**
- **Lactmed
toxnet.nlm.nih.gov/newtoxnet/lactmed.htm**
- **MotherToBaby <https://mothertobaby.org/>**