
Treating Perinatal Mood Disorders: Medications and/or other interventions

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Overview

Untreated perinatal mood disorders compromise the mother's ability to respond to her infant and meet the infant's needs.

Mothers' medications may affect the infant before birth and during lactation

Treatment trade-offs: balance infant's health and mother's health, as infant depends on her.

We will review (briefly) medication treatment and

Evidence-based & promising non-medication interventions

Learning objectives: We will cover

- The principle perinatal mood disorders, including how to recognize them
 - An introduction to principles of medication treatment, including risks and benefits.
 - Evidence-based and promising non-pharmacological treatment of perinatal mood disorders.
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Biological factors in Pregnancy

- During 3rd trimester and first months of baby's life, both men and women are psychologically preoccupied w. infant
 - Neurobiological agents (estrogen, prolactin, oxytocin, dopamine, NE, cortisol) & specific genes --> promote maternal behavior
 - Prenatal interventions greatly augment early interventions after birth
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Mental disorders during Pregnancy and Post-partum

- Major Depressive Disorder may be potentiated by pregnancy or parturition or weaning....
 - ...and increases in the first 5 postpartum weeks.
 - Women with other psychiatric disorders face special challenges during this time of physical and emotional change.
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Psychiatric disorders in Pregnancy

- Depression
 - Bipolar Disorder
 - Schizophrenia
 - Anxiety Disorders
 - Substance Abuse
 - Substance Abuse
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Principles of treatment 1

- Pregnancy neither predisposes nor protects against mental illness
 - Pregnancy provides an opportunity to review treatment of existing conditions
 - Discontinue medications if feasible, but
 - Uteroplacental circulation forms @ 2 wks. p. conception, so first missed period is not too late to discuss d/c-ing medications.
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Principles of treatment 2

- Nonpharmacological interventions should be used when possible.
 - D/C (or strenuously discourage) caffeine, nicotine, alcohol and drugs
 - Minimize environmental stress
 - Maximize good M.H. hygiene (sleep, diet)
 - Mobilize psychosocial supports
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Principles of treatment 3

- The FDA does not endorse safety of any psychotropic medication during pregnancy

BUT

- MDs may Rx according to data-based knowledge and good clinical judgment
 - Document discussion with patient, partner and assess patient's understanding
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Depression in Pregnancy

- 10% of pregnant women experience major or minor depression (same as non-pregnant)
 - Depression is associated with poor prenatal care & nutrition, elevated risk of postpartum depression, suicide, preterm deliveries and SGA babies.
 - If possible withhold antidepressant medication during first trimester
 - Keep medication dose at minimal possible level
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Prenatal antidepressant medications 1

- Prospective studies: no association between use of fluoxetine, citalopram, sertraline, paroxetine or fluvoxamine and major congenital abnormalities in neonate.
- 3rd trimester fluoxetine : some association with transient perinatal jitteriness
- No TCA- associated congenital anomalies, but transient perinatal toxicity or withdrawal symptoms if used near time of birth

Prenatal antidepressant medications 2

- Antidepressant dosages may need to be adjusted during pregnancy because blood levels may drop, especially in 3rd trimester.
 - No studies on use of bupropion, trazadone, venlafaxine, mirtazapine or nefazodone in pregnancy.
 - MAOIs should not be used: (a) risk of hypertensive crisis (b) adverse interactions with tocolytic agents if these are used to forestall premature labor.
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Bipolar Disorder in Pregnancy

Conflicting findings

- Untreated bipolar women who are lithium-responsive experienced fewer relapses during pregnancy (but a few cases relapsed in the last month)
 - Relapse rate the same for pregnant and nongravid women.
 - In both studies, untreated women had increased risk for postpartum decompensation, especially if lithium discontinued abruptly
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Specific mood stabilizers: LI

- Lithium: Ebstein's anomaly (tricuspid valve) increases from 1/20,000 to 1/1,000. There is also increase in other cardiac malformations (coarctation, mitral atresia)
 - Neonates may manifest hypotonia, poor suck, hypoglycemia, cyanosis, neonatal goiter, diabetes insipidus
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Specific mood stabilizers: anticonvulsants

- Increased risk of neural tube defects with Valproate (5%) and Carbamazepine (1%)
 - Increased risk of developmental delay, craniofacial defects, fingernail hypoplasia.
 - Anti-folate effects contribute to embryotoxicity.
 - Deficiency in vitamin-K-dependent clotting → increase risk of bleeding disorders in fetus and neonate. Therefore administer Vitamin K & folate.
 - Little data on Gabapentin or Topiramate.
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Management strategies

- Gradual medication tapering is less likely to lead to relapse
 - If BAD is brittle, continue Rx but Carbamazepine and Valproate are safer. Use multiple daily doses to avoid peak blood levels. Monitor levels closely.
 - Obtain level II ultrasound at 18 weeks to assess for neural tube defects.
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Schizophrenia in Pregnancy

- Psychotic symptoms associates with fetal abuse, neonaticide, failure to obtain prenatal care, paranoia re medical procedures with non compliance, greater risk of adverse outcomes.
 - Limited data on antipsychotic medications: no increased risk of congenital anomalies with high potency agents (e.g. Haloperidol) or Olanzapine.
 - No information to date on Resperidone, Quetiapine or Ziprasidone.
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Anxiety Disorders in Pregnancy: May coexist w. Mood Disorders

- Panic disorder may improve, worsen, or stay unchanged.
 - OCD may worsen
 - Non-pharmacological interventions (CBT) very effective.
 - Avoid benzodiazepines during gestational weeks 5-9
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ECT in Pregnancy

- Consider ECT for women who experience escalation or exacerbation of symptoms beyond those manageable with conservative medication doses.
 - ECT is safe, effective, and limits fetal exposure to medications.
 - Special procedures to exclude uterine contractions, assure perfusion, and conduct fetal monitoring.
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Substance abuse during Pregnancy

- Alcohol: premature labor, abruptio placentae, stillbirth + fetal alcohol syndrome and FAE.
 - Cocaine: reduced placental flow, intrauterine growth retardation, GU malformations + premature labor, abruptio placentae.
 - Tobacco: intrauterine growth retardation, low BW, spontaneous abortion, preterm delivery.
 - Caffeine: increased risk of early spontaneous abortion.
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Mothering

- Recent animal studies and growing evidence in humans indicate that maternal behavior “programs” the child’s self-regulation and subsequent adult maternal behavior.
 - Early intervention programs produce enduring behavioral and psychological change.
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Postpartum Blues

- @85% of mothers experience postpartum blues from 2-4 days after delivery, peaking at 5-7 days, ending at 2nd week.
 - Risk factors PMDD and depression + FH of depression
 - The condition resolves and does not require aggressive management, but early discharge mores indicate that parents and partners should be educated about this.
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Multidisciplinary assessment of Maternal Mood

■ KEY COMPONENT

- Maternal mood state
- Perception of fetus/baby
- Marital/partner supports
- Next steps

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HOW TO ASK

“How are your spirits?”

“What has baby been telling you about him/herself?”

“How has (partner) been handling all this?”

“You notice a lot. Things sound difficult. Let’s help you find someone to talk to”

Postpartum Depression

- MDD reported to be 3x higher in first 5 weeks postpartum.
 - Risk for negative parenting behavior → child at risk for behavioral and cognitive impact.
 - History of MDD increases risk of PPD to 24%.
 - Depression during pregnancy MDD increases risk of PPD to 35%.
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Postpartum Psychosis

- Incidence: 1-2 per 1,000 births
 - Clinical features: mood lability, agitation, confusion, thought disorganization, hallucinations, disturbed sleep.
 - It may be a subcategory of BAD.
 - Risk factors: primiparity, FH of BAD, Hx of BAD or previous postpartum psychosis --->20-35% risk of postpartum psychosis. If both --->50%.
 - Danger of infanticide, suicide, infant neglect
 - Rx: hospitalize
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Evaluation of Postpartum Psychosis

- Rule out organic etiologies: postpartum thyroiditis, Sheehans's syndrome, pregnancy-related autoimmune disorders, HIV-related infection, intoxication/withdrawal.
 - Acute pharmacological intervention: mood stabilizer, antipsychotics, benzodiazepines for agitation.
 - Antidepressants may provoke rapid cycling
 - Rx should be continued, with monitoring > 1 yr.
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Breastfeeding & Psychotropic medications

- The AAP recommends 12 months of breastfeeding.
 - About 70% of new mothers breast-feed.
 - Trade-off: benefits of nursing v.s. risk of Rx.
 - (The package insert tilts toward liability and against clinical outcomes).
 - Significant #s of women D/C breastfeeding to take a medication.
 - MD should review risks/benefits with mother and father.
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Guidelines for Rx of nursing mother:

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- Rodent studies: worthless because albumin content is many X higher in rodent milk.
 - Benefits of breastfeeding for the woman include reduction in bone loss later in life, reduced incidence of ovarian and breast cancer, reduced postpartum blood loss, enhanced weight loss, and longer inter-pregnancy interval.
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Guidelines for Rx of nursing mother:

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- Pediatrician should monitor infant for potential adverse effects: baseline behavior, sleep & feeding patterns before Rx mother
 - At birth, infant hepatic drug clearance is 1/3 or mother's weight-adjusted clearance; at 6 months it is 100%.
 - Premies should not be exposed until they reach maturity.
 - Use lowest possible dose, short-acting medications, and supplementation w. formula
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Which drugs are safer (for baby?)

Drugs transfer into human milk if they:

- Are highly lipid soluble
- Attain high concentrations in mother's plasma
- Are low in molecular weight (<500)
- Are low in protein binding
- Pass into the brain easily

(Hale TW: Medications and Mothers' Milk 2004)

Key points about breastfeeding and Medications

- Use only necessary medications
- Choose medications with published data and low Relative Infant Dose.
- Evaluate infant for risks; evaluate mother for depression.
- Risk of not breastfeeding (using formula) may be higher than risk of medication to baby.
- The risk of maternal depression is too high to avoid medications

Adapted from Hale TW, Ilet KF: Drug Therapy and Breastfeeding: From Theory to Clinical practice. London, Parthenon, 2002.

Specific medications

- AAP classifies most medications as “effects unknown but may be of concern.”
 - SSRIs - low serum levels, data reassuring; routine monitoring not necessary
 - MAOIs to be avoided - may cause hypertension in infant.
 - LI contraindicated: adverse effects include cyanosis, poor muscle tone, EKG changes.
 - Reported hepatic dysfunction, transient seizure-like activity with Valproate & Carbamazepine.
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Infant Outcomes - neurological

- Prospective study of neurobehavioral sequelae in children prenatally exposed to fluoxetine or TCAs showed no difference from controls in IQ, temperament, mood, behavior or attention in children up to 7 years of age.
 - Traditional antipsychotics → transient syndrome of motor restlessness, tremor, hypertonia, hyperreflexia, irritability, dyskinesia and poor feeding
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Infant Outcomes - behavioral

- Small effects of PPD on cognitive development (language, I.Q.), especially for boys
 - Behavioral effects described, may persist ≥ 5 years.
 - Chronic or recurrent maternal depression is related to later adverse developmental and psychological effects for the child.
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Children of depressed mothers

Depression in mothers is associated with:

- disruption of bonding and attachment,
 - the quality of their child's relationships later in life,
 - later behavioral disturbances, and with later depression,
 - language and developmental delays.
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Therapeutic trade-offs 1:

Treatment with medication

During pregnancy

May allow mother to maintain freedom from symptoms that might interfere with healthy pregnancy (e.g. avoiding substance abuse, risky behavior, poor nutrition)

During pregnancy

May have teratogenic effects on the developing infant

Therapeutic trade-offs 2:

Treatment with medication

During lactation

Allows mother to be emotionally available to the baby.

Increases level of function at a very demanding time of caring (often with little sleep) for infant.

During lactation

May be excreted in mother's milk and have effects on the developing infant brain.

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- Describe how infants develop what is referred to as “procedural memories” early on,
 - which greatly influence the automatic habits and routines of the interpersonal dance
 - within relationships
 - 2. Explain that infants and their parents need high quality relationships in order to recover from abuse and neglect
 - 3. Describe how a shared, common language for understanding infants across all aspects of
 - the child welfare system can promote continuity and cohesion
 - 4. Demonstrate that infants can be “understood” through their non-verbal cues across
 - their sleep-awake cycles that all disciplines can learn to read
 - 5. Demonstrate that assessment is intervention and intervention is assessment rather than
 - two separate processes.
 - 6. Utilize different clinical approaches to healing trauma using a neurodevelopmental approach
 - 7. Observe how traumatic narratives can be expressed through sensorimotor play and
 - procedural enactments
 - 8. Describe how important the sensory system’s triggers and preferences are in working
 - through trauma
 - 9. Create interventions that account for the importance of the relevance system’s range of
 - emotional themes
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Promising non-pharmacological interventions

- Nurse Home Visiting (Olds model)
 - Parent-Infant therapy
 - Cognitive-Behavioral therapy (maternal depression)
 - Psychosocial interventions
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Conclusion

- Pregnancy and early mothering are critical time for parent, with powerful effects on infant
 - Physicians treating expectant/early mothers have crucial role in early recognition and treatment of psychiatric disorders
 - Early intervention has powerful and lasting effects.
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Cebc4cw.org/programs

Programs with a Scientific Rating of 1 - Well-Supported by Research Evidence

[Parent-Child Interaction Therapy \(PCIT\)](#)

Programs with a Scientific Rating of 2 - Supported by Research Evidence

[Child Parent Psychotherapy \(CPP\)](#)

[Multidimensional Treatment Foster Care for Preschoolers \(MTFC-P\)](#)

Programs with a Scientific Rating of 3 - Promising Research Evidence

[Attachment and Biobehavioral Catch-up \(ABC\)](#)

[Theraplay](#)

Programs with a Scientific Rating of NR - Not able to be Rated

[Circle of Security \(COS\)](#)

Nurse Home Visitation Program

- Targets low income, at-risk pregnant women bearing their first child
 - Intensive and comprehensive home visitation by nurses from pregnancy through age 2
 - Significantly less child mal-treatment
 - More employment
 - Less maternal substance abuse problems
 - Less maternal arrests
 - Developed by Olds
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- **Child Welfare Outcomes:** Safety and child/family well-being.
 - **Type of Maltreatment:** Not specified
 - **Target Population:** First-time, low-income mothers (no previous live births).
 - **Brief Description:**(The information in this program outline is provided by the program representative and edited by the CEBC staff.)
 - ***Nurse-Family Partnership (NFP)*** has been rated by the CEBC in the area of Home Visiting. The ***Nurse-Family Partnership (NFP)*** program provides home visits by registered nurses to first-time, low-income mothers, beginning during pregnancy and continuing through the child's second birthday. The program has three primary goals: (1) to improve pregnancy outcomes by promoting health-related behaviors; (2) to improve child health, development and safety by promoting competent care-giving; and (3) to enhance parent life-course development by promoting pregnancy planning, educational achievement, and employment. The program also has two secondary goals: to enhance families' material support by providing links with needed health and social services, and to promote supportive relationships among family and friends. Since ***NFP*** is highly rated on the Scientific Rating Scale, information on available pre-implementation assessments, implementation tools, and fidelity measures was requested from the program representative.
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Child-parent psychotherapy

- **Child Welfare Outcomes:** Safety and child/family well-being.
 - **Type of Maltreatment:** Exposure to domestic violence, Physical abuse, Physical neglect, and Sexual abuse
 - **Target Population:** Children age 0-5, who have experienced a trauma, and their caregivers.
 - **Brief Description:**(The information in this program outline is provided by the program representative and edited by the CEBC staff.)
 - **Child Parent Psychotherapy (CPP)** has been rated by the CEBC in the areas of Domestic Violence: Services for Women and their Children, Infant and Toddler Mental Health (0-3), and Trauma Treatment for Children. **CPP** is a treatment for trauma-exposed children aged 0-5. Typically, the child is seen with his or her primary caregiver, and the dyad is the unit of treatment. **CPP** examines how the trauma and the caregivers' relational history affect the caregiver-child relationship and the child's developmental trajectory. A central goal is to support and strengthen the caregiver-child relationship as a vehicle for restoring and protecting the child's mental health. Treatment also focuses on contextual factors that may affect the caregiver-child relationship (e.g., culture and socioeconomic and immigration related stressors). Targets of the intervention include caregivers' and children's maladaptive representations of themselves and each other and interactions and behaviors that interfere with the child's mental health. Over the course of treatment, caregiver and child are guided to create a joint narrative of the psychological traumatic event and identify and address traumatic triggers that generate dysregulated behaviors and affect. Since **CPP** is highly rated on the Scientific Rating Scale, information on available pre-implementation assessments, implementation tools, and fidelity measures was requested from the program representative. Please
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Project support

- **Child Welfare Outcomes:** Safety and child/family well-being.
 - **Type of Maltreatment:** Emotional abuse, Exposure to domestic violence, and Physical abuse
 - **Target Population:** Families (mothers and children) who had recently sought refuge at domestic violence shelters, with children aged 4-9 exhibiting clinical levels of elevations on externalizing problems (e.g., disruptive, defiant behaviors).
 - **Brief Description:**(The information in this program outline is provided by the program representative and edited by the CEBC staff.)
 - ***Project SUPPORT*** has been rated by the CEBC in the area of Domestic/Intimate Partner Violence: Services for Women Victims and their Children. ***Project SUPPORT*** was developed to address child conduct problems (i.e., disruptive, oppositional behaviors). Specifically, it was designed for individual families (mother and child(ren)) in which the mother had sought refuge at a woman's shelter because of domestic violence and at least one of her children was exhibiting clinical levels of conduct problems. The intervention includes two main components: providing instrumental and emotional support to the mother during her transition from the women's shelter and teaching the mother to implement a set of child management and nurturing skills that have been shown to be effective in the treatment of clinical levels of conduct problems. Since ***Project SUPPORT*** is highly rated on the Scientific Rating Scale, information on available pre-implementation assessments, implementation tools, and fidelity measures was requested from the program representative
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