Perinatal Mental Health Disorders

BC Best Practice Guidelines 2014

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1 Executive Summary

Introduction

- **20% women** → mental health disorder in perinatal period

- Untreated perinatal depression
  - Compromised **prenatal care**
  - Incr risk of **obstetrical complications**
  - Self-medication or **substance use**
  - Compromised **mother/infant interactions**
  - **Emotional + behavioral impairments** in developing child
  - **Maternal suicide + infanticide**

Overall Recommendations (1)

1) If personal/family history of mental health disorder:

- Should **plan pregnancy**, ideally timed with **stable mood**

2) If chronic mental health disorder:

- **Shared decision-making** (pt + HCP, before + during pregnancy)
- Consider **referral to psychiatrist** before/during pregnancy
- If medication stopped, monitor mental status during pregnancy, especially **postpartum (high risk of relapse**)

6) Educate partners, family members

- Recognize, support, **maximize sleep**

Overall Recommendations (2)

3) If requiring psychotropic medications in perinatal period:

- Discuss risk + benefits (of medications, of not treating)
- Involve partners, other family members
- Minimum number of medications, lowest effective dose

4) If severe mental health disorders requiring multiple meds

- Encourage **delivery in hospital** (vs home birth) → closer monitoring

Overall Recommendations (3)

5a) Encourage breastfeeding if possible

- Psychotropic meds usually **NOT contraindicated**
- Maximize **breastfeeding support** → increase probability of success
- Refer to **lactation consultation** or **public health nurse**

5b) If breastfeeding NOT possible:

- Support health/wellbeing of mother
- Promote optimal nutrition for baby
- **Supplement** with expressed breast milk, pasteurized donor milk,
- Supplemental or full **formula feeding**

5c) Premature babies, babies with significant health problems

- Discuss with pediatrician if wanting to breastfeed

Depression – Key Points

- Major depression in perinatal period = **16% of women**
  - Greatest risk = **personal/family hx, previous perinatal depression**

- Prevention (not supported by literature)
  - Early detection → improves outcomes
  - **Edinburgh Postnatal Depression Scale (EPDS)** → NOT diagnostic
    - Relevant to fathers, adoptive parents
  - **Diagnostic interview + DSM5** = GOLD STANDARD
    - Risk of suicide, risk to baby

- Combination treatment = MOST EFFECTIVE
  - Risk of **drug effects** vs risk of **untreated depression**

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Anxiety Disorders – Key Points

- Higher prevalence in perinatal populations
  - Major risks: **personal/fam hx**, **prev perinatal anxiety disorder**
- Most common perinatal anxiety disorders
  - **GAD, OCD, panic disorder**
  - Anxiety disorders + depression → **often co-exist**
- Little research on self-report tools for screening
  - **Diagnostic interview + DSM5**
  - Exclude medical conditions/substances
- Early intervention → improves outcomes
  - Mild-mod → **combination non-pharmacological tx**
  - Mod-severe → may require medication

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Bipolar Disorder – Key Points

- Prevalence/incidence NOT increased DURING pregnancy
  - **Incr risk POSTPARTUM** for development of bipolar disorder
  - If existing bipolar disorder → at incr risk of **RELAPSE postpartum**
    - Postpartum manic episodes, depressive episodes, psychosis

- **Postpartum psychosis = psychiatric + obstetric emergency**
  - Requires hospitalization + intensive treatment
  - If postpartum psychosis develops with **NO prev psych hx**
    - Incr risk of **further mood episodes** + eventual **bipolar disorder**

- No easy self-report screening tools, not preventable
  - Medications → significant role
  - Psychosocial tx → can improve outcomes (esp depression phase)

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Bipolar Disorder – Recommendations

- Promote early intervention
  - Ask about risk factors, direct observation, reports

- Integrated treatment plan
  - Women, family, psychiatry, obstetrics, PCP, public health nurse
  - Refer psychiatrist, repro psych → assess, med mgmt, monitor

- Women with bipolar disorder
  - Offer **genetic counselling**
  - Discuss family history + recurrence risk
  - Can refer **if father also has severe mental disorder**

Psychotic Disorders – Key Points

- Women with schizophrenia
  - High risk of **poor PERINATAL + NEONATAL outcomes**
  - Devastating impact on **mother-infant bonding**
  - Parenting difficulties → impacts **baby's neurodevelopment**

- Management of risk + impacts
  - **Preconception counselling**
  - Perinatal planning, mgmt, support

Psychotic Disorders – Key Points

- Postpartum psychosis = **RARE (0.1 – 0.2% of live births)**
  - Onset = unexpected, rapid → **within 72 hrs to 4 weeks of delivery**
  - Duration = **1-30+ days** → eventual return to baseline fxn
  - **Psychiatric + obstetrical emergency → hospitalization required**
  - Strongly associated with **bipolar disorder**

- Management
  - Primarily with **medications**
  - **ECT** may be beneficial if:
    - Unable to take/tolerate meds
    - Improvement needed quickly
    - Suicide risk

Suicide and Infanticide – Key Points

- Suicide = MOST COMMON cause of peripartum death
  - **During pregnancy + first postpartum year** (still rare though)
  - Always follow up on suicide concerns, risk of harm to baby
  - **EPDS = question 10** → trigger full risk assessment
  - If high risk → immediate referral to ER
    - Contact partner/family, arrangements for baby, MCFD referral

- Neonaticide + infanticide = very rare
  - **Postpartum psychosis** = risk factor
  - Risk between **infanticide + maternal suicide**

- If sig mental health disorder or mother-infant difficulties
  - Ask about **obsessions** related to harm to child
  - Legal duty to report infant safety concerns (to MCFD)

Suicide and Infanticide – Recommendations

- If depressed or psychotic → assess **suicide, infanticide risk**
  - If present → develop safety plan, refer for psych assessment, f/u
    - Hospitalization may be required
  - If safety concerns → involve other parties (partner, family, MCFD)

2 Mental Health Disorders in the Perinatal Period

Perinatal Mental Illness

- Mental disorders = significant cause of **perinatal disability**
  - Perinatal = conception to one year postpartum
  - **1 in 5** → sig perinatal depression or other mental health disorder
    - Only small proportion seek help

- Affects all aspects of life, baby, partner
  - Prenatal care, risk of obstetrical cx
  - Self-mediation or substance use
  - Compromised mother-infant interactions
  - Cognitive/neuro-behavioral impairments in early years
  - Maternal suicide + infanticide

- Can be detected early + effectively treated

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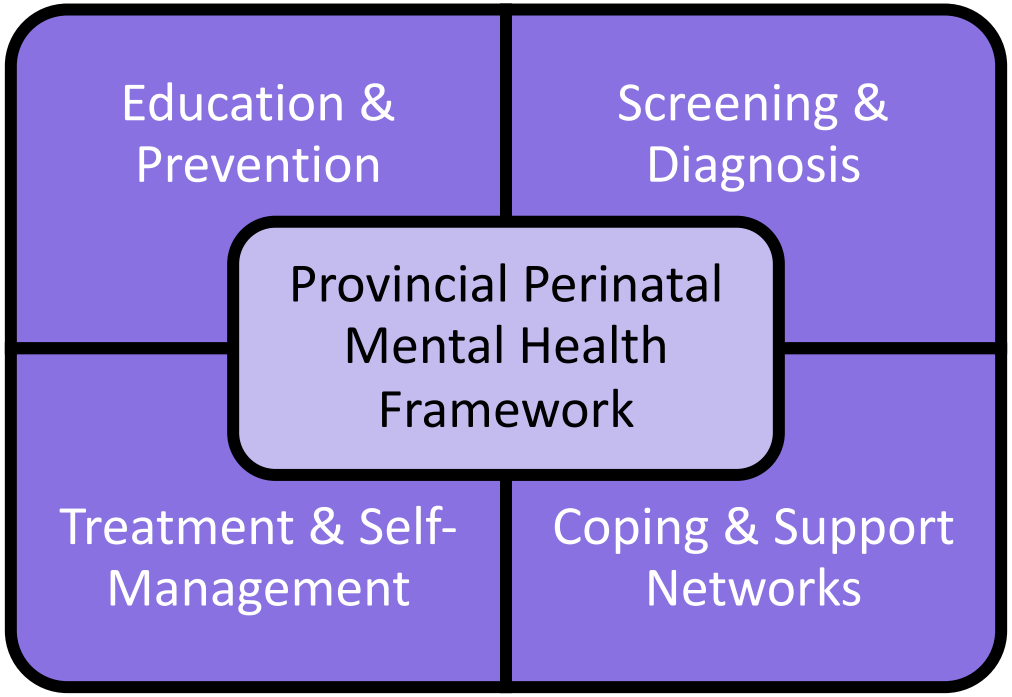
Provincial Perinatal Mental Health Framework

1. Education & Prevention
2. Screening & Diagnosis
3. Treatment & Self-management
4. Coping & Support Networks



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Prevalence

- **Perinatal depression** = MOST commonly diagnosed (16%)
  - Rates vary due to sample, definitions, measures, new/existing cases
  - Point vs period prevalence → majority research is **point prevalence**
  - **Varying time points** (3 vs 9 months after, both 1 yr postpartum)

- Perinatal vs non-perinatal populations
  - Depression rates = similar
  - **Anxiety disorders** = HIGHER in perinatal
  - **Bipolar disorders** = HIGHER in perinatal
  - Schizophrenia = similar (perinatal period not incr risk of relapse)

Prevalence

	Non-pregnant	Pregnancy	Postpartum
MDD	• **NO difference** vs perinatal	• **5 – 16%**	• 0-3 mos = 4 – 10% • 1st yr = **9 – 31%**
GAD	• **3% per yr** (childbearing age)	• **1 – 9%**	• 1st yr = **4 – 8%**
Panic Disorder	• **1 – 2% per yr** (childbearing age)	• **1 – 5%**	• 1st yr = **1 – 5%**
OCD	• **1 – 2% per yr** (childbearing age)	• **0.2 – 3%**	• 1st yr = **3 – 4%**
Bipolar Disorder	• **0.5% per yr** • Canadian women lifetime = 2.1%	• **NO difference** • 45-50% have sx exacerbation	• **Immediate = 25 – 30%** (recurrence) • **3-6 months = 67 – 82%** (relapse) • **Psychosis = 10 – 20%**
Psychotic Disorders (schizophrenia)	• **1%** (gen pop, M+F)	• **NO difference**	• **NO incr recurrence** • **NO incr risk of psychotic episode**

Clinical Significance – Impact (1)

- Critical time → can result in prolonged, negative effect
  - On mother, mother-baby relationship
  - Child development (psychological, social, educational)
  - Relationship with partner

A) Potential impacts on women

- **Negative views** of motherhood, themselves as mothers
- View **baby's behavior** as difficult
- Not recognize/response to **baby cues** → affect development
- May breastfeed for **shorter period** of time
- **Substance use** (incl alcohol, cigarettes)
- Incr risk of **future depression** + mental health issues
- **Risk of suicide**

Clinical Significance – Impact (2)

B) Potential impacts on babies

- Behavioral disturbances
  - **Crying** → quicker, louder, longer
  - **Less time in quiet & alert state** (where they learn the most)
- Development delays
  - **Walk + talk later**
- Social issues
  - **Secure relationships** → more difficult
  - **Socially withdrawn**
- **Risk of infanticide**

Clinical Significance – Impact (3)

C) Potential impacts on partners/families

- **Relationship disruption** → separation, divorce
- **Depressed partners** → may need tx
- **Depression in men = 10%**
  - Highest in **3-6 mo postpartum period**
  - Moderate **positive correlation** with maternal depression
- **Same negative impacts** (relationship, family, baby)

Barriers to Seeking Help

- **Stigma** (guilt, shame, judgement)
- **Denial** (minimizing symptoms)
- **Concerns about baby being removed** (from parent care)

- Lack of knowledge **(normal adjustment vs mental disorder)**
- Lack of awareness **(mental illness is treatable)**
- Lack of awareness **(consequences if not treated)**

- **Language limitations** (spoken, interpretive)
- **Lack of child care, transportation** (to get to appointments)
- **Lack of available services**

Key Points

- 20% women → perinatal mental health disorder
  - **Perinatal depression** = most diagnosed (up to 16%)

- Affects all aspects of life (woman, baby, partner, family)
  - Without treatment, risk of negative effects
    - Prenatal care
    - Incr risk of obstetrical complications
    - Self-medication, substance-related disorders
    - Mother-infant interactions
    - Cognitive/neuro-behavioral impairments (in early preschool)
    - Maternal suicide, infanticide

3 Perinatal Depression

Education & Prevention

Baby (Postpartum) Blues	Perinatal Depression (PND)
• Crying for no apparent reason • Rapid mood swings, anxiety • **Normal response** to new baby	• May start with baby blues symptoms • Becomes more severe • **Fulfills MDD criteria** (not normal)
• Onset **3 – 5 days postpartum**	• Onset **anytime** during pregnancy or within 1st year of childbirth/adoption
• **Resolves within 1 – 2 weeks**	• **Does NOT resolve** within 2 weeks
• Does not require treatment	• **Requires treatment** • If not, can have negative impact
• **50-80%** of new mothers • Small % progress to PND	• **Up to 16%** of perinatal women • Most common perinatal mental health disorder

Signs & Symptoms

- ***"with peripartum onset"*** (DSM5 specifier of MDD)
  - MSIGECAPS, 5/9, for 2 weeks
  - Distress/impairment
  - Onset **during pregnancy or within 4 weeks** **of childbirth**

- Clinically → can occur anytime in **first year postpartum**

Risk Factors for Perinatal Depression (1)

- MAJOR Risk Factors
  - **Personal hx of depression**
    - STRONGEST risk factor for depression **during pregnancy**
    - Strong predictor for **postpartum depression**
    - If hx of depression before conception or during pregnancy
      - **50% will have postpartum depression**
  - **Hx of postpartum depression**
    - **40% will have recurrent episode** of postpartum depression
  - **Family hx of depression**
    - If postpartum depression → **50% have psych family hx**

Risk Factors for Perinatal Depression (2)

- Contributing Risk Factors
  - Poor **social support,** relationship/family **conflict**
  - Recent **adverse life events,** life/financial **stress**
  - Intimate partner **violence**

  - **Unintended** pregnancy
  - **Ambivalence** towards pregnancy

  - **Maternal anxiety,** excessive **anxiety** during pregnancy
  - **Maternal health problems** (chronic/acute)

  - Infants with **health problems**
  - Perceived **difficult temperament**

Prevention

- Prevention of antenatal depression
  - If no risk factors → NO evidence for specific prevention during preg

- Prevention of postpartum depression
  - **Psychosocial/psychological intervention → decr risk of depression**
    - Includes women with or without risk factors

  - **Most promising PREVENTATIVE interventions**
    - Intensive, individualized **home visits** (nurse, midwife)
    - **Peer-based telephone support**
    - **Interpersonal psychotherapy (IPT)**
  - Similar benefit if HCP or layperson, single or multiple contact

  - **INSUFFICIENT evidence for pharmacotherapy as prevention**
    - NO recommendations for antidepressants, estrogens
    - **Progestins may WORSEN outcomes**

Screening & Early Detection (1)

- 3 basic approach to early detection of depression
  1. **Universal screening:** ALL pregnant/postpartum women
  2. **Targeted screening:** if known RISK FACTORS, clinical signs
  3. **No screening:** assessment only if depression sx apparent

- Canadian Task Force on Preventative Health Care 2013
  - Recommend **screening only when symptoms apparent (targeted)**
  - Not strong recommendation, weak evidence

- BC Provincial Position Statement
  - Recommends **universal screening**
  - Multiple RCTs → benefit from routine screening + interventions

Screening & Early Detection (2)

- Consensus on regularly enquiring about depressive sx
  - MDE more **often missed in pregnant women** (vs non-pregnant)

- Screening tools
  - **Incr rates** of accurate diagnosis
  - Non-threatening mechanism + systematic use helps share feelings
  - **Only EPDS + PDSS validated** in perinatal populations

Screening Tools

Table 2: Common Depression Screening Tools

Screening Tool	Number of Items	Time to Complete	Sensitivity[ii]	Specificity[iii]
Edinburgh Postnatal Depression Scale (EPDS)	10	<5 min	59 – 100%	49–100%
Postpartum Depression Screening Scale (PDSS)	35	5 – 10 min	91–94%	72–98%
Patient Health Questionnaire-9 (PHQ-9)	9	<5 min	75%	90%
Beck Depression Inventory (BDI)	21	5 – 10 min	48 – 82%	86 – 89%
Beck Depression Inventory-II (BDI-II)	21	5 – 10 min	56 – 57%	97 – 100%
Centre for Epidemiologic Studies Depression Scale (CES-D)	20	5 – 10 min	60%	92%
Zung Self-Rating Depression Scale (Zung SDS)	20	5 – 10 min	45 – 89%	77 – 88%

Source: American College of Obstetricians and Gynecologists, 2010.

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Edinburgh Postnatal Depression Scale (EPDS)

- **Recommended screening tool in perinatal period**
  - Specifically validated in perinatal populations → used worldwide
  - **10 items, scored 0-3, self-report, past 7 days**
  - Screening tool for perinatal **depression only** (not anxiety)
    - Guidance for further assessment → **NOT diagnostic**

- Administering EPDS
  - **All modalities valid** (in person, telephone, mail, internet)
  - Self-administration → more positive screen, higher scores
    - ? More false-positives, more honest, selection bias

EPDS – When to Administer It

- During pregnancy → NO specific timeframe recommended
  - Valid ANYTIME → **28 – 32 weeks gestation** suggested (BC)
  - Earlier screening → earlier identification, improves outcomes
  - If too early → may lead to missing later onset depression

- Postpartum
  - Valid **3 days to 2 years postpartum**
  - PND onset highest in **first 3 months** (but anytime up to 12 mos)
  - If only once → suggested **6 weeks to 4 mos** postpartum
  - If twice → **before 2 mos**, if moderate score **repeat at 4-6 mos**

	Possible Depression	Probable Depression
Antenatal	13+	15+
Postpartum	10+	13+

EPDS Scores

Table 3: EPDS Scores: Interpretation and Actions

EPDS Score	Interpretation	Action
Less than 8	Depression not likely	Continue support
9–11	Depression possible	Support, re-screen in 2–4 weeks. Consider referral to primary care provider (PCP).
12–13	Fairly high possibility of depression	Monitor, support and offer education. Refer to PCP.
14 and higher (positive screen)	Probable depression	Diagnostic assessment and treatment by PCP and/or specialist.
Positive score (1, 2 or 3) on question 10 (suicidality risk)		Immediate discussion required. Refer to PCP ± mental health specialist or emergency resource for further assessment and intervention as appropriate. Urgency of referral will depend on several factors including: whether the suicidal ideation is accompanied by a plan, whether there has been a history of suicide attempts, whether symptoms of a psychotic disorder are present and/or there is concern about harm to the baby.

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EPDS Considerations

- Linguistic/Cultural Considerations
  - **Validated translations** (Chinese, Punjabi, Vietnamese, Korean, Farsi)
    - Not direct translation → accounts for language/culture
  - Validated for possible depression → cut-off score 10
  - No validated cut-off for probably depression
  - **Validated in Aboriginal populations** in Saskatchewan, Australia

Use of EPDS for Others

- Partners
  - **Valid for new biological fathers** → timeframe same as mothers
  - **Lower cut-offs** → 10 for probably depression (men answer lower)
  - Moderate correlation with maternal depression → targeted screen

- Parents of adopted babies
  - **Valid for parents of adopted babies**
  - Can use same method, timing, cut-offs

- Step-parents
  - **NOT directly validated** → evidence suggests can be also used

Diagnosis

- Diagnostic assessment interview + DSM5 criteria
  - Exclude medical causes + concurrent substance use
  - Differentiate normal feelings/responses, overlapping symptoms
    - Pregnancy: **somatic sx** (sleep, energy, conc, appetite, nausea)
    - Postpartum: **normal adjustment, baby blues, sleep deprivation**

- Distinguishing **depression vs normal adjustment**
  - Persistent/marked depressive symptoms
  - Hopelessness, constantly overwhelmed by parenthood
  - Being “bad” or “terrible” mother
  - Guilt/worthlessness as parent
  - Social withdrawal
  - Co-existing anxiety sx
  - Thoughts of harm to self or baby
  - Suicidal thoughts, need to escape

Treatment & Self-Management

- Treatment factors
  - Nature of mental health disorder
  - Severity of symptoms
  - Previous response to treatment
  - Supports, resources, desires

- General guidelines
  - **Mild-moderate symptoms** → **non-pharmacological tx first**
    - If not effective, medications may be required
  - **Severe symptoms** → **medications first**
    - Add non-pharmacological tx when appropriate
    - If acutely suicidal → intensive home tx or hospitalization

Treatment & Self-Management

Table 4: Common Treatments Used for the Treatment of PND

Severity of Symptoms	Treatment & Self-Management
Mild to moderate	A. Psychoeducation B. Self-care: The NEST-S Program C. Psychotherapies i. Cognitive behavioural therapy (CBT) ii. Interpersonal therapy (IPT) iii. Psychodynamic therapy (PDT) iv. Group therapy (therapist and/or peer led) v. Parent-infant psychotherapy vi. Couples and family therapy D. Bright light therapy
Moderate to severe or at high risk of relapse	Treatments listed above plus: E. Pharmacotherapy (medications) (see Appendix 5) F. Electroconvulsive therapy (ECT) (if unable to tolerate/take medications or in whom a rapid response is required – e.g., psychosis or suicide risk)

Psychoeducation

- For woman + families
  - Effective in **both individual + group settings**

- Symptoms, disorder, treatment, effective coping strategies
  - Information about disorder
  - Prevalence
  - Risk factors
  - Signs + symptoms
  - Possible treatments
  - Benefits of early treatment
  - Expected progress during treatment

Self-Care: NEST-S Program

- Self-care = making positive changes to lessen depression

NESTS-S
N utrition
E xercise
S leep & rest
T ime for self
S upport

Mind-Body Modalities (1)

- Reduces stress, improve overall mood in perinatal women
  - **Yoga, meditation, breathing exercises**
    - May incr birth weight, reduce preterm births
  - Can link aspects of **NEST-S**
  - "Mind" = thoughts, emotions, beliefs, images

- NCCAM (National Center for Complementary and Alternative Medicine)
  - Meditation
  - Mindfulness
  - Yoga
  - Relaxation
  - Hypnosis
  - Guided imagery
  - Biofeedback
  - Creative therapies
  - Prayer
  - Tai Chi
  - Qigong

Mind-Body Modalities (2)

- Mindfulness
  - Based on Buddhist tradition
    - **Non-judgemental focus** on present thoughts + emotions
    - From state of **conscious awareness**
  - For stress, anxiety, depressive relapse, eating disorder, addictions
  - Treatment of perinatal depression/anxiety
    - Useful in **mild-moderate depression** or **adjunct to medications**
    - May reduce pregnancy-related anxiety/stress/depression
    - May improve **maternal-infant interactions** in postpartum period

Mind-Body Modalities (3)

- Relaxation
  - Promote calm physiological response → reduce stress/anxiety
  - 3 basic relaxation techniques
    - **Diaphragmatic breathing**
    - **Progressive muscle relaxation**
    - **Guided imagery**
  - Skill can improve **overall health + stress mgmt**
    - Low HR, improved patience, decr irritability, decr H/A, decr pain
    - Incr energy, better sleep, improved memory + concentration
  - Complementary & **interchangeable with mindfulness**
    - Emptying mind, being in moment
    - Freeing of distracting negative thoughts/emotions
    - Building blocks of self-management

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Psychotherapies

- Psychotherapies are effective in perinatal period
  - Focus on one/both parents, mother-baby dyad, parent-baby r/s
  - May involve wider family
  - Effective in **individual or group setting**

- CBT, IPT, PDT → **ALL EFFECTIVE** in perinatal depression
  - Used on own or in combination
  - Should be provided by specifically trained providers
  - **Therapeutic alliance** MORE important than specific approach

Cognitive Behavioral Therapy (1)

- CBT teaches women to:
  - Identify upsetting, negative, **distorted thoughts/assumptions**
    - Influence on mood, behavior
    - Challenge, replace → more realistic, accurate thoughts
  - **Decrease overall symptoms** of depression/anxiety
    - Reduce behaviors contributing to depression/anxiety
    - Increase behaviors contributing to physical/mental well-being
  - **Prevent relapse of symptoms**

Cognitive Behavioral Therapy (2)

- Effective in depression, anxiety, panic attacks, OCD, EDs
  - Success rate = **52 – 97%**
  - In mild-mod depression → **as effective as medication**
  - **Combined with antidepressant** → better results than either alone
  - Effective in individual or group settings

- Effective for depression during pregnancy + postpartum
  - Mild-mod → combination with psychoeducation + self-care
  - Mod-severe → helpful adjunct to pharmacotherapy

Interpersonal Psychotherapy (IPT)

- Focus on role transitions, changing roles/relationships
  - Teaches skills need to adjust + improve interactions
  - **Short-term therapy**
  - Individual or group settings

- Effective in treating depression
  - Mild-mod → decr depressive sx, incr social adjustment
  - Effective in perinatal depression
  - More effective when combined with antidepressants
  - **May be slightly MORE effective** for depression that other therapies

Psychodynamic Therapy (PDT)

- Also "Insight-Oriented Therapy"
  - Incr self-awareness, understanding of influence of past on present
  - Examine unresolved conflicts, from past dysfunctional relationships
  - Focus on unconscious processes → manifest in present behavior

- Effective in treating depression in general population
  - **Often used with other psychological tx** (most commonly CBT)
  - Individual or group

- Less available evidence for perinatal period
  - Research suggests PDT decr rates of postpartum depression
  - **Little research during pregnancy**

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Group Therapy

- May utilize different therapeutic approaches
  - On own or as adjunct
  - Therapist or peer-led
  - Open/continual or close/fixed intake
  - In person, teleconference, videoconference

- Often combined with antidepressants → better outcomes
  - RCT evidence → **EFFECTIVE in postpartum depression**
  - If HIGH risk for PDD → NOT effective for prevention

Parent-Infant Psychotherapy (1)

- **Functional (sleep, feeding) + behavioral disorders**
  - MOST frequent reasons for psychiatric consultation in **age <3**
  - Sig association with **maternal depressive symptoms**

- Perinatal depression affects state of mind
  - May impact capacity to be **attuned to world + look after baby**
  - Can be minimized by consistent, close alternate caregivers/partners
  - **Developmental trajectory derailed**, even after depression resolves

- Parent-infant psychotherapy
  - Parent-infant interaction, socio-emotional functioning of baby
  - History of parents, their attachment experiences
  - Mother-baby connection before baby born
  - Observable + deductible parent-child interactions

Parent-Infant Psychotherapy (2)

- Therapist helps develop a healthy attachment
  - **Therapeutic connection critical** → assisting mother-baby dyad
  - Learn to observe baby, think about reaction, what baby is thinking
  - Chart **new way of being with baby**

- Situations MOST likely to benefit
  - Baby difficulty regulating **eating, sleeping, emotions/crying**
  - Mothers with concern about **feelings towards baby**
  - Mothers with concern about **baby's reciprocation** of love/warmth

- Positive outcomes → **lasts for >6 mos** (but limited data)
  - Functional + behavioral symptoms
  - Mother-child interactions, mother-infant conflict
  - Maternal self-esteem, parenting stress

Parent-Infant Psychotherapy (3)

Positive Factors	• Involve **both parents,** supportive **partner** ***MOST EFFECTIVE*** • **Sensitize mothers** to baby behavioral signals • Duration **<16 sessions** • Start after baby **age 6 months**
Negative Factors	• Separation from **child's father** • Higher initial maternal **anx/dep scores** • More **serious behavioral** issues
No Effect	• **Length of tx** • Sex of child • Parental age • Parental occupation • Mother education status • Environmental risk factors

Couples/Family Therapy

- Couple relationship strain
  - Key factor in development + outcome of PPD
  - **Higher risk, more severe, longer duration**

- Limited research in PND population
  - General population RCTs, comparing to individual therapy
    - As effective in **improving depression symptoms**
    - MORE effective in **reducing relationship stress**
  - Partner relationship → role in prevention + recovery from PPD
  - Potential to improve both **maternal depressive symptoms** + **overall couple/family relationship dynamics**

Bright Light Therapy (BLT)

- Seasonal affective disorder = EFFECTIVE tx (in gen pop)

- Perinatal depression = **EFFECTIVE tx**
  - NO evidence of **adverse effects** on pregnancy
  - 2 RCTs → BLT **similar effects to antidepressant** drug trials
  - **3 weeks of BLT** → 49% improvement in depression ratings
    - Effects lasted through 5 weeks of tx
  - Effectiveness confirmed by **systematic review**

Psychotropic Medications in Perinatal Period

- Meds may be necessary in mod-severe PND
  - Risk of **drug effects** *vs* risk of **untreated depression**
  - Stopping meds → worsening PND → negative effect on fetus/baby

  - Ongoing/evolving research into perinatal med exposure
    - Prematurity, spontaneous abortion, low birth weight
    - Major congenital malformations, cardiac + neural tube defects

Medications for Perinatal Depression (1)

- Antidepressants = **FIRST-LINE**
  - If co-existing **anxiety** disorder → benzodiazepines
  - If intermittent **insomnia** → benzodiazepines, hypnotics PRN
  - **SSRIs = most commonly used** → then SNRIs, TCAs

- Neonatal Adaptation Syndrome (NAS)
  - **33% of newborns** of mothers on SSRI/SNRI during pregnancy
  - Present **few hours** after birth
    - Tremor, jitteriness, irritability, restlessness
    - Resp distress, temp instability
    - Feeding difficulty, sleep problems
  - Typically, NAS symptoms = **mild + transient**
    - Resolve within **2-3 weeks** of delivery (without treatment)

Medications for Perinatal Depression (2)

- Persistent Pulmonary Hypertension of the Newborn (PPHN)
  - Exposure to **SSRIs in utero** → slightly incr risk
    - Absolute risk very small, not well-defined
  - Rare condition
    - Failure of normal **relaxation of fetal pulmonary vascular bed**
      - During **circulatory transition** shortly after birth
    - Screening = **test O2 saturation q4h for first 24 hours**

- Congenital heart defects
  - **SSRI/SNRIs in first trimester** → slightly incr risk
    - Esp **paroxetine**
    - Screening = pulse oximeter

Electroconvulsive Therapy

- Indications
  - When severe depression **NOT responding to medication**
  - When rapid/sig response needed **(acute psychosis, suicidal)**

- **SAFE + EFFECTIVE**
  - As treatment for severe mental illness **during/after pregnancy**
    - **Safe for baby**
  - Allows **continuation of breastfeeding** schedule

  - Provide in hospitals able to **manage maternal & fetal emergencies**
    - Recommend **obstetrical consultation**

Partners and Depression (1)

- Recent meta-analysis
  - Prenatal + postpartum depression → **10% of men** (> gen pop)
  - Highest risk period = **3-6 months after birth**
  - Mod positive **correlation with maternal depression** (not causal)

SAME as new mothers	MORE prominent in partners
• **Previous hx** of depression • **Family hx** of depression • **Worries** about being parent • **Unintended** pregnancy • **Ambivalence** towards pregnancy • Life/financial **stress** • Poor **social support** • Poor **partner relationship/conflict** • Baby with **health problems** • Perceived **difficult temperaments**	• Changes in family **role/responsibilities** • Feeling excluded (**less attention**) • **Missing pre-baby** partner relationship • **Missing sexual** relationship • Feeling **overwhelmed** (work pressure, providing $, being home, baby care)

Partners and Depression (2)

- Signs & Symptoms
  - MSIGECAPS, anxiety, panic attacks
  - Incr substance use, anger, relationship conflict
  - Physical symptoms (headaches, GI, pain)
  - Less productive at school, work, home

- Screening
  - **EPDS** → valid for new biological fathers, same timeframe
  - **LOWER cut-off (10 vs 13)** for probable → men tend to answer lower

- Treatment & Support
  - Effective treatment similar to new mothers
  - **More potential medications options** → no risk to fetus/baby

Summary – Key Points (1)

- Depression rate = 16%
  - SAME as non-perinatal women of childbearing age
  - Major risk factors = personal/family hx, prev perinatal depression
  - If no risk factors
    - **NO evidence** for prevention of **depression DURING pregnancy**
    - **YES evidence** for prevention of **POSTPARTUM depression**

- Early detection
  - Early intervention + tx → more likely good outcome
  - **EPDS** → effective screening tool (but NOT diagnostic tool)
    - Validated → translated, fathers, adopting parents, diff modalities
    - Diagnostic interview = gold standard (incl risk assessment)

Summary – Key Points (2)

- Multi-prong treatment most effective
  - Mild-mod depression → **combo non-pharmacological tx**
  - Non-responsive, severe depression → **may require medication**

- Non-pharmacological tx
  - Psychoeducation, self-care, BLT
  - **CBT, IPT, PDT** all effective → alone/combo
    - Given as individual/group/couples/family
  - **Parent-infant psychotherapy** effective
    - For mother-baby relationship + development

Summary – Key Points (3)

- ECT safe + effective
  - Non-responders, severe depression, psychotic, suicidal

- Perinatal depression in male partner
  - **10%** (higher vs gen pop)
  - Similar symptoms + impact → broader range of tx available

Recommendations (1)

- Common to ALL perinatal mental health disorders
  - 1) Encourage planning **pregnancy when stable**
  - 2) If **chronic mental health disorder**
    - Optimize mental health during perinatal period
    - Consider referral to psychiatrist before/during pregnancy
    - If medication stopped → monitor closely, esp postpartum
  - 3) If **requiring psychotropic medications**
    - Informed decision-making
    - Minimum number of meds → at lowest effective dose
    - When breastfeeding → monitor baby for adverse effects
  - 4) If severe mental health disorder, requiring multiple meds
    - **Encourage delivery in hospital** (vs home)

Recommendations (2)

- Common to ALL perinatal mental health disorders
  - 5) **Encourage breastfeeding**
    - Maximise breastfeeding support
    - If exclusive breastfeeding NOT possible
      - Support feeding options (supplementation, full formula)
    - If baby premature or sig health problems, consult peds
  - 6) **Educate family**
    - Recognizing sx during pregnancy + postpartum
    - Maximize adequate sleep
- Screen all women for PND (if care pathways established)
  - **EPDS** → 28-32 wks GA, 6-16 wks postpartum, or if any concerns
    - Question 10 (suicidality)

Recommendations (3)

Treatment Approach to Perinatal Depression		
	Stable, LOW relapse risk	**Stable, HIGH relapse risk or +Sx**
Pregnancy & Postpartum	<u>Mild-Moderate Depression:</u> • Meds **USUALLY NOT** required • Focus on psychoed, self-care, psychotherapies <u>Moderate-Severe Depression:</u> • Meds **MAYBE** required • Focus on psychoed, self-care, psychotherapies	<u>Mild-Moderate Depression:</u> • Meds **MAY NOT** be required • Focus on psychoed, self-care, psychotherapies <u>Moderate-Severe Depression</u> • Meds usually **REQUIRED** • **ADD** psychoed, self-care, psychotherapies

Recommendations (4)

Medication Management of Perinatal Depression		
	Stable, LOW relapse risk	**Stable, HIGH relapse risk or +Sx**
Preconception & Pregnancy	<u>If taking AD:</u> • **Consider gradual d/c** prior to pregnancy if low relapse risk <u>If unable to d/c AD:</u> • Continue current effective med	<u>If NOT taking, but requires AD:</u> • **SSRI first-line** → then SNRI • **AVOID paroxetine** in 1st trim <u>If taking AD:</u> • Continue current effective med
At birth	• **Keep therapeutic AD dose** at delivery & immediately postpartum	

Recommendations (5)

Medication Management of Depression		
	Stable, LOW relapse risk	**Stable, HIGH relapse risk or +Sx**

Postpartum	<u>If NOT taking, requires AD:</u>
	• Consider SSRI
	  • **Citalopram** (lower infant plasma levels)
	  • **Paroxetine** (if not planning pregnancy in next year)
	
	<u>If taking AD & still requires AD</u>
	• Continue current effective med → may required **dose adjustment**
	
	• If first episode → treat for **at least 6-12 mos** after full remission
	• If 3+ episodes → treat **up to 2 yrs**, **or lifelong** if severe illness	

All phases	• If co-existing anxiety disorder → **benzos** • If intermittent insomnia → **benzos, hypnotics PRN**	

4 Perinatal Anxiety Disorders

Education & Prevention (1)

- Anxiety disorders in the perinatal period
  - Most common = **panic disorder, GAD, OCD, PTSD**
  - **Similar clinical features** to non-pregnant women
    - May present with concerns about pregnancy/fetus
    - Panic attacks may be interpreted as problem with fetus

- High rates of perinatal anxiety disorders
  - May be as high as depression → often co-exist
    - Women with anxiety disorder → **66% comorbid depression**
    - Women with MDE → **40% comorbid anxiety disorder**
  - Overlapping symptoms, feelings of inadequacy
  - **Diagnosed less often that perinatal depression**
    - "Naturally anxious" new mothers

Education & Prevention (2)

- Generalized Anxiety Disorder (GAD)
  - Variable onset → mean age 30 (coincides with peak childbearing)
    - More common in **females**
    - More common in **perinatal women** (vs non-perinatal)
  - **60% with co-existing mental disorder**
    - Most common = **MDD, panic disorder**

- Obsessive Compulsive Disorder (OCD)
  - Typical onset → adolescence + early adulthood
    - More common in **perinatal women** (vs non-perinatal)

Education & Prevention (3)

- Panic Disorder (PD) ± Agoraphobia
  - Typical onset → mid-20s
    - More common in **women**
    - More common in **perinatal women** (vs non-perinatal)
  - Panic attacks may occur with other mood disorders

- Post-Traumatic Stress Disorder (PTSD)
  - **Less common** than GAD, OCD, PD
  - Psychoeducation, peer support
  - Trauma-focused psychotherapy (CBT, "desensitization" therapy)
  - Antidepressants

GAD Signs & Symptoms

Worries during pregnancy	Worries postpartum
• **Food/alcohol** before knew pregnant • **Miscarriage** • Being a **good mother** • Baby **developing normally** • **Coping with pain** of childbirth • **Affording** baby • Uncomfortable **physical sensations**	• Baby becoming **sick, serious illness** • Leaving baby with **someone else** • **Abduction** • **Abuse** • **Stop breathing** while asleep
Effects on behavior	
• Afraid having baby **out of sight** • **Checking** at night if baby still breathing • **Frequent visits** to doctor about baby's health	

OCD Signs & Symptoms

Obsessions	Compulsions
• Vision of baby with injuries • Harming baby • Contamination • Illness or disease • Forgetting to do things • Need to do things in exact way	• Washing, cleaning • Checking • Repeating actions • Demanding assurance from others • Tidying in a particular way
New obsession during pregnancy	**New obsession after birth**
• **Harm to fetus** = MOST COMMON • May do things to minimize/avoid risk • Ego-dystonic, recognize as irrational • Can occur without mental disorder, postpartum psychosis, severe PND	• **Baby becoming sick** = COMMON (even if no OCD) • Most cases → **temporary, harmless, disappear** without great distress • Can become obsessions • Avoid situation → most do not act

Panic Disorder Signs & Symptoms

During pregnancy

- Often triggered by **changes in body**
- May have **uncomfortable physical sx**
- Worry excessively about own health + health of unborn baby
- Worry about being mother

Postpartum

- Panic attacks from sleep deprivation, incr stress, parenting responsibilities

Common triggers

- Worries about own health, baby health, parenting skills

Common responses

- Fear of **being left alone with baby** (panic attack, losing control)
- Fear of **going out of home with baby**

Risk Factors for Perinatal Anxiety Disorders

Major Risk Factors	Contributing Factors
• Personal hx of **perinatal anxiety disorder** • Personal hx of **any anxiety disorder** • **Family hx** of perinatal anxiety disorder • *Similar to perinatal depression*	• Life stressors • Lack of social support • Poor relationships • Family hx of any anxiety disorder • Babies with health problems • Perceived difficult temperaments • Maternal health problems • **Smoking, caffeine intake**

Prevention

- No biological markers

- **NO evidence for prevention** with current medication

Screening & Diagnosis

- Little research on screening tools in perinatal anxiety
  - **Pregnancy Anxiety Scale** → NOT validated
  - Other standard self-report tools → no specific perinatal measures
    - Overlapping anxiety vs pregnancy/postpartum symptoms
  - **NO RECOMMENDATION** for specific anxiety screening tool

- EPDS anxiety subscale (questions 3 – 5)
  - Correlates with external anxiety measures (so does total EPDS)
    - No consensus on cut-off points for subscale
    - Many score positive on both subscale + total EPDS

- Screen for specific risk factors → **personal/family history**

- **Diagnostic assessment interview + DSM5 criteria**

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Summary of Treatments

Table 7: Treatments Commonly used to Treat Anxiety Disorders in the Perinatal Period

Severity of Symptoms	Treatment & Self-Management
Mild to moderate	A. Psychoeducation B. Self-care: The NEST-S Program C. Psychotherapies i. Cognitive behavioural therapy (CBT) ii. Interpersonal therapy (IPT) iii. Psychodynamic therapy (PDT) iv. Group therapy (therapist and/or peer led)
Moderate to severe or at high risk of relapse	Treatments for mild to moderate symptoms plus: D. Pharmacotherapy (medications)

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Psychoeducation & Self-Care

- **Relaxation training = EFFECTIVE** → esp GAD, PD
  - Less evidence for OCD
  - Progressive muscle relaxation, thinking of relaxing scenes/places

- **Mindfulness & meditation**
  - Helpful to reduce stress/anxiety

Psychotherapies

- **CBT = EFFECTIVE** (most researched, group CBT effective too)
  - OCD, PD → effects maintained at follow-up
  - Suggested as ***psychotherapy of choice in perinatal anxiety***

- **IPT = promising** (limited research in anxiety)
  - CBT + IPT → no diff vs CBT alone (no benefit from adding IPT)

- **PDT = some evidence** (but stronger for CBT, IPT)

- **Family/couples therapy = effective** if relationship issues

Other Non-Pharmacological Treatments

- Bright light therapy = NO evidence

- ECT
  - May be useful for **refractory OCD** (needs more research)
  - NO evidence for other anxiety disorders

Medications for Anxiety Disorders

- **SSRIs & SNRIs** = **FIRST LINE**

- Benzodiazepines → PRN, time-limited basis
  - Risk of tolerance + withdrawal with long-term use
  - **Intermitted insomnia** → benzos, other hypnotics (PRN)

- Quetiapine → severe anxiety disorders (esp OCD)
  - If only partial response to antidepressants, benzos

Key Points (1)

- **Anxiety + depressive disorders** often co-exist

- **Higher rates of anxiety disorders** in perinatal population
  - Most common types = GAD, OCD, PD
  - Similar clinical features to non-perinatal women
  - Concerns about pregnancy, fetus, baby

- **Major risk factors**
  - Personal/FHx of perinatal anxiety d/o, personal hx any anxiety d/o
  - NO evidence for preventative interventions

- **No commonly accepted, validated self-report tool**
  - Screening for risk factors → early identification + treatment
  - Diagnostic assessment interview + DSM5 criteria

Key Points (2)

- **Treatment similar to depression**
  - Mild-mod → combo non-pharm
  - Mod-severe → may need meds

- **Effective non-pharm**
  - Psychoeducation, self-care, psychotherapies
  - **CBT most studied + effective**
  - IPT promising
  - Stronger evidence for CBT, IPT (vs PDT)

  - Little evidence for BLT or ECT

Recommendations (1)

Treatment Approach to Anxiety Disorders	
Pregnancy & Postpartum	<u>Mild-moderate anxiety disorders</u> • Meds **usually NOT required** • Focus on psychoeducation, self-care, psychotherapies <u>Moderate-severe anxiety disorders</u> • Meds **frequently REQUIRED** • Add to psychoeducation, self-care, psychotherapies

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Recommendations (2)

Medication Management of Anxiety Disorders	
Pregnancy & Postpartum	• **SSRIs & SNRIs** = FIRST LINE treatment • Benzos, other hypnotics PRN for **intermittent insomnia** • Benzos → PRN/regular, time-limited (tolerance, withdrawal risk)
Pregnancy	• **Minimize use** of benzos & other hypnotics **close to delivery** • Reduces **risk of NAS** → monitor for NAS
Postpartum	• **SSRIs & SNRIs NOT contraindicated with breastfeeding** • If benzos → use **short-acting, divided doses** during lactation • Monitor for adverse effects (sedation, poor feeding, irritability)

5 Perinatal Bipolar Disorder

Education & Prevention

- Bipolar disorder in the perinatal period
  - One of the most serious mental disorders in perinatal period
  - **Usually lasts lifetime**
    - If untreated → **worsens with more frequent/severe episodes**
    - Proper treatment → reduces frequency/severity of episodes

- Women with existing bipolar disorder at risk
  - Postpartum → **mania, depression, mixed states, psychosis**
  - **Postpartum psychosis = psychiatric + obstetric emergency**

- Women with no previous psychiatric hx
  - If develops postpartum psychosis → needs close follow-up
  - At incr risk of **further mood episodes** (stress, future pregnancies)
  - May eventually be diagnosed with bipolar

Risk Factors

- Bipolar disorder in the perinatal period
  - Causes not well understood
  - **Runs in families** → exacerbated by stressful life events

- During pregnancy
  - **Prevalence NOT increased**
  - **INCR exacerbation** of symptoms

- Postpartum period
  - INCR risk of **development + relapse**
  - May have **psychotic features**

- Hypomanic symptoms
  - Can be overlooked in immediate postpartum period
  - May present weeks/months later with MDE (but is bipolar disorder)

Prevention

- Preconception counselling
  - Strategies to minimize risk/symptoms
  - Review/change medications prior to pregnancy
  - Seeking early help once pregnant

- Planning, management, support
  - Ask all → **personal/family hx** of bipolar, MDE, postpartum psychosis
  - At-risk women:
    - Management plan → supports, HCP team, monitoring, meds
    - Referral to psychiatrist/repro psychiatrist
    - Address risk factors (**sleep deprivation** in late preg, postpartum)
  - High-risk women:
    - **Longer postpartum stay in hospital** → monitor mood, sleep

Screening & Diagnosis

- No easily implementable self-report screening tools
  - Observation/report of **behavior changes** → prompt assessment
  - Exclude medical conditions, substance-related disorders

- Diagnostic assessment interview = gold standard

- Additional tools
  - SMMSE (Standardized Mini-Mental State Examination)
  - BPRS (Brief Psychiatric Rating Scale)
  - MDQ (Mood Disorder Questionnaire)
  - HIGHS Scale

Treatment of Acute Phase

- Primarily managed with **MEDICATIONS**
  - May **augment with non-pharm tx** (NOT effective alone in acute)
  - May required **hospitalization**

- Rates of relapse
  - **HIGH** if mood stabilizers/antipsychotics **stopped during pregnancy**
  - LOWER if taking mood stabilizers/antipsychotics
  - **Maintenance therapy** during pregnancy = PROTECTIVE (vs relapse)

- Adding psychosocial interventions (CBT, couples/family tx)
  - Can reduce hospitalizations, improve psychosocial outcomes
  - Benefits **mainly in tx of depression** (not acute hypomania, mania)

- ECT may be beneficial in certain situations
  - Unable to take/tolerate meds, meds failed, suicide risk

Treatment of Recovery Phase

- Non-pharmacological tx
  - Useful adjunct during **recovery phase**
  - Maintenance of **well-being**
  - Learning ways to **cope with disorder**

Summary of Treatment

Table 9: Common Treatments for Bipolar Disorder in the Perinatal Period

Severity of Symptoms	Treatment & Self-Management
Acute phase	A. Pharmacotherapy (medications) B. Electroconvulsive therapy (ECT) (if unable to tolerate/take medications or in whom a rapid response is required – e.g., suicide risk)
Recovery phase	Used as an adjunct to pharmacotherapy or ECT: A. Psychoeducation B. Self-care: The NEST-S Program C. Psychotherapies i. Cognitive behavioural therapy (CBT) ii. Interpersonal therapy (IPT) iii. Group therapy (therapist and/or peer led) iv. Parent-infant psychotherapy v. Couples and/or family therapy (also referred to as family-focused therapy in the literature on bipolar disorder)

Medications for Treatment of Bipolar Disorder

- **Mood stabilizers + antipsychotics** = MOST commonly used

- Benzos → short-term use to control manic symptoms
  - Until mood stabilizer/antipsychotic takes effect

- Antidepressants → may be useful in Bipolar II

Mood Stabilizers (1)

- Mood stabilizers
  - **Lithium** = "gold standard", oldest, best-known
  - Anticonvulsants: CBZ, VPA, lamotrigine, gabapentin, topiramate
  - EFFECTIVE for **acute mania, long-term control, prophylaxis**
  - **Less effective for tx of depression** (except lamotrigine)
    - May help prevent depression by preventing mania/mood cycling

- Risk of teratogenicity
  - **Lithium** → **cardiac anomalies** (low abs risk) = avoid 1st trimester
  - **VPA** → **neural tube defects** = NOT RECOMMENDED
    - Unless severe, only response to VPA
  - **Carbamazepine** → **neural tube defects** = avoid 1st trimester
  - **Lamotrigine** → **NO incr risk** of major congenital malformations
  - Other mood stabilizers less well studied

Mood Stabilizers (2)

- Abrupt cessation of mood stabilizers
  - Incr relapse risk **during pregnancy + esp postpartum!**

- Continuing mood stabilizers through pregnancy
  - If more severe illness
  - If hx multiple hospitalizations
  - If clear benefit of tx (vs exposure effects to fetus)

Antipsychotics

- **Atypical antipsychotics** = **FIRST-LINE** during pregnancy
  - **Mood stabilizing properties**
  - **? Lower rate of teratogenicity** (vs mood stabilizers, but less studied)

- Typical antipsychotics = NOT first-line
  - **Less effective, more side effects** (than atypical antipsychotics)

Recommendations (1)

- Promote early identification + treatment
  - Ask about **risk factors** (personal/family hx)
  - Direct **observation/reports** (behavior changes)

- Offer genetic counselling
  - Women with **severe mental disorder** (incl bipolar disorder)
  - Father has severe mental disorder
  - Discuss family history, **recurrence risk**

- Integrated treatment approach
  - Support, HCP team, referral to psychiatry
  - May have **longer hospitalization (>3 days)** after delivery
    - Establish sleep routine, close mood monitoring

Recommendations (2)

Treatment of Bipolar Disorder	
Treatment Approach	PRE-EXISTING bipolar disorder (incl psychosis) • **Individualized tx planning** (prev episodes, response to meds) Illness in REMISSION (clinically stable) • **Remain on meds** (risk of relapse/psychosis in perinatal period) SYMPTOMATIC women • **Require medication** (risk of relapse) **Consider ECT if** • Mod-severe mania or mixed episodes NOT responding to meds **Non-pharm adjunct tx** • Psychoeducation, self-care, psychotherapies

Recommendations (3)

Medication Management of Bipolar Disorder	
Preconception & Postpartum	<u>On mood stabilizer/antipsychotic, clinically stable 4-6 mos</u> • Consider trial of gradual d/c of medication → **prior to pregnancy if low relapse risk** <u>Severe illness, hx relapse with med d/c</u> • **CONTINUE meds** (except VPA) • If VPA → substitute with **AAP or other mood stabilizer** <u>If currently medication free, but requires medication</u> • Consider **AAP or mood stabilizer** (NOT VPA) • Avoid **lithium & CBZ in 1st trimester**
At birth	• **Monitoring guidelines** at time of delivery + postpartum

Recommendations (4)

Medication Management of Bipolar Disorder	
Postpartum	<u>Taking medications, still requires meds postpartum</u> • Continue current effective med → may need **dose adjustment** <u>Not taking medication, but requires meds postpartum</u> • Consider **any mood stabilizer or AAP** (not clozapine) <u>Taking LITHIUM</u> • **Breastfeeding NOT recommended** (high infant levels, toxicity) <u>Taking medication with high levels in nursing infants, toxicities</u> • Caution with breastfeeding
All phases	• Benzos may be used **short-term to bridge control** of manic sx

6 Perinatal Psychotic Disorders

Education & Prevention

- Postpartum psychosis
  - Sudden onset of psychotic sx following childbirth
  - Most commonly associated with:
    - **Bipolar disorder** (acute manic episode, MDE)
    - **Brief psychotic disorder**
    - **Major depressive disorder**
  - LESS likely schizoaffective, schizophrenia

- Requires **rapid + intensive psychiatric tx/hospitalization**

Psychotic Disorders

- Onset **usually ages 15 – 35** (childbearing years)
  - Affects men + women equally
  - Different features in women
    - **More mood sx, more rapid cycling**
    - **Briefer duration of sx**
    - **Later onset**

- <u>Abnormalities in psychosis</u>
  - Delusions
  - Hallucinations
  - Disorganized speech
  - Disorganized behavior
  - Negative symptoms (isolation, apathy, sleep, emotions)

Psychotic Disorders & the Perinatal Period (1)

- Most studies on schizophrenia → likely relevant to others
  - **Increasing pregnancy rates** among women with schizophrenia
    - Deinstitutionalization
    - Changing attitudes (conception in psychotic disorder)
    - Newer AAPs (higher fertility rates than typical)
    - Improved preconception + prenatal care

- **50-60%** of women with schizophrenia will become pregnant
  - Of those, **50% unplanned or unwanted** (higher than gen pop)
  - **Older**, fewer social supports, more unhealthy behaviors
  - May seek **prenatal care late or not at all**
  - Higher risk of **poor perinatal + neonatal outcomes**

Psychotic Disorders & the Perinatal Period (2)

- Schizophrenia assoc with perinatal/neonatal complications
  - Low APGAR, LBW, SGA, prematurity, stillbirth, death
  - Impact on **mother-infant bonding + baby neurodevelopment**
    - Psychopathology of illness, reality of psychosocial situation

- With postpartum psychosis
  - **LOWER incidence in schizophrenia** (vs bipolar disorder)
  - Further impacts **mother-infant bonding**
  - **Potential danger** to baby or mother

- Mothers with schizophrenia → difficulties with parenting
  - **50% lose custody** (temporarily or permanently)
  - **Poor interactions** with babies (than affective disorders)

Postpartum Psychosis

- Onset → **unexpected + rapid** (within hours)
  - Most often appear within **72 hrs to 4 weeks after delivery**
  - **Lasts at least 1 day** → up to 1 month (or longer)
  - Eventual return to prev level of function

- Symptoms similar to psychosis at other times of life
  - May involve baby (additional risk)
  - **Little insight** during acute presentation
    - Requires **hospitalization** (safety of mother + baby)
    - Start tx with **antipsychotic** +/- mood stabilizer
  - RARE → 1-2 per 1000 live births **(0.1 – 0.2%)**
  - **Psychiatric + obstetrical emergency!**

Risk Factors

- Psychotic disorders
  - Interplay between genetic + environmental factors
  - Risk of illness in **identical twin = 40-50%**
  - Risk of illness in **child = 10%** (gen pop risk is 1%)

- Postpartum psychosis
  - Personal hx of **perinatal psychosis** → **50-60% relapse risk**
  - **Bipolar disorders** → rates 25-50%
  - **Family hx of postpartum psychosis** → 74% if women has bipolar
  - **Family hx of bipolar** (1st degree relative)
  - **Use of drugs**, drug-induced psychosis

- Schizophrenia → **LESS LIKELY acute relapse** (vs bipolar)
  - More chronic course throughout perinatal period
  - Bipolar disorder → 4x likely to be hospitalized in 1st month

Prevention

- Psychotic disorders
  - NOT preventable (similar to bipolar) → can **successfully manage**
  - Preconception counselling, postpartum management + support

- Postpartum psychosis
  - **If pre-existing bipolar** → counselling, management, support
  - **If no prev psych hx** → **50% recurrence risk** in subsequent deliveries
  - Education + integrated treatment plan
  - Should remain in hospital for **at least 3 days after delivery**
    - Monitor mood + sleep
    - Childcare supports prior to discharge

Screening & Diagnosis

- No easily implementable self-report screening tools
  - Observation/report of **behavior changes** → prompt assessment
  - Exclude medical conditions, substance-related disorders

- Diagnostic assessment interview = gold standard
  - Distinguish **pre-existing vs first-onset** psychotic disorder
  - Very different course + treatment issues

- Additional tools
  - SMMSE (Standardized Mini-Mental State Examination)
  - BPRS (Brief Psychiatric Rating Scale)
  - MDQ (Mood Disorder Questionnaire)
  - HIGHS Scale

Treatment of Psychotic Disorders (1)

- Integrated multidisciplinary approach
  - Education before conception (healthy behaviors, contraception)

- Primarily managed with medications
  - Augment with **non-pharm tx**
  - May need **hospitalization**
  - Those who STOP taking meds → **50% relapse within 2 years**
  - Those who CONTINUE meds → **15% relapse within 2 years**

- Support in perinatal period
  - Own health, self-monitor for signs of relapse, seek help as needed
  - **Crisis plan** → if ability to care for children temporarily impaired
  - Close follow-up (esp postpartum) → **risk to baby, parental capacity**

Treatment of Psychotic Disorders (2)

- Breastfeeding → individual risk-benefit analysis
  - **Symptom** severity/frequency
  - **Family** supports
  - **Treatment** adherence
  - Ability to **monitor newborn**
  - Ability to **identify early signs** related to antipsychotic exposure

Treatment of Postpartum Psychosis

- Primarily managed with medications
  - May augment with **non-pharm tx**
  - May need **hospitalization**

- **ECT** may be beneficial in certain situations
  - Unable to take/tolerate meds, meds failed, suicide risk
  - **During pregnancy → SAFE + EFFECTIVE** (well-documented)
    - Still tends to be underused
  - **Postpartum psychosis → SAFE + EFFECTIVE**
    - Established through case reports, case-controlled studies
    - ? First-line tx for postpartum psychosis (needs more evidence)

Medications for Perinatal Psychosis

- For psychotics disorders + postpartum psychosis
  - **Antipsychotics** = **FIRST-LINE** treatment
  - Benzos → **may be used short-term**, until antipsychotics take effect

- Schizoaffective disorder
  - May also need **mood stabilizer ± antidepressant** (mood disorder)

Recommendations

Prevention/Management of Postpartum Psychotic Illnesses	
Treatment Approach	• **Individualized tx plan** (frequency, severity, response to meds) • Severe psychotic disorders → continue APs during pregnancy • Less severe disorders → may require meds, esp postpartum

Recommendations

Medication Management	
Preconception & Postpartum	<u>Taking antipsychotic, clinically stable 4-6 mos, low relapse risk</u> • Consider trial of gradual d/c of medication → **prior to pregnancy** <u>If antipsychotic needs to be continued</u> • Use current effective medication <u>Not taking medication, but needs antipsychotic (due to relapse)</u> • **Avoid clozapine if possible** (maternal agranulocytosis) <u>Monitoring + folic acid supplementation guidelines</u>
At birth	• **Monitoring guidelines** at time of delivery + postpartum
Postpartum	<u>Taking medications, still required postpartum</u> • Continue current effective med → may need **dose adjustment** <u>Not taking medication, but requires postpartum tx</u> • **Avoid clozapine if breastfeeding** (sedation, agranulocytosis) <u>Atypical antipsychotic breastfeeding guidelines</u>

7 Perinatal Suicide

Prevalence

- Pregnancy-related maternal mortality = RARE
  - **Suicide** = **MOST COMMON CAUSE** of death in perinatal period
    - During pregnancy + 1st year postpartum

- Suicidal deaths among perinatal women
  - Suicide **4x more likely in the 9 months postpartum** (vs pregnancy)
  - Psychiatric illness leading to suicide → 28% of maternal deaths (UK)
  - If postpartum psychiatric admission → **70x greater risk in 1st year**
  - **Violent suicides** more common in childbearing women suicides

Risk Assessment

- Diagnostic assessment interview = gold standard
  - **Suicidal ideation** (nature, timing, persistence, intent)
  - **Suicide plan** (lethality, detail, violence, access)
  - **Current/past attempts** (timing, intent, method, consequences)
  - **Estimate suicide risk** (acute, chronic, protective factors)

Managing Immediate Risk

Ask about suicidal thoughts, plan, lethality, means Consider risk to infant at all times		
• Suicidal ideation ONLY • NO plan	• Suicidal ideation + plan *or* • Hx of suicide attempt • NO immediate intent	• Suicidal ideation • Imminent plan
LOW RISK	**MEDIUM RISK**	**HIGH RISK**
• Refer to PCP ASAP • ± Mental health referral • Crisis/urgent phone lines • Safety Plan	• Contact PCP • Urgent mental health ax • Crisis/urgent phone lines • Safety Plan	• Refer to ER immediately • Call 911 if family unable to take women to ER

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Developing a Safety Plan

- In collaboration with woman + responsible family/friend
- Need to be frequently revisited + modified as needed

- **1) Warning signs** (of risks of imminent suicide)
- **2) Coping strategies** (to decrease risk)
- **3) People who can assist in times of need** (family/friends)
- **4) Supportive health professionals**

- <u>Baby's safety is paramount</u>
  - Who will be responsible → contact partner, family members
  - Contact SW at MCFD to assess suitability of alternate caregivers

8 Neonaticide & Infanticide

Neonaticide & Infanticide

- Neonaticide: killing infant within 24 hrs of birth
- Infanticide: killing young children (commonly within 1st yr)
- Filicide: parent killing own children (any age)

- Rates of neonaticide/infanticide = RARE
  - Industrialized countries = 2.4 – 7.0 per 100,000 births
  - **Canada = 3.0 per 100,000 births**

- **Not all cases due to mental health disorders**

Neonaticide

- Women who commit neonaticide typically:

• **Younger than age 25**	• Emotionally immature
• Living with parents	• Do NOT seek **prenatal care**
• Single	• NOT involved with **baby's father**
• Unemployed	• Often give **birth at home**
• May still be in school	• Baby typically **unwanted**

- At time of murder/neonaticide
  - Majority of women → **NOT mentally ill**
  - Maternal suicide after neonaticide = **RARE**
  - Typically, **HCP not in contact** during first pregnancy/after birth
    - If hx of neonaticide → closely monitor subsequent pregnancy

Infanticide

- Women who commit infanticide typically:
  - Many **do NOT have severe mental illness that PRECLUDES them** from **being aware of the WRONGFULNESS** of their actions

- Subset who have a definitive mental illness
  - Can be shown to have strongly influence behavior
  - **Postpartum psychosis = risk factor**
  - Psychosis-related infanticide → **extremely rare** (<1 per 1000 births)

Risk Assessment

- Diagnostic assessment interview = gold standard

- Ego-SYNTONIC thoughts of ending baby's life
  - **Do NOT cause distress** → pose threat to baby + other children
  - May occur in **severe postpartum depression** or **psychosis**
  - **Hospitalize immediately** (treatment + safety)

- Ego-DYSTONIC thoughts of harming baby
  - **Postpartum OCD** → aware, irrational, do not want to act, avoid
  - Most women with OCD **do NOT act** on thoughts

- Women who commit infanticide → risk of suicide
  - Mother who commit filicide → **16 – 29% commit suicide**
    - Esp if killed **older children**
  - If psychiatric illness, usually no tx until after children dead

Risk Assessment

- If sig mental disorder or observed difficulties → enquiry
  - **Felt irritated** by baby
  - **Sig regrets** about having baby
  - Feel like **baby not yours** at times
  - **Wanted to shake/slap** baby
  - **Ever harmed baby**
  - Thoughts of harming baby or putting baby in **harm's way**
  - Baby **better off dead**
  - **End your life + baby's life too**

- If infant safety concerns → legal duty to report (MCFD)

9 Psychotropic Medications in the Perinatal Period

General Principles

- **Risk/benefits** of medications vs not treating symptoms
- **Minimum number** of medications, at **lowest effective dose**

- Should remain on medication during pregnancy if:
  - Risk of discontinuation greater than risk of fetal exposure
    - **Severe psychiatric illness**
    - **Multiple hospitalizations**
    - **History of relapse after discontinuation**

- Should discuss psychotropics with **baby's pediatrician** if:
  - **Premature baby**
  - **Baby with significant health problems**

Background Risk

Risk in general population	
Spontaneous abortion, recognized **(SAB)**	**15%**
Low birth weight **(LBW)**	**8%**
Prematurity	**4%**
Major congenital malformation **(MCM)**	**3%**
Cardiac defects	**1%**
Persistent Pulmonary Hypertension **(PPHN)**	**0.1 – 0.2%**
Neural tube defects **(NTD)**	**0.1%**

FDA Pregnancy Risk Categories

Category A	• **Controlled studies fail to demonstrate risk** • No evidence of risk in 1st & later trimesters • Remote possibility of fetal harm
Category B	• **Animal studies fail to demonstrate risk**, but **no controlled studies** • **Animal studies show AE**, but **not confirmed in controlled studies** • No evidence of risk of risk in 1st & later trimesters
Category C	• **Animal studies show adverse effect**, but **no controlled studies** • No available studies in women or animals • **Only use if potential benefit justifies risk to fetus**
Category D	• **Positive evidence of human fetal risk** • Benefits in **may be justifiable** (serious/life-threatening disease)
Category X	• **Positive evidence of human fetal risk** • Risk to fetus CLEARLY outweighs any benefit • **CONTRAINDICATED** if is/may become pregnant

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Hale Lactation Risk Categories

L1 *(Safest)*	• Taken by **large number** of breastfeeding women • **No incr AE** in infant • **Controlled studies → fail to demonstrate risk** to infant • Remote possibility of harm to infant • Product not oral bioavailable in infant
L2 *(Safer)*	• Studied in **limited number → no incr AE** in infant • Remote possibility of harm to infant
L3 *(Probably safe)*	• **No controlled studies** in women, but **possible risk** to infant • Controlled studies show **minimal, non-threatening AEs** to infant • **Only use if potential benefit justifies risk to fetus**
L4 *(Possibly hazardous)*	• **Positive evidence of risk** to breastfed infant or breast milk production • Benefits **may be justifiable** (serious/life-threatening disease)
L5 *(Hazardous)*	• **Significant + documented risk** to infant OR • **High risk of causing significant damage** to infant • Risk to fetus CLEARLY outweighs any benefit • **CONTRAINDICATED** if is/may become pregnant

SSRIs – Citalopram

Citalopram	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	Citalopram: • **Septal heart defects** → small risk (1.1% incidence) SSRIs (in general): • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• **M:P ratio = up to 3** • Infant serum levels = **up to 17%** of maternal levels • **Sedation reported** • **Monitor baby**

SSRIs – Escitalopram

Escitalopram	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	<u>Escitalopram:</u> • Teratogenicity → insufficient data <u>SSRIs (in general):</u> • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (limited data) • **M:P ratio = up to 2.5** • Infant serum levels = undetectable to 20% of maternal levels • **NO toxicity reported**

SSRIs – Fluoxetine

Fluoxetine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	<u>Fluoxetine:</u> • **Cardiac defects** → small risk (3% incidence) • **Septal defects** → small risk (1% incidence) • Cardiac events in NAS → rare <u>SSRIs (in general):</u> • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• Active metabolite in infant = undetectable to therapeutic levels • Few reports of **toxicity**, some reports of **colic + decr weight gain** • **PREFER other SSRIs** with lower infant plasma levels

SSRIs – Fluvoxamine

Fluvoxamine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	Fluvoxamine: • SAB, prematurity, LBW → no specific data • Long-term neurodevelopment → no specific data • Teratogenicity → insufficient data • MCM → no evidence of incr risk SSRIs (in general): • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • Infant levels = **up to 45%** of maternal levels • **PREFER other SSRIs** with more data + lower infant plasma levels

SSRIs – Paroxetine

Paroxetine	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	<u>Paroxetine:</u> • **Cardiac malformations with 1st trimester use** (2-4% incidence) • **Septal defects particularly** <u>SSRIs (in general):</u> • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• Well researched • **Low levels in milk** • Infant levels = **undetectable in most infants** • **NO toxicity reported**

SSRIs – Sertraline

Sertraline	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	<u>Sertraline:</u> • **Cardiac malformations** (2% incidence) • **Septal defects** (1.5% incidence) <u>SSRIs (in general):</u> • **SAB, prematurity, LBW** → small risk • Teratogenicity/MCM → risk not large • Cardiac defects → very slight risk • **NAS** → up to 30% of infants • **PPHN** → small risk (0.3% incidence, 2x background)
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• Extensively researched • **M:P ratio = 0.4 – 4.8** • Infant levels = **usually low** • **Few cases of elevated levels** • **Monitor baby, check serum levels if concerned**

SNRIs – Duloxetine

Duloxetine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → insufficient data • NAS reported • Altered behavior → animal studies, unknown in humans
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (minimal data) • **M:P ratio = up to 1.3** • Poor oral absorption → infant levels may be low • **NO toxicity reported** • **PREFER other drugs** with more safety data

SNRIs – Venlafaxine

Venlafaxine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• SAB → possible dose-related risk • Prematurity → possible • MCM → no risk (in most controlled studies) • **NAS** → many reports
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• High levels of exposure in nursing infants • **M:P ratio = up to 7** (incl desvenlafaxine) • Active metabolite in infant = **up to 37%** of maternal level • **MONITOR**

SNRIs – Desvenlafaxine

Desvenlafaxine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (no specific data) • See venlafaxine
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (limited specific data) • **M:P ratio = up to 2.7** • Infant levels = **up to 6.2%** of maternal level • **MONITOR** (see venlafaxine)

TCAs – Amitriptyline

Amitriptyline	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (minimal specific data) <u>TCAs (in general):</u> • SAB → possible small risk • **Prematurity, LBW** → possible 2x risk • Teratogenicity, limb anomalies → insufficient data • NAS → possible • Seizures → rare
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • **Present in milk** • **NO toxicities reported** • **MONITOR**

TCAs – Clomipramine

Clomipramine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	Clomipramine • **Cardiac defects** → 2x risk (1 study) TCAs (in general): • SAB → possible small risk • **Prematurity, LBW** → possible 2x risk • Teratogenicity, limb anomalies → insufficient data • NAS → possible • Seizures → rare
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • **Detected in infant plasma** • **NO toxicities reported** • **MONITOR**

TCAs – Nortriptyline

Nortriptyline	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• (minimal specific data, active metabolite of amitriptyline) <u>TCAs (in general):</u> • SAB → possible small risk • **Prematurity, LBW** → possible 2x risk • Teratogenicity, limb anomalies → insufficient data • NAS → possible • Seizures → rare
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (limited data) • **Possibly concentrated in milk** • **Low levels in infant** • **NO toxicities reported** • **MONITOR**

Other Antidepressants – Bupropion

Bupropion	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• SAB → possible incr risk • **Cardiac defects with 1st trimester exposure** → small risk • **Specifically LVOTO** (0.279% incidence vs 0.07% other ADs) • NAS → rare • Arrhythmia → one case • Seizures → one case • ADHD → possible incr risk, further research needed
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (limited data, 18 cases) • Milk levels → **variable, can be high** • M:P ratio = 0.09 up to 8.7 • One report of seizure • **MONITOR**

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Other Antidepressants – Mirtazapine

Mirtazapine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (limited data) • SAB → possible incr risk • Preterm births → possible incr risk • Teratogenicity → no evidence • **NAS** → reports
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (limited data, 10 cases) • **M:P ratio = up to 1.5** • Infant plasma → low levels • **NO toxicity reported** • **MONITOR**

Other Antidepressants – Trazadone

Trazadone	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (very limited data) • Malformations → no evidence
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (limited data) • M:P ratio = low (0.14) • **NO toxicity reported** • **MONITOR**

Benzodiazepines – Alprazolam

Alprazolam	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• Prematurity, LBW → no/small incr risk <u>Benzodiazepines (as a group)</u> • **SAB** → incr risk • Major malformations, oral clefts → no incr risk • Cardiovascular malformations → no incr risk alone, incr with SSRIs • **NAS, respiratory depression** → reported • Consider reducing dose close to delivery if possible
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• **M:P ratio = 0.36** • **Sedation, withdrawal** → reported <u>Benzodiazepines (as a group)</u> • **CNS depression** → incr risk if mother taking >1 CNS depressant • **MONITOR** infant for sedation, poor feeding, irritability

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Benzodiazepines – Clonazepam

Clonazepam	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• **Major malformations** → incr risk combined with antiepileptics • **NAS** → incr risk combined with SSRIs <u>Benzodiazepines (as a group)</u> • **SAB** → incr risk • Major malformations, oral clefts → no incr risk • Cardiovascular malformations → no incr risk alone, incr with SSRIs • **NAS, respiratory depression** → reported • Consider reducing dose close to delivery if possible
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• **M:P ratio = 0.33** • **Infants levels** → low plasma concentration • **Mild depression, apnea** → reported <u>Benzodiazepines (as a group)</u> • **CNS depression** → incr risk if mother taking >1 CNS depressant • **MONITOR** infant for sedation, poor feeding, irritability

Benzodiazepines – Diazepam

Diazepam	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• **Prematurity, LBW** → slight risk with exposure in 2nd & 3rd trimesters • **Prematurity** → incr risk with SSRIs <u>Benzodiazepines (as a group)</u> • **SAB** → incr risk • Major malformations, oral clefts → no incr risk • Cardiovascular malformations → no incr risk alone, incr with SSRIs • **NAS, respiratory depression** → reported • Consider reducing dose close to delivery if possible
Hale Lactation Risk = **L3 (probably safe), L4 if chronic use**	
Breast-feeding	• **M:P ratio = 0.13 – 0.50** • **Lethargy, weight loss**→ low plasma concentration • **If premature or very LBW** → incr risk of drug accumulation <u>Benzodiazepines (as a group)</u> • **CNS depression** → incr risk if mother taking >1 CNS depressant • **MONITOR** infant for sedation, poor feeding, irritability

Benzodiazepines – Lorazepam

Lorazepam	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	<u>Benzodiazepines (as a group)</u> • **SAB** → incr risk • Major malformations, oral clefts → no incr risk • Cardiovascular malformations → no incr risk alone, incr with SSRIs • **NAS, respiratory depression** → reported • Consider reducing dose close to delivery if possible
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• **M:P ratio = 0.13 – 0.50** • **Lethargy, weight loss**→ low plasma concentration • **If premature or very LBW** → incr risk of drug accumulation <u>Benzodiazepines (as a group)</u> • **CNS depression** → incr risk if mother taking >1 CNS depressant • **MONITOR** infant for sedation, poor feeding, irritability

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Other Hypnotics – Zolpidem

Zolpidem	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• **Prematurity, LBW** → 1.5 – 2x risk • Malformations → no evidence of incr risk • Intestinal malformation → possible link • **NAS, severe respiratory depression** → reported
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• Milk → low levels • Milk secretion → may be inhibited (animal data) • Sedation, decr appetite → reported • **MONITOR** for sedation, lack of weight gain

Other Hypnotics – Zopiclone

Zopiclone	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• LBW → possible • Malformations → no evidence of incr risk • Intestinal malformations → possible link • NAS → no reports (at therapeutic doses) • **Withdrawal syndrome** → reported (at high maternal doses) • Minimize use at delivery if possible
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • **M:P ratio = up to 0.7** • Infant plasma levels → no data (at therapeutic doses) • **MONITOR** for sedation

Mood Stabilizers – Carbamazepine

Carbamazepine	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• Teratogenicity → possible, but majority born without defects • **MCM, mainly NTD** → 3-5% (2x incr risk), incr risk with incr dose • **"Fetal carbamazepine syndrome"** → minor facial defects, fingernail dysplasia, cognitive defects • **Folic acid supp, 18-20 week detailed ultrasound** → RECOMMENDED • Long-term neurodevelopmental effects → some studies, not all • **Avoid if possible in 1st trimester**
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (well studied) • **M:P ratio < 1** • **Few toxicities reported** (case reports liver dysfunction, seizures) • Infant level = 69% maternal level (1 study) • **MONITOR**

Mood Stabilizers – Gabapentin

Gabapentin	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• LBW → possible • Teratogenicity → insufficient data, not shown
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • **M:P ratio = 0.7 – 1.3** • Infant plasma levels → low (6 – 12% maternal levels) • **NO toxicities reported** • **MONITOR** for sedation, unusual effects

Mood Stabilizers – Lamotrigine

Lamotrigine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• MCM → no evidence, may **incr risk if >200-300mg/d or with VPA** • **Oral clefts** → incr risk (absolute risk small = 7 per 1000 exposures)
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• Infant plasma levels → **25-43% maternal levels** • **Few adverse effects documented** (one case of apnea/cyanosis) • **MONITOR** → consider monitoring plasma levels

Mood Stabilizers – Lithium

Lithium	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• **MCM** → 0 – 12% incidence • **Cardiac anomalies** → 0 – 7% incidence • **Ebstein's anomaly** → 0.05 – 0.1% incidence • NAS → possible, unknown risk • Floppy baby syndrome, goiter, diabetes insipidus, cardiac defects, hepatomegaly → case reports • **Avoid in 1st trimester** (or detailed U/S + ECHO at 18-20 weeks) • **Hold lithium at time of delivery,** maintain hydration
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• **Infant plasma levels** → 10-100% maternal levels • **NO toxicities report** • (one case of floppy infant syndrome, lethargy, T-wave inversion) • (cases of poor feeding) • **Avoid infant dehydration** • MONITOR thyroid function if symptoms occur

Mood Stabilizers – Topiramate

Topiramate	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• LBW → possible • Teratogenicity → low risk • **MCM** → small incr risk (95% born without) • **Oral cleft** → incr risk (small absolute risk 1.2 – 2.2%) • **Hypospadias** → small incr risk (1.1%) • NAS → possible • Hypocalcemic seizures → rare • Long-term neurobehavioral deficiencies → one small study
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (very limited data) • **M:P ratio = 0.67 – 1.1** • Infant plasma levels → **10 -20% maternal levels** • **NO toxicities reported** • **MONITOR**

Mood Stabilizers – Valproic Acid, Divalproex

Valproic Acid, Divalproex	
FDA Pregnancy Risk = **Category D**	
Fetal Risks	• **MCM** → incr risk with dose (3-5% <1400mg/d, 8-35% higher dose) • **Spina bifida = most common** (1 – 2% incidence) • **"Fetal Valproate Syndrome"** → distinctive facial abnormalities, NTDs, long thin fingers/toes, hypospadias, possible poor neurobehavioral development • ?reduced IQ, ?autism • **AVOID in pregnancy if possible**
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• **Milk levels** → low • **M:P ratio = 0.05 – 0.10** • **Infant drug levels** → 0.9 – 40% maternal levels • Thrombocytopenia, anemia → reports

Atypical Antipsychotics – Aripiprazole

Aripiprazole	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → insufficient human data • **Gestational diabetes** → potential complication • **NAS** → reported • Animal studies → possible risk of teratogenicity, LBW, long-term neurodevelopmental effects
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (very limited data) • Milk levels = low • Sedation report

Atypical Antipsychotics – Asenapine

Asenapine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → insufficient human data • **NAS** → probably similar to other AAP • Animal studies → embryotoxicity, decr fetal weight, delayed growth
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (no human data) • Oral absorption = **very low** when swallowed • Unlikely large exposure to nursing infant • MONITOR

Atypical Antipsychotics – Clozapine

Clozapine	
FDA Pregnancy Risk = **Category B**	
Fetal Risks	• Teratogenicity → insufficient human data • **NAS** → reported • LGA → possible risk • **Gestational diabetes** → potential complication • **Maternal agranulocytosis** • SAB, long-term neurodevelopmental effects → insufficient data
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (very limited data) • **Sedation, agranulocytosis** → reported • **PREFER other drugs for breastfeeding**

Atypical Antipsychotics – Olanzapine

Olanzapine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (limited data) • Teratogenicity → no evidence • SAB, prematurity → no evidence • **NAS** → reported (1 seizure) • **Gestational diabetes** → potential complication • LGA → possible risk
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• Infant plasma levels → **not detectable** • EPS → reports • Developmental effects → reports

Atypical Antipsychotics – Quetiapine

Quetiapine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → no evidence (limited data) • **NAS** → risk similar to other AAP • **Gestational diabetes** → potential complication • LBW → possible • SAB, long-term neurodevelopmental effects → no incr risk
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very little data) • Milk levels = low • Infant plasma levels → detectable • **Developmental delay** → reported (unclear causality)

Atypical Antipsychotics – Risperidone

Risperidone	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (very limited data) • Teratogenicity → no evidence • **NAS** → reported • **Gestational diabetes** → potential complication • **LBW** → possible small risk • SAB, prematurity → insufficient data • Long-term neurodevelopmental effects → insufficient data
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (limited data) • Milk levels = low • Infant plasma = low • Developmental effects → some concerns in animals

Atypical Antipsychotics – Paliperidone

Paliperidone	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (no data) • See risperidone
Hale Lactation Risk = **L3 (probably safe)**	
Breast-feeding	• (no data) • After given risperidone, paliperidone found in **milk + infant plasma**

Atypical Antipsychotics – Ziprasidone

Ziprasidone	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (very limited data) • Teratogenicity → insufficient human data • Animal studies → possible teratogenicity, LBW, long-term neurodev • **Gestational diabetes** → potential complication • **NAS** → similar risk to other AAP
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (very limited data) • **Suggests low exposure**

Typical Antipsychotics – Fluphenazine

Fluphenazine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• (very limited specific data) <u>Phenothiazines:</u> • Teratogenicity → no incr risk from controlled studies • Malformations → rare case reports • **Gestational diabetes** → potential complication • **NAS** → reported • **EPS** → may be delayed/persistent
Hale Lactation Risk = **L2 (safer)**	
Breast-feeding	• (no data) • Milk levels = may be low (high protein binding, high molecular wt) • **MONITOR for sedation, EPS**

Typical Antipsychotics – Haloperidol

Haloperidol	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → no incr risk • **Gestational diabetes** → potential complication • **NAS** → reported • **Prematurity, LBW** → possible risk • SAB → no incr risk
Hale Lactation Risk = **L3**	
Breast-feeding	• **M:P ratio = 0.5 – 3.6** • Infant plasma levels → undetectable to therapeutic range • **Developmental concerns → at high doses** • **Use lowest effective dose** • **MONITOR for sedation**

SimplePsych

Typical Antipsychotics – Loxapine

Loxapine	
FDA Pregnancy Risk = **Category C**	
Fetal Risks	• Teratogenicity → insufficient data (conflicts with animals) • **NAS** → similar risk to other AAPs • **PREFER other drugs** (with safety evidence)
Hale Lactation Risk = **L3**	
Breast-feeding	• (no data) • **PREFER other drugs** (with more evidence) • **MONITOR for sedation**

Medication Monitoring & Management

Suggested Actions/Monitoring

- Folic Acid Supplementation
  - **Recommended for ALL pregnant women**
    - 0.4 – 1 mg daily → throughout pregnancy
  - **If AT RISK (incl VPA, CBZ)**
    - **5 mg daily x 14 weeks** → then 0.4 – 1 mg daily

- Detailed second trimester ultrasound (18 – 20 weeks)
  - **Recommended for ALL pregnant women**
  - **If on lithium** → also do **fetal ECHO**

All SSRIs + SNRIs (except paroxetine)

All SSRIs + SNRIs (except paroxetine)	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS** • Vital signs post-delivery (q4h x 24hr) • O2 sat post-delivery (1hr, then q4h x 24hr) • **If O2 sat low → consult peds** (r/o heart defects, PPHN)
Breast-feeding	• **Considered SAFE** • Monitor for AEs (sedation, poor feeding, irritability) • If concerns → check baby serum level

Paroxetine

Paroxetine	
Pregnancy	• **AVOID in 1st trimester** • Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS** • Vital signs post-delivery (q4h x 24hr) • O2 sat post-delivery (1hr, then q4h x 24hr) • If O2 sat low → consult peds (r/o heart defects, PPHN) • (same as other SSRIs)
Breast-feeding	• **Considered SAFE** • Low infant plasma levels

TCAs

TCAs	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS** • Vital signs post-delivery (q4h x 24hr) • O2 sat post-delivery (1hr, then q4h x 24hr) • If O2 sat low → consult peds (r/o heart defects, PPHN) • (same as other SSRIs)
Breast-feeding	• **No concerns reported** • (limited data)s

Bupropion & Mirtazapine

Bupropion & Mirtazapine	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS** • Vital signs post-delivery (q4h x 24hr) • O2 sat post-delivery (1hr, then q4h x 24hr) • If O2 sat low → consult peds (r/o heart defects, PPHN) • (same as other SSRIs)
Breast-feeding	• Monitor for AEs (sedation, poor feeding, irritability) • If concerns → check baby serum level

Benzos & Other Hypnotics

Benzos & Other Hypnotics	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Minimize use near delivery** • **Monitor for withdrawal symptoms**
Breast-feeding	• Monitor for AEs (sedation, poor feeding, irritability) • Especially if combined with other CNS depressants (opioids)

Carbamazepine

Carbamazepine	
Pregnancy	• **AVOID in 1st trimester** • **Folic acid 5 mg x 14 weeks** (then 0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• (no recommendations)
Breast-feeding	• **Compatible with breastfeeding** • Monitor for AEs • If concerns → check baby serum level, refer to peds

Gabapentin

Gabapentin	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• (no recommendations)
Breast-feeding	• Monitor for AEs (sedation, unusual behavior) • (limited data)

Lamotrigine

Lamotrigine	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• (no recommendations)
Breast-feeding	• **Use with caution** • Monitor for AEs (apnea, cyanosis reported) • If concerns → check baby serum level • **Monitor for skin rash**

Lithium

Lithium	
Pregnancy	• **AVOID in 1st trimester** (risk of cardiac defects) • **Month lithium levels** → adjust dose as necessary, **ensure hydration** • Folic acid (0.4 – 1 mg daily) • **Detailed ultrasound + fetal ECHO** (18 – 20 weeks)
At birth	• **Ensure hydration** • **Hold lithium** (24 hrs before scheduled C/S or induction, if spontaneous: start of labor to after birth) • **Recommence lithium** → usual time of preconception dose • **Monitor for NAS, floppy baby syndrome, goiter**
Breast-feeding	<u>Mother:</u> • **Lithium levels** → within 5 days postpartum, then weekly until stable, then q1-3 months • **Breastfeeding NOT recommended** <u>Infant (if breastfeeding):</u> • **Lithium levels** → within 5 days of starting breastfeeding, or after delivery if exposed in utero • If concerns or dehydrated → check baby serum level • Monitor for AEs (restlessness, low muscle tone, lethargy)

Topiramate

Topiramate	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS**
Breast-feeding	• **Use with caution** • Monitor for AEs (electrolyte abnormalities reported) • (limited data)

Valproic Acid/Divalproex

Valproic Acid/Divalproex	
Pregnancy	• **AVOID THROUGHOUT PREGNANCY** (risk of MCM, development) • **Folic acid 5 mg x 14 weeks** (then 0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks)
At birth	• **Monitor for NAS**
Breast-feeding	<u>Mother:</u> • **VPA levels** → within 1 week of starting tx, then q3-6 mos if stable <u>Infant:</u> • **Compatible with breastfeeding** • Monitor for AEs (sedation, thrombocytopenia, anemia reported) • If concerns → check serum level, refer to peds

SimplePsych

Antipsychotics (Typical & Atypical)

Antipsychotics (Typical & Atypical)	
Pregnancy	• Folic acid (0.4 – 1 mg daily) • Detailed ultrasound (18 – 20 weeks) • **Monitor blood glucose, fasting serum lipids** • **AVOID CLOZAPINE if possible** (maternal agranulocytosis)
At birth	• **Monitor for NAS + EPS**
Breast-feeding	• **Use with caution** • Monitor for AEs (sedation, EPS, developmental delay) • (limited data) • **AVOID CLOZAPINE if possible** (sedation, agranulocytosis reported)