COMMONLY PRESCRIBED PSYCHOTROPIC MEDICATIONS

NAME Generic (Trade)	DOSAGE	KEY CLINICAL INFORMATION
Antidepressant Medications*		
Bupropion (Wellbutrin)	Start: IR-100 mg bid X 4d then ↑ to 100 mg tid; SR-150 mg qam X 4d then ↑ to 150 mg bid; XL-150 mg qam X 4d, then ↑ to 300 mg qam. Range: 300-450 mg/d.	Contraindicated in seizure disorder because it decreases seizure threshold; stimulating; not good for treating anxiety disorders; second line TX for ADHD; abuse potential. ¢ (IR/SR), $(XL), Preg: C; Lact: Possibly unsafe.
Citalopram (Celexa)	Start: 10-20 mg qday,↑10-20 mg q4-7d to 30-40 mg qday. Range: 20-60 mg/d.	Best tolerated of SSRIs; very few and limited CYP 450 interactions; good choice for anxious pt. ¢, Preg: C, Lact: Unknown.
Duloxetine (Cymbalta)	Start: 30 mg qday X 1 wk, then ↑ to 60 mg qday. Range: 60-120 mg/d.	More GI side effects than SSRIs; tx neuropathic pain; need to monitor BP; 2nd line tx for ADHD. $, Preg: C, Lact: Unknown.
Escitalopram (Lexapro)	Start: 5 mg qday X 4-7d then ↑ to 10 mg qday. Range 10-30 mg/d (3X potent vs. Celexa).	Best tolerated of SSRIs, very few and limited CYP 450 interactions. Good choice for anxious pt. $, Preg: C, Lact: Unknown.
Fluoxetine (Prozac)	Start: 10 mg qam X 4-7d then ↑ to 20 mg qday. Range: 20-60 mg/d.	More activating than other SSRIs; long half-life reduces withdrawal (t ½ = 4-6 d). ¢, Preg: C, Lact: Unknown.
Mirtazapine (Remeron)	Start: 15 mg qhs. X 4-7d then ↑ to 30 mg qhs. Range: 30-60 mg/qhs.	Sedating and appetite promoting; Neutropenia risk (1 in 1000) so avoid in immunosupressed patients. ¢, Preg: C, Lact: Unknown.
Paroxetine (Paxil)	Start: 10 mg qhs X 4-7d then ↑ to 20 mg qday. Range: 20-60 mg/d.	Anticholinergic; sedating; significant withdrawal syndrome. ¢, Preg: D, Lact: Safe.
Sertraline (Zoloft)	Start: 25 mg qam X 4-7d then ↑ to 50 mg qday. Range: 50-200 mg/d.	Few and limited CYP 450 interactions; mildly activating. ¢, Preg: C, Lact: Safe.
Venlafaxine (Effexor)	Start: IR-37.5 mg bid X 4d then ↑ to 75 mg bid; XR-75 mg qam X 4d then ↑ to 150 qAM. Range: 150-375 mg/d.	More agitation & GI side effects than SSRIs; tx neuropathic pain above 150 mg qday; need to monitor BP; 2nd line tx for ADHD. Significant withdrawal syndrome. ¢ (IR), $ (XR), Preg: C, Lact: Unknown.
*Warnings/precautions: 1) Potential increased suicidality in first few months, 2) Long term weight gain likely (except fuoxetine & bupropion), 3) Sexual side effects common (except bupropion & mirtazapine), 4) Withdrawal syndrome frequently occurs with abrupt cessation (especially with SSRIs and SNRIs), Increased risk of bleeding with SSRIs and SNRIs (especially in combo with NSAIDs), 5) Risk for Serotonin Syndrome (except bupropion), especially with combination of drugs effecting serotonin metabolism, 6) Hyponatremia sometimes seen with SSRIs and SNRIs.		
Antianxiety and Sleep (Hypnotic) Medications		
Alprazolam (Xanax)	Start: 0.25 mg – 0.5 mg tid. Usual MAX: 4 mg/d.	Equiv. dose: 0.50 mg. Onset: *intermediate* (1-2 hrs). T½: 11 hrs. More addictive than other benzos and has uniquely problematic withdrawal syndrome. Try to avoid as 1st line tx. ¢, Preg: D, Lact: Possibly Unsafe.
Chlordiazepoxide (Librium)	Start: 10-20 mg 3-4X daily. Usual MAX: 200 mg/d	Equiv. dose: 25 mg. Onset: *intermediate* (0.5-2 hrs). T1/2: 10-48 hrs (parent compound), 14-95 hrs (metabolites). Useful for treating outpatient ETOH withdrawal because of long half-life. ¢, Preg: D, Lact: Probably safe.
Clonazepam (Klonopin)	Start: 0.25 mg bid or tid. Usual MAX: 3 mg/d.	Equiv. dose: 0.25 mg. Onset: *intermediate* (1-4 hrs). T½: 40-50 hrs. Helpful in tx mania. ¢, Preg: D, Lact: Safety Unknown.
Diazepam (Valium)	Start: 2–10 mg bid to qid with doses depending on symptoms severity. Usual MAX: 30-40 mg/d.	Equiv. dose: 5 mg. Onset: *immediate* (highly lipophilic). T½: 20-50 hrs. Note: the presence of liver disease will significantly lengthen half-life. ¢, Preg: D, Lact: Possibly Unsafe.
Lorazepam (Ativan)	Start: 0.5-1 mg bid to tid. Usual MAX: 6 mg/d. Insomnia: 0.5-2 mg qhs.	Equiv. dose: 1 mg. Onset: *intermediate*. T½: 12 hrs. No active metabolites, so safer in liver dz. ¢, Preg: D, Lact: Safety Unknown.
Buspirone (Buspar)	Start: 7.5 mg bid. Range: 10-30 mg bid.	Non-benzo SSRI-like drug FDA approved for anxiety. May take 4-6 weeks to become fully effective. ¢, Preg: B, Lact: Safety Unknown.
Hydroxyzine (Vistaril)	Start: 25-100 mg 3-4 X per day. Usual MAX: 400 mg per day.	Antihistamine/antiemetic drug FDA approved for anxiety. Consider in pts w/ hx of substance abuse. ¢, Preg: C, Lact: Probably safe.
Prazosin (Minipress)	Start: 1 mg qhs. Increase q 2-3 d until symptoms abate. Usual MAX: 10 mg qhs.	Old antihypertensive used to tx nightmares and night sweats d/t PTSD. Need to warn about orthostasis particularly in AM after first dose and after each new dosage change. ¢, Preg: C, Lact: Safety Unknown.
Trazodone (Desyrel)	Start: 25-50 mg qhs. Range: 50-150 mg/qhs.	Commonly used as sleep aid. ¢, Preg: C, Lact: Probably safe.
Temazepam (Restoril)	Start: 15 mg at bedtime. MAX: 45 mg qhs.	T½: 8.8 hrs. Older benzo hypnotic. No P450 metabolism. More potential for physical dependence than Ambien/Sonata. ¢, Preg: X
Zolpidem (Ambien)	Start: 5-10 mg qhs. MAX: 20 mg qhs.	T½: 2.6 hrs. Potential for sleep-eating and sleep-driving. ¢. Available in longer acting form (CR $), Preg: C, Lact: Possibly unsafe.
Mood Stabilizers		
Lithium	Start: 300 mg bid to tid. Target plasma level: acute mania & bipolar depression: 0.8-1.2 meq/L; Maintenance: 0.6-0.8 meq/L. Available in ER form dosed once daily (usually at HS, Lithobid & Eskalith). Plasma levels related to renal clearance.	Black box warning for toxicity. Teratogenic (cardiac malform.) and will need to inform women of childbearing age of this risk. Check TSH and BMP before starting and q 6-12 months thereafter. Advise pt about concurrent use of NSAIDS and HTN meds as can decrease renal clearance. Lithium strongly anti-suicidal. ¢ (lithium carbonate. citrate. & SR), $ (Lithobid, Eskalith), Preg: D, Lact: Poss Unsafe
Divalproex (Depakote)	Start: 750 mg daily (bid or tid, DR; qday, ER); increase dose as quickly as tolerated to clinical effect. Target plasma level: 75 to 100 mcg/mL (DR) & 85-125 mcg/ml (ER).	Multiple black box warnings including for hepatotoxicity, pancreatitis, and teratogenicity (need to inform women of childbearing age of this risk). Need to monitor LFTs, platelet counts, and coags initially and q3-6 mo. Signif. wt. gain common. $, Preg: D, Lact: Prob. Safe
Lamotrigine (Lamictal)	Start: 25 mg daily for weeks 1 & 2, then 50 mg daily for weeks 3 & 4, then 100 mg qday for week 5, and finally 200 mg qday for week 6+ (usual target dose). Dosage will need to be adjusted for patients taking enzyme-inducing drugs or Depakote.	Black box warning for serious, life-threatening rashes requiring hospitalization and d/c of TX (Stevens Johnson syndrome @ approx. 1: 1-2000). No drug level monitoring typically required. Need to strictly follow published titration schedule. Fewer cognitive and appetite stimulating side effects. ¢, Preg: C, Lact: Unsafe.
Antipsychotic/Mood Stabilizers**		
Aripiprazole (Abilify)	Mania. Start: 15 mg qday; Range: 15-30 mg/day. MDD adj tx. Start: 2-5 mg/day; adjust dose q 1+ weeks by 2-5 mg. Range: 5-10 mg/day. MAX: 15 mg qday. Schizophrenia. Start: 10-15 mg/day; ↑ at 2 week intervals; rec. dose: 10-15/day: MAX: 30 mg/day	EPS: moderate (especially akathisia); Metabolic side effects: low. Very long half-life: 75 hrs. Least amount of sexual side effects. FDA indication for adjunctive treatment of MDD. Potential increased suicidality in first few months. Need to screen glucose and lipids regularly. $, Preg: C, Lact: Safety Unknown.
Olanzapine (Zyprexa)	Start: 5-10mg daily titrating to 15-30 mg daily once or divided bid.	EPS: Low; Metabolic side effects: high. Weight gain and sedation common. Do not prescribe to diabetics. Need to screen glucose and lipids regularly. $, Preg: C, Lact: Possibly unsafe.
Quetiapine (Seroquel)	Bipolar Dep: Start: 50 mg qhs; Initial target: 300 mg qhs; Range: 300-600 mg/d Mania. Start: 50 mg bid; Initial target: 200 mg bid. Range: 400-800 mg/d. MDD adj tx. Start: 50 mg qhs; Initial target: 150 mg qhs. Range: 150-300 mg/day. Schizophrenia. Start: 25 mg bid and increase by 50-100 mg/d (bid/tid). Initial target: 400 mg/d. Range: 400-800 mg/d	EPS: Lowest (except for Clozaril); Metabolic side effects: moderate. Highly sedating. FDA indication for bipolar depression and adjunctive treatment of MDD. Potential increased suicidality in first few months. Need to screen glucose and lipids regularly. Abuse potential. Available in an extended release form: Seroquel XR. Avoid or use alternative in combination with methadone due to QTc prolongation. $ (IR & XR), Preg: C, Lact: Safety Unknown.
Risperidone (Risperdal)	Start: 0.5 – 1mg qhs or bid titrating to 4-6 mg daily or bid. Available as long-acting injectable given q 2 weeks called Risperdal Consta.	EPS: highest; Metabolic side effects: moderate. Hyperprolactinemia and sexual side effects common. Need to screen glucose and lipids regularly. ¢, Preg: C, Lact: Possibly unsafe.
Haloperidol (Haldol)	Start: 0.5 to 5 mg daily or bid titrating to 5- 20 mg daily.	Classic typical, high potency neuroleptic. EPS common & ↑↑ risk of TD. Long acting injectable (Decanoate) available. ¢, Preg: C, Lact: Safety Unknown
**Antipsychotic/mood stabilizer warnings/precautions: 1) Increased risk of death related to psychosis and behavioral problems in elderly patients with dementia, 2) Increased risk of QTc prolongation and risk of sudden death (especially in combination with other drugs that are known to prolong the QTc).		

po = by mouth; prn = as needed; qday = 1x/day; bid = 2x/day; tid = 3x/day; qid = 4x/day; qod = every other day; qhs = at bedtime; qac = before meals. ¢ = generic available. $ = Not available as generic or expensive. SSRI = Selective Serotonin Reuptake Inhibitor. SNRI = Serotonin Norepinephrine Reuptake Inhibitor. Relatively Safe in Preg, Contraindicated in Preg, Safe after 1st trimester. Developed by David A. Harrison, MD, PhD

Pregnancy and Post-Partum Psychopharmacology Guidelines

General Principles:

- Treatment involves weighing the risks of the illness vs. the risk of medication.
- There are no "safe" medications—all involve some degree of risk.
- Typically we have a higher threshold for using medications during pregnancy and informed consent is key—involve the partner if at all possible.
- Abrupt discontinuation may lead to earlier relapse or withdrawal symptoms.
- Most of the toxicity to the fetus occurs during the first trimester but craniofacial anomalies and neurobehavioral effects can occur later in pregnancy.
- Toxicities to the fetus include: (1) Major malformations (base rate is 3%), (2) Minor malformations, (3) adverse pregnancy outcomes (e.g., miscarriage), (4) Neonatal toxicity (e.g., withdrawal) and (5) Neurobehavioral effects.
- Good references: Micromedex REPROTOX®, MGH Center for Women's Health: http://www.womensmentalhealth.org

Antidepressants (SSRIs, SNRIs, Remeron, TCAs, & Wellbutrin):

- Overall considered reasonably safe during pregnancy—the exceptions include paroxetine (category C but concern for ↑ heart defects), imipramine (category D), and nortriptyline (category D).
- Risks of not taking medication: (1) Relapse risk, (2) Poor prenatal care, (3) Decreased maternal weight gain, (4) Decreased birth weight, (5) Prematurity, (6) Increased post-partum depression, (7) Poor bonding/attachment, (8) Greater risk of depression in children.
- Risks of taking medication:
    - *Compelling evidence*: (1) Increased rate of miscarriage, (2) Preterm delivery (by approximately 1 week), (3) Neonatal toxicity/withdrawal, (4) Passage into breast milk to some degree (sertraline has the least passage into breast milk).
    - *Modest evidence*: (1) Heart defects (especially with paroxetine)
    - *Mixed evidence*: (1) Primary Pulmonary Hypertension of the Newborn (PPHN)—One study showed increased risk (increased risk 6X, from 1-2:1000 to 6-12:1000), one study decreased risk, and one study no difference (2) Lower Bayley psychomotor developmental indexes and motor quality in f/u 6-40 months in one study but the majority of studies show no difference.
    - *Emerging evidence*: (1) Increased risk of HTN (~2X) and preeclampsia in women taking SSRIs (~5X) during pregnancy but did not controlled for the presence of a mood disorder.

Antianxiety and Sleep (hypnotic) medications:

- Benzodiazepines (e.g., lorazepam)—Concerns about withdrawal after birth and long-term neurobehavioral problems.
- Hydroxyzine—Safest of the antianxiety drugs (except buspirone) and also helpful for sleep.
- Zolpidem—Used a great deal but long term toxicities unknown.

Mood Stabilizers:

- Lithium.
    - Increased risk of cardiac malformation during first trimester.
    - Generally considered fairly safe after the first trimester (and would be first choice of mood stabilizers at this time).
    - Generally considered unsafe for breastfeeding but may need to weigh the risks vs. the benefits.
- Divalproex
    - Generally considered unsafe during pregnancy because of major and minor malformations, craniofacial anomalies and neurobehavioral effects.
    - Passes into breast milk.
- Lamotrigine—Increased risk of clef lip (only in one study to date), but definitely safer than Depakote.

Antipsychotics/Mood Stabilizers:

- Haldol: The first choice both during pregnancy and breastfeeding (usually discouraged).
- Atypical antipsychotics: Not a lot known about long-term safety. Second choice. Typically avoid in breastfeeding.

FDA Pregnancy Drug Risk Categories: A: Controlled studies in women fail to demonstrate a risk to the fetus in the first trimester (and there is no evidence of a risk in later trimesters), and the possibility of fetal harm appears remote. B: Either animal-reproduction studies have not demonstrated a fetal risk but there are no controlled studies in pregnant women, or animal-reproduction studies have shown an adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women in the first trimester (and there is no evidence of a risk in later trimesters). C: Either studies in animals have revealed adverse effects on the fetus (teratogenic or embryocidal or other) and there are no controlled studies in women, or studies in women and animals are not available. Drugs should be given only if the potential benefit justifies the potential risk to the fetus. D: There is positive evidence of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk (e.g., if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective). X: Studies in animals or human beings have demonstrated fetal abnormalities, or there is evidence of fetal risk based on human experience or both, and the risk of the use of the drug in pregnant women clearly outweighs any possible benefit. The drug is contraindicated in women who are or may become pregnant.

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