COMMONLY PRESCRIBED PSYCHOTROPIC MEDICATIONS

NAME Generic (Trade)	DOSAGE	KEY CLINICAL INFORMATION
Antidepressant Medications*		
Bupropion (Wellbutrin)	Start: IR-100 mg bid X 7d, then ↑ to 100 mg tid; SR-150 mg qam X 7d then ↑ to 150 mg bid; XL-150 mg qam X 7d, then ↑ to 300 mg qam. Range: 300-450 mg/day.	Novel mechanism; **Contraindicated in seizure disorder** because it decreases seizure threshold; **stimulating; less effective for treating anxiety disorders;** 2nd line TX for ADHD;. ¢ **IR/SR/XL.**
Citalopram (Celexa)	Start: 20 mg qday X 7d, then ↑ to 40 mg. MAX: 40 mg qday (MAX: 20 mg qday if ≥60 y/o, hepatically impaired, a CYP2C19 poor metabolizer, or taking a CYP2C19 inhibitor).	Well-tolerated; minimal CYP450 interactions; good choice for anxious pt. **Caution: QTc prolong. dose dependent** ¢
Duloxetine (Cymbalta)	Start: 30 mg qday X 7d, then ↑ to 60 mg qday. Range: 60-120 mg/day.	SNRI; TX for neuropathic pain; **need to monitor BP**; 2nd line TX for ADHD. $
Escitalopram (Lexapro)	Start: 5 mg qday X 7d, then ↑ to 10 mg qday. Range 10-20 mg/d (~3X potent vs. Celexa).	Best-tolerated SSRIs; minimal CYP450 interactions. Good choice for anxious pt. ¢
Fluoxetine (Prozac)	Start: 10 mg qam X 7d, then ↑ to 20 mg qday. Range: 20-60 mg/day.	More activating than other SSRIs; long half-life reduces withdrawal (t½ = 4-6 d). ¢
Mirtazapine (Remeron)	Start: 15 mg qhs. X 7d, then ↑ to 30 mg qhs. Range: 30-45 mg/qhs.	Unique mechanism; Sedating and appetite promoting; Neutropenia risk so avoid in the immunosupressed. ¢
Paroxetine (Paxil)	Start: 10 mg qhs X 7d, then ↑ to 20 mg qday. Range: 20-60 mg/day.	SSRI; Anticholinergic; sedating; **Significant withdrawal syndrome.** ¢
Sertraline (Zoloft)	Start: 25 mg qam X 7d, then ↑ to 50 mg qday. Range: 50-200 mg/day.	SSRI; limited CYP 450 interactions; mildly activating, usual first-line during pregnancy/postpartum if breastfeeding. ¢
Venlafaxine (Effexor)	Start: IR-37.5 mg bid X 7d, then ↑ to 75 mg bid; ER-75 mg qam X 7d, then ↑ to 150 qAM. Range: 150-375 mg/day.	SNRI. More agitation & GI side effects than SSRIs; TX for neuropathic pain at 225 mg and above; **need to monitor BP; Significant withdrawal syndrome.** ¢ **IR $ ER.**
Nortriptyline (Pamelor)	Start: 25 mg qhs X 7d, then ↑ 25 mg qhs - q weekly to 75 mg qhs. Range: 75-150 mg/day.	TCA; Sedating; TX for neuropathic pain; Baseline EKG; Max dose in elderly: 100 mg; **Lethal in overdose.** ¢
*Antidepressant Medications warnings/precautions: 1) Potential increased suicidality in first few months, 2) Long term weight gain possible (except venlafaxine & bupropion), 3) Sexual side effects common (except bupropion & mirtazapine), 4) Withdrawal symptoms can occur with abrupt cessation (especially with SSRIs and SNRIs), 5) Increased risk of bleeding with SSRIs and SNRIs (especially in combo with NSAIDs), 6) Risk for serotonin syndrome (except bupropion), when combined with medications or drugs effecting serotonin metabolism, 6) Hyponatremia sometimes seen with SSRIs and SNRIs in older adults.		
Antianxiety and Sleep (Hypnotic) Medications		
Alprazolam (Xanax)	Start: IR-0.25-0.5 mg tid. Usual MAX: 4 mg/d. ER-0.5-1mg qAM Usual MAX:3-6 mg/d	**Equiv. dose: 0.5 mg.** Onset: *rapid* . T½: 11 hrs. More addictive than other benzos and has uniquely problematic withdrawal syndrome. **Do not use as 1st line TX. Significant withdrawal syndrome.** ¢
Amitriptyline (Elavil)	Start: 10 mg qhs X 7d, then consider ↑ 25 mg qhs Range: 10-50mg/qhs	TCA; Sedating; TX for neuropathic pain; **Lethal in overdose.** ¢
Clonazepam (Klonopin)	Start: 0.25 mg bid Usual MAX: 4 mg/day.	**Equiv. dose: 0.25 mg.** Onset: *intermediate* . T½: 30-40 hrs. Helpful in TX mania. ¢
Diazepam (Valium)	Start: 5 mg bid. Usual MAX: 40 mg/day.	**Equiv. dose: 5 mg.** Onset: *rapid*. T½: 50-100 hrs. Caution with liver disease ¢
Lorazepam (Ativan)	Start: 0.5-1 mg bid to tid. Usual MAX: 6 mg/day. Insomnia: 0.5-2 mg qhs.	**Equiv. dose: 1 mg.** Onset: *intermediate*. T½: 12 hrs. No active metabolites, so safer in liver dz. ¢
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. ¢
Hydroxyzine (Vistaril)	Start: 25-100 mg 3-4 X per day. Usual MAX: 400 mg/day.	Non-benzo Antihistamine FDA approved for anxiety. ¢
Prazosin (Minipress)	Start: 1 mg qhs. ↑ by 1mg q 2-3 d. Range: 4-6mg po qhs Usual MAX: 10 mg qhs.	alpha1 blocker used to TX PTSD-related nightmares. Warn about orthostasis ¢
Trazodone (Desyrel)	Start: 25-50 mg qhs. ↑ by 25-50mg q 1 wk Range: 50-200 mg qhs.	Commonly used as sleep aid; **inform about priapism risk in men.** ¢
Zolpidem (Ambien)	Start: 5-10 mg qhs. MAX: 10 mg qhs.	**T½: 2.6 hrs**. Potential for sleep-eating and sleep-driving. ¢ Available in longer acting form (CR $)
BENZODIAZEPINE EQUIVALENCY(oral administration): clonazepam 0.25mg ≈ alprazolam 0.5mg ≈ lorazepam 1mg ≈ diazepam 5mg		
***Benzodiazepine Medication warnings: 1)** Concomitant use of benzodiazepines and opioids may result in profound sedation, respiratory depression, coma, and death. 2) Benzodiazepines and zolpidem are DEA Schedule IV Controlled substances.		
Mood Stabilizers		
Divalproex (Depakote)	Start: 500 mg/day (bid, DR; qday, ER); increase dose as quickly as tolerated to clinical effect. Target serum concentration: **75 to 100 mcg/mL (DR) & 85-125 mcg/ml (ER).**	**Multiple black box warnings** including for hepatotoxicity, pancreatitis, and teratogenicity (Avoid in women of reproductive potential or should use effective contraception). Monitor LFTs, platelets, and coags initially and q3-6 mo. Weight gain common. $
Lamotrigine (Lamictal)	Start: 25 mg qday for wks 1 & 2; then 50 mg qday for wks 3 & 4; then 100 mg qday for wk 5; and finally 200 mg qday for wk 6+ (usual target dose). Dosage adjustment required when taken w/ drugs that ↓ (e.g., Tegretol, estrogens) or ↑ (Depakote) Lamictal concentration.	**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. No evidence that doses above 200 mg more effective for mood. Oral contraceptives may decrease serum concentration lamotrigine. ¢
Lithium	Start: 300 mg bid or 600 mg qhs. Target serum concentration: acute mania & bipolar depression: **0.8-1.0 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 (rare cardiac malform.) and will **need to inform women of reproductive potential of this risk**. Check Ca^{2+}, TSH and BMP before starting and q6-12 months thereafter. Advise pt about concurrent use of NSAIDS and HTN meds acting on the kidney which can decrease renal clearance of lithium leading to higher serum concentrations. ¢
Antipsychotic/Mood Stabilizers**		
Aripiprazole (Abilify)	**MDD adj tx**. Start: 2-5 mg/day; adjust dose q1+ weeks by 2-5 mg. Range: 5-10 mg/day.**Mania.** Start: 15 mg qday; Range: 15-30 mg/day. MAX: 15 mg qday. **Schizophrenia**. Start: 10-15 mg/day; ↑ at 2 week intervals; Range: 10-15 mg/day; MAX: 30 mg/day.	EPS: Mild; TD Risk: Mild; Sedation: Mild; Metabolic Effects: Mild. 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. $$$
Lurasidone (Latuda)	**Bipolar Dep:** Start/Initial: 20 mg qday; Range: 20-60 mg/day. MAX: 120 mg/day. **Schizophrenia:** Start/Initial Target: 40 mg qday Range: 40-160 mg qday. MAX: 160 mg/day.	EPS: Mild to Moderate; TD Risk: Unknown; Sedation: Moderate; Metabolic Effects: Mild. It is important to take Latuda with food (at least 350 calories) for optimal absorption (increased by up to three fold). Also, grapefruit juice should be avoided. $$$.
Olanzapine (Zyprexa)	**Mania.** Start: 10 mg qhs; Range: 10-20 mg/qhs. MAX: 20 mg/day. **Schizophrenia**. Start: 5 mg qhs; ↑ by 5 mg qhs per week; Range: 10-15 mg qhs: MAX: 20 mg/day.	EPS: Mild; TD Risk: Mild; Sedation: Moderate; Metabolic Effects: Severe. **Do not prescribe to patients with diabetes**. Need to screen glucose and lipids regularly. ¢
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: Mild; TD Risk: Mild; Sedation: Moderate; Metabolic Effects: Moderate to Severe. FDA indication for bipolar depression and adjunctive treatment of MDD. Potential increased suicidality in first few months. Need to measure 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 $
Risperidone (Risperdal)	**Mania.** Start: 1-2 mg qhs;↑ by 1-2 mg/d per week. Range: 3-4 mg/day. MAX: 6 mg/d. **Schizophrenia**. Start: 1 mg qhs;↑ by 1 mg/d per week; Range: 3-4 mg/day, MAX: 8 mg/d.	EPS: Moderate; TD Risk: Moderate; Sedation: Moderate; Metabolic Effects: Moderate. Hyperprolactinemia and sexual side effects common. Need to screen glucose and lipids regularly. ¢
**Antipsychotic/Mood stabilizer warnings/precautions: 1) Increased mortality related to psychosis and behavioral problems in elderly patients with dementia, 2) Increased risk of QTc prolongation and risk of sudden death (especially combined with other drugs known to prolong QTc).		

For ALL Medications, Clinicians MUST consider reproductive potential, pregnancy, and lactation status when treating patients. See Page 2 for Details.

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 ¢ = <$20, $ = $20-$100, $$ = $101-250, $$$ = >$250. SSRI = Selective Serotonin Reuptake Inhibitor. SNRI = Serotonin Norepinephrine Reuptake Inhibitor. TCA = Tricyclic Antidepressant. Initially developed by Stephen Thilke, MD, MPH & Alex Thompson, MD, MPH in 2008. Subsequent revisions by David A. Harrison, MD, PhD & Anna Ratzliff, MD, PhD V4.0 Aug 2015. Revision by Joseph Cerimele MD MPH, V4.1 May 2018

Considerations for clinicians when treating any individual with above medications:

-As of June 2015, Pregnancy Categories for medications (A, B, C, D, X) are no longer used by FDA to communicate risk. New FDA Classification of risks and benefits associated with medication treatment include considering an individual's status in three categories:

1) *Females and Males of Reproductive Potential* – *Includes when pregnancy test or contraception is required or recommended; or effects on fertility such as valproate (PCOS)*

2) *Pregnancy* – *Also includes labor and delivery. Consider risks in terms of A) Obstetric, B) Congenital, C) Neonatal, and D) Child long-term neurodevelopmental. Consider need to increase dose of certain medications with advancing pregnancy.*

3) *Lactation* – *Most psychotropic medications are secreted in breastmilk. Consider concentration of medication in breastmilk and safety of medications during breastfeeding. For some individuals, consider prioritizing sleep over breastfeeding, due to risk of mood episode recurrence associated with poor sleep.*

Potential Questions to ask Patients:

1) Are you planning a pregnancy in the next year?

2) What current form of contraception do you use? Did you know that oral contraceptives and some psychotropic medications may interact?

3) What have you heard about the risks of medication treatment during pregnancy?

4) What do you know about the risks of untreated mental health disorders such as depression during pregnancy?

5) (If currently pregnant) – Are you planning to breastfeed?

Major Depressive Disorder: Points to Consider when observing Limited or No Response to Treatment

1) Is the patient taking the medication?

Intermittent adherence is common. Are side effects occurring limiting adherence (*e.g.*, sexual side effects) or other concerns (e.g., cost)?

2) Is the dosage high enough?

Low dose is a common cause of lack of effectiveness of antidepressants. If the patient has a partial response but not remission after 4 weeks, then consider dose increase.

Typical Maximum Therapeutic Doses (mg/day) of Commonly Used Antidepressant Medications

Bupropion (Wellbutrin)	**450 mg**	**Mirtazapine (Remeron)**	**45 mg**
Citalopram (Celexa)	**40 mg**	**Paroxetine (Paxil)**	**60 mg**
Duloxetine (Cymbalta)	**120 mg**	**Sertraline (Zoloft)**	**200 mg**
Escitalopram (Lexapro)	**30 mg**	**Venlafaxine (Effexor)**	**375 mg**
Fluoxetine (Prozac)	**60 mg**		

3) Is the diagnosis correct?

---Other causes of depression requiring potentially different approaches include:

Bipolar depression. In bipolar depression antidepressants may be ineffective for some individuals, or can worsen manic or anxiety symptoms.

Depression due to another medical condition. Causes include hypothyroidism, cerebrovascular accident, sleep apnea, and Parkinson's Disease.

Substance induced mood disorder. Is the patient taking medications or using substances associated with depression? Such as steroids, interferon, hormonal therapy, alcohol and other CNS depressants. Is the patient withdrawing from medications associated w depression? Such as withdrawal from cocaine, methamphetamine, anxiolytics.

4) Are there untreated co-occurring conditions contributing to symptom burden?

---Examples include PTSD, anxiety disorders (Panic D/O & OCD), personality disorders, and somatoform disorders.

5) Common Reasons to Consider Stopping Treatment With a Medication Include: A) Intolerable side effects, **B)** Incorrect diagnosis or wrong medication for correct diagnosis, **C)** Treatment at maximum therapeutic dosage has occurred for 4-8 weeks with no response to treatment.