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)
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. ¢
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. $
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. $
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). ¢
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. ¢
Paroxetine (Paxil)	Start: 10 mg qhs X 4-7d then ↑ to 20 mg qday. Range: 20-60 mg/d.	Anticholinergic; sedating; significant withdrawal syndrome. ¢
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. ¢
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)
*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. ¢
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. ¢
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. ¢
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. ¢
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. ¢
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 per day.	Antihistamine/antiemetic drug FDA approved for anxiety. Consider in pts w/ hx of substance abuse. ¢
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. ¢
Trazodone (Desyrel)	Start: 25-50 mg qhs. Range: 50-150 mg/qhs.	Commonly used as sleep aid; inform about priapism risk in men. ¢
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. ¢
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 $)
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)
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. Significant weight gain common. $
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. ¢
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. $
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. $
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. $ (IR & XR). Avoid or use alternative in combination with methadone due to QTc prolongation.$
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. ¢
Ziprasidone (Geodon)	Start: 40 mg bid titrating quickly to 60–80 mg bid. Needs to be taken w/ food (doubles absorption).	EPS: moderately high (especially akathisia); Metabolic side effects: lowest. Need to screen glucose and lipids regularly. Lower dosage can be more agitating than higher doses. Contraindicated in combination with methadone due to QTc prolongation.$
**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. Developed by David A. Harrison, MD, PhD

Major Depressive Disorder: Limited or No Response to Treatment

Considerations

Is the patient taking the medication?

Poor adherence is common with all medications and antidepressants are no exception. Are there side effects that are limiting adherence (*e.g.*, sexual side effects) or other concerns (e.g., cost, getting addicted)?

Is the dosage high enough?

One of the most frequent causes of lack of efficacy of antidepressants is under-dosing. If the patient has showed some response but has not achieved remission to an adequate initial dosage (see guidelines in this document) after 4-6 weeks then increase the dosage. The usual maximum dosages are listed below.

Is the diagnosis correct?

Other causes of depression requiring potentially different approaches include:

Bipolar depression. In bipolar depression antidepressants frequently do not work and can trigger a manic episode.

Depression secondary to a general medical condition. Causes include hypothyroidism, cerebrovascular accident, sleep apnea, and Parkinson's Disease.

Substance induced mood disorder.

- Is the patient taking medications that could be triggering depressive symptoms? Examples include steroids, interferon, and hormonal therapy.
- Is the patient withdrawing from medications that could cause depression? Examples include withdrawal from cocaine, methamphetamine, anxiolytics.
- Is the patient abusing alcohol or other CNS depressants?

Are there untreated co-morbid conditions that are exacerbating the symptoms?

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

Maximum Therapeutic Doses (mg/day) of Commonly Used Antidepressants

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

Good Reasons to Stop a Medication

- Intolerable side effects
- Dangerous interactions with other necessary medications
- It was never "indicated" to begin with (wrong diagnosis or wrong medicine for correct diagnosis)
- It has been at the maximum therapeutic dosage for 4-8 weeks with no response.

Serotonin Reuptake Inhibitors (SSRIs)

Common side effects in all SSRIs (>10 %): GI distress (nausea, diarrhea),insomnia, restlessness, agitation, fine tremor, headache, dizziness, sexual dysfunction.

**mg*

Drug name	Unit doses avail.*	Therapeutic dose*	Usual dose*	Starting dose*	Comments
Fluoxetine	10, 20	10-60	20	10 daily	Long half-life
Sertraline	50, 100	25-200	50-100	25 daily	
Citalopram	20, 40	10-40	20	10 daily	Few drug interactions
Escitalopram	5, 10, 20	10-20	10	10 daily	Few drug interactions
Paroxetine	10, 20, 30, 40	10-50	20-30	10 daily	Dry mouth, constipation

New Antidepressants: SNRIs

SNRI side effects: GI distress (NAUSEA, diarrhea), insomnia, restlessness, agitation, fine tremor, headache, dizziness, constipation, decreased appetite, sexual dysfunction.
Small risk of elevation of blood pressure at higher doses => check BP.

** mg*

Drug name	Unit doses avail.*	Therapeutic dose*	Usual dose*	Starting dose*
Venlafaxine	25, 37.5, 50, 75, 100	12.5-150 bid	25-100 bid	25 daily
	XR 37.5, XR 75, XR 150	37.5-225 daily (XR)	75-225 daily (XR)	37.5 daily (XR)
Comments	Once daily dosing with XR preparation.			
Desvenlafaxine (no generic)	50 , 100	50 – 100	50 daily	50 daily
Comments	Active metabolite of venlafaxine; similar side effect profile.			

New Antidepressants: SNRIs – II

SNRI side effects: GI distress (NAUSEA, diarrhea), insomnia, restlessness, agitation, fine tremor, headache, dizziness, constipation, decreased appetite, sexual dysfunction.
Small risk of elevation of blood pressure at higher doses => check BP.

** mg*

Drug name	Unit doses avail.*	Therapeutic dose*	Usual dose*	Starting dose*
Duloxetine	20, 30, 60	40 – 60 daily	40 – 60 daily	30 daily

Comments Nausea, dry mouth, constipation, decreased appetite, fatigue, sweating, sexual dysfunction.
Enteric coated. *DO NOT break tablets!*

Mirtazapine

Drug name	Unit doses avail.*	Therapeutic dose*	Usual dose*	Starting dose*
Mirtazapine	15, 30	15-45 qhs	15-30 qhs	7.5 -15 qhs

Comments Sedation, weight gain.
Minimal sexual side effects.
May help with anxiety / nausea.

**mg*

Bupropion

Drug name	Unit doses avail.*	Therapeutic dose*	Usual dose*	Starting dose*
Bupropion	75,100 SR 100, 150 XL 150, 300	75-150 tid 100-200 bid (SR) 150-450 daily (XL)	75-150 tid 100-200 bid (SR) 150-300 daily (XL)	75 daily 100 daily (SR) 150 daily (XL)

Comments

TID dosing with regular preparation.
BID dosing with SR. Daily dosing with XL.
Insomnia, agitation, tremor.
Anorexia; no weight gain.
Risk of seizures at high doses.
Minimal sexual side effects.
Perhaps less mania induction in bipolars
Not good for anxiety.

**mg*

Secondary Amine Tricyclics (TCAs)

Common side effects in all TCAs (>10 %): arrhythmias (particularly with pre-existing conduction defects), dry mouth, constipation, blurry vision, orthostatic hypotension, and weight gain.

**mg*

Drug name	Unit doses avail.*	Therap dose*	Usual dose*	Starting dose*	Side effects
Nortriptyline	10, 25, 50, 75	40-150	50-100	10 qhs	Weakness/fatigue
Desipramine	10, 25, 50, 75, 100, 150	75-200	100-200	25 daily	Tachycardia, insomnia, agitation