

Psycho drugs

Anxiety

| Class | Coverage | MOA | Admin/Kinetics | AEs |
|-----------------|------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benzodiazepines | Insomnia, seizures, muscle spac., ETOH w/drawl, anesthesia | Enhance GABA* | QUICK: PO 30+ min, IM 15+, IV 1+ (mins.) IV: Diazepam (VALIUM), Lorazepam, etc. Taper to discontin. | Shorter 1/2 life → rebound insomnia. Ataxia. No mix -driving, OTCs and Alch. No for minor stress. W/drawl = coverage list if high dose & short 1/2 life. Falls. |

*Side note: GABA receptor-Cl channel complex. If opened, can increase Cl permeability and hyperpolarizes the neuron cell.

Length of half life tells you about what type of anxiety is being treated:

Long (day+) = anxiety disorders, seizures, ETOH w/drawl (e.g. Clonazepam, Diazepam)

Medium (w/in day) = anxiety symptoms (e.g. Alprazolam, Lorazepam)

Short (hrs) = insomnia, anesthesia (Triazolam)

Sleep: Benzo class

| Class | Coverage for Insomniar | MOA/Notes | AEs |
|----------------|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------|
| Flurazepam (L) | Sleep maintenance/ Early awakening problems | Enhance GABA | Dependence Withdrawls Anxiety (if w/) |
| Temazepam (M) | Sleep maintenance insomnia (not in book) | | Sleep disorder (if w/) Contraindications (don't use if): |
| Triazolam (S) | GETTING to sleep/ sleep-onset insomnia | Short half life → less prob. w/ daytime sedation | Pregnantt: teratogenic in 1 st semester Sleep apnea Alcoholism |

Benzo drugs: Estazolam, Flurazepam, Quazepam, Temazepam, Triazolam.

L,M,S= Long, med., short half lives.

Sleep: Benzo-like class (the Zzz's)

| Drug | Coverage | MOA | AEs | Notes |
|-----------------|-----------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Zolpidem (S) | Sleep onset or night-time wake. | Same as benzo | Sedation, daytime sedation, anxiety, amnesia, ataxia, hyper-excitability, somnambulism (sleep-walking) | Less likely to cause benzo w/drawl symptoms |
| Zaleplon (xS) | Sleep onset, reduces wakings, prolongs sleep. | | | |
| Eszopiclone (M) | “”, Approved 4 long-trm | | | |

Sleep: Non-benzos

| Drug | Coverage | MOA/Admin | AEs | Notes |
|-----------|----------|--------------------------------------------------|--------------------------------|------------------------------------------|
| Ramelteon | Insomnia | Melatonin agonist Rapid onset, short duration | Dizziness, Somnolence, Fatigue | Not controlled by FDA Abuse not shown |

Also: Benadryl (in many OTCs) can be used for insomnia.

Mood Disorder Drugs

| Drug | Coverage | MOA/Admin/Kinetics | AEs | Notes |
|---------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| TCAs: Tricyclic Antidepressants | Depression, OCD (Chlomipramine), Chronic pain, Sleep Disorders | TCAs block uptake mech of mood-heightening neurotransmitter Onset: 3-4 weeks. Improved E and sleep. | Anticholinergic reactions, memory problems Antiadrenergic Antihistaminergic (sedation + weight gain) Cardiac: arrhythmias, tachycardia | Slide 38 lists a bunch of these drugs. |
| SSRIs | Depression, OCD, panic disorder, social anxiety disorder, PTSD, | Blocks reuptake of serotonin to the pre-synaptic neuron. Onset: 3-6 weeks (+ for OCD). | Anxiety, agitation, akathisia (severe restlessness), insomnia, nausea, diarrhea, sexual dysfunction. MAKES NO | Fluoxetine (Prozac), Paroxetine (Paxil), |

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| | eating disorders, borderline personality disorder | Youth = adult dose. | SENSE! See e-mail from prof. | |
| <p><i>Serotonin syndrome</i> (excess serotonin): diarrhea, restlessness, extreme agitation, hyper-reflexia and autonomic instability, myoclonus, seizures, hyperthermia, rigidity, delirium, <u>coma, and possible death</u>. <i>Serotonin discontinuation syndrome</i>: Tapering is advised. FLUSH effects. Flu-like , Lightheadedness, Uneasiness, Sleep disturbances, Headache.</p> | | | | |
| Novel Agents: SNRIs & NDRI | | | | |
| SNRIs: Serotonin/norepinephrine reuptake inhibitors | Depression, anxiety disorders, and ADHD (kids and adults) | | | Venlafaxine, Duloxetine |
| NDRI: Norepinephrine dopamine reuptake inhibitor / Bupropion | Depression ADHD, smoking cessation. | Used as additional drug. | No sexual side effects. May increase seizure risk: avoid if hx of bulimia | |
| Monoamine Oxidase Inhibitors (MAOIs) | Depressed patients w/ anxiety or phobia. | MAO enzyme, usually inactivating NE & Ser, is inhibited. Onset: 3-6 weeks | No kids. Orthostatic hypotension, insomnia, weight gain, edema, and sexual dysfunction. Hypertensive crisis induced by excess tyramine (inactivated by MOA); preserved or aged foods. Drug interaction can cause SNS stimulation. | Phenelzine, Tranylcypromine, Selegiline (parkinsonism) |
| BiPolar Drugs | | | | |
| Lithium | Acute mania, mood stabilization. | 900-1800 mg/day in divided doses. Long 1/2- life (18-30 hrs), narrow TI. Onset: 7-14 days | <i>Acute</i> : thirst, nausea, increased urination, fine hand tremor (Propranolol and reduced caffeine may help) <i>Chronic</i> : increased urination, weight gain, hair loss, acne, cognitive impairment, impaired | Routine lab and physical exams required (narrow TI) |

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| | | | kidney function after many years (avoid NSAIDs) | |
| <i>Lithium toxicity (Med emergency):</i> Coarse hand tremor, severe GI distress (take with meals to avoid), blurred vision, drowsiness, mental dullness, slurred speech, confusion, muscle twitching, vertical nystagmus (REM), and tinnitus (ringing/buzzing of ears). May progress to <u>seizures, coma, arrhythmias, multiorgan toxicity, and death</u> . Discontinue immediately, emesis or lavage, dialysis may be required. | | | | |
| Anti-convulsant mood stabilizers. | Nausea, diarrhea, sedation (transient), weight gain, tremor: consider low dose beta-blocker, increased risk for thrombocytopenia (too little platlets), risk for agranulocytosis (esp. carbamazepine) | | | Works on mania quickly but mood stabilization takes longer. |
| Valproate / Divalproex | Acute mania. | | | |
| Carbamazepine | Second-line augmenting agent for acute mania. | | Risk for agranulocytosis: monitor WBC q 2 wks X 2 mo then q 3 mo. | |
| Gabapentin | Good anti-anxiety and pain control effects. | | | Questionably effective. |
| Lamotrigene | Bipolar maintenance, bipolar depression. | Start very low and go slow. Start at 25mg q o day X 2 wk. | Risk of Steven Johnsons (kids and adolescents) | |
| Topiramate | Useful adjunct in bipolar disorder. | | May cause weight loss. | Not effective as first-line. |
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Antipsychotics

| Drug | Coverage | MOA/Admin/Kinetics | AEs | Notes |
|--------------|-------------------------------------|---------------------------------------------------|------------|----------------------------------|
| Conventional | | | | |
| Conventional | Psychosis, manic excitation, severe | Dopamine D2 antagonist Onset: effects in 30-60 | See below. | Phenothiazines – chlorpromazine, |

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| | agitation, Tourette's. | min, action in 7-10 days, full effect in 4-6 weeks. Long 1/2-life. Wide range in potency | | fluphenazine. Butyrophenone – haloperidol |
| <p>Conventional AEs: Ortho hypo, sedation, increased prolactin (big boobs), galactorrhea (milk), and sexual dysfunction. Extrapyramidal SEs: Parkinsonism, dystonia, akathisia (muscular discomfort). Tardive Dyskinesia (abnormal, involuntary movements). Anticholinergic symptoms (Can't...): Anticholinergic Toxicity (dry as a bone, red as a beet, hot as a hare, blind as a bat and mad as a hater). Risk is greatest w/ those having epileptic history. Potency: If high (haloperidol, fluphenazine) than greater risk of ___ & less risk of ___ & ___. Visa versa for low potency (chlorpromazine). [Extrapyramidal SEs (EPS), sedation & anticholinergic SE]</p> | | | | |
| Atypical Antipsychotics: SDAs: Serotonin-Dopamine Antagonists | For psychosis, manic excitation, severe agitation, Tourette's (all pos sympt). And for w/drawl, flat affect, anhedonia (no feeling of pleasure), low speech, catatonia, cognitive impairment. | Dop antag. But lower risk of EPS symptoms. Serotonin antagonist; may release dop in frontal lobe → improving neg symptoms. | Metabolic Syndrome = inc. BMI, hyperglycemia, cardio disease. Sedation. Risk of EPS is RARE (but anticholinergics may help) | Clozapine (first atypical), risperidone, olanzepine, quetiapine, ziprazidone |

BOTH conventional and atypical LOWER seizure threshold.