Antipsychotic Medications

Atypical Antipsychotics (2nd Gen) cont.

SE's	ALL SE's: Metabolic side effects → sleepy and fat, → W/u: EKG, Lipids, BMI, Others: **Asenapine, Iloperidone, Lurasidone, Paliperidone** • **Olanzapine** → **O**besity (metabolic syndrome) • **Risperidone** → ↑prolactin (↓dopamine activity in tuberoinfundibular pathway→ gynecomastia, galactorrhea, amenorrhea) • **Quetiapine** → best for movement disorders (ex: Parkinson's) • **Ziprasidone** → starts w/ **Z** worst for the **qTC,** ↓metabolic effects • **Aripiprazole** → **light and "ari**" → doesn't put you to sleep/lead to weight gaint; **partial agonist** at D2 • **Clozapine** → **D4 blockade** is primary effect, must watch **cloz**ly → monitor WBC and absolute neutrophil counts ▪ 3 good: **best efficacy** (if nothing else working), ↓**risk of suicide** in schizophrenia **(lithium only other), Lewy Body Dem** ▪ 6 bad **(1) Agranulocytosis** (CBC before/wkly for 1st 6 mo→ look at WBC/↓ANC on diff (<1500 → Tx: **STOP**) **(2) Myocarditis** (EKG, troponins, etc) **(3)↓Seizure threshold** (most common) **(4) Wt gain** (worse then olanzapine) **(5) Sedation (6) Sialorrhea**

Mood Stabilizers

Lithium

MOA	Not established; possibly related to **inhibition of phosphoinositol cascade → inositol = buzzword**
Use	**Mood stabilizer for bipolar disorder; blocks relapse and acute manic events.** • Drug of choice in acute mania and as prophylaxis for both manic/depressive episodes in **bipolar & schizoaffective** disorders. • It is also used in **cyclothymic disorder** and **unipolar depression**. Excellent at low doses for anti-suicidality
SE's	**LMNOP—L**ithium SEs**: M**ovement **(tremor), N**ephrogenic Diabetes Insipidus Hyp**O**thyroidism**, P**regnancy problems **(Ebstein anomaly)** • Almost exclusively **excreted by kidneys;** most is reabsorbed at PCT w/ Na+. **Skin: acne, psoriasis** • ↑ Li+ levels: **NSAIDs, Aspirin**, **Thiazides, ACEi/ARBs, Metronidazole,** Dehydration, Salt depr, Sweating (salt loss), ↓renal fxn • ↓LI+ levels: K**+ sparing diuretics, Theophylline**, CCB/Furosemide may ↑/↓ Acute Lithium toxicity**: tremor,** diarrhea**,** vomiting, weakness, **polyuria, polydipsia**, **ataxia,** cognitive impairment Chronic Lithium toxicity: **nephrogenic diabetes insipidus, thyroid dysfunction, hyperparathyroidism** • Prior to starting: ECG, BUN, creatinine, Ca2+, u/s,, thyroid function tests, CBC, and a pregnancy test • Contraindications: chronic kidney disease, heart disease, hyponatremia or diuretic use Therapeutic range: **0.8-1.2** mEq/L

Valproic Acid (Depakote)

MOA	↑Na+ channel inactivation, ↑GABA concentration by inhibiting GABA transaminase
Use	**Bipolar** (acute mania, mixed features, rapid cycling)**, Migraine prophylaxis, Myoclonic seizures,**
SE's	**Hepatotoxicity** (measure LFTs)/↑**ammonia, Hemorrhagic Pancreatitis, ↓plts, neural tube defects**, **tremor, wt gain/PCOS, hair loss**

Mood Stabilizers	
Carbamazepine (Tegretol)	
MOA	Blocks Na+ channels
Use	**Bipolar** (esp. mania w/ mixed features and rapid-cycling)**, Antiepileptic, Trigeminal neuralgia**
SE's	**cyt P-450 inducer (**HINT: ↓Warfarin effects → bleed, ↓OCP → pregnancy), **blood dyscrasias** (agranulocytosis (↓ANC), aplastic anemia), **liver toxicity, teratogenesis, SIADH, Stevens-Johnson syndrome** (HINT: SJS <30% body, TEN >30%)**, Diplopia, ataxia**
Buspirone (BuSpar)	
MOA	Stimulates **5-HT1A receptors.**
Use	**Generalized anxiety disorder** → I'm always **anxiou**s if the **bus** will be **on** time, so I take **bus**pir**one**.
SE's	Does not cause sedation, addiction, or tolerance. Takes 1–2 weeks to take effect. Does not interact w/ alcohol (vs barbiturates, benzodiazepines)**.**
Benzodiazepines	
MOA	**Facilitate GABA-A action by ↑freq of Cl− channel opening. ↓REM sleep.** **"Frenzodiazepines" ↑frequency. Benzos, barbs, and alcohol all bind theGABA-A receptor, which is a ligand-gated Cl− channel.** Most have long half-lives/active metabolites **(excep: Al**prazolam**, T**riazolam**, O**xazepam**, M**idazolam→ **short acting/↑addictive pot).**
Use	**Anxiety, akathisia, spasticity, status epilepticus (Lorazepam, diazepam), eclampsia, detoxification (**esp. alcohol withdrawal–DTs**), night terrors, sleepwalking, general anesthetic** (amnesia, muscle relaxation), **hypnotic** (insomnia).
EX	**Diazepam** (Valium)**, Clonazepam** (Klonopin), **Lorazepam** (Ativan)**, temazepam, oxazepam,** (LOT – safe for liver), **midazolam** (Versed)**, triazolam, chlordiazepoxide** (long acting, used to treat EtOH w/drawal, but not in liver failure)**, Alprazolam** (Xanex)**.**
SE's	**Dependence, Additive CNS depression effects w/ alcohol** (drowsiness, impaired intellect, motor coordination, amnesia) • Less risk of respiratory depression and coma than w/ barbiturates. Overdose tx: **Flumazenil (**competitive antagonist at GABA benzodiazepine receptor**)** • Can precipitate **seizures** by causing acute benzodiazepine withdrawal → withdrawal can be life threatening
Barbiturates	
MOA	**Facilitate GABAA action by ↑duration of Cl− channel opening → ↓neuron firing (**barb**idurat**es→ ↑**durat**ion**).** **Contraindicated in porphyria.**
Use	**Sedative for anxiety, seizures, insomnia, induction of anesthesia (thiopental).**
EX	**Phenobarbital, pentobarbital, thiopental, secobarbital**
SE's	**Respiratory/cardiovascular depression** (can be fatal); **CNS depression** (exacerbated by alcohol use); **dependence** • **Drug interactions (induces cytochrome P-450)** Overdose Tx: **supportive (assist respiration and maintain BP)**

Mood Stabilizers continued on next page →