



Psychotherapeutics



- Amitriptyline
- Amphetamine & dextroamphetamine
- Atomoxetine
- Bupropion
- Desipramine
- Fluoxetine
- Haloperidol
- Lithium
- Methylphenidate
- Mirtazapine
- Olanzapine
- Phenelzine
- Risperidone
- Thioridazine
- Venlafaxine



Amitriptyline

- Antidepressant
 - **Tricyclic**

 - **Blocks neuronal reuptake of serotonin > norepinephrine**
 - **Blocks muscarinic & α -adrenergic receptors**
 - Chronic pain
 - Depression

 - Delayed onset of antidepressant effect >4 wks

 - **AVOID**
 - MAOI
 - SSRI
- Lethargy
 - Sedation
 - Blurred vision
 - Constipation
 - **Urinary retention**
 - **↑ appetite & wt gain**

 - OD wide QRS complex VT

 - Altered effects by drugs that inhibit/induce CYP450
 - Carbamazepine
 - Quinidine
 - Rifampin



Amphetamine

- CNS stimulant
- **Sympathomimetic amine**
- **↑ neuronal release of norepinephrine**
 - ADHD
 - ↑ attention span
 - ↓ motor restlessness
 - Narcolepsy
 - ↑ mental alertness
 - ↓ drowsiness & fatigue
- Tachycardia
- HTN
- Anorexia
- Irritability
- Insomnia
- Tremor
- Growth inhibition
- Drug dependence
- **HTN crisis w/ MAOI**



Atomoxetine

- ADHD agent
- **Selective NE reuptake inhibitor**
- **Inhibits neuronal reuptake of NE in CNS**
 - ADHD in children/adults
 - **↑ levels & effect in slow metabolizers – CYP2D6**
- ↓ appetite
- Insomnia
- Levels & effects altered by drugs that inhibit/induce CYP2D6



Bupropion

- Antidepressant
- **Neuronal reuptake inhibitor**
- **Inhibits neuronal reuptake of DA > 5-HT & NE**
 - Depression
 - Smoking cessation
 - Delayed onset for antidepressant effects
- Agitation
- HA
- Dry mouth
- N
- Tremor
- Impaired motor & cognitive skills
- MAOI ↑ adverse effects
- Seizure risks w/ phenothiazines



Desipramine

- Antidepressant
 - **Tricyclic**

 - **Blocks neuronal reuptake NE > 5-HT**
 - **Blocks muscarinic & α -adrenergic receptors**
 - Depression
 - Chronic pain

 - Delayed onset for antidepressant effects

 - **AVOID**
 - MAOI
 - SSRI
- Lethargy
 - Sedation
 - **Blurred vision**
 - **Constipation**
 - **Urinary retention**
 - **↑ appetite & wt gain**

 - OD wide QRS complex VT



Fluoxetine

- Antidepressant
- **SSRI**
- **Inhibits neuronal reuptake of serotonin**
 - Depression
 - OCD
 - Bulimia nervosa
 - Anorexia nervosa
 - Fibromyalgia
 - Panic attacks
 - Phobias
 - Premenstrual dysmorphic disorder
 - **Active metabolite 5-7d half-life**
 - **AVOID MAOI**
- Anxiety
- Drowsiness
- Insomnia
- Nervousness
- **Sexual dysfunction**
- Sweating
- Tremor
- ↑ levels metabolized by CYP2D6



Haloperidol

- Typical antipsychotic
- **Butyrophenone**
- **Blocks D2 receptors in mesolimbic area, chemoreceptor trigger zone, solitary tract, & basal ganglia**
- **Blocks muscarinic & α -adrenergic receptors**
 - **Psychotic disorders**
 - Schizophrenia
 - **Tourette's syn**
- **Neuroleptic malignant syn**
 - **Fever**
 - **Respiratory distress**
 - **Tachycardia**
 - **Seizures**
 - **Severe m. stiffness**
 - **Altered BP**
- **Extrapyramidal rxns**
- Tardive dyskinesia
- Blurred vision
- Constipation
- Dry mouth
- Urinary retention
- Hypotension



Lithium

- Mood stabilizer, antimanic
- **Inorganic cation**
- **↓ noradrenergic neurotransmission or effects b/c of ↓ cAMP**
- **Inhibition of inositol-1-phosphatase**
 - **Depletion of inositol & IP3**
- **Improved Na transport via Na pump**
 - Bipolar affective disorder
 - *Monitor serum levels*
 - *Toxicity > 2.5*
- Polyuria
- Impaired memory
- Acne
- Tremor
- ECG changes
- GI distress
- **Hypothyroidism**
- Leukocytosis
- NM toxicity w/ haloperidol
- ↑ toxicity
 - Diuretics
 - NSAIDS
 - Fluoxetine



Methyphenidate

- CNS stimulant
- **Sympathomimetic amine**
- **↑ neuronal release NE**
 - ADHD
 - ↑ attention span
 - ↓ motor restlessness
 - Narcolepsy
 - ↑ mental alertness
 - ↓ drowsiness & fatigue
- Tachycardia
- HTN
- Anorexia
- Irritability
- Insomnia
- Tremor
- Growth inhibition
- Dependence
- **HTN crisis w/ MAOI**



Mirtazapine

- Antidepressant
- **Tetracyclic**
- **Inhibits presynaptic α_2 autoreceptors & heteroreceptors**
 - **\uparrow NE & 5-HT release**
 - Depression
 - Appetite stimulation
 - **AVOID MAOI**
 - **HTN, seizure, death**
- **\uparrow appetite & wt gain**
- Constipation
- Dry mouth
- Drowsiness



Olanzapine

- Atypical antipsychotic
 - **Thienobenzodiazepine**

 - **Blocks D2 & 5-HT2 receptors in CNS**
 - **Blocks H1, muscarinic, & α -adrenergic receptors**
 - Schizophrenia
 - Manic episodes of bipolar
 - Anorexia nervosa

 - *Oral tablets contain aspartame*
 - *Avoid in phenylketonuria*
- Agitation
 - Dizziness
 - Restlessness
 - Sedation
 - Amblyopia
 - Orthostatic hypotension
 - Tachycardia
 - Constipation
 - Dry mouth
 - Wt gain
 - Tremor



Phenelzine

- Antidepressant
- **MAOI**
- **Inhibits MAO & ↑ CNS levels of NE & 5-HT**
 - Neurotic & atypical depression
 - **Avoid**
 - Fluoxetine
 - Tyramine
- Dizziness
- Insomnia
- Restlessness
- Blurred vision
- Orthostatic hypotension
- Diarrhea
- Potentially fatal
 - SSRI
 - Tricyclics
- **HTN crisis**
 - Tyramine
 - Amphetamines
 - Methyldopa
 - Levodopa



Risperidone

- Atypical antipsychotic
 - **Benzisoxazole**

 - **Blocks 5-HT₂ > D₂ receptors in CNS**
 - **Blocks H₁ & α-adrenergic receptors**
 - Schizophrenia
 - Psychotic disorders

 - **Monitor pt for neuroleptic malignant syn**
- Aggressive behavior
 - **Extrapyramidal rxns**
 - Sleep disturbances
 - Insomnia
 - Sedation
 - Constipation or diarrhea
 - Wt gain



Thioridazine

- Typical antipsychotic
- **Phenothiazine**
- **Blocks D2 receptors in mesolimbic area, chemoreceptor trigger zone, solitary tract, & basal ganglia**
- **Blocks muscarinic receptors**
 - Psychotic disorders
 - Schizophrenia
- Extrapyrarnidal rxns
- Tardive dyskinesia
- **Photosensitivity**
- **Potential for V arrhythmias & sudden death**
- **Retinal pigmentation w/ high doses**
 - melanosis



Venlafaxine

- Antidepressant
- **Phenethylamine**
- **Inhibits neuronal reuptake 5-HT & NE**
 - Depression
 - Generalized anxiety disorder
 - **AVOID MAOI**
- Sexual dysfunction
- GI distress
- Dizziness
- Insomnia
- Nervousness