

## Anti-Depressant Drugs

Drugs	MOA	Pharmacokinetics	Side effect	Drug interaction
<b>TCAs</b> Drugs that Block the Re-Uptake of NE & 5-HT. 1 <sup>st</sup> generation (old)	<b>Block</b> the Re-Uptake of NE & 5-HT.	<b>Lipophilic</b> with High protein binding; basic in nature, metabolized → liver ✓ <b>Hemodialysis</b> doesn't work	Sedation. <b>Cardiovascular</b> effects (Tachycardia & hypotension). <b>Anticholinergic effects.</b> <b>Weight gain.</b> <b>Seizure.</b> Hypomania.	
<b>Amitriptyline (5-HT)</b> <b>Desipramine (NE)</b>				
<b>SSRIs</b> Drugs that Selectively Block Re-Uptake of 5-HT. (new)	<b>Selective</b> uptake of 5-HT the presynaptic cleft, broad spectrum act on many receptors (histamine, ACH)	T <sub>1/2</sub> Too long (3-11 days): <b>Fluoxetine.</b> Rest are 24hrs.	N, V & ↓ <b>appetite (5HT3).</b> Insomnia & anxiety ( <b>Except Paroxetine</b> ). <b>Impotence</b> & sexual dysfunction ( <b>5HT2</b> ). Enzyme inhibition ( <b>Fluoxetine</b> ). Drugs interactions due to their significant inhibitory action at CY P450 ( <b>Except Citalopram</b> ).	<b>Drug Interaction:</b> Combined with MAOIs → <b>Serotonin Syndrome.</b> Enzyme inhibitors → ↓ metabolism = ↑ toxicity of TCA, neuroleptic, some antiarrhythmic, β-blockers.
<b>Fluoxetine</b> <b>Citalopram</b> <b>Paroxetine</b>				
<b>Drugs that Block Presynaptic α<sub>2</sub> adrenoceptors</b>	Increasing the release of 5-HT & NE by blocking α <sub>2</sub>		<b>↑ appetite</b> → good for patients taking cancer chemotherapy. <b>Sedation.</b> Constipation. Rarely leads to agranulocytosis (Mianserin).	
<b>Mirtazepine</b> <b>Mianserin</b>				
<b>Drugs that Inhibit MonoAminoOxidase (MAOIs)</b>	↑ Serotonin ↑ NE	<b>Uses:</b> Only for resistance Depression where phobia and anxiety are the main symptoms.	<b>Side effect</b> Drug-drug and food interaction. Food containing <b>tyramine</b> (Old chese, wine, Pickles, smoked fish) & TCA → <b>hypertensive crisis.</b> SSRIs → <b>serotonergic syndrome.</b>	<b>Side effect of:</b> <b>Phenelzine:</b> ↑ appetite Hepatotoxicity, sedation. <b>Tranylcpramine:</b> ↓ appetite, insomnia
<b>Iproniazide</b> (anti TB) Irreversible Inhibitors: <b>1) Phenelzine.</b> <b>2) Tranylcpramine.</b>				
<b>Other type of Drugs:</b> <b>1) Venlafaxine</b>	By <b>blocking</b> 5-HT & NE uptake.		Like SSRIs, <b>Seizure.</b> Constipation.	
<b>2) Trazodone</b>	<b>Selective</b> blocker of 5-HT uptake but has significant α- blocking effect.		<b>Hypotension, Sedation.</b> Blocks 5-HT <sub>2</sub> receptors (Priapism).	
<b>3) Nefazodone</b>	No sedative effect & no blockage of α- adrenoceptors. Likes most SSRI inhibit P450 3A4 isoenzyme.			