

A note on layout: The neurotransmitters are listed from the most often targeted by antidepressant drugs (serotonin) to the least often targeted (dopamine). The mechanisms are listed in functional or “life cycle” order from the perspective of the neurotransmitter, which is first synthesized, then released, binds receptors, and ultimately is broken down. The drug classes are listed in order of historical discovery.

| | | | | | |
|-------------------|----------------|-----------|-----------------|---------------------------------|----------------------------------|
| Neurotransmitters | | | | High: | Low: |
| | Serotonin | SER, 5-HT | Satiety | Fullness, contentment | Anxiety, OCD, aggression, hungry |
| | Norepinephrine | NE | Fight or flight | Alert, concentration, memory | Inattentive |
| | Dopamine | DA | Salience | Reward, desire, learning, alert | Inactive, unmotivated, hungry |

| | | | | |
|-----------------------------|------------------------|-------------------------|--------------------------|------------------------------|
| Mechanisms (to boost NT) | | Example: | Boosts: | Used for: |
| | Increase synthesis | Levodopa, 5-HTP | DA and SER, respectively | PD and useless, respectively |
| | Cause release | Amphetamine (Adderall®) | NE > DA >> SER | ADHD, narcolepsy |
| | Receptor agonist | Pramipexole | DA | Parkinson’s (PD) |
| | Partial agonist | Bupropion (Wellbutrin®) | SER | Anxiety > depression |
| | Presynaptic antagonist | Mirtazapine (Remeron®) | SER, NE | Depression > anxiety |
| | Inhibit reuptake | Fluoxetine (Prozac®) | SER | Depression, anxiety, OCD |
| | Inhibit breakdown | Phenelzine (Nardil®) | SER, NE, DA | Depression > anxiety |

| | | | | | | |
|---|------------------------------|-------|------------|--|---|-------------------|
| Antidepressant classes | | | | First: | Notable: | Mechanism: |
| | Antipsychotics* | | 1952 | Chlorpromazine (Thorazine®) | Haloperidol (Haldol®) | Antagonist* |
| | Monoamine oxidase inhibitors | MAOIs | 1953 | Iproniazid and isoniazid | Phenelzine, selegiline, moclobemide, harmaline | Inhibit breakdown |
| | Tricyclic antidepressants | TCAs | 1955 | Imipramine (Tofranil®) | Amitriptyline (Elavil®), chlomipramine (Anafranil®) | Inhibit reuptake |
| Selective serotonin reuptake inhibitors | SSRIs | 1977 | Zimelidine | Fluoxetine (Prozac®), sertraline (Zoloft®), paroxetine (Paxil®), citalopram (Celexa®), escitalopram (Lexapro®), fluvoxamine (Luvox®), dapoxetine | Inhibit reuptake | |

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