6.6: Antipsychotics

Antipsychotic medicines are primarily used to manage psychosis (i.e., a loss of contact with reality that may include delusions or hallucinations). Psychosis can be a symptom of a physical condition (such as a high fever, head injury, or substance intoxication) or a mental disorder (such as schizophrenia, bipolar disorder, or severe depression). Antipsychotic medications may also be used in combination with other medications to treat the symptoms of other mental health conditions, including attention deficit hyperactivity disorder (ADHD), eating disorders, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and generalized anxiety disorder. [1]

First-generation antipsychotics (also called typical antipsychotics) have several potential adverse effects, and medication is prescribed based on the client’s ability to tolerate the adverse effects. Second-generation antipsychotics (also referred to as atypical antipsychotics) have fewer adverse effects and are generally better tolerated. Clients respond differently to antipsychotic medications, so it may take several trials of different medications to find the one that works best for their symptoms. [2]

First-Generation (Typical) Antipsychotics

Common first-generation antipsychotic medications (also called “typical” antipsychotics) include chlorpromazine, haloperidol, perphenazine, and fluphenazine. [3]

First-generation antipsychotics work by blocking dopamine receptors in certain areas of the CNS, such as the limbic system and the basal ganglia. These areas are associated with emotions, cognitive function, and motor function. As a result, blockage produces a tranquilizing effect in psychotic clients. However, several adverse effects are caused by this dopamine blockade, such extrapyramidal side effects (e.g., involuntary or uncontrollable movements, tremors, and muscle contractions) and tardive dyskinesia (a syndrome of movement disorders that persists for at least one month.
and can last up to several years despite discontinuation of the medications).

### Second-Generation (Atypical) Antipsychotics

Second-generation antipsychotics (also called atypical antipsychotics) work by blocking specific D2 dopamine receptors and serotonin receptors. Second-generation medications include risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole, paliperidone, and lurasidone. Several atypical antipsychotics have a “broader spectrum” of action than the older medications and are used for treating bipolar depression or depression that has not responded to an antidepressant medication alone. They have a significantly decreased risk of extrapyramidal side effects but are associated with weight gain and the development of metabolic syndrome. Metabolic syndrome increases the risk of heart disease, stroke, and type 2 diabetes. Clinical symptoms of metabolic syndrome include high blood glucose, symptoms of diabetes (i.e., increased thirst and urination, fatigue, and blurred vision), obesity with a large abdominal girth, hypertension, elevated triglyceride, and lower levels of HDL.

### Clozapine

Clients with treatment-resistant schizophrenia may be prescribed clozapine, a specific atypical antipsychotic medication that binds to serotonin, as well as dopamine receptors. Clozapine also has strong anticholinergic, sedative, cardiac, and hypotensive properties and frequent drug-drug interactions.

View a supplementary YouTube video explaining how clozapine binds to additional neuroreceptors compared to other antipsychotic medications: The Pines, the Dones, Two Pips and a Rip

Read additional information about the mechanism of action, adverse side effects, and patient education regarding antipsychotic medications in the “Schizophrenia” section of the “Psychosis and Schizophrenia” chapter.

4. This work is a derivative of StatPearls by Chokhawala and Stevens and is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).
6. NEI Psychopharm. (2014, March 18). The pines, the done, two pips, and a rip [Video]. YouTube. All rights reserved. [https://youtu.be/kuYGJOcloH8](https://youtu.be/kuYGJOcloH8)