

SIDE EFFECTS OF TYPICAL ANTIPSYCHOTICS

- ✓ Sedation
- ✓ Weight Gain
- ✓ Increased Appetite
- ✓ Blood Pressure Changes and Lightheadedness
- ✓ Dry Mouth
- ✓ Urinary Retention/Difficulty Urinating
- ✓ Constipation
- ✓ Blurry Vision
- ✓ Cognitive Impairment
- ✓ Slowed Movements (Parkinsonism)
- ✓ Emotional “Blunting” or “Flattening”
- ✓ Seizures (rare)
- ✓ Cardiac Arrhythmias (rare)
- ✓ Tardive Dyskinesia

RECEPTORS AND SIDE EFFECTS

- ✓ Blockade of Histamine (H_1) receptors causes sedation and weight gain
- ✓ Blockade of Adrenergic (α_1) receptors causes sedation and blood pressure changes
- ✓ Blockade of Muscarinic cholinergic (M_1) receptors causes dry mouth, urinary retention, constipation, blurry vision, and cognitive impairment/memory impairment.
- ✓ High-potency antipsychotics such as fluphenazine and haloperidol show far less sedation, hypotension, and anticholinergic side effects, but because they are strong dopamine blockers, they are more likely to cause side effects from blocking dopamine (slowed movements, cognitive problems, emotional flattening, dystonic reactions, prolactin elevations, and tardive dyskinesia).

TARDIVE DYSKINESIA (TD)

- ✓ Tardive Dyskinesia (TD) is a hyperkinetic movement disorder associated with long term use of antipsychotics and/or the rapid withdrawal of antipsychotic medications.
- ✓ Symptoms include involuntary movements such as lip smacking, eye blinking, grimacing, tongue movements, or writhing movements of the extremities or trunk.
- ✓ All first-generation antipsychotics induce tardive dyskinesia (TD) at an incidence rate of about 3% to 5% per year of exposure up to 60% lifetime prevalence.
- ✓ TD is mild and non-progressive in majority of cases.
- ✓ TD results from chronic blockade of dopamine receptors in the brain and the body's response to such blockade over time.
- ✓ Once TD is well-established, withdrawal of the offending agent does not typically result in a return of the nigrostriatal pathway to baseline signal transduction, i.e. movements tend to persist.
- ✓ TD is treated by reducing the dose of the antipsychotic, switching to an atypical antipsychotic, or using new medications such as Valbenazine (Ingrezza).
- ✓ Clozapine has been shown to reduce TD symptoms in some patients.
- ✓ In general, extrapyramidal symptoms are treated by reducing the dose of antipsychotic, switching to an atypical antipsychotic with lower dopamine blocking properties, and/or administering an anticholinergic agent such as benztropine (Cogentin) or diphenhydramine (Benadryl).

NEUROLEPTIC MALIGNANT SYNDROME (NMS)

- ✓ First generation antipsychotic medications, especially high-potency medications, may rarely induce a condition called neuroleptic malignant syndrome (NMS). Note that immediate withdrawal of dopamine agonists (such as L-Dopa or Bromocriptine) can also lead to NMS.
- ✓ NMS is characterized by delirium/confusion, muscle rigidity, rhabdomyolysis (muscle break down), fever, seizures, and renal failure.
- ✓ The mortality rate is about 15% in well-managed cases.
- ✓ Treatment usually involves medical hospitalization with supportive measures such as intravenous fluids, cooling blankets, and specific medications (such as dantrolene and bromocriptine).