

Low Potency Antipsychotic Drugs

Low potency antipsychotics are typical antipsychotic drugs that are more favorable to some patients due to their low potency. Their decreased potency, when compared to other antipsychotics, allows patients to control daily dosing with more freedom. Chlorpromazine and thioridazine are two antipsychotic drugs used within this sub-class and are indicated for schizophrenia, mania, psychosis, and anxiety. These drugs block dopamine D2 receptors in the mesolimbic and mesocortical areas of the CNS. This effect leads to an increase of the intracellular concentration of the second messenger, cyclic adenosine monophosphate (cAMP). Thioridazine use leads to retinal deposits, while chlorpromazine is deposited in the cornea and is phototoxic. After sunlight exposure, it can lead to blindness or corneal pigmentation. Both drugs have α -blockade effects, which can lead to hypotension and anorgasmia. These low potency antipsychotics also have anticholinergic effects and can lead to dry mouth, urination difficulty, obstipation, induction of glaucoma, postural hypotension, and sinus tachycardia. Though these drugs are of low potency, they are typical antipsychotic drugs and can still lead to extrapyramidal symptoms or neuroleptic malignant syndrome.



PLAY PICMONIC

Drugs

Chlorpromazine

Color-pro

Chlorpromazine is a low potency antipsychotic used for psychosis, schizophrenia, and manic episodes. This drug has the side effect of hypotension and also has anti-histamine properties, which counteract the extrapyramidal symptoms experienced with antipsychotics.

Corneal Deposits

Corn-eyes Filled

Chlorpromazine accumulates in the corneal stroma of the eye. After light exposure, cellular damage occurs, as the drug is a phototoxic compound. This effect may lead to color blindness and benign pigmentation of the cornea.

Thioridazine

Thor-daisy

Thioridazine is an antipsychotic medication typically used to treat schizophrenia and psychosis. It is a low potency antipsychotic and has very serious adverse effects. This drug can lead to extrapyramidal symptoms, neuroleptic malignant syndrome, impotence, and autonomic side effects.

Retinal Deposits

Red-tin Filled

Thioridazine can lead to retinal deposits in patients.

Shared Side Effects

Alpha1 Antagonist Effects

Afro (1) Wand Ant-toga

The α 1 antagonist effects of both these low potency antipsychotic medications may lead to hypotension and, rarely, impotence or anorgasmia.

Anticholinergic Effects

Ant-tie-cola

Anticholinergic effects, such as dry mouth, urination difficulty, obstipation, induction of glaucoma, postural hypotension, and sinus tachycardia, may occur. However, these are seen less often than with most other mildly potent antipsychotics.

Antihistamine Effects

Ant-tie-history-man

Low potency antipsychotic drugs such as chlorpromazine and thioridazine possess strong antihistamine properties due to their ability to antagonize histamine H1 receptors. By blocking these receptors, they inhibit the action of histamine, a neurotransmitter involved in various physiological processes, including allergic responses and wakefulness. This blockade results in sedative effects and a reduction in allergic symptoms such as itching, sneezing, and nasal congestion. Additionally, the antihistamine activity of these drugs contributes to their overall therapeutic profile in managing psychotic symptoms and conditions like schizophrenia. However, they are often associated with more pronounced sedation and anticholinergic side effects compared to higher-potency antipsychotics.