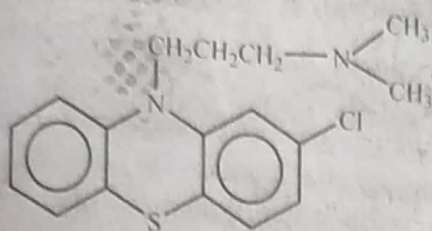


10.1.3.1. Chlorpromazine

Chlorpromazine is a prototypical phenothiazine antipsychotic drug whose actions are because of the long-term adaptation by the brain to block dopamine receptors.

Chemical Structure

Molecular Formula: C₁₇H₁₉ClN₂S

IUPAC Nomenclature: 3-(2-chlorophenothiazin-10-yl)-N,N-dimethylpropan-1-amine

Properties: Chlorpromazine occurs as a white coloured crystalline solid, with no odour. It is soluble in water, alcohol, and chloroform; and insoluble in ether.

Uses: Chlorpromazine is used for treating schizophrenia, mania, and hypomania, anxiety psychomotor agitation excitement, violent or dangerously impulsive behaviour. It is used as an adjunct in the short-term management of intractable hiccup, nausea and vomiting of terminal illness, and childhood schizophrenia and autism.

Stability and Storage Conditions: Chlorpromazine should be stored at room temperature at 20-25°C away from moisture and light as it gets decomposed and changes colour when exposed to light.

Types of Pharmaceutical Formulations: Tablet, injection, and oral solutions.

Brand Names: Megatil, Clozine, and Chlorpromazine.

10.1.3.2. Prochlorperazine

Prochlorperazine is a synthetic propylpiperazine derivative of phenothiazine having antiemetic, antihistaminic, antipsychotic, and anticholinergic activities.

Molecular Formula: C₂₀H₂₄ClN₃S

IUPAC Nomenclature: 2-chloro-10-[3-(4-methylpiperazin-1-yl)propyl]phenothiazine.

Properties: Prochlorperazine occurs as a white or pale yellow crystalline powder. It is freely soluble in water and alcohol.

Uses: Prochlorperazine is used for managing the symptoms of psychotic disorders. It is also used for short-term management of non-psychotic anxiety in patients having generalised anxiety disorder. It also controls severe nausea and vomiting arising due to various causes.

Stability and Storage Conditions: Prochlorperazine should be stored below 40°C temperature, preferentially between 15-30°C. It should be stored in well-closed air-tight containers, away from light.

Types of Pharmaceutical Formulations: Capsule, tablet, and injection.

Brand Names: Bucatel, Emidoxyn, and Stemetil.

10.1.3.3. Trifluoperazine

Trifluoperazine is a phenothiazine having similar actions to chlorpromazine. It is used as an antiemetic and an antipsychotic.

Molecular Formula: $C_{21}H_{24}F_3N_3S$

IUPAC Nomenclature:
(trifluoromethyl)phenothiazine

10-[3-(4-methylpiperazin-1-yl)propyl]-2-

Properties: Trifluoperazine occurs as a white to pale yellow coloured crystalline powder which is hygroscopic in nature. It is soluble in alcohol; and freely soluble in water.

Uses: Trifluoperazine is used for treating anxiety disorders, and depressive symptoms other than anxiety and agitation.

Stability and Storage Conditions: Trifluoperazine should be stored at controlled room temperature and freezing should be avoided. It loses colour when exposed to light, thus should be protected from light.

Types of Pharmaceutical Formulations: Tablet and injection.

Brand Names: Trinicalm plus, Shricalm, and Sycot.

10.1.3.4. Thiothixene

Thiothixene is a thioxanthene derivative and a dopamine antagonist having antipsychotic property.

Molecular Formula: $C_{23}H_{29}N_3O_2S_2$

IUPAC Nomenclature: (9Z)-N,N-dimethyl-9-[3-(4-methylpiperazin-1-yl)propylidene]thioxanthene-2-sulfonamide

Properties: Thiothixene occurs as a white or nearly white coloured crystalline powder, with no odour and a very bitter taste. It is soluble in water, chloroform, and anhydrous alcohol; and insoluble in benzene, acetone, and ether.

Uses: Thiothixene is an antipsychotic agent useful in schizophrenia and other psychotic states. It also shows antidepressant activity. It is also used for managing secondary symptoms of schizophrenia like hallucinations, tension, and suspiciousness.

Stability and Storage Conditions: Thiothixene should be stored in well-closed containers away from light.

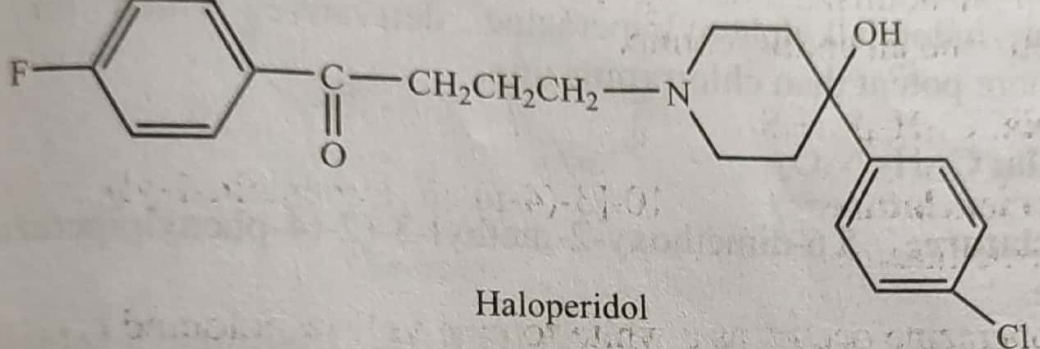
Types of Pharmaceutical Formulations: Capsule and injection.

Brand Name: Navane.

10.1.3.5. Haloperidol

Haloperidol is a phenylbutylpiperidine derivative having antipsychotic, antiemetic, and neuroleptic activities.

Chemical Structure



Molecular Formula: $C_{21}H_{23}ClFNO_2$

IUPAC Nomenclature: 4-[4-(4-chlorophenyl)-4-hydroxypiperidin-1-yl]-1-(4-fluorophenyl)butan-1-one.

Properties: Haloperidol occurs as a white to faintly yellowish coloured amorphous powder or microcrystalline powder. It is slightly soluble in water; and freely soluble in chloroform, acetone, benzene, and methanol.

Uses: Haloperidol is used for treating severe behavioural problems related to oppositional defiant disorder or other disturbing behavioural disorders. It is used for treating Attention-Deficit Hyperactivity Disorder (ADHD) in paediatrics.

Stability and Storage Conditions: Haloperidol should be stored at room temperature within 15-30°C, away from light and moisture.

Types of Pharmaceutical Formulations: Tablet, syrup, intramuscular injection, and suspension.

Brand Names: Serenace, Relinase, Hexidol, and Estidol.