# Clonidine

$$\begin{array}{c|c}
CI & 3 \\
H & N \\
2 & N \\
5
\end{array}$$

# MOA

Clonidine is an imidazoline derivate and centrally-acting alphaadrenergic agonist, with antihypertensive activity. Clonidine binds to and stimulates central alpha-2 adrenergic receptors, thereby reducing the amount of norepinephrine (NE) release and thus decreasing sympathetic outflow to the heart. The reduction in sympathetic outflow leads to decreased peripheral vascular resistance, decreased blood pressure, and decreased heart rate.

Use: It is a medication used to treat high blood pressure, attention deficit hyperactivity disorder, drug withdrawal (alcohol, opioids, or smoking), menopausal flushing, diarrhea, and certain pain conditions.

# **Oxymetazoline**

### MOA

A direct-acting sympathomimetic amine. Xylometazoline acts on alpha-adrenergic receptors in the nasal mucosa to produce vasoconstriction, resulting in decreased blood flow and decreased nasal congestion.

### Uses

Xylometazoline nasal (for use in the nose) is used to treat stuffy nose caused by allergies, sinus irritation, or the common cold.

# MOA

Similar to xylometazoline Uses

Similar to xylometazoline

# **Hydroxyamphetamine**

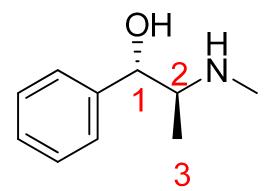
# HO 1 6 5 NH<sub>2</sub>

MOA- It is an indirectly acting sympathomimetic drugs. When it is applied topically to the eye it stimulates the release of norepinephrine from adrenergic neuron that results in stimulation of both  $\alpha$  and  $\beta$  receptor. Stimulation of  $\alpha$  receptor causes dilatation of pupil.

Uses- It is used mainly as eye drop for diagnostic purpose.

It causes dilation of eye pupil before surgery.

# **Pseudoephedrine**



MOA- It is an indirectly acting sympathomimetic drug. It releases nor-epinephrine from nerve endings.

Uses- it is used as nasal decongestant.

It is used for stuffy nose, allergy, sinus irritation, common cold and rhinitis (running nose).

# **Ephedrine**

### MOA

Ephedrine is a mixed action sympathomimetic drug. It acts as an agonist of  $\alpha$  and  $\beta$  receptor. It also enhances the release of norepinephrine from the adrenergic neuron.

### Uses

It has been used in the treatment of several disorder including asthma, heart failure, rhinitis and urinary disorder.