

# Sympathomimetic eyedrops and their mechanism of action on the Iris

## Alpha-1 Adrenergic Agonists

- cause vasoconstriction, mydriasis and uterine contractions
  - Phenylephrine (neoynepherine): Alpha-1 receptor agonist
  - Other similar drugs: Dipivefrin, naphazoline

## Alpha-2 adrenergic agonists

- have more effects on CNS
  - Apraclonadine: weakly binds to Alpha-1 receptors
    - Will cause dilation in Horner syndrome pupil due to this binding effect and upregulation of the receptor that occurs 2-5 days after sympathetic block
  - Bromonidine (Alphagan P) is similar with less Alpha-1 effect on pupil

## Indirect Acting Agents

- Cocaine: blocks reuptake of norepinephrine
  - causes dilation in normal pupil but not in a Horner syndrome pupil
- Amphetamine: causes release of and blocks reuptake of norepinephrine
  - causes dilation in normal pupil but not in a Horner syndrome pupil.

drugs

From:  
<https://childreneye.org/wiki/> - **Children's Eye Wiki**

Permanent link:  
[https://childreneye.org/wiki/doku.php?id=sympathomimetic\\_eyedrops](https://childreneye.org/wiki/doku.php?id=sympathomimetic_eyedrops)

Last update: **2018/10/14 20:02**

