

# ANISOCORIA

## (Anisocoria = unequal size of the pupils)

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Anisocoria may cause a vexing problem for ring physicians.  
A careful medical examination can stratify the etiology and the decision: urgent referral (imaging), or routine follow-up care.

### Pathophysiology:

Pupil size is governed by parasympathetic (pupilloconstrictor) and sympathetic pupillodilator).

### Physiologic anisocoria:

- occurs 20% of the population
- response to light and near testing is normal
- difference size of the two pupils is less than 2mm
- may depend on either the amount of ambient light or the time of observation

### Pathologic anisocoria (less common).

- **Local ophthalmic conditions:**
  - Iris sphincter spasm caused by an inflammation within the anterior chamber
  - Acute closed-angle glaucoma
  - Congenital malformation of the iris
  - Postoperative changes
  - Posttraumatic mydriase
- **Mydriasis**
  - **Adie's tonic pupil**  
most cases are idiopathic but associations are present with viral infections or diabetes, herpes, giant cell arteritis, alcoholism, neurosyphilis
  - **Third nerve palsy:**  
Ptosis, diplopia, pain and restricted extra ocular motility
  - **Pharmacologic mydriasis:**  
Atropinic drop; sympathomimetics; anticholinergic agents; narcotics



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- **Miosis:**
  - **Horner syndrome** ( disruption of the sympathetic innervation at any place along the pathway) = ptosis, miosis, facial anhydrosis, heterochromia
  - **Argyll-robertson pupil** (neurosyphilis)
  - **Iritis** (traumatic, idiopathic, associated with systemic disease)
  - **Traumatic pupillary rupture**
  - Pharmacologic miosis (cholinergic glaucoma medications)

In boxing:

Anisocoria is :

- traumatic--- **If traumatic, Refer to hospital**
- If first time---- **refer to hospital**
- Pre existing, and known----OK

**those characteristics must be notified in the record book.**