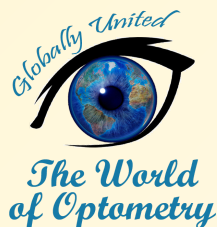
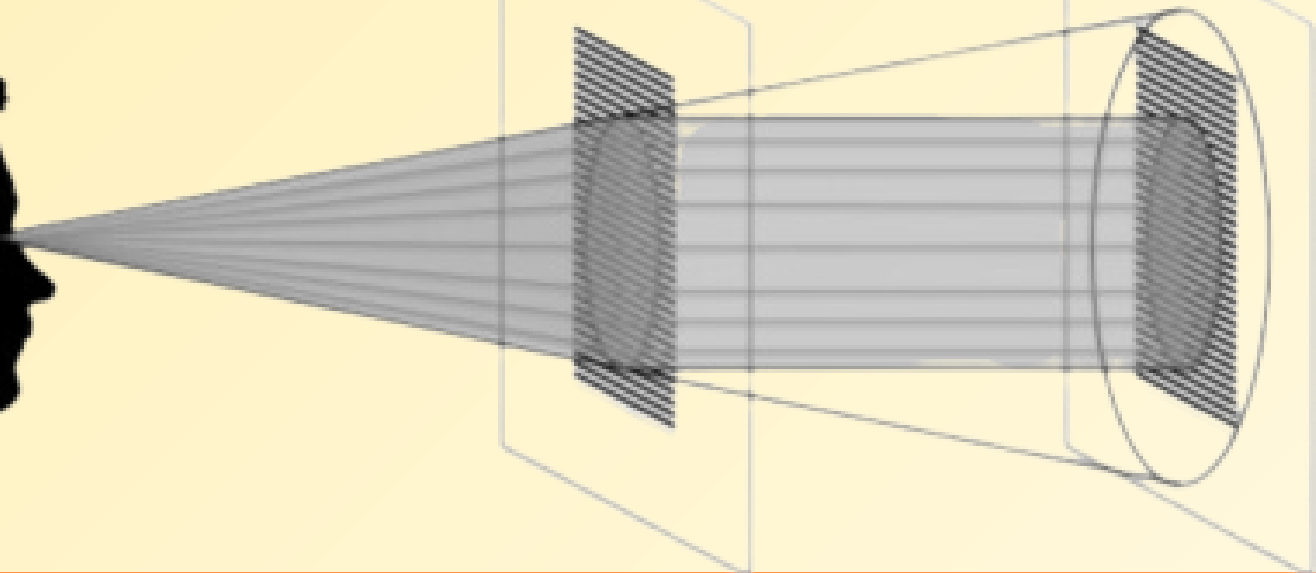


# TWOP Discussion

## FUNCTIONAL VISUAL DISORDERS



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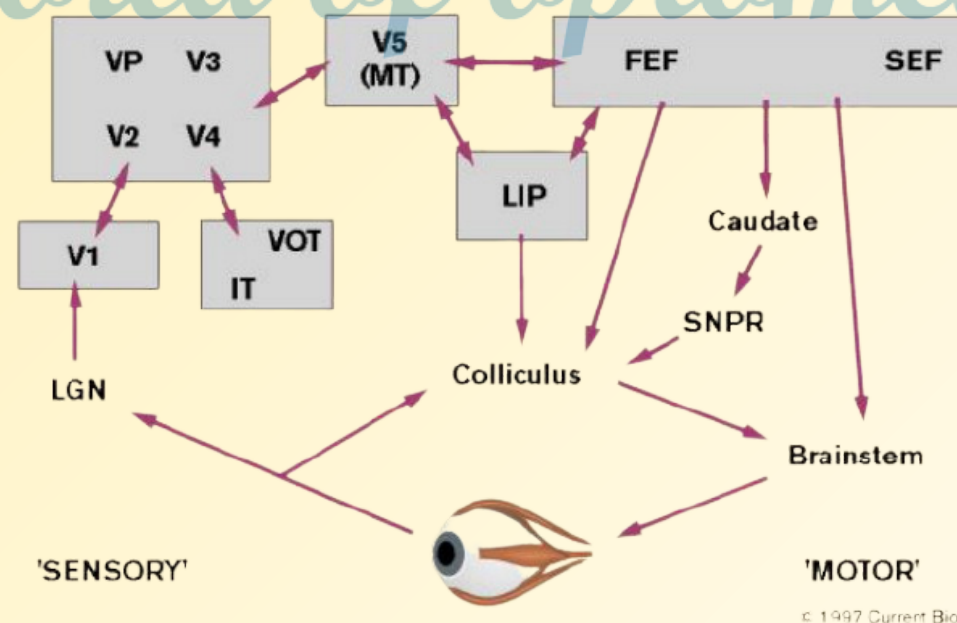
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# INTRODUCTION

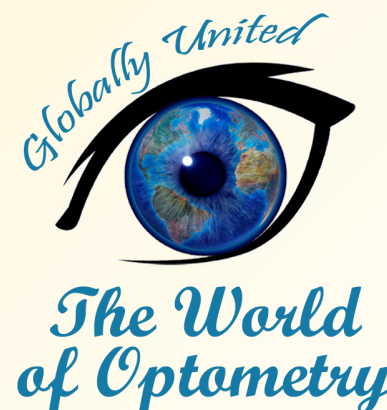
Visual complaints that have no physiologic or organic basis are called functional.

**Malingering** is willful feigning or exaggeration of symptoms for the purpose of a consciously desired end whether monetary or otherwise.

**Hysteria** is a subconscious expression of non-organic signs or symptoms usually involving loss or alteration of sensorimotor functions.



c. 1997 Current Biology



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# SYMPTOMS

Symptoms are generally precipitated by psychological stress and the patients characteristically exhibit 'La Belle Indifference' i.e. the patients are unconcerned about their symptoms.

**Munchausen's** syndrome is a condition where the patient fabricates false symptoms and signs or self harms with the view of drawing medical attention. It is at times very difficult to distinguish malingering from hysteria, both entities form part of the spectrum of functional or nonorganic eye disease.

The approach to a patient with functional disorder can be divided into the following steps:

- History taking
- Examination of the afferent visual pathway
- Examination of ocular motility and alignment
- Examination of pupils and accommodation
- Examination of eyelid position and function
- Examination of visual field defects.
- The severity of the patient's symptoms seems exaggerated, e.g. if a patient has received a trivial trauma to the eye and he complains of having no vision in that eye.
- Some secondary gain seems to be present e.g. if the patient appears to be more concerned with whether a medicolegal case can be established than with his symptoms.



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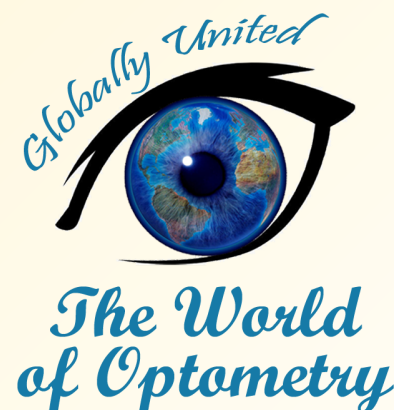


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# EXAMINATION OF THE AFFERENT VISUAL PATHWAY

- The examination of the afferent visual pathway can be divided into the following groups:
- **Patient with complete bilateral blindness, test include:** Observation, Certain reflexes, Proprioception tasks, Pupillary reaction, Optokinetic nystagmus test, Mirror test, VEP testing
- **Patient with monocular blindness, test include:** Fixation test, Diplopia Test, Fogging test, Colour test : Duochrome test, Stereopsis, Afferent pupillary defect
- **Patient with monocular & binocular reduced vision, test include:** Bottom up acuity testing, Visual aids, Varying the viewing distance,





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# EXAMINATION OF OCULAR MOTILITY AND ALIGNMENT

- **1. Voluntary Nystagmus**
- Characterised by irregular bursts of rapid frequency, low amplitude, pendular eye movements.
- Mostly, the movements are horizontal but they can be vertical and torsional.
- The movements are bilateral and conjugate.
- Associated at times with convergence, fluttering of eyelids, blinking and strained facial expressions.
- **2. Voluntary gaze palsy**
- The patient complains of inability to move the eyes in some direction either vertical or horizontal.
- This can be tested by Doll's Head Phenomenon, Optokinetic testing, Mirror tracking and caloric testing.

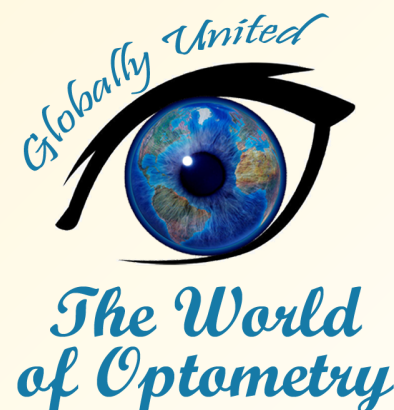
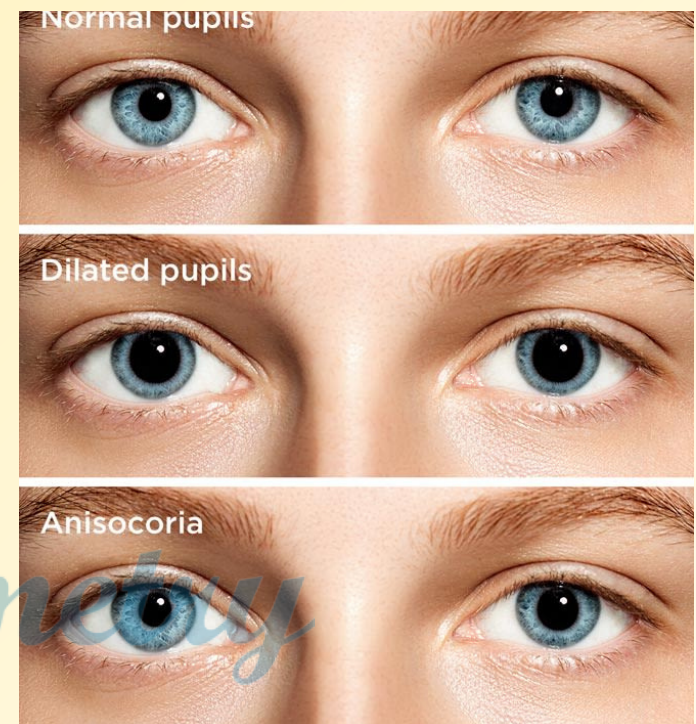


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# EXAMINATION OF PUPIL AND ACCOMMODATION

## Fixed, Dilated Pupil

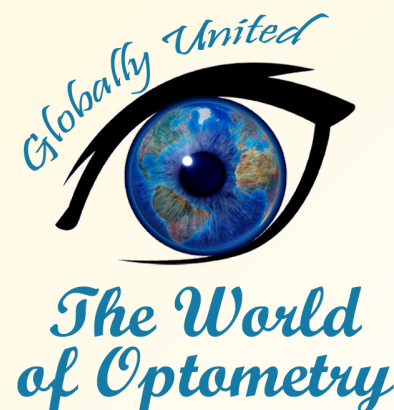
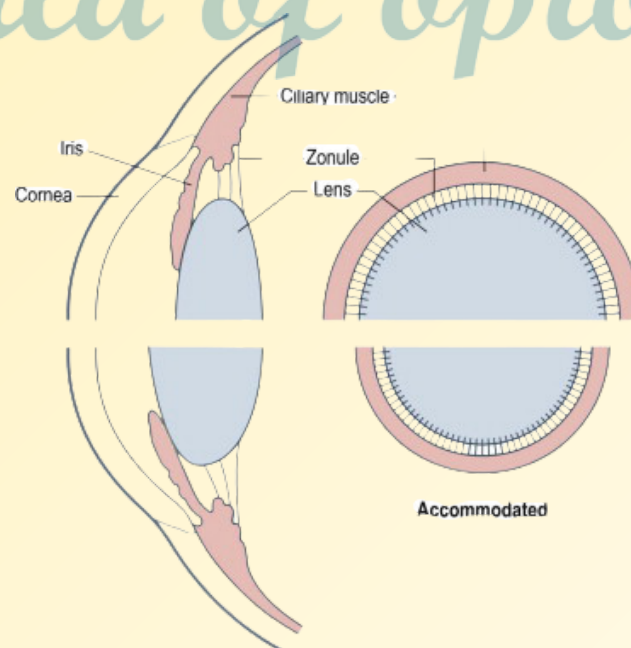
- Generally, the main differential diagnosis of fixed, dilated pupil are three.
- Voluntary pharmacological blockade.
- Oculomotor nerve palsy.
- Adie's pupil.
- To distinguish between the three, 1% and 0.1% Pilocarpine is used. The eye with the pharmacological blockade does not respond to Pilocarpine whereas the eye with oculomotor third nerve palsy constricts on putting 1% Pilocarpine and Adie's pupil constricts with 0.1% Pilocarpine.



# CHANGES IN ACCOMMODATION

## Spasm of Accommodation

- Characterised by increased convergence, miosis and induced myopia
- There is no abduction deficit on testing the eye monocularly
- Patient may have diplopia and micropsia
- DD: 6th nerve palsy
- Treatment : Involves bifocals, atropine drops and medial rectus injection with Botulinum toxin.





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# EXAMINATION OF EYELID POSITION AND FUNCTION

- **Voluntary Ptosis**

In voluntary ptosis, there is no overaction of frontalis; hence there is no appearance of furrows on the forehead.

Voluntary Blepharospasm

It may be unilateral/bilateral

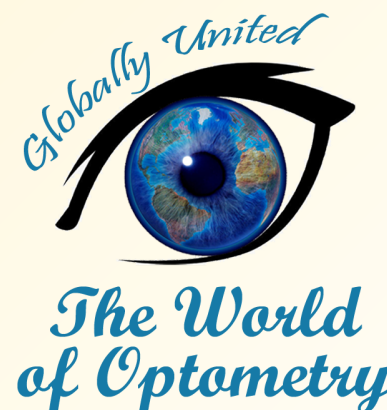
Pressure over the supraorbital notch is often useful in inducing a patient with nonorganic blepharospasm to raise the eyelids.

- **Patient with Visual Field Defects**

Sometimes, patients present with complaints of difficulty in seeing part of the visual field. The problem may be binocular but is more commonly unilateral.

- **Monocular Visual Field Defects**

- Concentric contraction with no expansion of the field at an increasing test distance
- Spiralling of isopters
- Crossing of isopters.

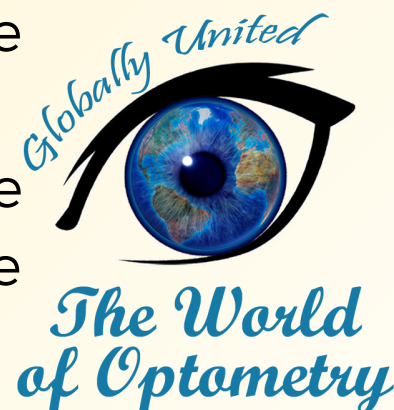




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# BINOCULAR VISUAL FIELD DEFECTS

- The testing is done with Lister's Arc Perimeter or Goldman Perimeter
- Normal binocular field: Measures 180 degree in width with no blind spots due to overlap of the visual fields
- Normal monocular field: Extends more temporally as there is no obstruction to the field of vision
- True monocular blindness: Binocular perimetry shows blind spot of blind eye with loss of temporal crescent of the blind eye
- Functional monocular blindness: Binocular perimetry reveals a full visual field without the blind spot and temporal crescent
- True bitemporal hemianopia: Binocular perimetry shows a wide central field with narrow zone of loss of temporal field
- Functional bitemporal hemianopia: Binocular perimetry shows narrow central field with wide zone of loss of temporal field
- Remember, automated perimetry cannot differentiate functional from organic field loss
- other ways of checking for visual field testing like confrontation testing Tangent screen testing can also be employed.



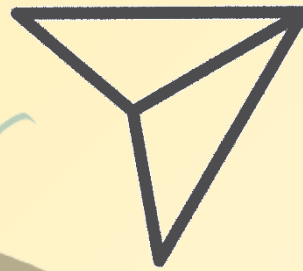
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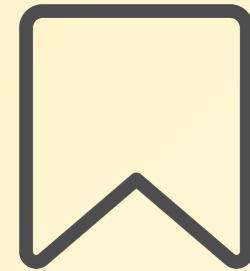
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