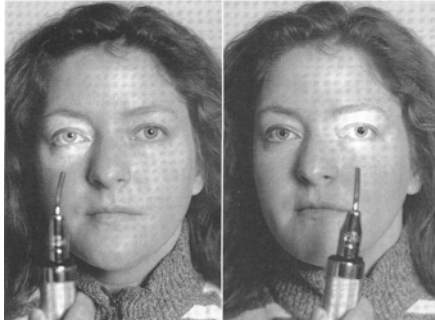


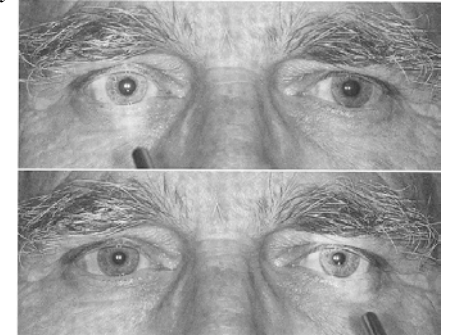
Relative Afferent Pupillary Defect

- *Most useful in patients with asymmetric or monocular eye disease (optic nerve or retinal)*
- *Response is compared “relative” one eye to the other* (Clinical Decisions in Neuro-Ophthalmology 1992)



Relative Afferent Pupillary Defect

- *Sometimes the difference between the two eyes is subtle*
- *When the difference is extreme, the pupil in the eye with the RAPD will actually be seen to dilate when the light is swung its way* (Neuro-Ophthalmology The Requisites 2000)

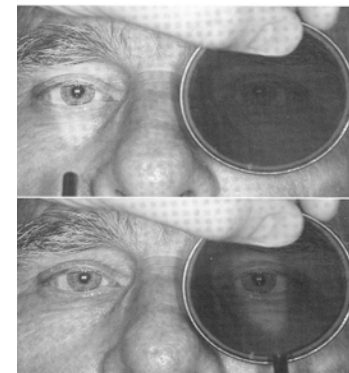


Relative Afferent Pupillary Defect

- *The depth of the RAPD is quantitatively measured with neutral density filters*

Relative Afferent Pupillary Defect

- *Neutral density filters of increasing density are placed in front of the unaffected eye to dim the light stimulus sufficiently to neutralize the RAPD* (Neuro-Ophthalmology The Requisites 2000)



Relative Afferent Pupillary Defect

- Optic Neuritis
- Ischemic Optic Neuropathy
- Chiasmal Area Tumors
- Retinal Artery or Vein Occlusion
- Retinal Detachment

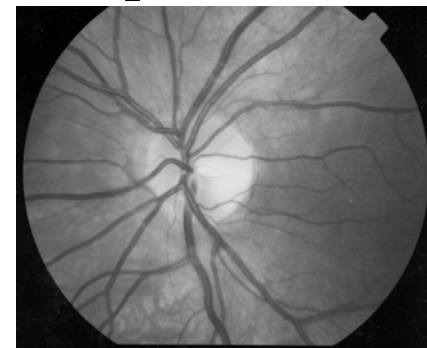
Optic Nerve

- Anterior surface of optic nerve head clinically visible-- known as optic disc or papilla
- 1.5-2mm in diameter
- Contains approx. 1.2 million axons
- Axons of retinal ganglion cells form bundles that constitute the nerve fiber layer
- Exit at level of optic nerve head--scleral canal

Optic Nerve

- The larger the scleral canal, the more space present in the center of the disc, resulting in a larger physiologic cup
- Conversely, a small scleral canal gives the appearance of a crowded optic nerve head with a small to absent physiologic cup

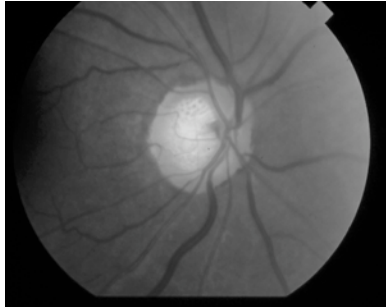
Optic Nerve



Normal-appearing optic disc

Absent physiologic cup

Optic Nerve



- Normal-appearing optic disc
- Large cup-to-disc ratio

Anomalous Optic Nerves

- **Best divided into:**
 - Those with disc elevation
 - Those without disc elevation

Optic Nerve Head Drusen

- *calcified hyaline bodies anterior to the lamina cribosa*
- *0.3 - 1 % clinically*
- *more common in Caucasians*
- *bilateral in 75%*
- *may be inherited as AD*
- *subretinal hemorrhage or neovascularization may be present*
- *visual acuity loss rare*
- *visual field loss more common*