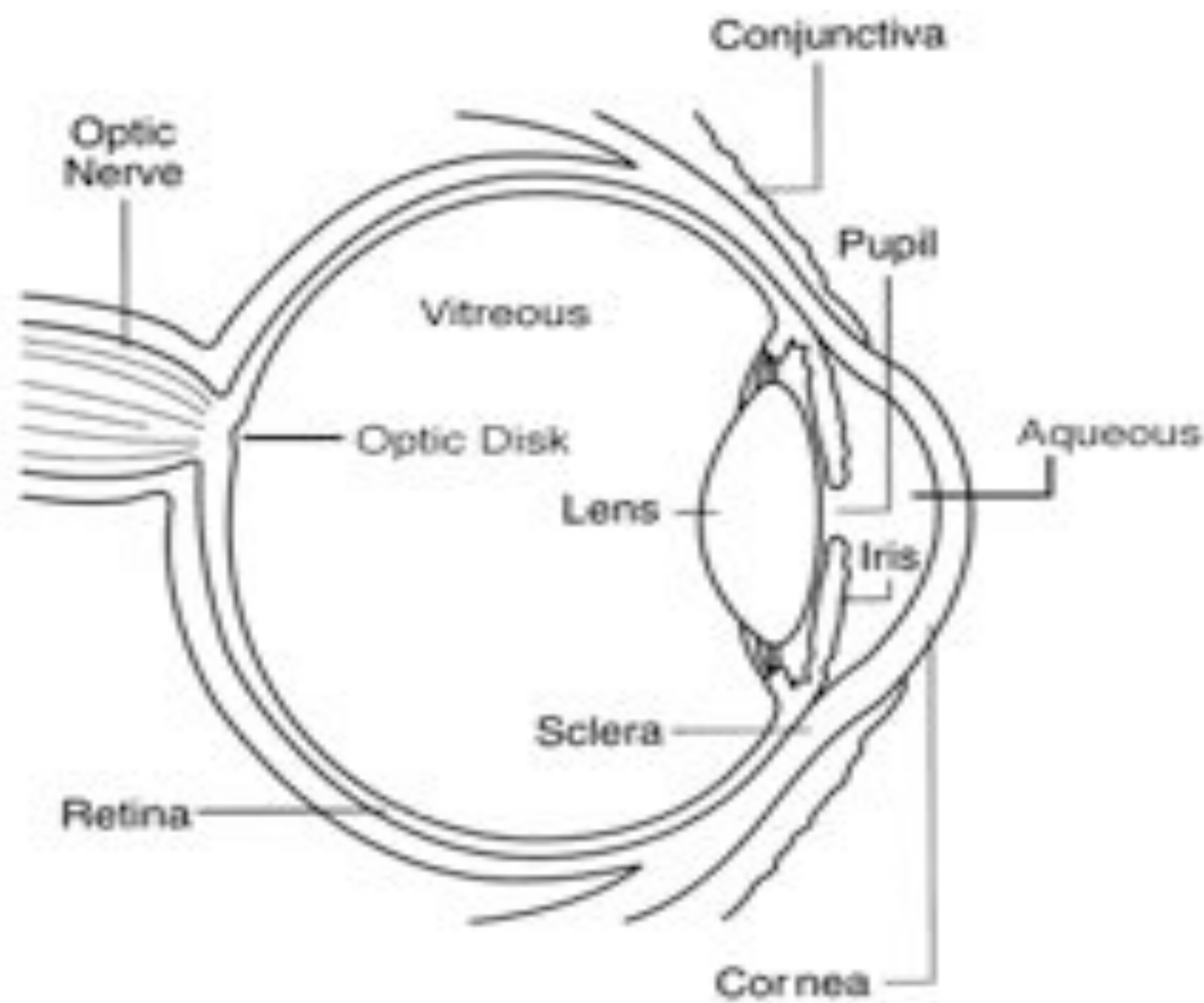


Visual issues for children with CHARGE Syndrome

AustCHARGE 2008
Christchurch, New Zealand

David Brown
Education Specialist
California Deaf-Blind Services
San Francisco State University



High Risk Signs of Vision Loss

- Atypical appearance of the eye
- Unusual eye movements
- Unusual gaze or head positions
- Absence of visually directed behaviors

The Five Types of Vision Loss

1 Loss of visual acuity:
visual images appear
blurred, visual detail is
missing







The Five Types of Vision Loss

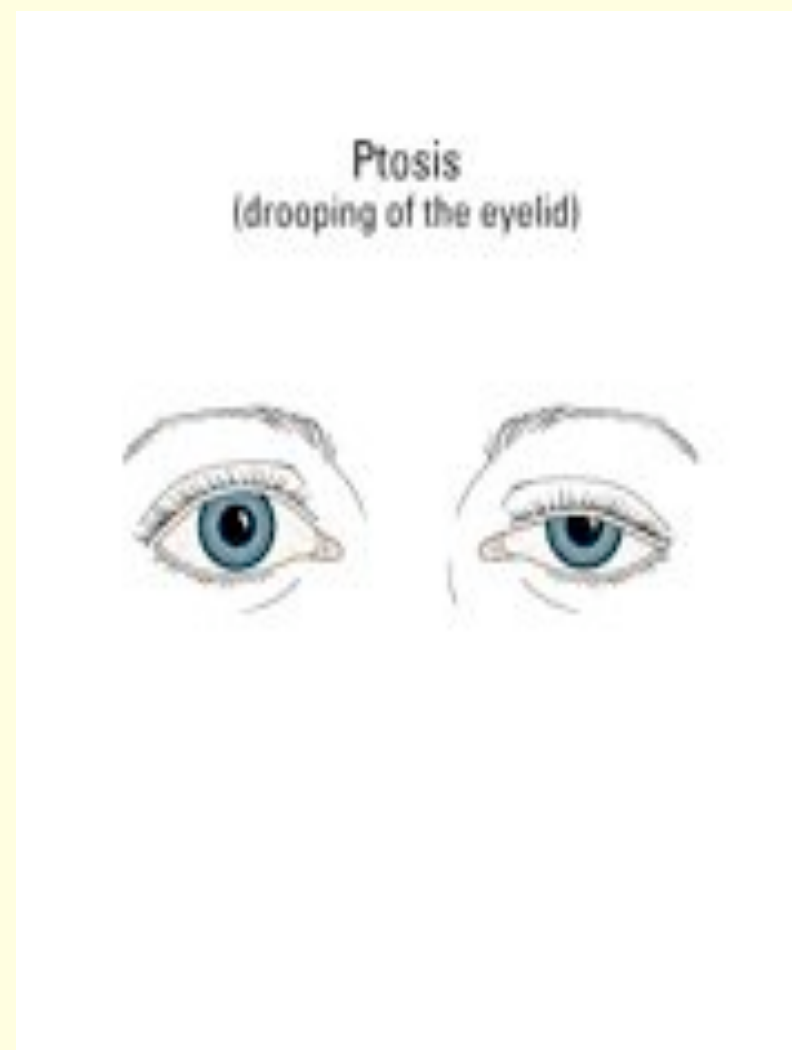
2 Loss of visual field:
part (or parts) of the
visual field is blurred
or completely missing







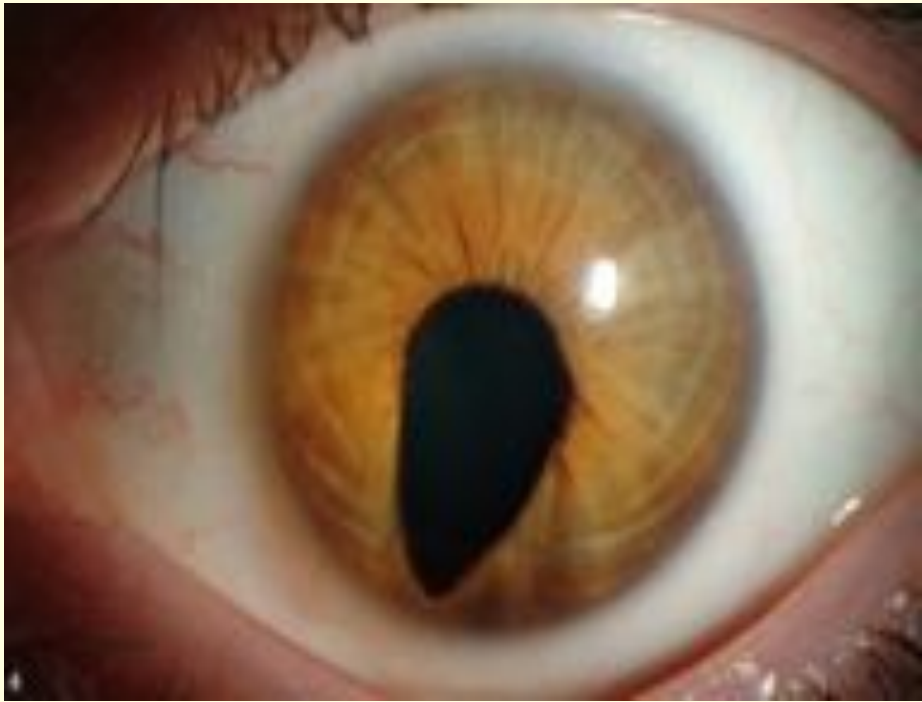
Facial palsy & ptosis



Facial palsy & ptosis



Iris coloboma



The Five Types of Vision Loss

3 Loss of contrast

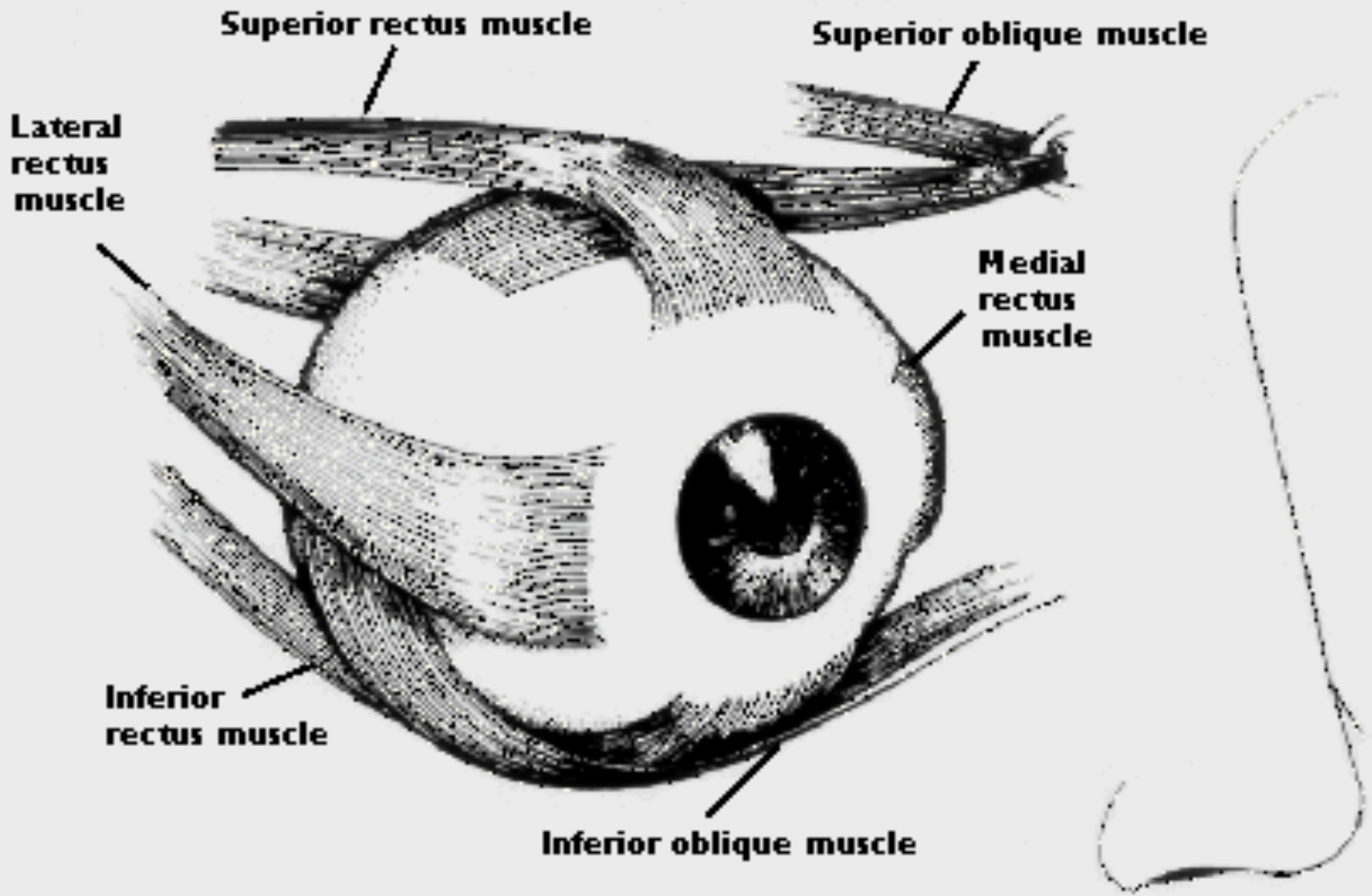
sensitivity:the relative difference between the lightness and darkness of objects and their background is hard to perceive



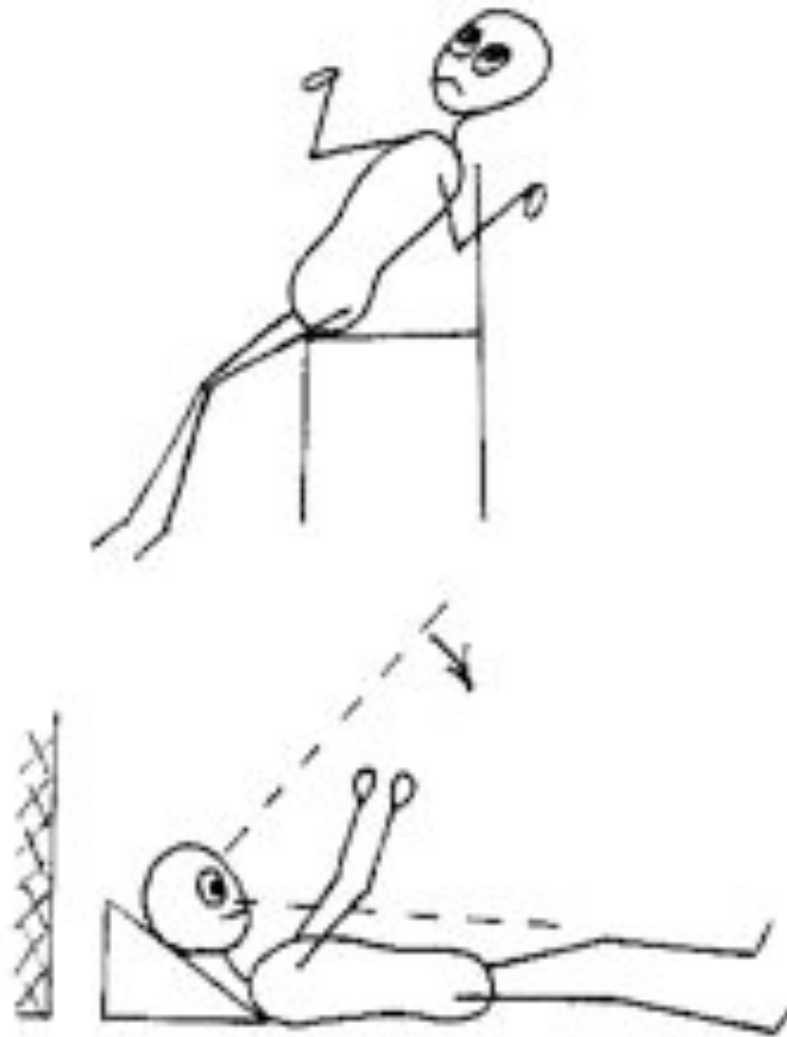
The Five Types of Vision Loss

4 Loss of ocular motor control:
the ability to control eye
movements, particularly when
performing visual tasks (eg
fixating, tracking, scanning) is
compromised

2



T Geniale (1991)



T Geniale (1991)



T Geniale (1991)



T Geniale (1991)

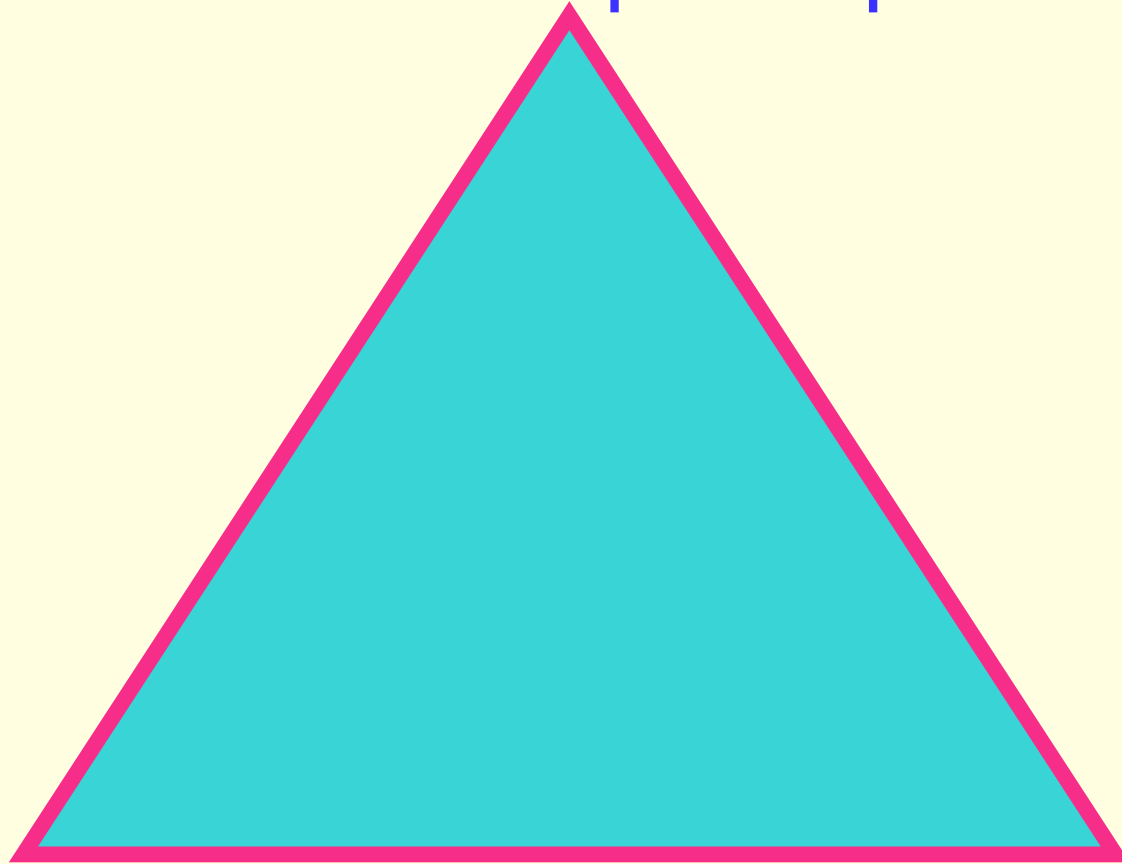


The Equilibrium Triad

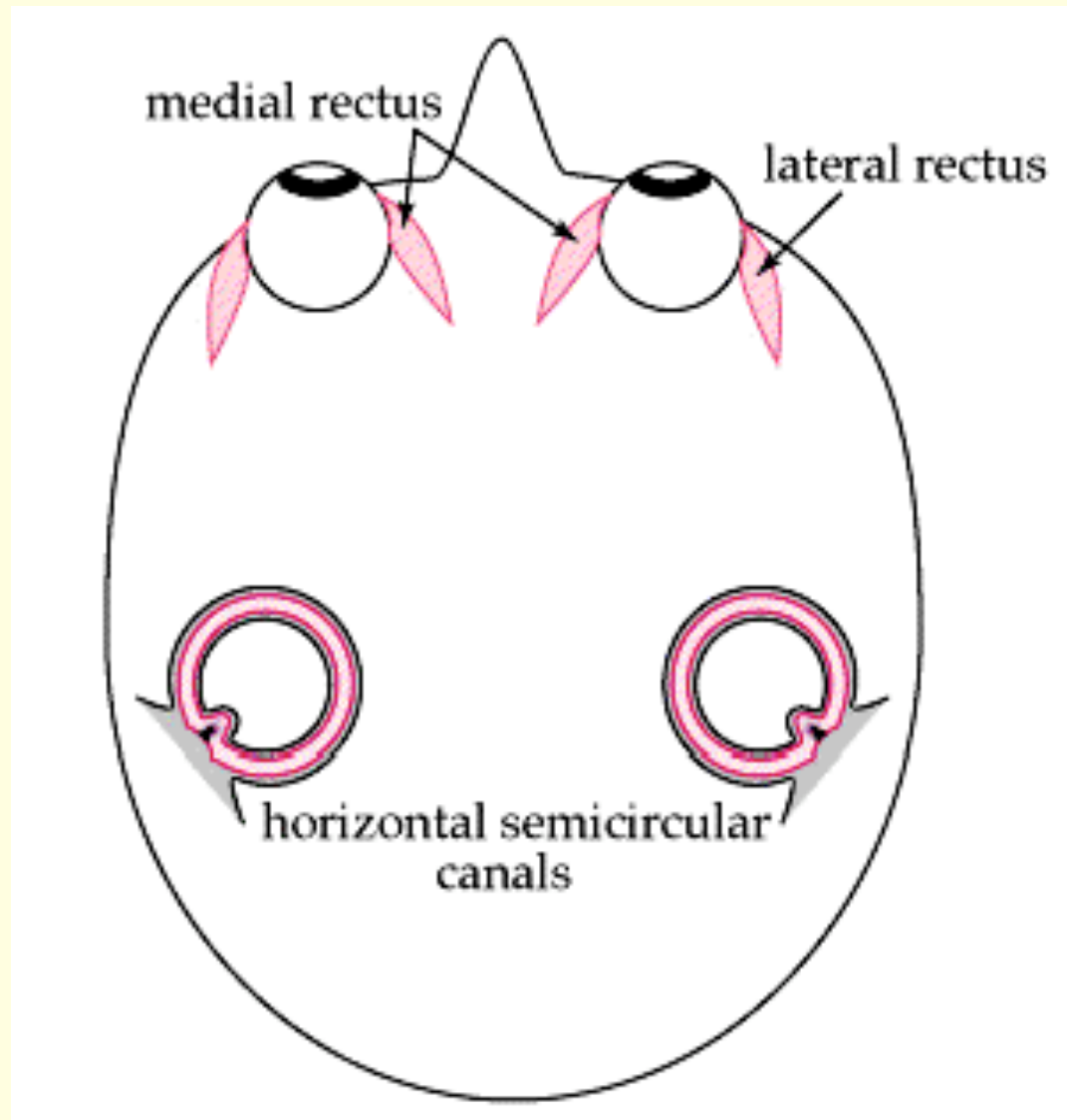
Touch/Proprioception

Vision

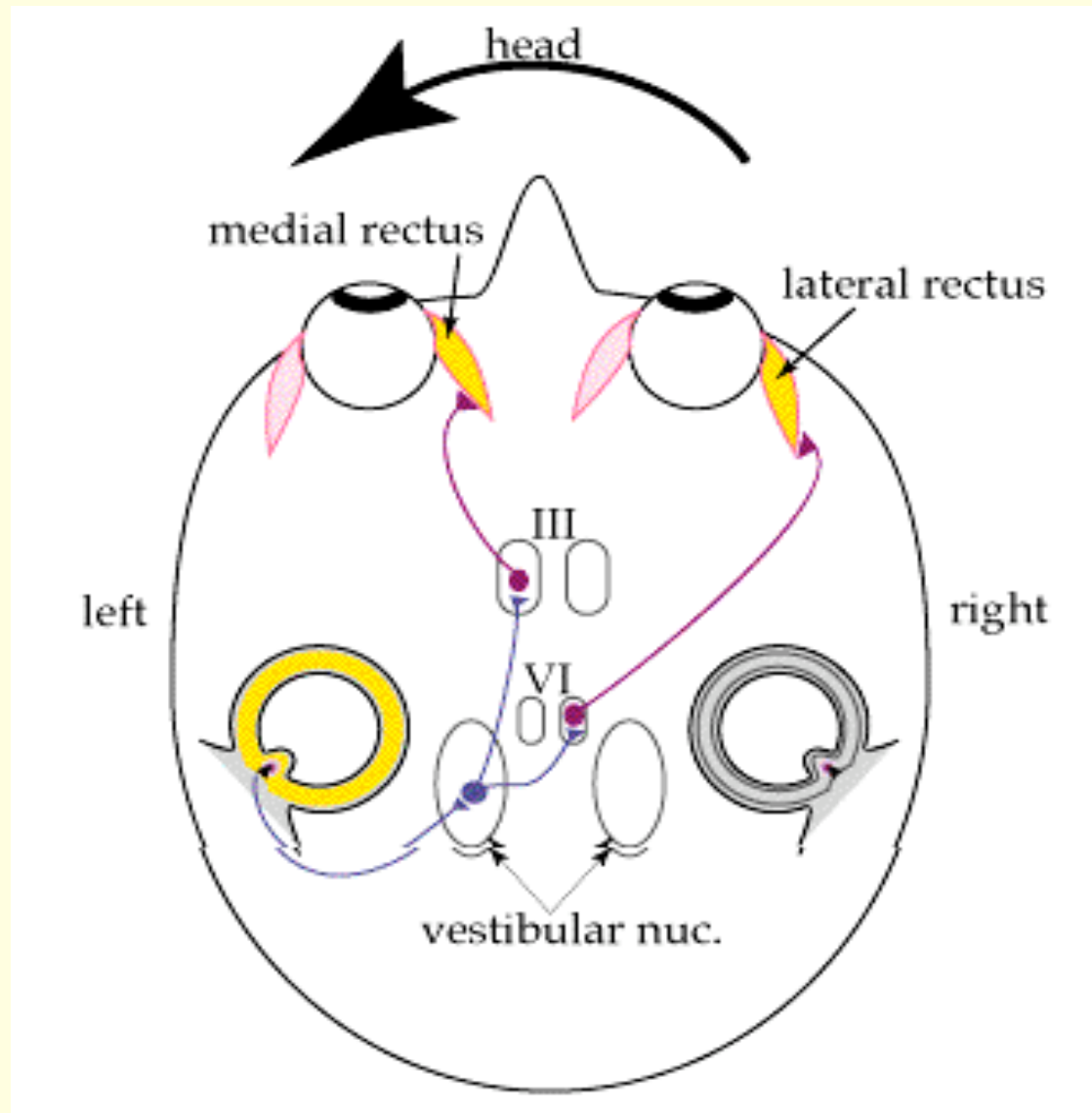
Vestibular



The Vestibulo-ocular Reflex (1)



The Vestibulo-ocular Reflex (2)





This is normal viewing posture...

...when you have no vestibular sense, upper visual field loss, poor tactile & proprioceptive perception, & low muscle tone.



The Little Room



The Be-Active Box



The Five Types of Vision Loss

5 Loss of visual processing:
the brain is unable to make
correct sense of the
information it is receiving
through the eyes

Whose perception counts?

The brain, the organ that is responsible for your conscious experience, is an eternal prisoner in the solitary confinement of the skull... and must rely on information smuggled into it from the senses...the world is what your brain tells you it is, and the limitations of your senses set the boundaries of your conscious experience.

Coren, Porac & Ward "Sensation & Perception" (1984, p2)







We don't see with our eyes -
we see with our brains

When you are assessing vision
- don't think 'eyes', think 'child'

We don't hear with our ears -
we hear with our brains

When you are assessing hearing
- don't think 'ears', think 'child'

Natalie Barraga (1976)

Visual functioning is related in part to the condition of the eye. More explicitly, visual functioning is determined by the experiences, motivations, needs and expectations of each individual in relation to whatever visual capacity is available to satisfy curiosity and accomplish activities for personal satisfaction.