

**Dr. David Brown
(USA)**

Saturday, June 19, 2021

05.00 – 06.00 p.m.

**CEST- Central European Summertime
(Germany)**

***„Visual issues for people
with
CHARGE Syndrome“***

Vision issues for children with CHARGE syndrome

June 2021

David Brown
Deafblind Educational Specialist



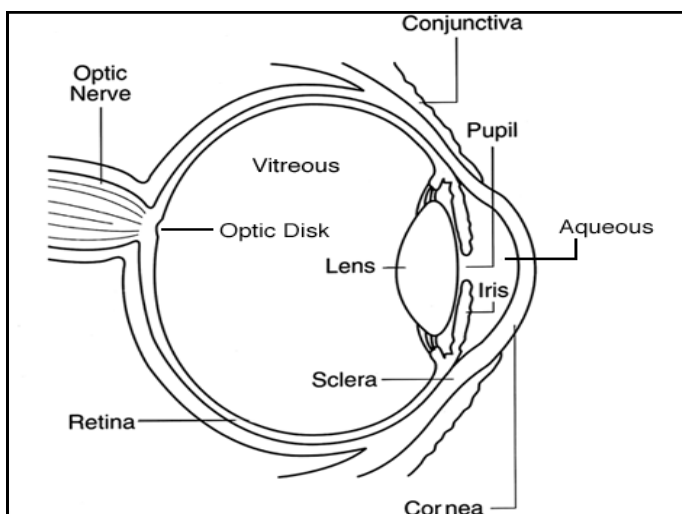
Natalie Barraga (1976)

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.

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21 CHARGE issues which can contribute to fatigue

- Visual impairment
- Hearing impairment
- Vestibular dysfunction
- Poor proprioceptive perception
- Poor tactile perception
- Low/high muscle tone
- Skeletal malformations
- Breathing problems
- Poor nutrition
- Anaemia
- Hypoglycaemia
- Hypothyroidism (slow metabolism, low energy)
- Sleep problems
- Heart problems
- Constipation
- Gastro-intestinal issues
- Migraine
- Dental issues
- Joint pain (growth related?)
- Seizure disorder
- Medications
- Poor self-regulation

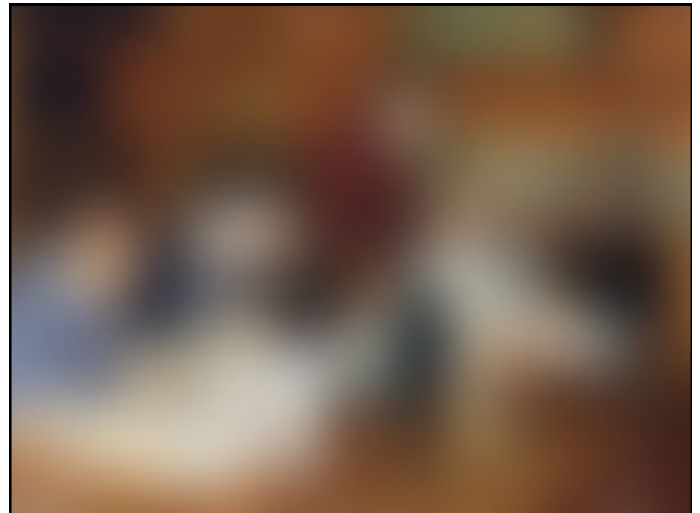


High Risk Signs of Vision Loss

- 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.



Strabismus



The Five Types of Vision Loss

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

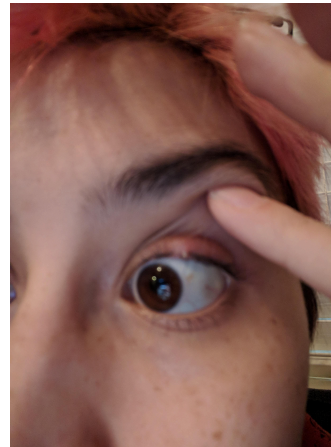
Gesichtslähmung & Augenlidlähmung

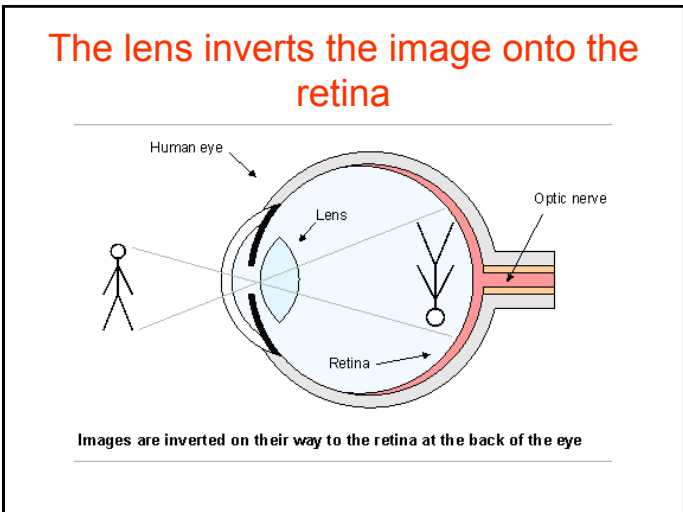
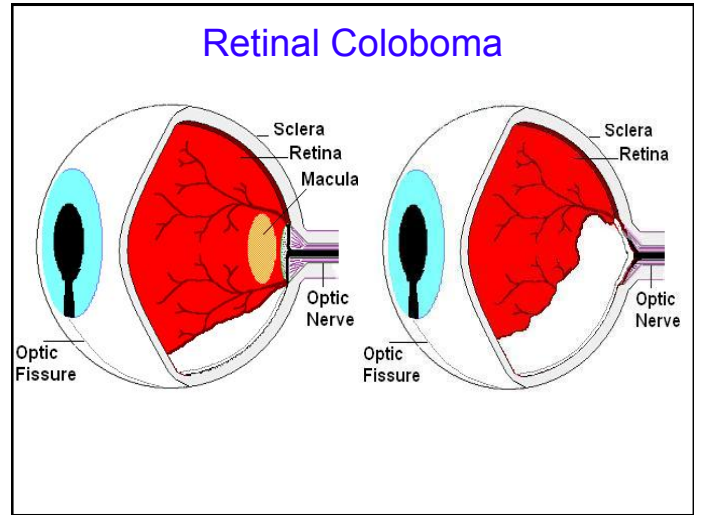


Gesichtslähmung & Augenlidlähmung



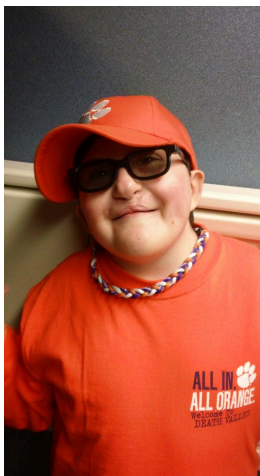
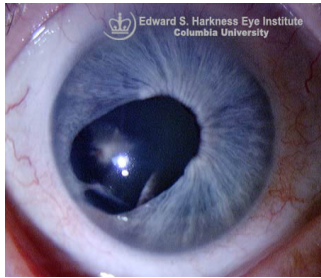
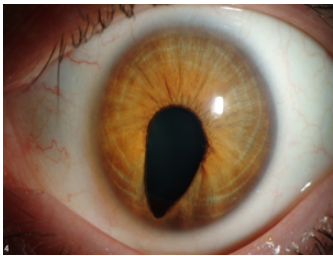
Fig: Bilateral jaw-winking in a patient with CHARGE association. Note that ptosis resolves with jaw thrust to the contralateral side.







Iris Kolobom



Grelles
Licht!

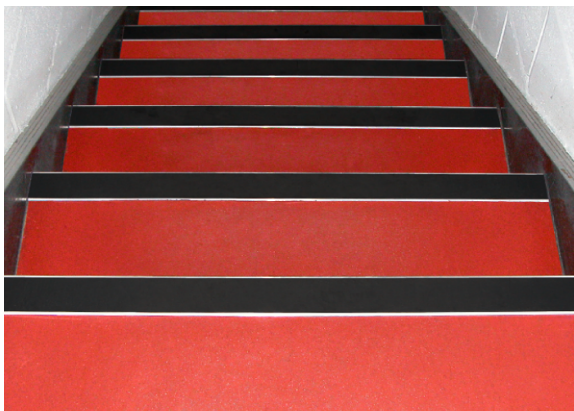


Glare!



The Five Types of Vision Loss

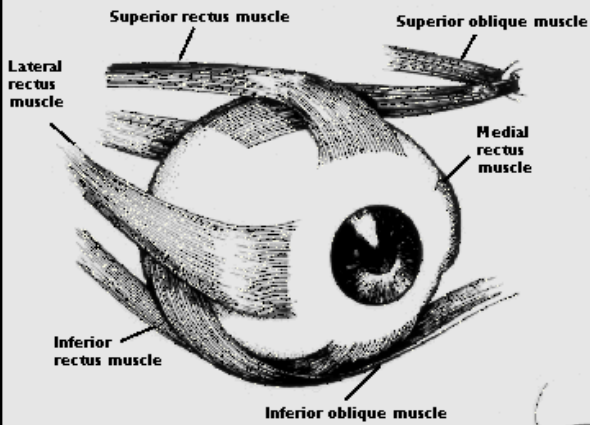
3 Loss of contrast sensitivity:
the relative difference between
the lightness and darkness of
objects and their background is
hard to perceive.



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



The Equilibrium Triad

Touch/Proprioception

Vision

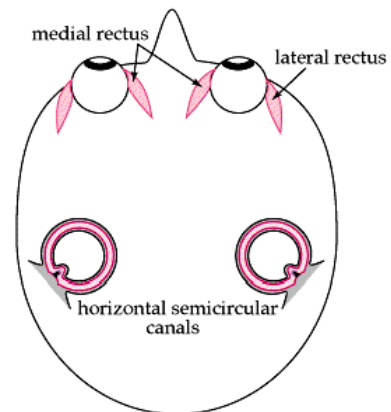
Vestibular

Vestibulo-ocular Reflex (VOR)

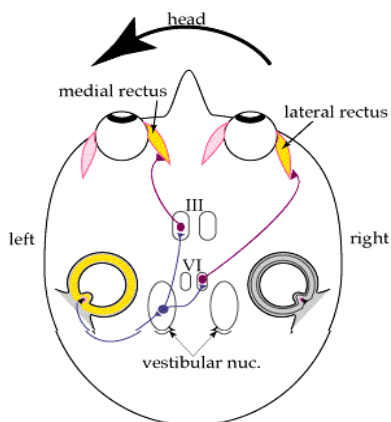
- Normal head rotation: eyes move in opposite direction of head to stabilize retinal image (VOR)
- Conflicting sensory information from visual and vestibular senses is a problem

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Der Vestibulookkuläre Reflex (1)



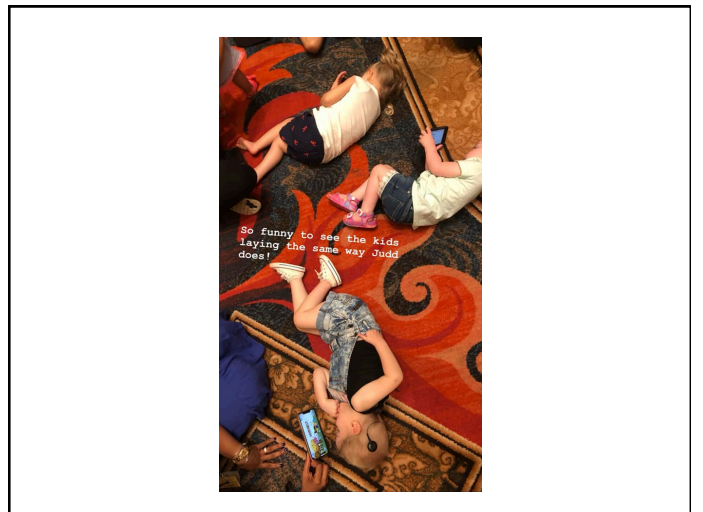
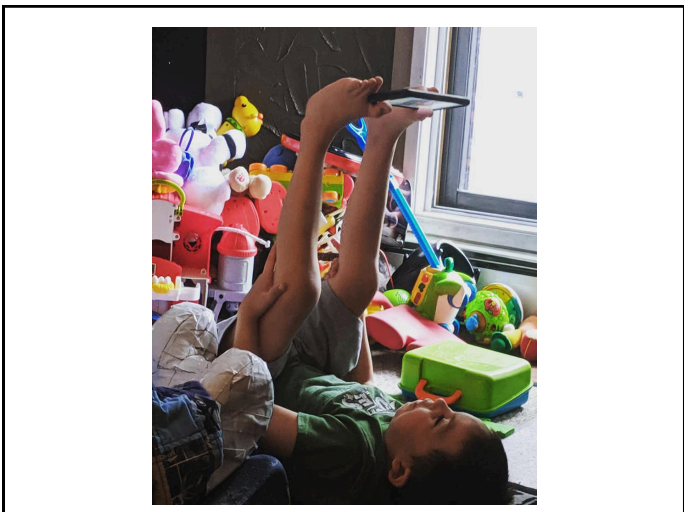
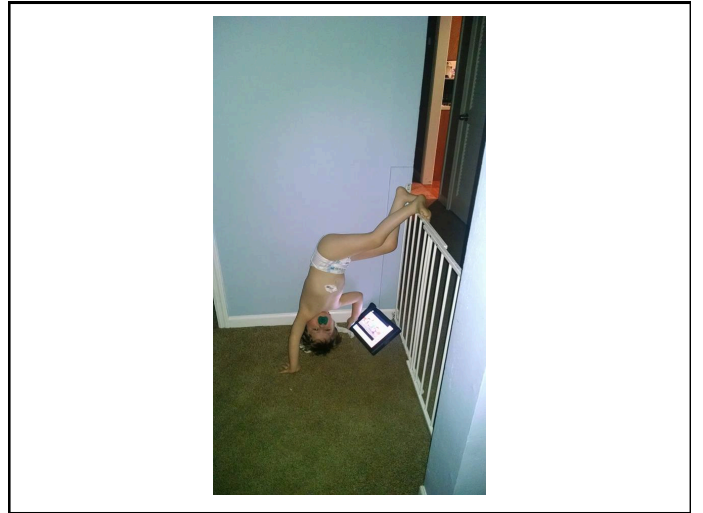
Der Vestibulookkuläre Reflex (2)



This is normal viewing posture...

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

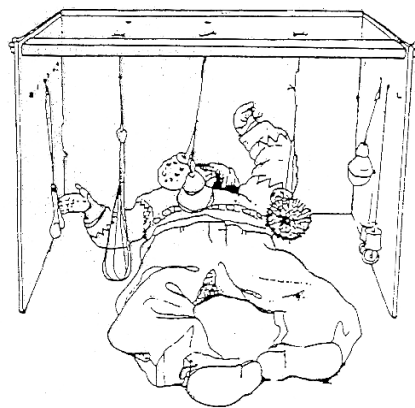




The Little Room (Der kleine Raum)



The Be-Active Box (Sei aktiv Box)

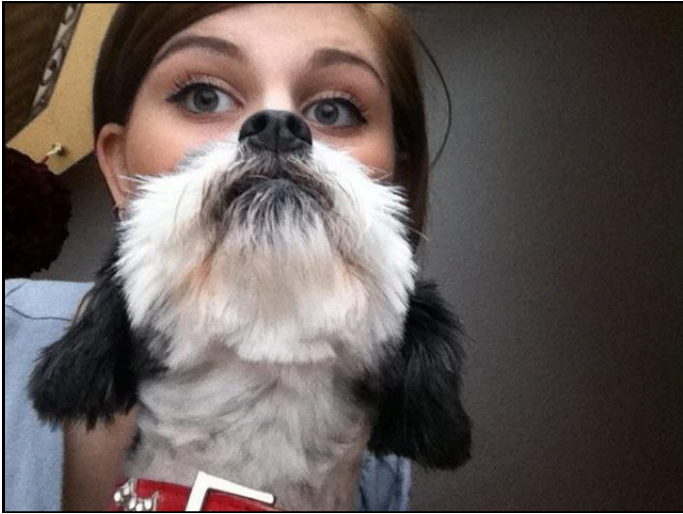


You fix the body.....
to fix the head.....
to fix the eyes.....
so you can use your vision
in the best, most reliable,
and most comfortable way
possible.

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.





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

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

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

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

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What do you do?



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