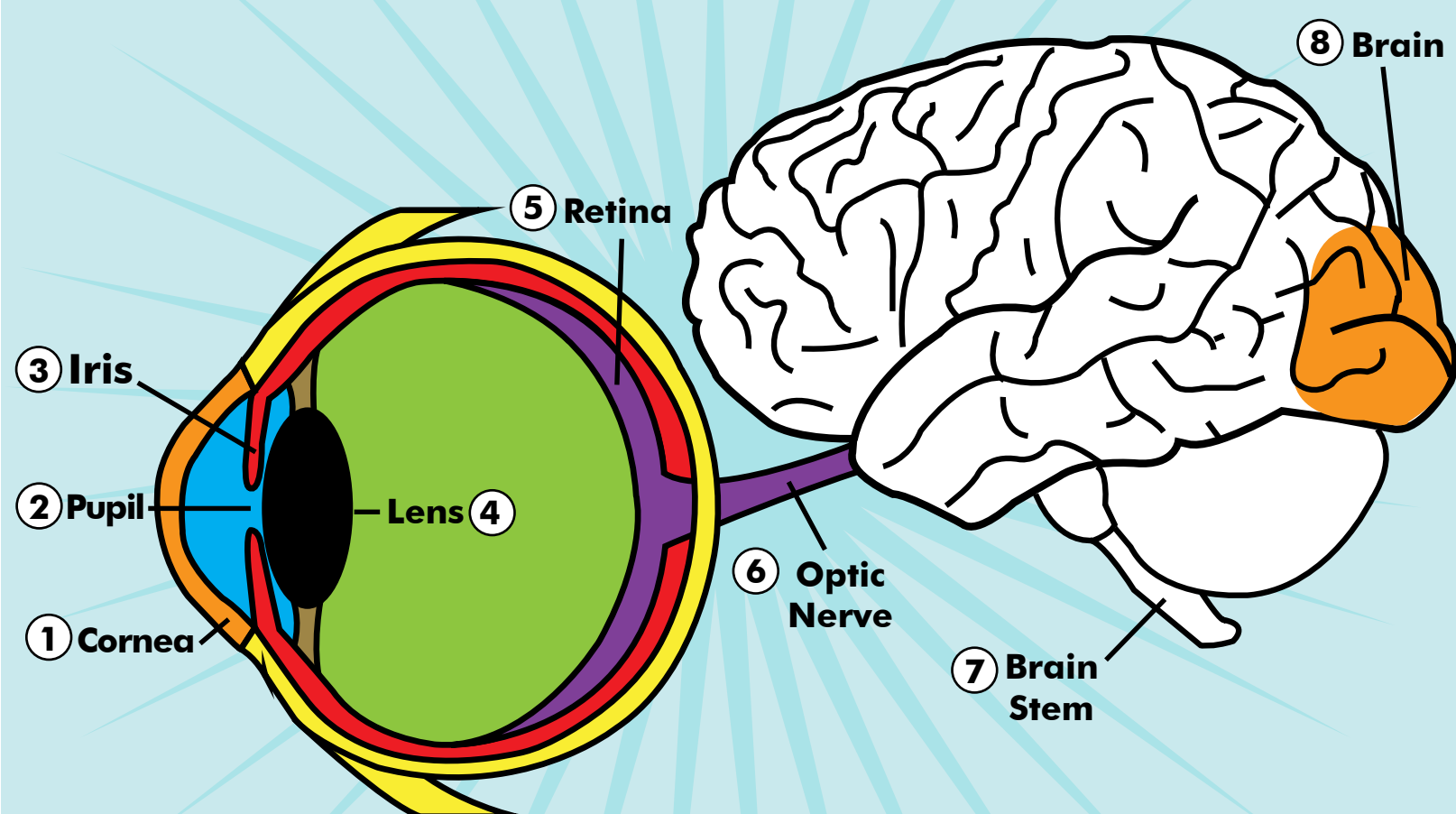


SENSORY PROTEINS

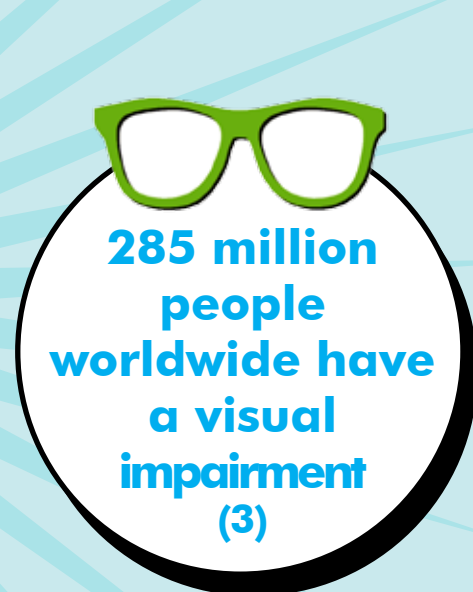
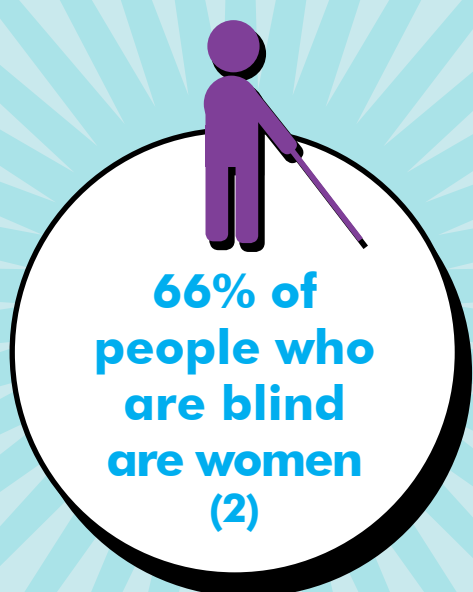
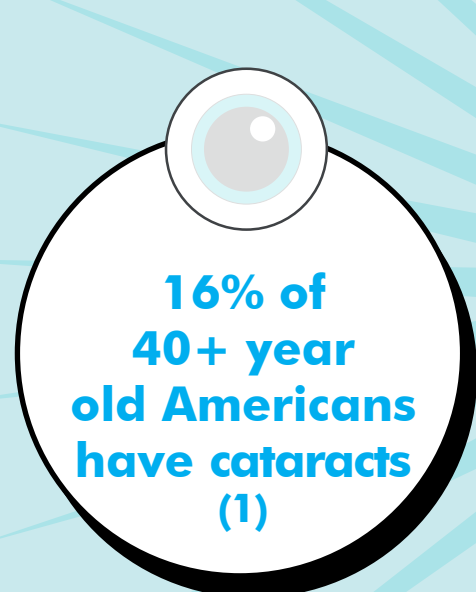
VISION

Vision involves several parts of the eye processing light which send signals to the brain via the optic nerve to process information.



PROCESS OF SEEING (4)

- 1 Cornea:** External surface of the eye where reflected light from an object enters.
- 2 Pupil:** Aperture that allows refracted light to enter the eye.
- 3 Iris:** Muscle that controls pupil size & amount of light coming through.
- 4 Lens:** Changes shape to create a sharp image on the retina.
- 5 Retina:** Converts electrical impulses from various nerve cells.
- 6 Optic nerve:** Sends impulses to the brain and brainstem.
- 7 Brain Stem:** Pretectum and superior colliculus are implicated in vision perception.
- 8 Brain:** Thalamus & cerebral cortex decode and process messages into images.



INTERESTING OCULAR RELATED PROTEINS

LRP5

Has a key role
in vascular
development in
layers of the retina (6)

Mucolipin-1

Decreased amounts
of mucolipin-1
have been
linked to MLIV (7)

Opsins

Family of GPCRs
localized to
photoreceptor cells
in the retina (8)

Bestrophin 1

Defects in the BEST1 gene
cause RP50, where
people experience night
vision blindness and loss
of peripheral/
central vision (5)

Rhodopsin

Transmembrane
photoreceptor protein that
initiates the visual
transduction cascade.
Defects in RHO may cause
congenital stationary night
blindness (9)

