



Sense Organs : The Eye

What is a sense organ?

groups of receptor cells responding to specific stimuli: in this case light

Structure

- CORNEA** - refracts light
- IRIS** - controls how much light enters pupil
- LENS** - focuses light onto retina
- RETINA** - contains light receptors
 - three types of cones
 - absorbing light of different colours for colour vision
 - rods for night vision
- OPTIC NERVE** - carries impulses to the brain

Actions

Pupil reflex

ability of the eye to respond to changes in light intensity

- Increasing
 - Iris closes further, pupil becomes smaller
- Decreasing
 - Iris opens more, pupil becomes larger

light intensity

Accommodation

ability of the eye to change its focus from distant to near objects

- near object**
 - ciliary muscles contract
 - suspensory ligaments slacken
 - muscle tension low
 - lens shape fatter
- distant object**
 - ciliary muscles relax
 - suspensory muscles tighten
 - muscle tension high
 - lens shape thinner