

OCR (B) Biology A-Level

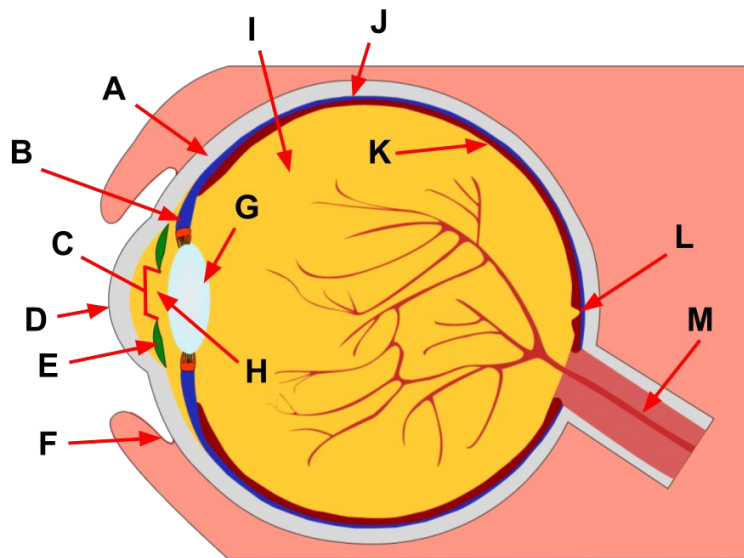
5.2.2 - Monitoring visual function

Flashcards

This work by [PMT Education](https://www.pmt.education) is licensed under [CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)

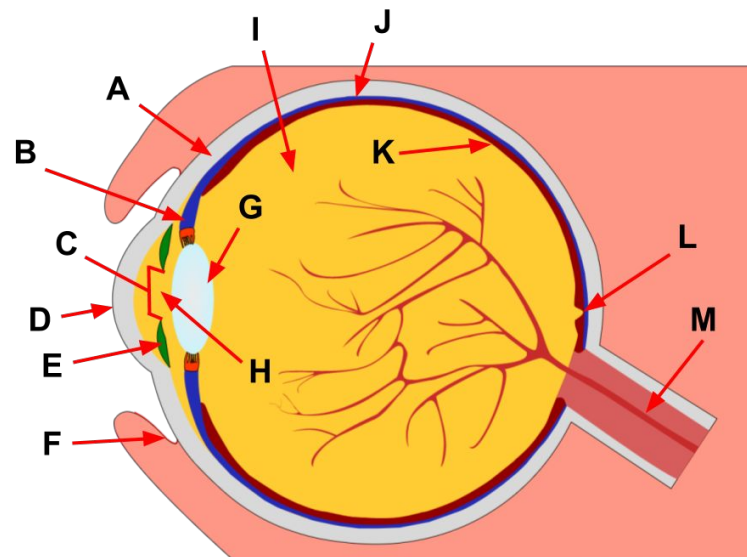


Name the structures shown on the diagram of the eye below.



Name the structures shown on the diagram of the eye below.

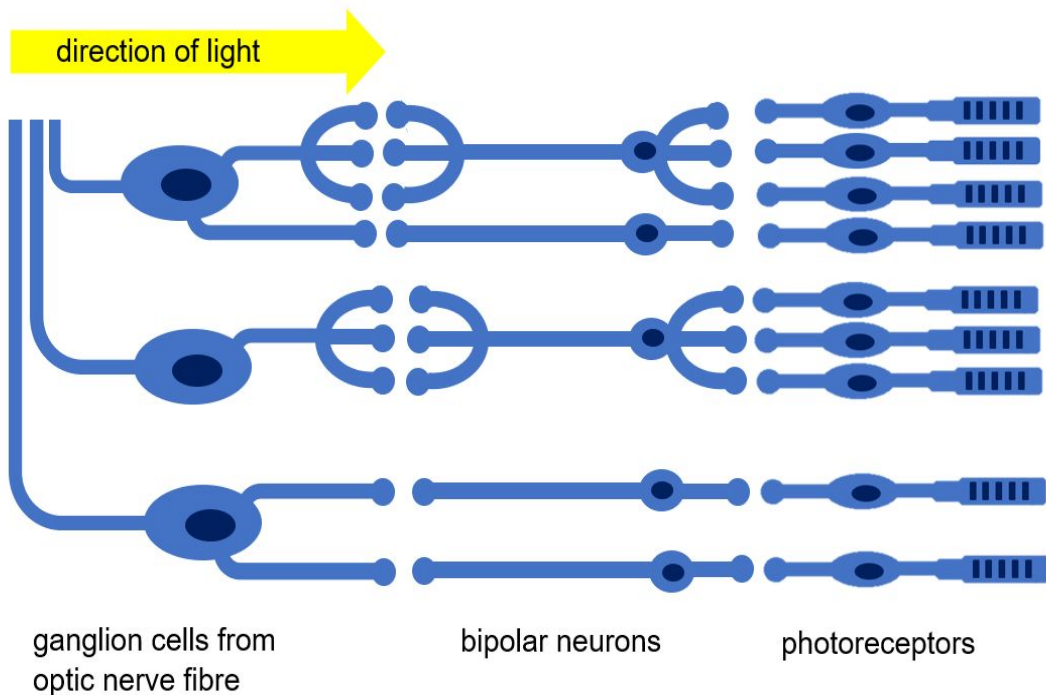
A	Sclera	H	Aqueous humor
B	Ciliary muscles	I	Vitreous humor
C	Pupil	J	Choroid
D	Cornea	K	Retina
E	Iris	L	Fovea
F	Conjunctiva	M	Optic nerve
G	Lens		



Describe the structure of the human retina.



Describe the structure of the human retina.

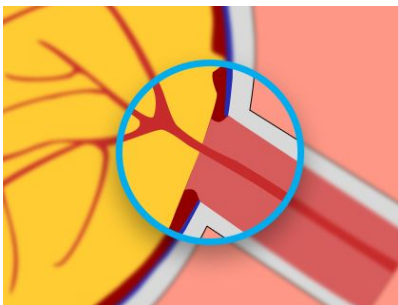


What is the blind spot?



What is the blind spot?

The area at the back of the eye where the optic nerve exits the eye. It has no rods and cones so there is no image detection.



What are transducers?



What are transducers?

Structures which convert one form of energy to another



How does the retina act as a transducer?



How does the retina act as a transducer?

The retina converts light energy into electrochemical impulses that are transmitted along the optic nerve.



What is a receptor?



What is a receptor?

A structure which detects a change in the environment



How does the retina act as a receptor?



How does the retina act as a receptor?

It detects changes in visual stimuli



What is visual acuity?



What is visual acuity?

The ability of the eye to distinguish details



How is visual acuity measured?



How is visual acuity measured?

Visual acuity is measured through a person's ability to see certain letters from a set distance. This is most commonly done using a Snellen chart but can also be done through other methods like tumbling E tests where the orientation of the letter E is recognised.



What is colour blindness?



What is colour blindness?

An inability to distinguish between different colours



How can you test for colour blindness?



How can you test for colour blindness?

- By asking the person to arrange colours in order of their shades e.g. Farnsworth-Munsell 100 hue test
- By asking a person to read the numbers contained within the Ishihara test (shown below)

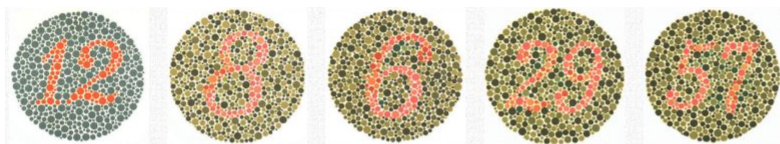


Image courtesy of <https://www.color-blindness.com>



How do OCT scans (optical coherence tomography) work?



How do OCT scans (optical coherence tomography) work?

They use light waves to take cross-sectional pictures of the inside of the eye to visualise its internal structures and to measure the thickness of the retina.



What are OCT scans used for?



What are OCT scans used for?

Diagnosing and monitoring diseases of the retina, like glaucoma and macular degeneration

