# Retinal ganglion cell

A retinal ganglion cell (RGC) is a type of neuron located near the inner surface (the ganglion cell layer) of the retina of the eye. It receives visual information from photoreceptors via two intermediate neuron types: bipolar cells and retina amacrine cells. Retina amacrine cells, particularly narrow field cells, are important for creating functional subunits within the ganglion cell layer and making it so that ganglion cells can observe a small dot moving a small distance.

Retinal ganglion cells collectively transmit image-forming and non-image-forming visual information from the retina in the form of action potential to several regions in the thalamus, hypothalamus, and mesencephalon, or midbrain.

Retinal ganglion cells vary significantly in terms of their size, connections, and responses to visual stimulation but they all share the defining property of having a long axon that extends into the brain. These axons form the optic nerve, optic chiasm, and optic tract.

A small percentage of retinal ganglion cells contribute little or nothing to vision, but are themselves photosensitive; their axons form the retinohypothalamic tract and contribute to circadian rhythms and pupillary light reflex, the resizing of the pupil.

## Types

The six types of retinal neurons are bipolar cells, ganglion cells, horizontal cells, retina amacrine cells, and rod and cone photoreceptors.

## Retinal ganglion cell damage

Retinal ganglion cell damage.

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