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# OCCIPITAL LOBE

The occipital lobe is located near the back of the head. Its primary function is visual, and it contains a sensory area that receives input from the eyes. Damage to this area often produces a ”hole” in the person’s field of vision: objects in a particular location can’t be seen, but the rest of the visual field may remain unaffected. Damage to the occipital lobe in the right hemisphere produces loss of vision in the left visual field, whereas damage to the occipital lobe in the left hemisphere produces loss of vision in the right visual field. The occipital lobe contains the complex, multifaceted neural ensembles that form the basis for human vision and visual perception.

## Function

The occipital lobes are involved in several functions of the body including:

- Visual Perception
- **Colour** Recognition
- Reading
- Reading Comprehension
- Depth Perception
- Recognition of Object Movement

The occipital lobes receive and interpret visual information. Vision is the ability to detect images of visible light. The eyes transmit this information via nerve impulses to the visual cortex. The visual cortex takes this information and processes it so that we are able to determine colours, identify objects, identify shapes, and other aspects of visual perception. The visual information is then sent to the parietal lobes and temporal lobes for further processing. The parietal lobes use this visual information in conjunction with motor processes to perform such tasks as opening a door or brushing your teeth. The temporal lobes help to connect the visual information received with memories.

## Occipital Lobe Injuries

Damage to the occipital lobes may result in a number of vision-related problems. Some of these issues include the inability to discern colours, vision loss, visual hallucinations, inability to identify words, and distorted visual perception.

# Occipital lobe syndromes

- Destructive lesions/visual deficits
- **Colour agnosia** – loss of correct colour perception, inability to name/recognize colours
- Unilateral lesions - **controlateral homonimous hemianopia** (partial or complete loss of sight in the visual field projecting in the primary occipital visual area)
- **Cortical blindness** – both primary visual areas are lesioned
  - Patients cannot process visual information and behave as in a peripheral blindness
  - Some patients try to behave as if they were able to see (do not aknowledge the blindness)
  - Anton syndrome – associates parietal lesions and sensory neglect, sometimes for other types of sensory information