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## Quadrantanopia

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### Synonyms

[Quarter visual field cut](#)

### Definition

Anopia refers to a loss of the visual field. Quadrant indicates “quarter.” Accordingly, quadrantanopia is a visual disorder involving loss of one quarter of the visual field.

### Current Knowledge

Visual disorders that involve loss of a particular spatial region, with sparing of the remainder of the visual field, tend to provide strong localizing information regarding the location of the cortical damage. Unilateral cortical lesions involving the occipital lobe will usually produce a hemi-field cut contralateral to the site of the lesions. Large lateralized lesions caused by posterior cerebral artery stroke often result in homonymous hemianopsia, with the entire hemi-field being lost. However, with smaller lesions, more circumscribed

field cuts occur (i.e., partial hemianopsia). With inferior parietal lesions, quadrantanopia involves the lower quadrants of the field, with the side of the quadrant loss depending on the laterality of the lesion. When lesions affect fibers from the inferior retina, which is around the lateral ventricles and through the temporal lobe (Meyer’s loop), the resulting quadrantanopia involves a superior field cut with a loss of either the upper left or right quadrant of the visual field depending on lateralization (Kandel et al. 2000).

From a clinical neuropsychological perspective, characterizing the nature of the visual field disturbance in patients with stroke or other focal brain disorders is useful for determining what areas of the brain are likely affected. This aids in determining whether findings are converging on a pattern of specific neurocognitive impairments based on the location of the lesion (Adams 1981).

### Cross-References

- ▶ [Cortical Blindness](#)
- ▶ [Hemianopia](#)

### References and Readings

- Adams, R. D. V. M. (1981). *Principles of neurology* (2nd ed.). New York: McGraw-Hill.
- Kandel, E. R., Schwartz, J. H., & Jessell, T. M. (2000). *Principles of neural science* (4th ed.). New York: McGraw-Hill, Health Professions Division.