# Scotoma
## (Blind Spot)

The visual fields are the areas that are seen by each eye. A scotoma is a dim or totally black area in your field of vision or a small area of visual loss within the visual fields. There are often areas around the dim or black spot that have normal vision. A scotoma can therefore be thought of as an "island" of lost vision.

Central scotoma means there it is a blind area in the middle of the visual field, surrounded by normal vision. Scotomas may not occur in the center of vision. They may be off to the side or up or down in the visual field.

### CAUSES

Scotomas may occur as a result of diseases anywhere along the path of the visual nerves from the eye to the brain. However, diseases along this pathway often cause more defined or symmetric visual field defects. Almost all of the disorders that cause visual field defects may also appear as scotomas, so there is a lot of overlap in what may be causing both types of visual loss.

Scotomas may be caused by a many disorders and diseases. Some include:

**Diseases of the Eyes**

- Glaucoma.
- Diseases or defect of the:
  - Cornea.
  - Lens (*cataract*).
  - Fluid inside the eye (*vitreous*).
  - Retina.
  - Optic nerve.

**Diseases of the Optic Chiasm** (the point where the optic nerves meet and cross in the brain)

- Tumors of, or near the optic chiasm.
- Tumors and diseases of the pituitary gland.
- Hemorrhages, aneurysms or other disorders of the blood vessels near the optic chiasm.

**Diseases of the Optic Tracks**

- Hemorrhages (*stroke*), aneurysms or other disorders of the blood vessels within the brain.
- Brain tumor**.**
- Neurological diseases of the brain (e.g. multiple sclerosis).
- Increased pressure inside the head.

**Diseases of the Brain**

- Disorders of development (e.g. *amblyopia*). This is poor vision in one eye due to underdevelopment of the brain's visual center in childhood).
- Hemorrhages (*stroke*), aneurysms or other disorders of the blood vessels within the brain.
- Brain tumor.
- Brain infections.
- Neurological diseases of the brain (e.g. multiple sclerosis).
- Increased pressure inside the head.
- Drugs (e.g. digitalis poisoning).
- Poisoning (e.g. lead poisoning, methanol poisoning).

**Diseases of the body or other organs (e.g. pernicious anemia, drug toxicity)**

### SYMPTOMS

Noticing a dim or black area that does not move when looking at an object or surface with one or both eyes

### DIAGNOSIS

Visual Field testing is done in the doctor's office. A patch will go over one eye. The patient is asked to look at

the center of a screen or large bowl shaped machine. You will then press a button whenever you see a small light with your side vision. By doing this, the visual field in each eye is “mapped.” Areas of lost or diminished vision are detected if any are present. Everyone has a normal “blind spot” where the optic nerve leaves the eye, but even the size and shape of the blind spot is mapped to look for abnormalities.

## TREATMENT

- Treatment depends on the cause of the visual defect(s). If the problem is not coming from the eye(s), additional testing is done. These tests include:
  - X-rays of the head.
  - CT scanning.
  - Injecting a dye into the bloodstream with X-rays of the head (*angiography*).

Other investigations may be necessary to find the cause of the problem.

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