



## Therapy for Visual Field Loss and Visual-Spatial Neglect

**Therapy** for **visual field loss** and **visual-spatial neglect** are similar. However, neglect generally requires considerably more treatment, as the patient “forgets” about their vision defect, putting them at greater risk for accident and injury.

### Treatment areas include:

- Understanding the use of any peripheral prism applied
- Reestablishing a basic understanding of visual space extending equally to both sides, as well as up-space and down-space. *Out of sight can mean out of mind.*
- Efficient scanning techniques
- Perceptual speed--patients with visual field loss scanning into the blind field are now “blind” in the ordinarily attended area of space. They must be able to look, perceive quickly, and return to straight ahead gaze.
- Basic orientation and mobility--for safety. More complex cases are referred to certified orientation and mobility instructors.
- Reading aids and strategies.

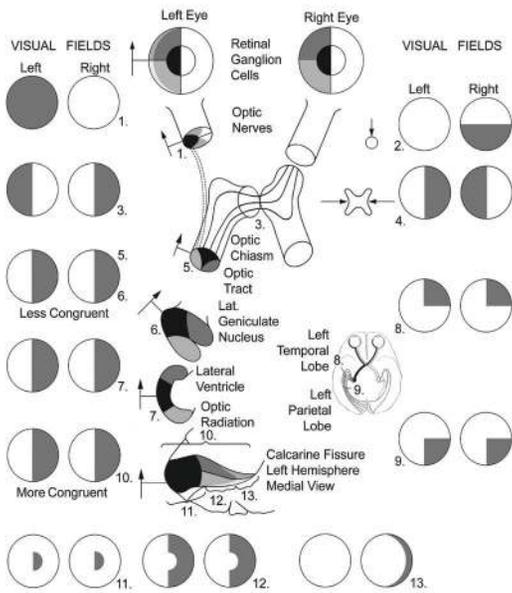
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# Visual Field Loss

Rehabilitation and  
Peripheral Field Expansion  
Prism Application

*Compliments of*

Penelope S. Suter, O.D.  
FCOVD, FABDA, FNORA  
Providing vision services for  
general and special needs  
individuals



*It is critical to have a neuro-optometric work up to determine whether the patient has visual-spatial neglect (instead of, or in conjunction with hemianopia)--*

*Particularly if they are determined to drive again!*



Peli prism on lens for left hemianopia

## Peripheral vision expansion prism systems

Gottlieb Style, Peli Style, and Yoked Rehabilitation Prisms

Visual Field Loss can be somewhat predicted by the location of the injury.

Confrontation fields are helpful, but may be confounded by spared temporal crescents (#13 in the above figure).

### Visual-Spatial Neglect

is a loss of visual attention for an area of space. It can masquerade as visual field loss, or it can coexist with visual field loss. Neglect puts the patient at much greater risk of injury than patients with visual field loss alone. If you cannot attend, you cannot perceive or "see" and there is no reason to "look." Visual-spatial neglect patients are unaware of their surroundings in the unattended space. Studies report between 30 and 60% of patients hospitalized with stroke suffer visual-spatial neglect.

There are three basic types of compensatory prism prescriptions for visual field loss, a) Gottlieb, b) Peli, and c) yoked. The Gottlieb and Peli style prisms are applied to the glasses lens on the side of the vision loss.

The **Gottlieb prism** is a circular prism button applied to, or manufactured into the lens; it sits in the blind periphery and is unseen until the patient scans into it with their eyes. The fitting kit is shown below. The



prism moves images about 10 degrees so that the patient does not have to move the eyes so far into the blind field to see obstacles or objects of interest. This prism button is very useful for patients

with visual field loss without visual-spatial neglect. It is a tool that they put on every day, and serves as a reminder to scan with their eyes. With consistent scanning, visual field loss will often partially resolve. Without, the patient often develops further defects in spatial perception and spatial attention over time.

The **Peli Prism** is a Fresnel type prism that moves images 20 degrees from the blind field into the sighted field. It is placed above the patient's line of sight so that the patient is able to detect objects in their peripheral vision. The developers of this prism system also recommend placing a prism inferiorly, but based on clinical experience, many patients have difficulty using the inferior prism during mobility, as it puts an image at their feet.

**Yoked rehabilitation prism** can be used to move the image of the entire visual field for both eyes up to 4 degrees into the sighted field. These prisms have the disadvantage of less image displacement. They also shift the patient's perception of straight ahead (i.e. egocentric localization). This results in shifts in the patient's center of gravity, sometimes creating leaning, veering or imbalance during mobility. If the patient already has abnormal egocentric localization due to visual spatial neglect, visual field loss, or other aspects of brain injury, these prisms may actually restore balance and reduce the leaning and/or veering that is so common following stroke and other forms of acquired brain injury. Yoked rehabilitation prisms are also frequently useful in treating developmental disorders, the most common being children who "toe walk."