

QUICK GUIDE

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SPECIALIZED INSTRUCTION, ACCOMMODATIONS, AND AIDS FOR CHILDREN WITH HOMONYMOUS HEMIANOPIA



Children with homonymous hemianopia, a type of cerebral vision impairment, will have challenges that impact their daily living activities, such as noticing other children or adults, reading, walking, and watching television and other forms of video. This short guide introduces teachers of the visually impaired, orientation and mobility specialists, special educators, parents, or anyone working with a child with homonymous hemianopia after epilepsy surgery to various intervention methods and strategies to help the child succeed.

It is important that a child with homonymous hemianopia learns as early as possible to advocate for themselves. This should be part of the Individual Education Plan (IEP). The educational staff should allow the child to say what they cannot see, in what position in the class they see best, or if they do not feel safe. Self-advocacy is one of the most important social, emotional, and educational skills we can teach.

Some children may require a 1:1 dedicated aide to exploit the interventions and strategies outlined below. Sample IEP goals for each strategy are noted in italics.

**SPECIALIZED INSTRUCTION:
EARLY READING**

Because we understand how adults with hemianopic reading impairment (sometimes referred to as *hemianopic dyslexia*) relearn reading skills after brain injury or stroke, these same interventions are helpful for children with homonymous hemianopia who are learning how to read.

Eccentric viewing

Eccentric viewing is a technique where the child is taught to look slightly away from the object/word so that more of the object/word is visible in the remaining visual field.

A child with left homonymous hemianopia should be taught to look at the first letter of the word so that the white space before the word is in his/her lost field of vision, and that

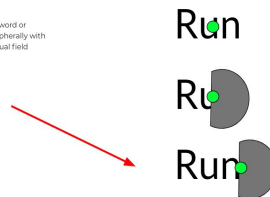
most of the word is in his/her remaining right field of vision.

[Using a red marker, child will place a red dot in the middle of the last stroke/portion of a letter in every word in a paragraph with 100% accuracy in 5/5 trials given over a six-week period.]

A child with right homonymous hemianopia should be taught to look at the last letter of the word so that the white space after the word is in his/her lost field of vision, and that most of the

ECCENTRIC VIEWING
SIDE VIEWING

• looks slightly away from the word or object in order to view it peripherally with the remaining area of the visual field



word is in his/her remaining left field of vision.

[Using a red marker, child will place a red dot in the middle of the first stroke/portion of a letter in every word in a paragraph with 100% accuracy in 5/5 trials given over a six-week period.]

Oblique presentation

Rotating the page 45-90 degrees, so that the entire line of text is in the remaining visual field, can be helpful for some children. Research shows that it is most helpful for right hemianopia.

[Prior to reading a passage, child will independently rotate the page of a book to approximately 90 degrees in 5/5 trials given over a six-week period.]

Last letter cancellation therapy

Similar to the wood stick method above, this strategy requires the child with right hemianopia to first mark the last letter of a word before reading it. This trains the child to scan to the end of a word before reading it.

~~last letter cancellation therapy~~

First letter/line cancellation therapy

Similar to last line cancellation therapy, this method is for right-sided surgeries which result in left hemianopia. These children show difficulties locating the next line of text. This method teaches the child to scan to the subsequent line of text as well as to see the first part of the word.

~~first letter cancellation therapy~~

Wood stick method

This method has the child use a long wooden stick on a chalkboard or whiteboard which they move from word to word as they read off a board. Children with left-sided

hemianopia are asked to tap the wooden stick on the beginning of the next word. Children with right-sided hemianopia (which results after left-sided surgeries) are asked to tap the wooden stick on the end of the next word. This teaches the child to shift their gaze intentionally (known as attentional gaze shift) into the blind field. In adults who have hemianopic visual loss, this method showed improved reading after a few weeks.

Long gaze shift method

This method requires the reader to scan all the way to the end of the line first so they understand how many words are in the line as well as the length of each word. This requires the child to perceive each word as a whole first before reading it.

When reading a line of text, the vision interventionist should help the child understand the sequence of words by moving his/her finger underneath each word. Also, a ruler can be placed underneath the line of text to guide the eye.

[Prior to reading a line of text, child will scan all the way to the end of the line of text and place a red dot or slash after the last word in the line with 100% accuracy in 5/5 trials given over a six-week period.]

Electronic reading aids with gliding text

Electronic reading aids magnify text from a book or

magazine onto a computer screen. This allows the reader to view the words in larger print against a bright background which improves oculomotor control. Examples of electronic reading aids include:

- EzReadElectronic Reading Aid
- Carson E-ZRead Digital Magnifier
- ReizenElectronic Reading Aid

Boundary marking devices

Boundary marking devices, such as translucent plastic with a bright red boundary line, can help the child scan to the next line of text.

[Prior to commencing a reading activity, child will place boundary marking device at the (beginning/end) of the text line using a Post-It note, red marker, or other boundary marking device, with 100% accuracy in 5/5 trials given over a six-week period.]

Scanning visual materials

Teach the child to systematically scan visual materials during any task which requires vision. Scanning a page of images should be taught from the left to right and top to bottom. This will help set a habit for reading languages that are read from left to right, like English or Spanish.

[Prior to commencing any activity which requires the child to regard a page or worksheet, child will place sticky dots in each of the four corners of the page and the middle of the top, bottom, and both side margins with 100% accuracy in 5/5 trials given over a six-week period.]

Dot counting

Place sticky dots on a page and ask the child to count them. Increase the number of sticky dots used as the child improves.

[Child will be given a page with an array of pre-placed sticky dots and asked to count each dot or mark each dot with a black pen, with 100% accuracy in 5/5 trials given over a six-week period.]

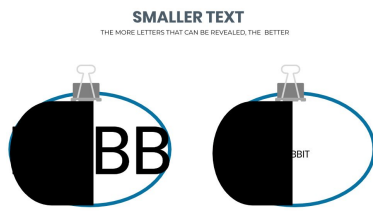
You can also help make the child aware of the whole array of objects and both pages in a book. Ask him/her to point out different things on the page and make them aware of both pages, starting from the left.

ACCOMMODATIONS

In school, accommodations should be provided to ensure that all instructional material remain within the child's field of vision. For example, they can include the following:

Small text

When appropriate, small text ensures that more of a word is in the remaining visual field.



Vertical presentation

Vertical presentation of text can be beneficial so that material is not missed. Columns of text may be easier to read than whole pages of uncolumned text. Present visual materials on a slanted surface for viewing. A computer screen is ideal as the surface is vertical. The position of the child's face relative to the slanted surface or screen is important. The surface should be biased toward the child's seeing field (leftward in the case of right field loss, and rightward in the case of a left field loss.)

vertical presentation of text

Reading guide highlighter strips

Reading guide highlighter strips are simple devices which form a window that masks the lines above and below the line of text and can be slid along the line while reading so that the child sees

only the line of text being read.

Other tips

For a child with left hemianopia, the problem in reading involves returning from the right end of a line to the left and down to the next line. This can be difficult especially for the beginning reader. Using your finger to follow back along the line that was read, and down to the next line may be helpful. To guide the eyes to the left and down, a ruler placed along the left edge of the text or an L-shaped guide shifted down to the next line can be used. Color coding of left and right margins may be helpful.

Children with hemianopia may forget to write or draw on the part of the paper that falls into their lost field. Compensatory strategies like oblique presentation with head tilt may be helpful.

A slanted surface for writing may be helpful for some children.

A bold dark felt tip pen may provide better writing and drawing than a pencil. This increases contrast between the letters and papers when learning to write. Lined paper can also be helpful for writing as well as graph paper for math.

Make sure the child is aware of the entire piece of lined paper before writing.

ORIENTATION AND MOBILITY

Children with homonymous hemianopia often bump into people and objects and have problems in finding their way about. This can result in reduced participation in play and social interactions with other children.

Scanning

Teach the child to visually scan new environments, especially into the blind hemifield.

Classroom Seating

The child should be seated where his/her remaining visual field can take in what the teacher presents to the class as a whole. This may be in the back of the classroom for some activities, or in the front for others.

When facing the front of the classroom and the teacher, the child with a right field loss should be seated to the RIGHT facing the front, with the teacher on the child's LEFT.

And the child with a left field loss should be seated to the LEFT facing front with the teacher on the child's RIGHT.

In a semicircular group, placement of the child with a visual field loss should be guided by the activities and where the child's attention should be directed. If the goal is to attend to the teacher, then the teacher should be well in the child's seeing field. If the goal is to interact with the other children, then the child with a field defect should be positioned so that as many

of the other children as possible are in the seeing field.

Positioning in the classroom needs continuous reevaluation by the educational staff. If the child can advocate for themselves, they can vocalize where the best position for their access to information is.

Independence and safety are important for the child and require continuous reevaluation.

Provide additional lighting so that the child can see things clearly. Children with field loss may have difficulty locating objects and people at a distance, even if their distance visual acuity is normal. The child should be taught to scan objects at various distances and accommodations must be designed and implemented across all activities and environments;

The child's classroom, hallways, stairways, and playground should be evaluated for potential hazards often; mark crucial features such as stairs and railings for better visibility as needed. Furniture and other objects should be located in the same place every day so as not to confuse the child. Introduce safety features such as Exit signs early and often.

Watching a video can be difficult for a child with homonymous hemianopia because the child's ability to

follow the story is affected by the visual impairment. When videos are used as instruction methods, the child should be provided with a content guide which summarizes the storyline.

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The Brain Recovery Project: Childhood Epilepsy Surgery Foundation

969 Colorado Blvd., Suite 101

Los Angeles, California 90041

Phone: 626-225-2841

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Email: info@brainrecoveryproject.org