

# VI Times

Volume 2, Issue 2



MN Regions 5 & 7 Vision - O&M Staff  
Barb Lhotka, Editor



## Vision-O&M Staff

The purpose of a newsletter is to provide specialized information to parents and teachers of students with vision impairments. We hope to send regular newsletters that will cover topics of interest that are informative and create a base of knowledge that will assist our students with their on-going success!

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## What is CVI?

“During the last decade, vision loss caused by damage to the brain rather than by conditions or diseases of the eye has been the focus of increasing attention. As extremely premature infants survive in increasing numbers due to medical advances, often after sustaining hemorrhage or other injury to the brain, the incidence of visual impairment tied to neurological causes has risen in the United States.” (Source: American Foundation for the Blind, 2005)

We generally think of vision, the eye and glasses to correct any vision problem. We also need to realize the complexity of how we see and the involvement of the brain in processing visual information. It is estimated that 40% of the brain is devoted to the translation of visual images. (AFB, 2005) “When this process is disrupted, the visual systems of the brain do not consistently interpret or understand what the eyes see, and visual impairment is the result.” (AFB, 2005) We call this condition cortical visual impairment or CVI.

## What is CVI—Really?

The Nevada Dual Sensory Impairment Project has written “Children with CVI display a number of specific behaviors.” The project emphasizes that there “are some important facts to keep in mind about CVI:

- CVI can range from mild to severe.
- CVI can range from temporary to permanent.
- Many children experience improvement. [after intervention]
- Children with CVI can also have ocular (or eye) difficulties as well.
- Fluctuation is common. [according to situation and how the student is processing that situation]
- Characteristics vary from child to child.
- A single approach does not work for all children.
- Children with CVI typically have some vision.”



*Materials that are often used with young children with CVI*

## Characteristics of CVI

The medical and educational communities describe CVI in terms of characteristics commonly observed—although no two children have the same experience.

### Appearance of the eyes:

- Does not look blind
- Lack of visual communication skills
- Nystagmus (rapid eye movements) rarely seen
- Blank facial expression
- Eye movements smooth, but aimless

### Vision Function:

- Limited visual attention / lack visual curiosity
- Aware of distant object, but cannot identify it
- Consistently looks to either side when visually looking
- Visual learning tiring
- Closes eyes when listening
- Balance improved with eyes closed
- Looks away from people &

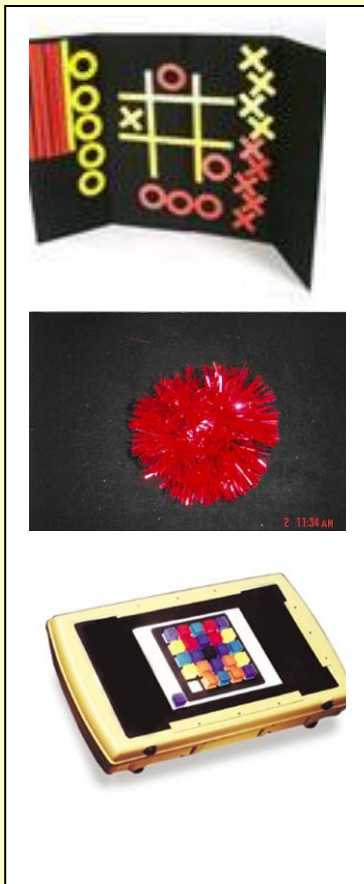
objects

- Spontaneous visual activity has short duration
- When visually reaching, looks with a slight downward gaze
- Uses touch to identify objects
- Turns head to side with reaching, as if using peripheral fields, or motion detection

### Mobility Skills:

- Occasionally see better traveling in a car
- Difficulties with spatial interpretation
- Avoids obstacles, but unable to use vision for close work
- Unable to estimate distances
- Difficulties with depth perception, inaccurate reach

**Source:** Vision Associates



## APH Study of CVI

The American Printing House (APH) for the Blind did a study in 1999 that indicated there are several unique characteristics of CVI. These include:

1. Typically normal eye exam (may have a co-existing ocular condition such as ROP or optic nerve atrophy)
2. Difficulty with visual novelty (prefers to look at familiar items)
3. Visually attends in near space only
4. Difficulties with visual complexity/ crowding (prefers simple items, simple background)
5. Non-purposeful gaze/ light-gazing behaviors noted
6. Distinct color preferences (usually red and yellow)
7. Visual field deficits
8. Visual latency noted (visual responses are slow, often delayed)
9. Attracted to movement
10. Absent or atypical visual reflexive responses (fails to blink at threatening motions)
11. Atypical visual-motor behaviors (child will look, then look away to reach)
12. Holds objects close to eyes to magnify but also reduce the crowding and isolate visual information
13. Usually have other neurological involvement
14. Objects viewed have movement or are reflective in nature

## So What Do We Do?

Some of the basic strategies for working with students with CVI include:

- Use simple cues (e.g., touch cues, object cues)
- Avoid figure-ground clutter
- Use repetition and familiar routines
- Avoid extra, unnecessary stimulation
- If possible, pair visual information with other sensory cues
- Do not over-stimulate the child with visual clutter
- Be aware of visual preferences
- Allow the child to avoid visual gaze if necessary
- Be aware of other “drains” on energy
- If needed, adapt the setting to reduce noise clutter, over-stimulating lighting and other distracters
- Sometimes moving an object will help the child to see the object better
- Use real objects rather than abstract symbols (e.g., orange vs. circle)
- Use active rather than passive learning
- Five environmental area that can be changed to encourage children to use their vision:
  - Color
    - Bright vs bland
  - Contrast
    - High vs low
  - Lighting
  - Space / Distance
  - Time (wait!)

## CVI Simulation

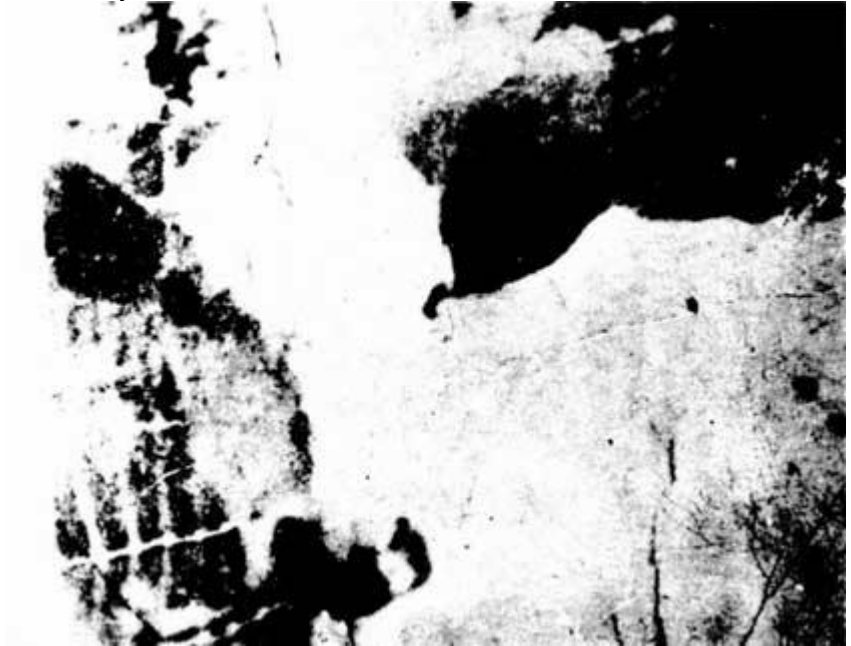
### Topic Preview

Future issues of this newsletter will address:

- Braille
- Early Childhood Intervention
- Living Skills
- O&M—Orientation & Mobility
- Parenting
- Self-Determination & Advocacy
- Sensory Efficiency
- Social Skills
- Technology
- Transition

It is difficult to simulate cortical visual impairment, but it is easiest to describe it as shown in the pictures below. When your eye and brain know what you are looking for...it makes visual sense. Until then, the visual image may not be clearly seen.

What do you see?



*In the first picture you should see a cow.*

*In the second picture you should see a man's head among the coffee beans.*