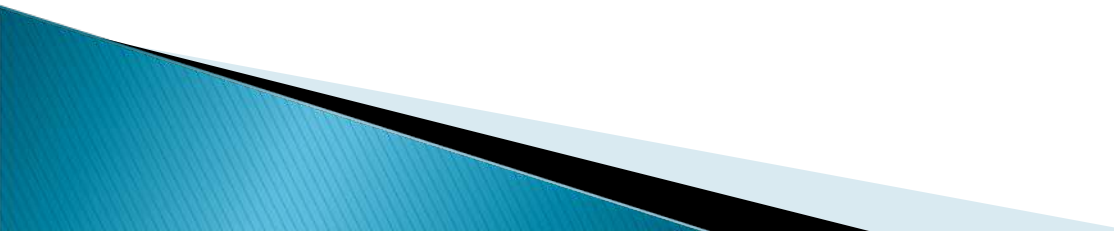



# Cortical Visual Impairment: A Basic Understanding

- ▶ There are 2 types of visual disorders:
    1. Ocular disorders where the pathology of the eye(s) is directly impacted.
    2. Neurological disorders where there is impaired or reduced vision due to an impairment or injury to the brain.
  - ▶ CVI is a neurological visual disorder, and it is the fastest growing visual impairment diagnosis today.
- 

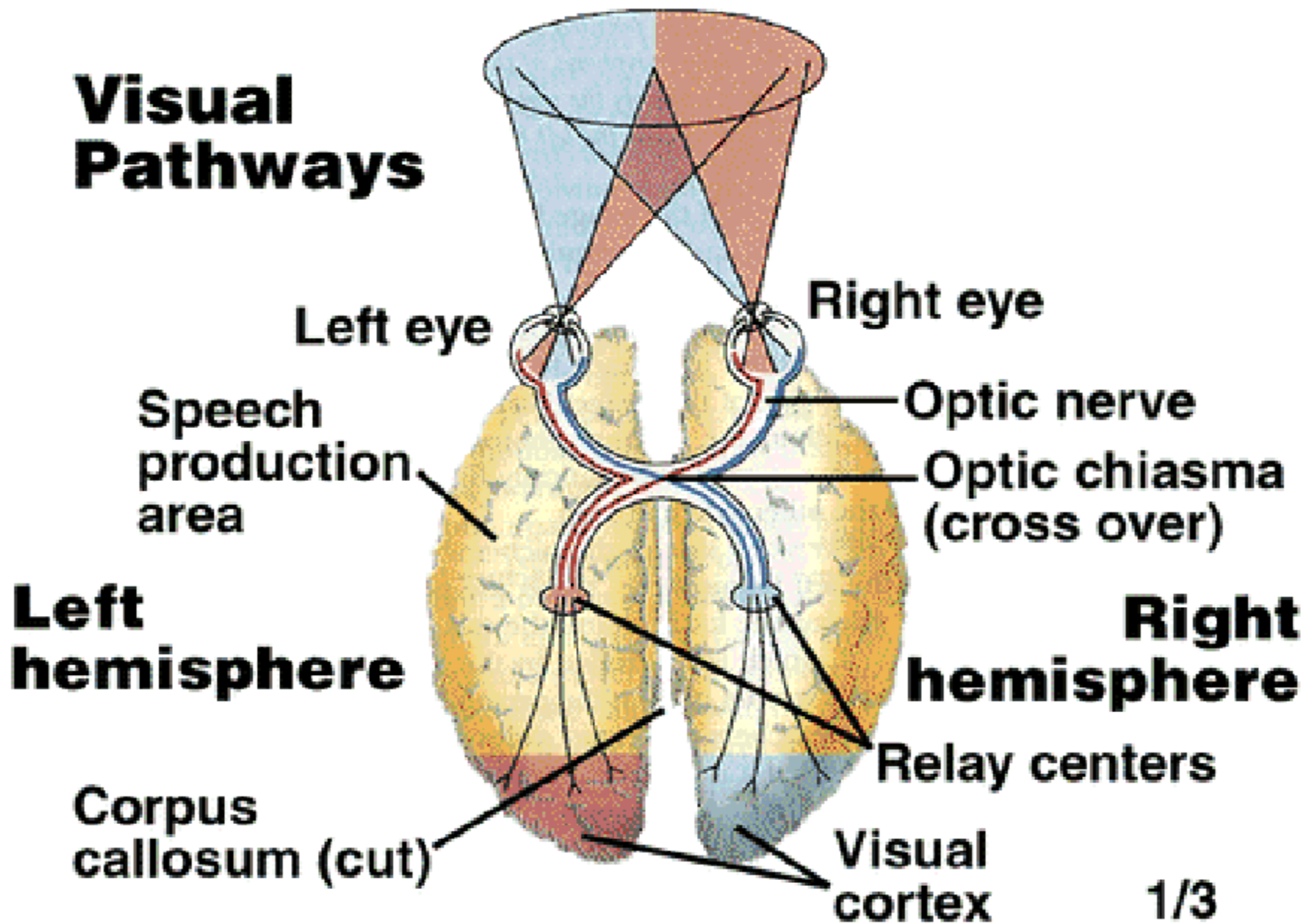
# What is CVI?

Cortical Visual Impairment is when the eye works fine but part of the brain that interprets signals from the eye does not.


The brain does not consistently understand or interpret what the eyes see.



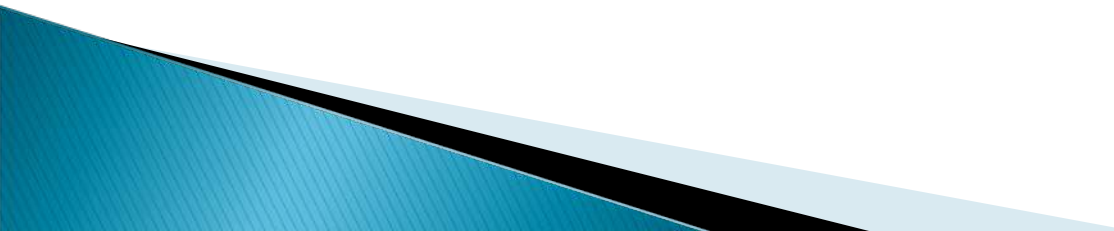
# Visual Pathways



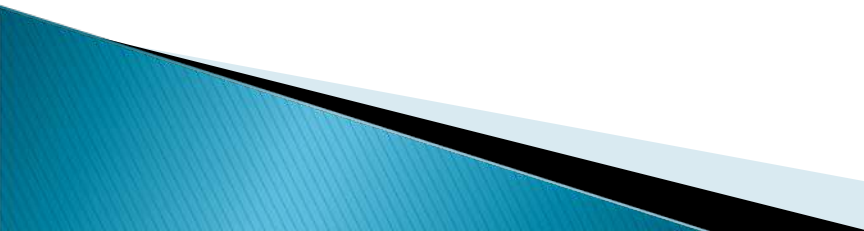
# Three indicators associated with CVI:

- ▶ Normal eye exam (or an ocular condition that does not explain the child's vision)
  - ▶ Medical history
  - ▶ Presence of unique characteristics (behavioral and visual)
- 

# Characteristics associated with CVI:

1. Light gazing
  2. Blink reflex / Visual Threat
  3. Color
  4. Latency
  5. Visual Novelty
- 

# Characteristics associated with CVI: (cont.)

6. Movement
  7. Visual Fields
  8. Visual Motor
  9. Complexity
  10. Distance Viewing
- 

- ▶ **“Due to improved medical care children with severe brain insults have increasingly begun to survive over the last 30 years. The vast majority have tended to have severe multiple disabilities, including a variety of learning difficulties. A minority of them also has permanent visual loss, but normal or minimally abnormal eye examinations.”**

**-Dr. James E. Jan**






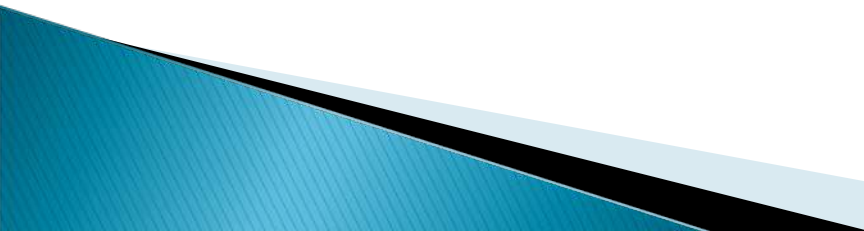
▶ **“Traditionally, educators for the visually impaired assisted only those whose eye conditions were associated with visual loss (reduced acuity). Now it has become necessary to offer services for those whose visual loss is due to brain damage. Thus, the definition of CVI was born.”**

▶ **–Dr. James E. Jan**

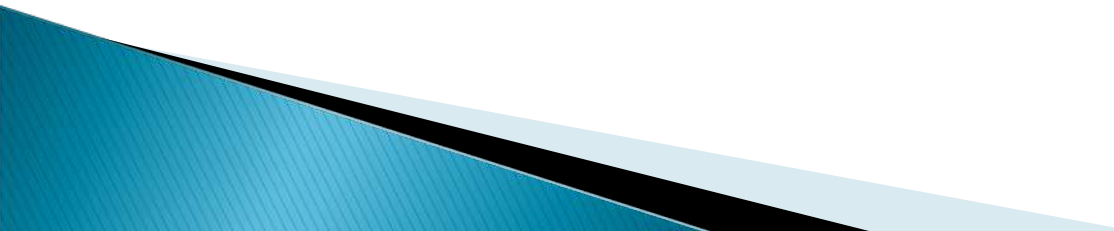
# Medical Conditions Typically Associated with Cortical Visual Impairment

- ▶ **Periventricular Leukomalacia**
  - ▶ **Asphyxia/Hypoxic Ischemic Encephalopathy**
- 

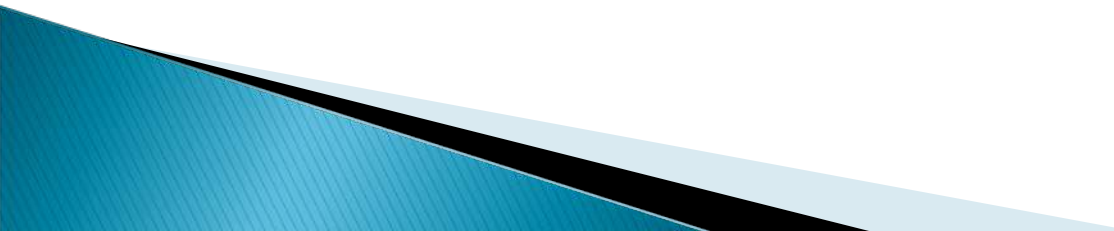
# Medical Conditions Typically Associated with Cortical Visual Impairment (Con't)

- ▶ **CVA (stroke)**
  - ▶ **Intraventricular Hemorrhage**
  - ▶ **Infection (i.e.: TORCH infections)**
- 

# Medical Conditions Typically Associated with Cortical Visual Impairment (Con't)

- ▶ **Structural Abnormalities**
  - ▶ **Trauma (i.e.: head injury)**
  - ▶ **Metabolic**
- 

# MYTHS

- **Children with CVI are visually inattentive and poorly motivated**
  - **All children with CVI will have cognitive deficits**
- 

# MYTHS (CON'T)

- **CVI is not a true visual impairment**
- **Children whose visual cortex is damaged are cortically blind**

- 

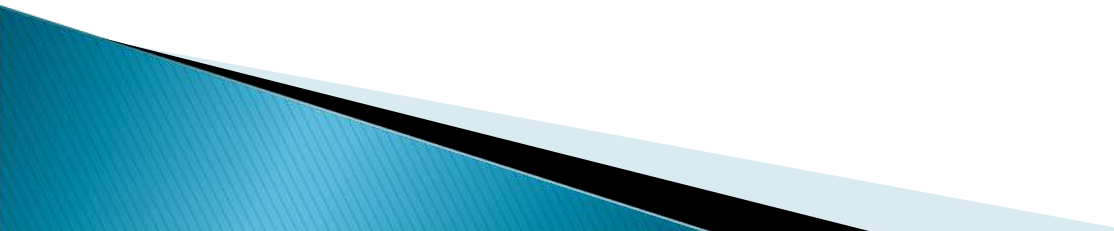


# Truths Versus Myths

## ▶ Truths:

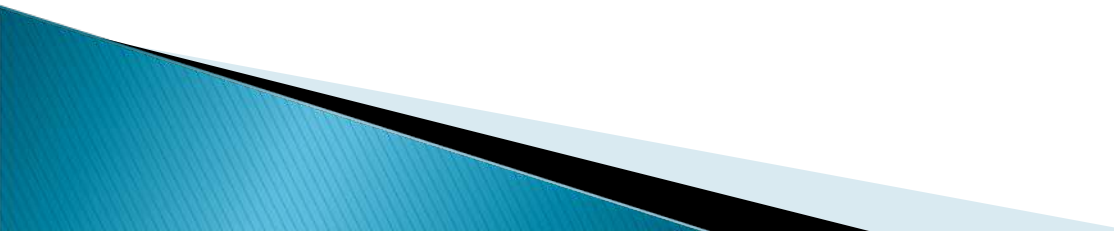
- Treatment is *educational* not medical
- Visually functioning fluctuates depending on environmental factors, time of day, health of child

# Truths Versus Myths (Con't)

- **CVI may range from mild to severe**
  - **Intervention strategies center on the resolution of the CVI characteristics**
- 



# Truths Versus Myths (Con't)

- It has been proven that the first years of life are when the brain is most plastic and the time when permanent change can be influenced
  - Children with CVI are often misdiagnosed
- 

# Assessment Framework

- ▶ Medical diagnosis
  - ▶ Parent Interview
  - ▶ Observation
  - ▶ Assessment of characteristics
  - ▶ Share results with family and team members
- 