



Diagnosing CVI

Diagnostic Criteria

You can make a cortical or cerebral visual impairment (CVI) diagnosis if your patient meets the following criteria:

- The child has a neurologic condition affecting the visual pathways in the developing brain.
- There is a visual dysfunction that an ocular abnormality cannot explain.
- The visual deficits involve visual acuity, contrast sensitivity, visual fields, and/or higher-order visual processing.
- The visual dysfunction cannot be attributed to autism, dyslexia, or any other disorder of learning, language, or social communication.¹

Historical Indicators

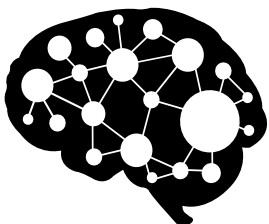
Parents or vision teachers may notice that the child:

- Interacts better with a visually uncluttered workspace and lower sensory complexity.
- Prefers to gaze at light.
- Does not respond to people or large objects from across the room.

Behavioral Characteristics

Children with CVI may show:

- Absent or clumsy visually guided motor responses.
- Preference for flashing lights or brightly colored objects (often yellow or red), with ocular following, smiling, or head/trunk movements.
- Stronger responses to visual stimuli approaching from certain sides of the visual field.
- Delayed visual responses, taking longer to fix, follow, or re-fixate on objects in peripheral vision.
- Looking up or away while viewing an object.



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Pediatric Cortical Visual
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Next Steps for Assessment

Use additional assessments as needed to characterize visual deficits, rule out differential diagnoses, and evaluate underlying neurologic conditions. Suitable tests depend on the child's age, level of vision, and cognitive ability, such as:

- Structured history-taking questionnaires for CVI
- Preferential looking tests of visual acuity and contrast sensitivity
- Perimetry
- Neuroimaging
- Electrophysiology (electroretinography and visual evoked potentials)
- Genetic testing
- Neuropsychological assessments of visual perception

Recommendations and Follow-Up

- Explain to parents that targeted interventions can improve functional vision.
- Share resources: PCVIS, Perkins CVI Now, CVI Scotland.
- Treat any ocular disorders as usual.
- Certify the child as legally blind or visually impaired (ICD-10 H47.61 Cortical Blindness) to access state services.
- Write a parent letter recommending assessment and intervention with:
 - TVI, O&M, and other CVI-experienced therapists.
 - Include a CVI-specific functional vision assessment.
- Offer ongoing support and referrals as needed.
- Schedule eye/ocular assessments every one to two years; some children may need exams every 6 months.



References

¹ Chang MY, Merabet LB; CVI Working Group. Special Commentary: Cerebral/Cortical Visual Impairment Working Definition: A Report from the National Institutes of Health CVI Workshop. *Ophthalmology*. 2024 Dec;131(12):1359-1365.

PCVIS is a 501(c)(3) nonprofit organization transforming outcomes for children with CVI by advocating for research, policy, education, practice, heightened awareness, and understanding of this brain-based visual impairment.

Visit [PCVIS.vision](https://www.pcvis.vision) for more information and resources.



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