



PCVIS

Pediatric Cortical Visual
Impairment Society

Diagnosing CVI

You can make a CVI diagnosis if your patient meets the following criteria:

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

History from parents or vision teachers that is suggestive of pediatric CVI:

- The child interacts visually in a more focused way with an uncluttered workspace and lower sensory complexity.
- The child prefers to gaze at light.
- The child does not respond to people or large objects from across the room.

Behavioral characteristics of CVI in children include:

- Absent or clumsy visually guided motor response.
- Preferential response to a flashing light toy or brightly colored object (usually yellow or red) with ocular following, smiling, or head/truncal movements.
- Responds more vigorously with visual stimulation approaching from one side of the visual field or other.
- Delayed response to visual stimuli; taking longer to fix and follow or to re-fixate to target in peripheral vision.
- Looking up or away while looking at an object.

Next steps

Use additional assessments as needed to characterize visual deficits, rule out differential diagnoses, and evaluate underlying neurologic conditions. Suitable tests depend on 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
- Electrophysiology (electroretinography and visual evoked potentials)
- Neuroimaging
- Genetic testing
- Neuropsychological assessments of visual perception

Inform parents that with intentional, strategic interventions, there is an expectation of improved functional vision and provide resources like PCVIS, Perkins CVI Now, and CVI Scotland.

Treat the ocular disorders as you usually do.

Certify the child as being "legally blind" or "visually impaired" due to neurological disorder under ICD-10 H47.61 Cortical Blindness. This will qualify the child for state-funded services for children with visual impairments.

Write a parent letter with your diagnosis and recommendation that the child receive "assessment and intervention for CVI by a Teacher of Students with Visual Impairment, Orientation and Mobility Specialist, and other therapists who are knowledgeable about CVI. This should include a CVI-specific functional vision assessment."

Provide support to the family, referring to other specialties as needed. Children with CVI need eye/ocular assessments every 1-2 years at minimum for a periodic certification of diagnosis. Many pediatric ophthalmologists see young children with CVI every 6 months.

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

pcvis.vision