Little Bear Sees

Helping visually impaired children learn to see

What is CVI?

Cortical visual impairment (CVI) is a term used to describe visual impairment that occurs due to brain injury. CVI differs from other types of visual impairment which are due to physical problems with the eyes. CVI is caused by damage to the visual centers of the brain, which interferes with communication between the brain and the eyes. The eyes are able to see, but the brain is not interpreting what is being seen.

Cortical visual impairment (CVI) is often referred to by other terms including: cerebral visual impairment, neurological visual impairment, brain damage related visual impairment and so forth. All of these terms refer to visual dysfunction resulting from injury to visual centers of the brain. We will always refer to it as cortical visual impairment or CVI.

Typical characteristics of CVI:

1. **Preference for a specific color.** You may have noticed that your child seems to prefer looking at a certain color. Bright red and yellow are often favorite colors, but some children prefer other bright colors such as blue, green, or pink.
2. **Need or preference for movement.** Many children with CVI require movement in order to see an object. For example, it may be easier for them to look at a pinwheel or a swaying balloon.
3. **Delayed response when looking at objects (visual latency).** It may take time for a child with CVI to look at an object. Often they will look at an object and then look away. For this reason it is important to give your child enough time when presenting an object.
4. **Difficulty with visual complexity.** Children with CVI need simplicity. First, it is important that the object presented is simple. For example, a single colored stuffed animal, like Elmo, is preferable to one with multiple colors. Likewise, it is important that the background and the environment are simple. For example, putting a solid black cloth behind a single colored toy helps to reduce visual clutter. Creating a simple environment is a matter of eliminating noise and anything else that might distract from the visual task.
5. **Light-gazing and nonpurposeful gazing.** Often, children with CVI will stare at light. They may be seen gazing out the window or up at a ceiling light. They may also appear as if looking at things that are not there, or looking at things without intent.

6. **Visual field preferences.** Most children with CVI will prefer to look at objects in a particular direction. For example, they may see an object better when it is presented in their periphery, or may turn their head to see an object.
7. **Distance vision impaired.** Some children with CVI have trouble seeing far away. This is related to the preference for visual simplicity. Objects far away may be lost in visual clutter.
8. **Visual blink reflex is absent or impaired.** When an object comes too close to the eyes, or touches the bridge of the nose, many CVI children have an absent or delayed protective blink response.
9. **Preference for familiar objects.** Because it is difficult for CVI children to process the information that the eyes see, they often prefer familiar objects that the brain easily recognizes and has processed before.
10. **Impaired visually guided reach.** The ability to look at an object while reaching for it is impaired. Often CVI children will look away from the object and then reach for it.

The three phases of CVI:

Dr. Roman-Lantzy, author of Cortical Visual Impairment: An Approach to Assessment and Intervention, divides CVI into three phases. Most children start in Phase I, which means that most of the CVI characteristics are present. As a child progresses through the three phases many of the characteristics begin to resolve. This process can take several years and requires diligence and persistence. Children in Phase III approach near normal vision to varying degrees and may even result in literacy.

Undiagnosed?

CVI often goes undiagnosed. It may go undiagnosed by an ophthalmologist because the structure of the eye is often normal. Many parents are told that there is no way to know what, or how much, their child can see. They are often told that there is nothing that can be done, and to just wait and see. In our experience, very few medical professionals are aware of CVI. Frequently, parents are the first to notice some visual responses in their children. It is our hope that with this website we can empower those parents to help their children learn to see.

There is hope!

The wonderful reality of CVI is that it can, and usually does, get better with appropriate intervention. A study conducted by Dr. Roman-Lantzy found that, in a select group of children with CVI who had highly motivated parents, 97% went from Phase I to Phase III in an average of 3.7 years. Some vision specialists or teachers of the visually impaired (TVI) are knowledgeable about CVI and can help with assessment and intervention strategies. Even without the assistance of vision specialists there is a lot that you as a parent can do.