

## Cortical Visual Impairment (CVI)

### What is CVI?

CVI is a condition that affects the brain's ability to process visual information. Instead of the visual difficulty being in the eye, it is based in the brain. Visual Information is processed at the very back of the brain and information needs to get there from the eyes. Over 70% of the brain is involved in sending messages or processing visual information. Where these messages do not get to the right place, or the brain does not fully process them, then a person with CVI cannot 'see' or understand what they see in the same way as others.

### How common is CVI?

CVI is the leading cause of visual impairment in children and affects 1 in 30 children in a mainstream school, and 1 in 2-3 children in a special school. It is a very new condition and many people haven't heard of it before.

### Does this mean my child has brain damage?

Not at all! The brain is a very complex organ and has millions of nerves and pathways to pass information around. Some children may have CVI due to a tiny link missing or a pathway that is slightly out. These can be tiny and only affect visual processing. Other children who may struggle to fully process visual information may be on the autism pathway, have sensory processing needs, or have a diagnosis. Yet other children, may have more significant issues within the brain. Everyone is different and if you aren't aware of any brain damage, then please do not worry - this does not change that!

### Can my child not see?

All individuals experience CVI differently. Some children with CVI have no vision, others can see the world around them well but it may be more difficult to understand. Some of these difficulties may include how long a child can look at something, if they know what it is, and know where it is. Their vision can also be impacted depending on what the object is, its position, the time of day, or the situation. Vision in children with CVI can vary greatly. The ways vision can be affected are known as visual behaviours and are described below. Not all of these areas impact every child vision, and if they do have an impact, this can again vary greatly.

### Do I need a diagnosis?

This is not us diagnosing your child as having CVI. From our assessments and observations, we are recognising some of the visual behaviours as potentially impacting your child's vision and feel that our programme may support them. **We are not able to make any diagnoses.** There is no formal test to be able to diagnose CVI, and so getting a formal diagnosis is very difficult. If your child has a diagnosis or not, we will continue to support them with their visual access.

### What happens next?

We will continue to visit your child in setting to assess and monitor their visual access. Our recommendations are for schools to use to adapt your child's work and environment to ensure they have the best visual access possible. These strategies can also be used at home. We will continue to use the CVI programme with your child while ever we feel this is useful and strategies are working to support their access. Your child will stay on our caseload and we will continue to visit them in setting. This will only change if there is no longer a need to support their visual access to learning.

### I am still worried or unsure about this....

If you have any concerns, worries or questions please do get in touch with us. Your child's VI teacher will have their contact details on the top of their report. They may not reply straight away as we are out in schools and settings, but we will get back to you as soon as we are able.

We understand this is likely new to you and is a lot to take in so we run a parents session 3 times a year about CVI. You can meet other parents who have children on our CVI programme, and learn more about what CVI is and how it may be impacting your child.

| Visual cognition                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Visual Attention:</b>               | is a child's ability to fix on visual information. Some children may respond to visual information but not look directly at it. Others may look directly at it but for only a short time. Without looking for long enough, details in visual information may be missed. Visual attention can vary depending on how a child is feeling, where they are, and what they are looking at.                                                                                                                                                                                                     |
| <b>Visual recognition:</b>             | is a child's ability to visually recognize what or who they are looking at. Without good visual attention recognising objects can be more difficult. Some things may be easier to recognise than others so a child may recognise some things but not others.                                                                                                                                                                                                                                                                                                                             |
| <b>Visual curiosity:</b>               | is a child's ability to access visual information around them. It is impacted by all the visual behaviours described below.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Visual behaviours                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Impact of clutter:</b>              | A child can experience objects blurring together when there too many things or they are too close together. This can be in the surroundings or on a piece of work. Some children may need items showing one at a time, others might need two or three. Items can be spread out with bigger gaps between them or covered with a black cloth or white paper to support difficulties in this area.                                                                                                                                                                                          |
| <b>Visual field abilities:</b>         | A child might have better vision in one area, or another area might be lower. They may turn or tilt their head slightly, need people or objects to be on one side of them to see better. You might notice your child walk 'through' items on the floor instead of climb over, find stairs tricky or get very close to the edges of furniture and doorways. This can result in children bumping, tripping or having 'near misses' which may change in newer or busier areas.                                                                                                              |
| <b>Impact of Colour:</b>               | A child may find it easier to look at objects in a certain colour, they may seek them out or be able to look for longer in their preferred colour. Bright colours are usually easier for children to see, and black & white are often more difficult. visual attention and object recognition may be impacted by the colour of the item. For some children they may only really look at lights or objects in this colour, others may see a range of colours but putting their preferred colour around the edges of an item can help them to see it better or recognise its key features. |
| <b>Form accessibility:</b>             | A child may be able to recognise lights or objects more easily than pictures, letters or words. This is typical for all children's development but is increased for children with CVI.                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Visual guidance of Upper Limbs:</b> | A child may find it difficult to look and do at the same time. This means they might look away when they reach for an object or find it difficult to complete hand-eye coordination tasks.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Visual guidance of Lower Limbs:</b> | A child may find it difficult to look and move or use their legs at the same time. This means they may find it harder to judge where their body is in space. This may result in difficulties using stairs, managing surface changes, kicking a ball, climbing etc.                                                                                                                                                                                                                                                                                                                       |
| <b>Access to people:</b>               | A child might have difficulty looking at faces, recognising people or understanding facial recognition. For example, they might not smile back, give eye contact or recognise you unless you speak.                                                                                                                                                                                                                                                                                                                                                                                      |

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| <b>Impact of light:</b>        | A child might need light to see, or they added light might help them to look for longer. Children can 'light gaze' by looking at the ceiling light or the sun through the window. Light can sometimes be distracting and adding light to learning tasks can help with this, other times they may light gaze when they are tired or have had enough.                                                                                                                                                                                                                       |
| <b>Response Interval:</b>      | A child might take a long time to move their head/eyes to fix and look at an object. They may also take longer to respond to what they are seeing. Giving lots of extra time to look is really helpful.                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Impact of Motion:</b>       | A child may need movement to see. They might need an object to move so they can find the object, look for longer, or to process what is happening. Children may not need movement to see but can be very distracted by it- needing to turn and look whenever there is movement around them. Moving objects can also be difficult for children with CVI as they may not be able to judge how far away something is that is moving, how fast it is moving or how big it is. This mean that ball skills, road crossings, and being in the playground can often be difficult. |
| <b>Sensory Integration:</b>    | A child can find it difficult to look or recognise items when other sensory information is presented at the same time. They may not be able to listen, feel or reach while looking.                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Physical manifestations</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Appearance of Eyes:</b>     | A child may have a preferred eye, which may impact how well their eyes work together. They may also display misalignment of the eyes e.g. squint. This is not an indicator of CVI as many children have a squint but is common in CVI children. This impacts a child's depth perception.                                                                                                                                                                                                                                                                                  |
| <b>Movement of eyes:</b>       | A child's eye movements are needed to track moving objects/people, or to look between two or more objects. If a child has difficulties in this area they may not be able to make a choice or miss key information.                                                                                                                                                                                                                                                                                                                                                        |