

## COMPLEXITY

### **Does your child become easily overwhelmed in busy environments? Do you find yourself avoiding parties, grocery stores, or eating in restaurants?**

Simple, bright objects are easy for us to see quickly. A red STOP sign is easy to see when you are crossing the street as it attracts our visual attention. When you are standing 50 feet away from the stop sign, the visual scene becomes more complex; like an I-Spy game. Consider all of the other factors, or “extra stimuli” that make an environment complex. Imagine you are driving at night, looking for a new address, in an unfamiliar location, on the highway or in a thunderstorm. One of the first things you may do is turn down the radio. You may turn on your bright lights to focus your light source. You may sit up straighter in your seat and lean forward, trying to attend to the street signs. We are able to concentrate better by eliminating distractions. **As the environment becomes more complex, it requires more concentration.**

If a toy or environment is too complex, a child may look away or move their head to avoid looking. Some children hold objects close to their eyes to fill their entire visual field and eliminate visual distractions. Some children may even close their eyes to take a break. We may think this behavior indicates that the child is not interested, when this is not the case. Looking at the object, looking away, and looking back at the object may indicate the beginning of a functional looking behavior.

- Gradually build on the sensory experience by slowly setting up the activity *with your child*. Present sensory input sequentially (one at a time); rather than simultaneously.
- A multi-sensory approach is a bridge to increased vision use (Roman-Lantzy & Tietjen, 2020). As you identify “easy” things your child always looks at, balance an easier visual presentation, with the “harder” tasks that your child finds challenging because they require the use of multiple senses at once.

*Aubrianna’s son Jack is 14 months old and was diagnosed with CVI before his first birthday. Jack’s trouble with visual complexity was most noticeable when he would look away if someone talked to him. If there were several people in front of Jack, he would close his eyes, and keep them closed as he smiled or laughed. This year, Aubrianna wants to take Jack to a holiday party **and she is more prepared**. As family members arrive at the party, they come to say hello to Jack **one at a time**. As they bend down to his level, Jack hears them coming, laughs at their voices, and then glances up to look at them! Aubrianna is so happy to see Jack enjoying his first large family gathering, she beams. It is as though this is the first time Jack has looked at aunts, uncles, and cousins. Aubrianna **keeps Jack’s visual field clear with a simple background**. She **presents one gift at a time**, so that Jack can take his time looking at it before he swats at the metallic bows on top. She feels so accomplished as Jack turns to a gift wrapped in gold paper, reaches out and pulls off the red bow! Aubrianna and Jack’s teacher of students with visual impairments have been talking about why Jack always turns his head away when he is listening to the phone. Since **children with CVI often have difficulty using their vision in a functional way in the presence of competing auditory input** (Lueck & Dutton, 2015) Aubrianna is now giving Jack music on her phone when they are in a visually busy environment. However, at home, she gives Jack a game on the iPad with the sound turned off. This way Jack can visually attend longer to the pictures.*

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### IDEA FOR ROUTINES:

#### Play/Floor Time

- \_\_\_ Avoid toys that have many colors, lights *and* music (that you can't turn off)
- \_\_\_ Use a solid-colored blanket or rug to play on
- \_\_\_ Present object against a plain background, for example one toy in each bin

#### Dressing/Diapering

- \_\_\_ Move caregiver's face in close, without talking
- \_\_\_ Make silly, exaggerated facial expressions (slowly) and wait for the child's response
- \_\_\_ Bring 1 outfit out of the closet or drawer and lay over solid colored chair or blanket to encourage reach; next move to two for a choice

#### Meal Time

- \_\_\_ Use a solid-colored plate, or placemat
- \_\_\_ Choose a plate with different sections to separate foods
- \_\_\_ Smell your food before you taste, touch or eat it

#### Lap Time/Literacy

- \_\_\_ Practice listening first, then looking at the pictures
- \_\_\_ One person should read or sing at a time
- \_\_\_ Keep other materials/toys clear from the area
- \_\_\_ Dampen background noise by turning off unnecessary TVs, radios, fans, etc.
- \_\_\_ Turn the volume down on games with screens, to encourage looking

#### Outdoors

- \_\_\_ Use a solid, one-colored ball (or soccer ball) to kick across the grass or sidewalk
- \_\_\_ Present one object in sandbox or on a blanket
- \_\_\_ Arrive at event, store, or restaurant when less people are there
- \_\_\_ Bring noise cancelling headphones
- \_\_\_ Sit child next to one other child at a time

#### Bed/BathTime

- \_\_\_ Choose one color at a time. For example, all yellow toys such as rubber ducks and yellow sponges. Another day use all red toys such as a red boat and a red cup.
- \_\_\_ Present bedtime routine items one at a time
- \_\_\_ Limit sensory input at bedtime (no music, no lights, no toys).
- \_\_\_ Choose a bedtime story that has simple, high contrast pictures.

#### References:

Lueck, A. H., & Dutton, G. N. (2015). *Vision and the brain: Understanding cerebral visual impairment in children*. AFB Press  
Roman-Lantzy C. & Tietjen M. (2020). *Sensory Balance: An approach to learning media planning for students with CVI*. Perkins