

3. Sensory Considerations for Learners with Visual & Hearing Loss, Multisensory Learning

3B: Common Visual Conditions

LOW VISION/'BLIND'

What is this?

Learners may be referred to as being 'blind', but very few individuals are completely blind, instead they have what might be referred to as 'low vision.' This means that their permanent lack of visual acuity interferes with their daily living and cannot be corrected. A learner with low vision might have light perception - the ability to see the difference between light and dark but a learner who is blind will have no light perception.

What causes this?

There are multiple causes of low vision including most of the visual Conditions we describe here.

What does this mean for the learner in my class?

A learner with low vision may experience difficulties with:

loss of central vision

night blindness

loss of peripheral vision

blurred vision

hazy vision

Juvenile Macular Degeneration

What is this?

Macular degeneration is a deterioration or breakdown of the eye's macula, a very small part of the retina. Learners are unable to use their straight-ahead vision to see fine detail.

What causes this?

A rare genetic condition.

What does this mean for the learner in my class?

A learner with juvenile macular degeneration will experience:

- a loss of straight ahead vision
- difficulties discriminating between colours (colour blindness)
- difficulties adjusting from moving from a light to dark environment (or the other way around)

Cortical Visual Condition

What is this?

Cortical Visual Condition (CVI) is the most common cause of visual Condition in children.

What causes this?

CVI is a result of the brain not being able to interpret, or make sense of, the visual information it receives from the eyes.

What does this mean for the learner in my class?

A learner with cortical visual Condition may experience:

- Variation in visual ability - decreases if tired/ill
- Difficulties with visual acuity
- Fixation
- Complex visual information
- Accommodation (moving between looking at a near then far object.)
- Delayed response to visual stimulus
- Difficulty moving around in a busy environment

Diabetic Retinopathy

What is this?

This visual Condition is associated with diabetes.

What causes this?

Diabetic retinopathy occurs when changes in blood glucose levels cause changes in retinal blood vessels. Sometimes tiny blood vessels at the back of the eye become blocked and leak. In other cases, the blood vessels grow over the retina. When these changes affect a large area of the retina, blood supply to the retina is reduced & vision is affected.

What does this mean for the learner in my class?

A learner with diabetic retinopathy may experience:

- blurred vision
- visual acuity issues
- cataracts

Cataracts

What is this?

A cataract is a cloudy or opaque area in the lens of the eye, which might cover all, or part, of the lens. When you hear 'cataract' you might think of this as an age-related condition. But children can have cataracts, and a learner with Down's syndrome might develop an age-related cataract much earlier.

What causes this?

The light entering the eye cannot easily pass through the denser mass of the cataract on the lens, meaning the light reaching the retina is 'scattered' and an incomplete or blurred image result.

What does this mean for the learner in my class?

A learner with cataracts may experience difficulties with:

- moving their head to look at objects from different positions using their peripheral vision
- distorted or blurred images
- struggle with activities that previously they were proficient with
- deteriorating vision and related anxieties
- sensitivity to very bright light

Nystagmus

What is this?

Nystagmus is uncontrolled movement or 'flickering' of the eyes.

What causes this?

This results from damage to the part of the brain which controls eye movement.

What does this mean for the learner in my class?

A learner with nystagmus may experience difficulties with:

- focusing on an object or person
- depth perception making it difficult to reach for and pick up objects
- fine motor skills
- mobility and gross motor skills
- moving their gaze from looking at one object to another e.g. looking at a book on their desk, then looking at the whiteboard

Squint

What is this?

A squint is a condition in which the eyes point in different directions.

What causes this?

A muscle weakness in one eye means the eyes do not work together to give clear vision. If not corrected (usually with a patch over the strong eye) over time, the brain learns to ignore the visual information from the weaker eye to reduce the blurred/double vision.

What does this mean for the learner in my class?

A learner with a squint may experience difficulties with:

- depth perception - making it difficult to reach for and pick up things
- hand eye co-ordination - making handling and manipulating objects more difficult
- walking and judging distances - making a pupil more 'clumsy'
- Blurred or double vision

Shortsightedness (Myopia)

What is this?

Short sightedness is the inability to see objects at a distance clearly. This is usually corrected with prescription glasses.

However, this may be difficult to identify in a learner with SEND.

What causes this?

The eyeball is too long, or the cornea is too rounded and when the light enters the eye through the cornea, it is focused just in front of the retina and not on the retina itself.

What does this mean for the learner in my class?

A learner with short-sightedness, and no corrective glasses, may experience difficulties with:

- distorted or blurred images
- Seeing clearly objects in the distance e.g. the white board/wall display/door/window
- Moving in or exploring an environment where it is difficult to see where it finishes e.g. the playground
- Recognising familiar faces at the edge of their vision e.g. seeing the teacher at the front of the classroom/lunch time supervisor in the playground.

Longsightedness (Hyperopia)

What is this?

Long sightedness is the inability to see near objects clearly. This is more common than short sightedness. This is usually corrected with prescription glasses. However, this may be difficult to identify in a learner with SEND.

What causes this?

The eyeball is too short, or the cornea is too flat and when the light enters the eye through the cornea, it is focused beyond the retina, and not on the retina itself.

What does this mean for the learner in my class?

A learner with long-sightedness, and no corrective glasses, may experience difficulties with:

- recognising objects very near to them - moving themselves away from the object to see it more clearly
- distorted or blurred images
- hand eye co-ordination making handling and manipulating near objects more difficult
- Recognising familiar faces too close to them
- Playing with objects and toys which are too close e.g. on a tray or desk

Astigmatism

What is this?

Astigmatism is similar to long-sightedness and short-sightedness and may co-exist with these Conditions. This is usually corrected with prescription glasses. However, this may be difficult to identify in a learner with SEND.

What causes this?

The eyeball is shaped more like a rugby ball than a football, so light is focused at more than one place in the eye.

What does this mean for the learner in my class?

- Blurred or distorted vision
- Increased eye strain/headaches