

Implications of Sight in Only One Eye

The child with normal vision in one eye should be able to read regular size print and to access visual information in the classroom as efficiently as children with normal two-eyed vision. S/he should have no difficulty with reading from the chalkboard, seeing a TV screen or projector screen, or discriminating objects in the distance. S/he will be able to gain a driver's license at age 18. S/he may, however, experience some difficulties with eye-hand coordination or mobility. Use the following as a guide or consult a Visiting Teacher for the Vision Impaired for more specific advice.

Check on prognosis for other eye:

- ❖ Check with parents or specialists
- ❖ Teachers need to be aware of prognosis for vision in remaining eye
- ❖ Know what signs indicate degeneration in vision
- ❖ Know what action should be taken if such signs occur

Restriction to visual field:

- ❖ With normal vision in both eyes, the field of view is about 175°
- ❖ With vision in only one eye, this is restricted to about 100°
- ❖ The field is absent on the side of the affected eye so the child will not see objects or activity on that side

Implications:

- ❖ on his/her 'blind' side
- ❖ The child may bump into obstacles on 'blind' side
- ❖ Try to approach child from side of good vision
- ❖ The child will need to move head into 'blind' side to compensate for reduced field
- ❖ The child will need to be especially aware of road safety on 'blind' side

Lack of depth perception:

- ❖ We need two eyes to 'triangulate' to perceive depth or distance from objects (called 'stereopsis'). With one-eyed vision, the child will need to adopt other strategies to compensate for this deficit.

Implications:

- ❖ The child may have difficulty in sporting activities which involve judgement of distances (eg ball sports, hurdles, golf, high jump, etc)
- ❖ Eye-hand coordination may be affected if the child cannot grasp accurately for objects or judge whether they are within reach (eg putting brush in clag bottle or paint pot, threading activities, etc)
- ❖ Mobility may be affected, especially when on contoured ground (eg walking up/down unfamiliar steps, negotiating contoured terrain, etc)

Strategies for compensating for lack of depth perception:

Lack of depth perception can be compensated for by using relative size and position, object occlusion or 'motion parallax'. Most children with sight in one eye use these cues without being taught about them.

Size and position:

We learn that objects look smaller as they move further away and larger as they come closer. If we know the size of an object, we can often judge its distance by its apparent size.

Implications:

- ❖ Show the child the size of a ball before playing a game
- ❖ Build up the child's awareness of the sizes of common objects

Object occlusion:

Sometimes if an object is further away from us, it is occluded (or partially covered) by objects closer to us. Children will use this information, especially when grasping for objects.

Implications:

- ❖ Ensure that the child is familiar with the language and concepts of 'behind', 'in front', 'back', 'beside', etc

Motion parallax:

Motion parallax is the term for how objects seem to move at different rates, depending on their distance from us. If you look out of the window of a moving car, the objects closer to you will move by quickly, but objects further away will move by more slowly. A student with no depth perception can use this to judge relative distances. If the student moves his/her head, closer objects will move relatively more quickly than more distant objects.

Implications:

- ❖ Make the student aware of this and practice using it for judging the distance of objects
- ❖ Moving his/her head may assist in making judgements as to the distance of objects

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