

MONOCULAR VISION

Students who have monocular vision have sight in one eye only. Monocular vision may be caused by disease or trauma in the eye. It is important to know the eye condition and the cause of vision loss. The ability to cope with monocular vision is not simply related to the level of vision in the other eye, but is also dependent upon how the brain processes information and the student's ability to react.

IMPLICATIONS OF MONOCULAR VISION

The student 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 students 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.

However, a student with monocular vision may experience difficulty in some of the following areas:

- **Reduced peripheral field of vision**--about 30 degrees of temporal field loss on the "blind side" (the side with no eyesight).
 - Easily startled on the "blind side".
 - Difficulty playing ball games, such as netball or hockey, because of reduced field of vision and problems with accurate depth perception.
 - Unintentional physical contact with people or objects on the affected side.
- **Difficulty with close up tasks** such as sewing, reading and studying, all of which require good near vision. Students may lose their place, experience some eye fatigue and blurring of vision and have difficulty concentrating.
- **Difficulty with depth perception and distances.** Student may experience difficulty with:
 - Going up and down stairs, escalators, steps, curbs, uneven ground and changes in floor levels.
 - Judging distances. Difficulty judging speed of a car while crossing street.
 - Balance.
 - Catching or hitting fast moving balls etc.
- Increased **visual fatigue/headaches**, discomfort or eyestrain in the "blind eye". This may result in attention/concentration difficulties. Monitor visual fatigue and headaches.
- Problems with **orientation**-finding their way. Difficulties determining the **location of objects** in relation to one another (learned spatial awareness/orientation to space). This may be more evident in unfamiliar environments.
- Difficulties with **hand-eye coordination** (using the eye to direct the hands).
 - Difficulty with sports involving hand-eye coordination such as tennis, baseball and ping-pong.

ACCOMMODATIONS TO CONSIDER

Provided with the proper support, a student with monocular vision can learn to adjust to his or her environment and feel positive about the accommodations required.

Environmental Accommodations:

- **Familiarization in new environment** would assist child in anticipating distances and height. Alert student to any potential hazards ('trip hazards') in the surroundings either at school or on field trips in order to ensure safe movement within the environment.
- **Lighting** conditions favoured by individual students, must be considered.
- **Seating** should favor the student's better eye. Proper positioning the desk within the classroom to make it easier to see the board and other visual resources to reduce the frequency of head turning. A child with no vision in the right eye should sit at the right hand side of the classroom so the board can be easily scanned with the strong left eye.
- Use materials with **good contrast**. Contrast allows something to stand out from the background (i.e., outlining doorways, adding fluorescent strips on the edges of stairs).

Educational /Assessment Accommodations:

- Assist student in becoming well **organized** with materials and resources. Ensure items are always kept in the same place and student is informed of any changes.
- Teachers and individuals instructing/speaking to child should sit on the child's "**good side.**" Also, present materials and texts on the 'good side' in order to ensure the student's ability to see them.
- When presenting visual information, pair it with **auditory information** (i.e., verbalize written work on blackboard).
- Enlarge text to assist with viewing if this is necessary. Children with monocular vision are often able to view regular size text.
- Techniques such as **scanning** with head and eyes may be employed to increase visual field and heighten awareness of materials and environment. The reduced awareness of about 30 degrees of temporal field on the "blind side" can be compensated for by turning the head in that direction. Direct instruction to make this eye or head movement may be required; they will not necessarily come naturally.
- If **visual fatigue** is demonstrated, the following requirements may be considered:
 - Divide tasks into manageable chunks.
 - Provide rest periods.
 - Avoid timed tests.
 - Allow more time to complete tasks.
- Provide a ruler or black paper as **bookmark/line guide** so student does not lose place in text.
- Encourage the student to use **two hands for tasks** which helps with depth perception difficulties (i.e., when looking for something on the floor, use both hands to make contact and act as a reference to one another).
- Encourage student to develop strong self-advocacy skills to assist him as an engaged learner.

☺ **With monocular vision, students are at risk for significant visual loss or blindness should their functional eye be damaged. Eye injury may occur when falling or when playing rough sports. Thus, there is a need for eye protection and safeguarding the good eye by wearing protective lenses.**