

# Monocular Vision



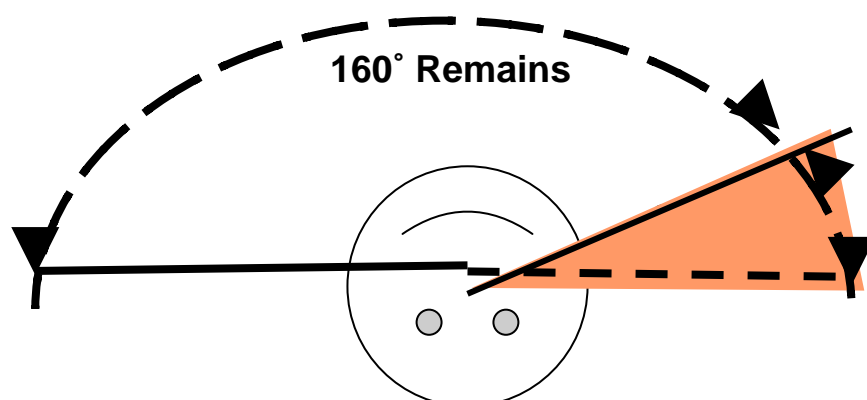
Monocular vision means 'sight in one eye only'. Many children with monocular vision adopt a compensatory head posture, turning their head to one side. Difficulties, which may arise include a sense of loss of self-wholeness and a fear of total blindness. Adjustment, dependent upon age and general practical ability often occurs, however, people who are born with one functioning eye show very little need for adjustment.

Monocular vision affects the child in the following ways:

## Field of Vision

The field of vision is reduced; often the horizontal field is narrowed by approximately 20%. However, the good eye can see surprisingly far into the other half of the visual field. A child may be aware of people and objects on their blind side. This can be especially hazardous in an unfamiliar, busy or cluttered environment. A child with loss of vision in one eye may experience difficulties with, materials presented on the blind side, people making gestures on the blind side, estimation of distances, as depth perception is impaired and mobility in unfamiliar surroundings. Although the individual learns to turn their head to compensate for the loss of field of vision on the affected side, there is however, a gap over the shoulder which cannot be viewed, this particularly shows itself when the adult reverses or parks a vehicle on the blind side, as the individual cannot accurately judge the distance between vehicles and others in close traffic. It is possible to relearn how to see in depth. Eventually the remaining eye adjusts and people with monocular vision may need to learn to turn their head more.

## Example of field of vision



## **Depth of Vision**

A child with sight in one eye lacks 3 dimensional stereoscopic vision. The environment becomes confusing; steps or kerbs, unless clearly marked, may not be recognised. Changes in floor surfaces, for instance carpet to lino or concrete to asphalt, may be mistaken for different levels.

## **Judgment of Speed and Distance**

Games or playground activities may be frightening, especially to young children because of the fast moving objects and groups of children. Sportsmen encounter difficulty hitting fast moving balls and tend to bump into other players on the blind side. People may bump into other people coming into view from the blind side, particularly in crowds.

## **Hand-eye Co-ordination**

Tasks such as threading a needle or pouring liquids can cause problems. For example, hitting a nail with a hammer, lining up a screwdriver with the screw, matching joints in woodwork, lining up wallpaper, can present problems. A misjudged aim may mean an upset paint pot or a tin of pencils accidentally knocked to the floor, such 'clumsiness', can be distressing. Fine-detailed work such as wiring, drilling and cutting may take the individual longer with the need to check accuracy, using measuring tools. Understanding and sensitivity are required when dealing with situations of this nature.

## **General Advice on Management within the home and school or during visits outside school premises.**

There are few, if any, school activities that are limited by having only one good eye. Many people develop their own ways of coping, for example, developing strategies in learning to sort the visual clues that enable the estimation of distance.

- **Safety**

Safety is of prime concern when dealing with a child who has monocular vision. Care should be taken in lessons involving potential hazards particularly practical subjects, e.g., science, woodwork, cookery, where experiments and demonstrations involve the pouring of hot or caustic liquids. All staff should be aware of the child's visual problems

- **Indoor**

Avoid hazards and unnecessary untidiness in the classroom such as:-

- Obstacles on the floor e.g., school bags
- Tables/cupboards jutting out
- Half open doors and windows

- **Outdoor**

All aspects of road safety should be emphasised to the child with monocular vision. Extra care is necessary regarding awareness of traffic approaching on the blind side.

Compensatory use of head movement and listening skills will help to overcome many problems.

- **Optimum Seating Position**

In the classroom the child needs a good view of the classroom board with their seeing eye. Check also that the child is in the best position during

- Assembly
- Story time
- Class demonstrations
- Group activities e.g., computer work
- Lessons where an overhead projector is used.

A child with monocular vision should never be expected to share a book. When copying text, the text should be placed on the good side.

The teacher should sit on the child's good side when:

- Teaching new skills
- Correcting work
- Listening to the child read
- Giving individual explanation

## **PE, Games and Playground Activities**

### **Apparatus**

Extra supervision may be necessary when the child is using large apparatus, especially equipment which is above floor level e.g., climbing frame. The child may be more apprehensive than normally sighted children on apparatus, owing to an inability to judge height/depth/distance.

### **Ball Games/Team Games**

The child may not see the ball approaching until it hits the child. When playing netball or football the child should be positioned so that a good view of the pitch is achieved with the 'seeing' eye. Difficulty is usually experienced with racquet games, those with monocular vision may be more reluctant to join in some activities and adult intervention may be necessary to ensure the child is included.

Providing there is awareness by all concerned, the child with monocular vision, often does not find it a disability. There is always, of course, an underlying anxiety about maintaining sight in the good eye.

## **General Activities**

Many people who had sight in one eye only, can hold an ordinary driving licence, although they will need to inform the DVLA and their insurance company of their condition.

Many individuals who have sight in one eye only, are able to read printed information, watch television from a reasonable distance and perform many other day to day activities without problems.

## **Hints and ideas to help people with sight loss in one eye**

When putting a drink down, place the other hand on the table or surface, then place the drink next to it.

It can be difficult to judge the last step on the staircase. Move cautiously, feel ahead with your foot and keep a hand on the banister.

Wear protective glasses when gardening or doing repair work and DIY work. Polycarbonate lenses are the safest.

When going out for a meal, make sure that your friend/partner sits on your seeing side. Be aware that the waiter may turn up on the blind side.

When crossing the road it may be useful to stop at the kerb to gauge the depth before crossing.

Disclaimer: Information sheets have been produced to provide information and advice for the parents of visually impaired children. Changes may occur in theories and legislation, however, the information sheets have been written in good faith, as a general guidance tool. If you have any questions with regard to issues raised by the information sheet, please contact the National Blind Children's Society, National Family Support and Information Manager.