

Adults with learning disabilities are 10 times more likely to have serious eye problems than other people. Losing the sight in one eye can have profound emotional effects on anyone, whatever their ability. However, for people with learning disabilities being able to see with one eye only, known as monocular vision, can cause ongoing problems which carers and supporters must understand to be able to offer the right help and support.

As in the general population, some people with learning disabilities cope well, while others may have difficulties in adapting to the changes in their vision and the way they now perceive their world because of their sight loss. Coping strategies that people learn through trial and error may well need to be taught to people with learning disabilities. People will also need support in coping with the distress caused by their loss of sight. Some people may have a lack of understanding of what has happened to their sight and why.

This factsheet aims to give carers and supporters of people with learning disabilities a good understanding of monocular vision and the challenges it presents. Most of the issues we cover refer to people who previously had sight in two eyes, known as binocular vision. However, people born with monocular vision may have some or all the problems we discuss.

## What causes monocular vision?

Monocular vision occurs for a variety of reasons, including eye disease. However, it most commonly occurs when there has been trauma, injury or accident to the eye involving severe or total loss of sight. Occasionally the injured or diseased eye is removed; this is called enucleation.

## What visual problems does monocular vision cause?

Monocular vision can cause part of an image to be hidden or blurred. People usually find that monocular vision will affect:

Three-dimensional vision – with vision in both eyes we see the height, width and depth of objects around us. By comparing those dimensions with those of other objects we can recognise distances and the sizes of objects. Monocular vision will affect how objects are perceived and can lead to people feeling or being seen as clumsy or accident-prone. Monocular vision can make steps and slopes difficult to see.

and

All-round vision (peripheral visual field) - it is estimated that a fifth of the field of vision is lost if a person sees with only one eye.

In addition, the person's nose may cast a partial shadow over the image being seen (known as nasal quadrant loss) and clarity of vision may be reduced because we generally see better with both eyes together than with either eye separately.

## What are the effects of these visual problems?

People may experience difficulties with:

- balance
- finding their way which can lead to feeling disorientated
- visually assessing where things are in relation to one another (spatial awareness) and seeing three dimensional images, so things may seem flat
- bumping into objects and people
- going up and down stairs, steps, escalators, kerbs, uneven ground and changes in floor level
- maneuvering a wheelchair or walking frame
- eye-hand co-ordination and picking things up
- carrying out daily life tasks, like pouring water from a jug into a cup
- tasks that demand good near vision like reading or finding small objects

- sports
- judging depth (depth perception), judging distance at less than about a metre and judging speed, such as oncoming traffic, bikes or pedestrians
- transferring skills they have learned in one setting to another setting. For example, a person may learn to reach out with their hand to get through a familiar doorway safely but may not understand they will also need to do this when negotiating doors in unfamiliar settings

## Eye care considerations

It is important to remember people may also have poor or impaired sight in their so called 'good eye'. So, people with monocular vision must continue to have their sight checked regularly. Age-related sight problems such as presbyosis (ageing eyes), cataracts and macular degeneration may occur in the affected eye or unaffected eye. People with Down's syndrome are also more likely to have sight problems.

Extra care will need to be taken with 'risky' activities: the 'good' eye needs to be protected by goggles, 'toughened glasses' (strong frames and specially coated lenses for sport) or ordinary glasses.

If the person tends to rub or poke their eyes, extra attention should be paid to avoiding and treating eye infections, as an infection could put a person with monocular vision at risk of damage to the other eye, or even total sight loss.

## How to offer support with everyday activities

### Consider the person's environment

Lighting - light can assist people to overcome problems with depth perception. Lights that provide shadows for objects may give depth clues to the person.

Contrast - consider contrasting colour schemes and colour contrast between objects the person might be using.

Surfaces and texture - people may want to use changes of textures as landmarks and orientation clues.

Sound - keeping background noise to a minimum will reduce distraction and may help people to concentrate on their activities.

Organisation - make sure items are always kept in the same place and position them in the person's field of vision.

Wheelchair users - ensure that wheelchair users are in a position where they can see and where they are not excluded from people and activities.

## Support the person to overcome perceptual difficulties

Games or activities that involve catching and throwing are good and are useful for helping people overcome the effects of having monocular vision. Jigsaws and sorting games may also help.

Use enlargement as enlarging objects can sometimes help overcome perceptual difficulties. For example, using a low vision aid such as a magnifier, prescribed by a hospital clinic or a local society for the visually impaired.

Encourage eye and/or head movements - these can compensate for a visual field loss and can help the person gain similar information to that obtained when both eyes work together.

Encourage the use of both hands - encouraging the person to use two hands for tasks will help with difficulties with depth perception

## Moving around

Safeguards - encourage the person to wear a bag or carry something in their hand on their 'blind side'. This can offer them a little prior warning of an obstacle or act as a buffer.

Carrying a symbol cane (a foldable small white stick) may help the person by showing others they have a sight problem. A symbol cane is simply held in front of the person's body, it is not a walking stick. Symbol canes can be purchased from the RNIB or a local society for people with visual impairments. It is important that someone is shown how to use their symbol cane correctly, for example, by a Rehabilitation Worker.

Guiding - whenever possible guide a person on their 'blind side'. Encourage the use of stair rails.

Corridors - if walking down a narrow walkway encourage the person to have their 'blind side' nearest to the wall.

Hands - encourage the person to make contact with doorways and corridors with the back of their hand.

Landmarks - teach people to notice permanent 'landmarks' to help them identify exactly where they are.

Road crossings - ensure people look for and use controlled or tactile paving crossings.

## Independent living skills

Some self-care tasks may be more difficult when a person has sight in one eye only. Help the person adapt to their visual field loss by assessing the support they might need when using daily living skills.

## Communication

Positioning - when interacting with someone with monocular vision position yourself on their 'good side'. Consider where people sit in cinemas and theatres.

Attention gaining - don't assume the person knows you are talking to them if you are on their 'blind side'. Say the person's name to attract their attention, then introduce yourself.

Attention sustaining - don't think that the person is not paying attention if they adopt an unusual head position when you're talking to them. They are likely to be trying to see you within their field of vision.

Prompting - in a discreet way encourage the person to scan their head or their eyes to see around them.

Communicating - encourage the person to be assertive, for example, "can you talk to me/sign to me from this side?".

## Emotional support

Time - people should be allowed time to experience a whole range of emotions and distress caused by their loss of vision; these emotions may range from anger and loss to sadness, and may take many months to overcome.

Post-traumatic stress disorder - some people who have lost the sight in one eye or have had an eye removed can feel very distressed and experience post-traumatic stress disorder.

Self-injury - the person may experience an increased desire to injure (eye poke, eye rub, face slap, head bang and so on) the affected eye. This should be interpreted as a means of expressing extreme emotional distress. It is important that help is obtained to prevent sight loss in the second eye.

Fear - with only one eye the person's world might appear to be frightening and less predictable.

Overcoming failure - if people continue to experience failure when attempting tasks it may reduce their enthusiasm to perform them in the future. This may lead to low self-esteem and depression. People need to be motivated to persevere and their successes should be celebrated.

Supporter's attitude - supporters should avoid criticism or negativity such as saying "He's so clumsy!" Supporters should show understanding and be motivating and supportive.

For more information and advice on eye health please look at our other factsheets on our website: [seeability.org/looking-after-your-eyes](https://seeability.org/looking-after-your-eyes)