

# EYE PROBLEMS AFTER A STROKE

For many people, it is some type of sight defect that gives them the first inkling that they have suffered a stroke. A stroke happens when the blood supply to the brain is interrupted in some way. A blood vessel may become blocked or alternatively a blood vessel may burst and bleed. The affects may be temporary or permanent, and can affect thinking, speech, movement and the senses, including vision. Therefore visual problems following a stroke are common. The area and extent of the stroke determine the types of visual problems experienced. The visual problem is most commonly caused by damage to the visual pathway. The visual pathway carries information from the eye to the back of the brain where it is processed. This damage may be temporary or permanent, unfortunately it is difficult to predict who will recover from their visual problems. The most common symptoms are loss of part of the visual field, blurred or double vision and difficulty reading. Though distressing, in many instances, aids or techniques are available to help you cope more effectively. Initially speak to your GP or optician (optometrist) if you are concerned. You may need to be referred to an eye specialist. An ophthalmologist specialises in the diagnosis and treatment of eye disease. An orthoptist specialises in the assessment of eye disorders such as muscle balance and visual fields. There may be local visual impairment services available for you to be referred on to.

## Reduced Vision

We often experience a reduction in vision as we age. A stroke may be associated with a pre-existing health problem such as high blood pressure (hypertension) or diabetes. Some reduction in vision may be a direct result of the high blood pressure or the diabetes rather than the stroke. However, after suffering a stroke, the combination of the stroke and any pre-existing reduced vision is extremely debilitating. Examination is required by a specialist so that the cause of the reduced vision can be established and the appropriate treatment prescribed.



## HEAD OFFICE

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## Visual Field Loss

About one third of people with a stroke have some visual field loss (hemianopia), making it the most common problem associated with vision. Visual field loss is an inability to see either to the right or to the left of the centre of the field of vision. This type of visual loss is directly related to the site of the stroke in the brain. Both eyes will be affected, but the effect may be different in each eye. Damage to the visual pathway, not the eye itself, results in loss of sight on one side in both eyes. A person with left visual field loss loses some, or all, of their vision on the left side, while somebody with right visual field loss loses some, or all, of their vision on the right side. However, the person may or may not be aware of this loss. Specialised measurement of the visual field will reveal such a loss.

Visual field loss has obvious dangers, for example if you are crossing the road you may not be aware of cars coming from one side. Therefore it is important for you and your carer to be aware of the problem. Some orthoptists and some agencies, that assist people with visual disabilities, offer training on how to compensate for visual field loss. For example, you are taught to get into the habit of turning your head and eyes, and therefore minimise the effect on day-to-day activities. However, generally less than half of those affected show an improvement.

If visual field loss makes reading difficult, there are strategies to help. Place a ruler under each line as you read or ask for a typoscope (a piece of card with a pillar-box slit) that allows you to read only one line of text at a time. Drawing a line down the left-hand side of the page with a marker pen or holding a coloured ruler vertically can also help with left visual field problems.

## Eye Movement

A stroke may cause a wide variety of eye movement disorders. You may experience a disturbance of rapid eye movements (saccades), which normally allow you to look from one object of interest to another. This may lead to difficulties with activities such as reading, sewing, playing cards etc. Disruption of slow eye movements (smooth pursuit) results in an inability to follow slow moving objects accurately. Compensatory fast jerky movements may replace slow eye movements. This may make it difficult to keep your visual attention on one object of interest. Sometimes the damage will repair itself, but in the meantime you have to be instructed to lift your head rather than your eyes. Recognising the problem is important - to understand the difficulties carers also need to understand what is going on.

## **Double Vision**

People who have never had double vision (diplopia) do not realise how horrible it is. It can make you feel dizzy, sick and it can make you lose your balance. Double vision is common when a stroke affects the back of the brain. Double vision has dangers, for example when making a cup of tea you can miss the teapot with the boiling water as you see two teapots. Traditionally, treatment was to wear a patch over one eye.

However, this can cause the loss of 3-D perception, making tasks more difficult. More sophisticated 'frosted' patches can be stuck onto one lens of your glasses to allow peripheral vision only. An alternative is to have a prism laid onto the spectacle lens.

This has the effect of moving the images seen by the eye so that they join up, restoring 3-D perception. They don't work in every case, but when they do, they are very successful.

## **Useful Addresses**

### **Royal National Institute for the Blind Scotland (RNIB)**

12-14 Hillside Crescent Edinburgh EH7 5EA

Tel: 0131 652 3140

UK Helpline: 0303 123 9999

Website: [www.rnib.org.uk](http://www.rnib.org.uk)

Email: [rnibscotland@rnib.org.uk](mailto:rnibscotland@rnib.org.uk)

*Contact RNIB Scotland for details of visual impairment services in your area.*

If you would like to speak to one of our nurses in confidence,  
please call the Chest, Heart & Stroke Scotland Advice Line

*Monday - Friday 9.30am - 12.30 and 1.30pm - 4.00pm*

**0845 077 6000**