

Acquired Fourth Nerve Palsy

Information for patients, relatives and carers

Orthoptic Department

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How do eye muscles work?

We have six muscles around each eye which move our eyes. Nerves in the brain make the muscles work; the nerves are like the electric wiring to the muscles. If a nerve isn't working properly the muscle it supplies becomes weak, or in some cases stops working altogether.

What is a fourth nerve palsy?

The fourth nerve supplies the superior oblique muscle, which moves an eye down and 'also rotates the eye'. If the fourth nerve is not working (palsy), then the superior oblique muscle will become weak and not work properly.

How does it affect the eye?

People with a fourth nerve palsy will be unable to move the affected eye downwards. The degree to which movement is affected can vary; it could be complete so no movement or partial, (some movement).

Because eye muscles normally work in pairs, its paired muscle, the inferior oblique will be working too well and this will pull the affected eye up creating a vertical 'squint'.

What are the symptoms?

Double vision (diplopia), patients often notice the images are separated vertically and may appear tilted. It may be constant or only present when looking down or to the side.

'Blurred vision', that improves when you close one eye.

What causes a fourth nerve palsy?

Fourth nerve palsy may be caused by hypertension, diabetes, TIA (transient ischemic attack/mini stroke), stroke or as a result of head trauma.

Other causes may require investigation such as a scan. Sometimes a cause may not be found despite extensive investigation.

Will it get better?

In most people the palsy will improve over time, but there is no way of predicting how long it will take. Some people recover fully, others may have a partial recovery and some people may see no improvement at all.

Most improvement occurs in the first six months after onset, but can continue for up to 18 months.

Can it be treated?

The first step is to treat the double vision either with a prism to artificially align the eyes and restore single vision or if this is not possible by covering an eye to eliminate the second image.

Then a period of observation is required to see if the palsy improves. In this time the strength of prism required may reduce as the palsy improves.

If the palsy fails to recover fully some people will benefit from having prisms built into their glasses or in some instances will benefit from corrective surgery.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact Patricia McCready, Eye Clinic, The York Hospital, YO31 8HE, telephone 01904 6750 or email patricia.mccready@york.nhs.uk.

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