NHS
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# Ocular nerve palsies causing double vision










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## Who is this leaflet for?

This leaflet has been designed to provide information for patients or carers about cranial nerve palsies.

## What is a nerve palsy?

There are six muscles around each eye that help to keep our eyes aligned. These muscles allow us to use both eyes together as a pair to achieve binocular vision. They receive their innervation from three nerves which stem from the brain (the third, fourth and sixth cranial nerves). Loss of function of one of these nerves will result in a squint, and eye movement problems will develop. Double vision may be the first sign of this. Most commonly, only one nerve will be affected but occasionally more than one nerve palsy can occur. The double vision is usually worse when looking in a particular direction. The images you see may be displaced horizontally, vertically or diagonally. You may also notice one of the images appears tilted. This will all depend on the type of nerve palsy you have.

## What causes a nerve palsy?

The most common causes are high blood pressure, diabetes, TIA (transient ischemic attack) or trauma. Other possible causes may include viral illness, stroke, brain tumour, inflammation, infection, migraine headache and elevated pressure inside the brain.

Sometimes no cause for the palsy can be found despite extensive investigation. In older people, diabetes, blood vessel disease or a small stroke are most common.

## How is it diagnosed?

The orthoptist will examine how the eyes move and observe the position of the eyes whilst taking various measurements. Once a nerve palsy is diagnosed you may be asked to have blood tests or in some cases a CT or MRI scan.

If the doctor knows you are diabetic, have had a stroke or have other general health risk factors then often no further investigations are necessary, providing the nerve palsy goes on to show signs of recovery.

Your orthoptist will repeat the measurements at regular intervals to monitor any changes. Should your condition change dramatically inbetween appointments you are advised to telephone the Orthoptic department on 01872 253287.

## What are the symptoms of a nerve palsy?

Double vision is the main (and often the only) symptom of a nerve palsy. Some patients also report blurred vision. You may notice that your eyes look different – they may look misaligned or deviated from their usual position. Symptoms can vary depending on which ocular nerve is affected and occasionally you may also have a ptosis (droopy eyelid) or your pupil (the black part of your eye) may change size.

It is important to tell your orthoptist or doctor straight away if you experience these problems, particularly if you notice your pupil becomes noticeably dilated (larger than usual). You should also inform your orthoptist or doctor if you experience any other symptoms such as a loss of vision, loss of balance, dizziness, facial weakness or headaches in case they are related to your condition. It is common to experience difficulties with depth perception and care should be taken when walking, using stairs and pouring hot liquids.

## How are nerve palsies treated?

Your orthoptist can usually make you more comfortable by helping to resolve your double vision. The orthoptist will assess your suitability for a Fresnel prism, which can be stuck on to your glasses to help join the double images together. This restores your depth perception by allowing you to use both eyes together when you are looking straight ahead. A prism may not eliminate your double vision in all positions as nerve palsies usually cause varying amounts of double vision when you look in different directions. In the early weeks after onset it is not always possible to 'join' the images satisfactorily and you may be offered an eye patch or frosting tape for one lens of your glasses to block out one of the images and make you more comfortable.

If you do not have glasses, the orthoptist may advise you to bring a pair of non-prescription glasses to your next appointment.

It is advisable to stick with Fresnel ('stick on') prisms until your orthoptist advises your condition is stable enough to get the prism strength incorporated into your glasses. This is because the prism strength required can change quickly over the first few months.

Surgery on the muscles around your eyes is occasionally considered if symptoms persist after 12 months or more.

## Do nerve palsies improve?

It is difficult to ascertain if or when a new nerve palsy will completely recover at the first appointment. Recovery speed depends on what has caused the weakness. Nerve palsies caused by vascular (eg diabetes or high blood pressure) or viral problems generally improve well. Maximum improvement is most common in the first 6-12 months after onset. Recovery is not always complete and some patients can be left with a residual weakness and double vision can sometimes remain. Symptom relief with prisms may be used long term in these cases or surgery may be considered.

## Can I drive with double vision?

You cannot drive with double vision.

If you are able to control your double vision by using prisms then you may be able to return to driving once you have adapted to the prisms and your double vision is well controlled. Please discuss with the orthoptist.

It is sometimes acceptable to drive with one eye covered, please discuss with the orthoptist.

www.gov.uk/diplopia-and-driving

## Any questions?

You can contact the Orthoptic Department with any queries relating to your condition on:

Tel: 01872 253287

Email: rch-tr.rchtorthoptic@nhs.net

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

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