

Third (III) Nerve Palsy

Orthoptic Department
St Richard's Hospital
Southlands Hospital

Patient information

A decorative geometric pattern in the bottom right corner, consisting of a grid of white dots connected by thin white lines to form a series of triangles, all set against a blue background.

This leaflet is intended to answer some of the questions of patients or carers of patients, diagnosed with Third Nerve Palsy under the care of University Hospitals Sussex NHS Foundation Trust.

What is third (III) nerve palsy (also known as oculomotor nerve palsy)?

This is weakness of the III (third) cranial nerve which is responsible for moving four of the six eye muscles which control eye movement.

A weakness of this nerve results in the affected eye being out of alignment with the other. This nerve also supplies the upper eyelid and the muscles that control pupil size. This means lid droop (ptosis) may be noticed and the pupil may also be affected where the pupil becomes enlarged and blurred vision may be a problem.

What is the cause?

This weakness can be there from birth (congenital) or acquired through the result of damage to the nerve.

The most common causes in adults are diabetes or other vascular conditions.

There are also other rarer causes such as trauma, aneurysm, inflammation, stroke or tumour which may require further investigations.

What are the symptoms?

The affected eye may appear to be out of alignment. Commonly this is seen as the eye turning outwards (away from the nose) and downwards.

Double vision (diplopia) may be noticed. This could be sudden in onset or gradually occurring depending on the cause. It may be present all of the time or only in certain positions of gaze.

The upper eyelid may droop, this could be mild or complete so that the eye appears fully closed.

You may notice the pupil may also have changed in size. This can cause blurred vision.

Symptoms of double vision may be masked if the eyelid is drooping initially, but this may become more problematic when the lid muscle begins to recover or if the lid closure is not complete.

How is it diagnosed?

The orthoptist will examine the eye movements and position of the eyes taking various measurements. 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 III nerve palsy shows signs of recovery.

The types of tests you will need to have done will depend on your age, general health and any pre-existing medical conditions you may have.

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

Does third nerve palsy improve with time?

Yes, in many cases.

The amount of improvement depends upon the cause. Most third nerve palsies caused by vascular conditions such as diabetes recover completely.

Some patients may experience improvement but not complete recovery and may be left a residual muscle weakness.

The orthoptist and ophthalmologist can advise you on the long-term management options available to you. Maximum improvement usually occurs during the first six months after onset, but may occur up to 18 months after the start of symptoms.

Congenital third nerve palsy is unlikely to resolve spontaneously.

How can double vision be treated?

Prisms added to or incorporated into spectacles can realign the images and allow single, binocular vision in straight ahead gaze. Because the degree of the misalignment varies in different gaze positions, prism correction does not always eliminate double vision in every gaze position.

The power of the prism can be reduced as the palsy improves. Patching one eye eliminates double vision, however, this treatment must be carefully monitored in children to avoid the development of amblyopia.

Can long-term third nerve palsy be fixed?

After observation (usually 12 months), surgery may be performed to reduce double vision or to improve the appearance of the eyes. Progress will be monitored by the orthoptist and ophthalmologist and any treatment will be discussed and carried out when and if appropriate.

Contact numbers

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