

Cranial Nerve Palsy

Ophthalmology

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

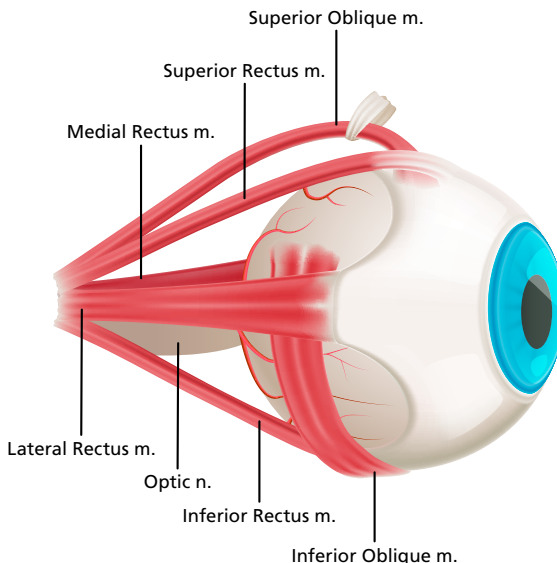
Introduction

Each eye is moved by six muscles. These muscles are situated around the outside of each eye ball. These six muscles receive their signals from three cranial nerves: the third cranial nerve (known as the oculomotor), the fourth cranial nerve (known as the trochlear) and the sixth cranial nerve (known as abducens).

These nerves begin in the brainstem (at the base of the brain) and enter the eye socket through a fissure (gap) in the bone of the skull behind the eye. There can be a number of reasons why a cranial nerve palsy occurs. Microvascular conditions such as high blood pressure and diabetes are common, as well as head injuries, infections and inflammatory conditions to name a few. If this occurs, then eye misalignment may occur and may result in the appreciation of diplopia (double vision).

What does the Third Nerve do?

The third nerve is responsible for moving four of the six eye muscles. These muscles are the superior rectus, inferior rectus, medial rectus and the inferior oblique. It also supplies the upper eyelid and the muscle that causes the pupil to constrict (become smaller).



The affected eye will be out of alignment and will not move properly.

The eyelid of the affected eye may droop (ptosis) or be closed, and the pupil may be dilated (become larger) this can cause blurred vision. The degree to which movement is affected can vary. It could be complete so no movement or partial, (some movement).

What does the Fourth Nerve do?

The fourth nerve is responsible for moving the superior oblique muscle. This muscle usually moves the eye downwards and outwards and is able to rotate the eye slightly. The amount that the muscle will be affected by will vary from person to person.

What does the Sixth Nerve do?

The sixth nerve moves the lateral rectus muscle. This muscle pulls the eye away from the nose. The degree to which the movement is affected will vary from person to person.

What is a 'Palsy'?

A cranial nerve palsy is a condition that causes complete or partial paralysis of one or more of the 12 cranial nerves which arise from the brain. This leads to movement and coordination difficulties in various parts of the body.

What causes a Cranial Nerve Palsy?

There are many factors that can result in a cranial nerve palsy. The weakness can be there from birth (congenital) or acquired through the result of damage to the nerve.

The most common causes for cranial nerve palsies affecting the eyes are due to microvascular conditions such as uncontrolled blood pressure, cholesterol or diabetes.

Further investigations

Further investigations such as a scan (CT or MRI) and blood tests may be necessary to establish the cause of the cranial nerve palsy if the cause is not already known. The type of tests you will have done will depend on your age, general health, and any pre-existing medical conditions you may have.

Sometimes a cause may not be found despite extensive investigation.

What are the signs and symptoms?

If your eyes are not moving together, you might experience blurred or double vision. This may vary depending on the direction of gaze and which nerve has been affected.

You may experience:

- Blurred vision that improves when you close one eye
- Double vision
- Drooping eyelid
- Pain in or around your eye

Can anything be done?

It is not possible to speed up the natural recovery of cranial nerve palsy, but the vast majority of Third, Fourth and Sixth nerve palsies improve over time.

The amount of improvement depends on which nerve is affected and the cause for the nerve palsy. If the cause is due to underlying conditions such as poorly controlled diabetes or high blood pressure / cholesterol then the first step will be to manage these conditions.

Some patients may experience improvement but not complete recovery and may be left with a residual muscle weakness. The Orthoptist and Ophthalmologist can advise you on the long-term management options available to you.

Orthoptic Management

In some cases, fresnel prisms may be used to help join the double images. This is a thin piece of plastic that is cut to the shape of the lenses and stuck on with water.

If fresnel prisms are not suitable, then it may help to cover the eye with a patch or to cover one lens of the glasses in order to remove the diplopic image. A fabric or adhesive patch may be used, as well as frosted tape.

It is also important to make sure that blood pressure, blood sugar and cholesterol are controlled if this was the cause for the nerve palsy for which you may need to see your GP.

Can I continue to drive?

You must tell the DVLA if you've got any problem with your eyesight that affects both of your eyes, or the remaining eye if you only have one eye.

You could be prosecuted if you drive without meeting the standards of vision for driving.

Are there any other signs and symptoms?

Hearing loss, facial weakness, decreased facial sensation or droopy eye lids can often be the first signs of a cranial nerve palsy, and be the reason that you seek medical help.

Should you experience any of these in addition to your cranial nerve palsy then it's advisable you report this to a medical professional as soon as possible.

Monitoring

Progress and symptoms will be monitored by your Orthoptist and Ophthalmologist, and any treatment and management will be discussed with you at each appointment.

Sometimes your symptoms may change and improve in between appointments. You can contact the Orthoptic Departments for advice and support using the contact details below:

Wolverhampton Eye Infirmary

New Cross Hospital
Wolverhampton Road
Wolverhampton
WV10 0QP
Tel: 01902 695830

Cannock Eye Centre

Cannock Chase Hospital
Brunswick Road
Cannock
WS11 5XY
Tel: 01543 576680

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowałiby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。