

Cranial Nerve Palsy

WHAT IS A CRANIAL NERVE?

Cranial nerves are nerves that lead directly from the brain to parts of our head, face, and trunk. There are 12 pairs of cranial nerves and some are involved in special senses (sight, smell, hearing, taste, feeling) while others control muscles and glands.

WHICH CRANIAL NERVES PERTAIN TO THE EYES?

The second cranial nerve is called the **optic nerve**. It sends visual information from the eye to the brain. The third cranial nerve is called the **oculomotor nerve**. It is involved with eye movement, eyelid movement, and the function of the pupil and lens inside the eye. The fourth cranial nerve is called the **trochlear nerve** and the sixth cranial nerve is called the **abducens nerve**. They each innervate an eye muscle involved in eye movement. The fifth cranial nerve is called the **trigeminal nerve**. It provides facial touch sensation (including sensation on the eye).

WHAT IS A CRANIAL NERVE PALSY?

A palsy is a lack of function of a nerve. A cranial nerve palsy may cause a partial weakness or complete paralysis of the areas served by the affected nerve. In the case of a cranial nerve that has multiple functions (such as the oculomotor nerve), it is possible for a palsy to affect all the various functions or only some of the functions of that nerve.

WHAT ARE SOME CAUSES OF A CRANIAL NERVE PALSY?

A cranial nerve palsy can occur due to a variety of causes. It can be congenital (present at birth), traumatic, or due to blood vessel disease (hypertension, diabetes, strokes, aneurysms, etc.). It can also be due to infections, migraines, tumors, or elevated intracranial pressure. Age, medical history, details about symptoms, and examination will point the physician toward the correct diagnostic tests needed to determine the cause of the palsy.

WHAT ARE THE SYMPTOMS OF A CRANIAL NERVE PALSY?

[Third](#), [fourth](#), and [sixth](#) cranial nerve palsies can limit eye movements and produce strabismus (misalignment of the eyes) and diplopia (double vision). Patients with a cranial nerve palsy may adopt an [abnormal head position](#) to compensate for their strabismus and reduce diplopia. In addition to limited eye movements, a [third](#) nerve palsy can also cause ptosis (droopy eyelid) or mydriasis (an abnormally dilated pupil).



IS THERE ANY TREATMENT?

Please refer to the specific FAQ sections on [third](#), [fourth](#), and [sixth](#) nerve palsies for specific information and recommendations (located on this website). Some cases may resolve on their own, and the ophthalmologist will usually wait at least 6 months for possible spontaneous improvement. During this time, double vision may be relieved with prism glasses or by patching one eye. If the palsy is congenital or does not improve after six months, eye muscle surgery may be performed to improve eye alignment and diplopia. The best treatment will be determined by the ophthalmologist after a thorough evaluation.

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