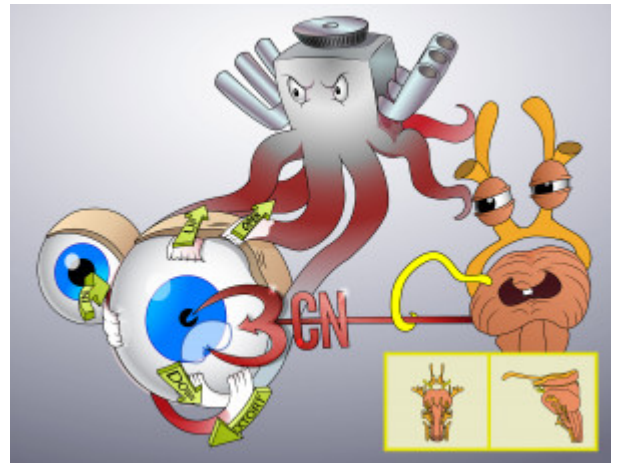


CN III

Also known as the oculomotor nerve. It is a motor nerve that controls most of the eye's movements, along with accommodation, eyelid opening and pupillary constriction.



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Oculomotor Nerve

Octopus-motor

The nucleus of the oculomotor nerve exists in the rostral midbrain.

Motor

Motor

It is primarily a somatic motor neuron; however, the Edinger-Westphal nucleus contains preganglionic parasympathetic neurons. Somatic fibres are more susceptible to ischemia (such as in diabetes) while parasympathetic fibres are more susceptible to compression (such as in a compressive aneurysm).

Eye Movement

Eye with Tentacles Moving Up, Down, Inward and Extorting

CN III controls most of the extraocular muscles including the superior rectus, inferior rectus, inferior oblique and medial rectus muscles. Damage to somatic fibres leads to the eye looking down and out.

Accommodation

Accommodating Lens

The Edinger-Westphal nucleus controls the ciliary muscle and allows the eye to focus on an object as its distance changes (known as accommodation).

Eyelid Opening

Eyelid Opened

CN III controls the levator palpebrae superioris muscle which allows the eyelid to open.

Pupillary Constriction

Pupil Constricted

The Edinger-Westphal nucleus controls the sphincter pupillae. Paralysis of parasympathetic fibres originating from the Edinger-Westphal subnucleus, due to compression from an aneurysm for example, can lead to a fixed, dilated pupil that cannot accommodate/change lens shape (cannot see near).