

Nervus opticus

Nervus opticus (II. cranial nerve', **optical nerve**). It develops as an outgrowth diencephala. It is produced by the efferent fibers of the retinal ganglion cells, which are **3. neuronem** visual pathways (ganglion opticum, multipolar cells).

Course of Nerve

The axons of the ganglion cells converge into the optic nerve papilla. The optic nerve continues from the back wall of the eyeball to the *apex orbitae* and passes through the wall of the eyeball (*lamina cribrosa sclerae*), where it acquires myelin sheath. It emerges from the eyeball medially from its posterior pole. At the apex of the orbit, it passes through the *canalis opticus* into the *cranial cavity*. The connection and partial crossing of the nerves creates the chiasma opticum, which is located in front of the Turkish saddle (in the sulcus chiasmatis) . *They continue as the right and left tractus opticus* (visual pathway). It ends its journey in the metathalamus (corpus geniculatum laterale) and in area 17 cerebral cortices.

In the area behind the eyeball (approx. 1 cm) **a is added to the nerve. centralis retinae** (branch of *a. ophthalmica*), which fulfills the role of **nutrition of the retina**.

Optic nerve sheaths

It is enveloped by brain envelopes derivatives. On the surface is the **'vagina externa n. optici'** (a continuation of the *dura mater*), which then passes into the sclera. Below it is the **'vagina intermedia n. optici'** (derivative of *arachnoidey*). *The internal sheath is the vagina interna n. optici'* (continuation of the pia mater). *The space between the packages is filled with cerebrospinal fluid.*

It differs from other cranial nerves in the arrangement of the braincases. For that reason, it is not considered a typical cranial nerve.

Nerve Disorders

Since the optic nerve is an outgrowth of the central nervous system, pathological processes affecting the brain and its coverings can spread to the optic nerve.

- **Amaurosis** - unilateral blindness (interruption of the optic nerve in front of the chiasm);
- **bitemporal heteronymous hemianopsia** - in a lesion in the region of the chiasma opticum (most often in pituitary tumors);
- **contralateral homonymous hemianopsia** - lesion in the course of the optic tract.

Links

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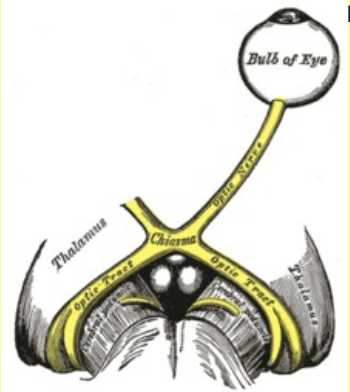
- Sight Path
- Retina
- Orbits
- Cranial Nerve Exits
- Disorders of selected cranial nerves/PGS

References

External links

- Nervus opticus (Czech Wikipedia)
- Optic nerve (English Wikipedia)

References



TA A14.2.01.006 (<http://www.unifr.ch/ifaa/Public/EntryPage/TA98%20Tree/Entity%20TA98%20EN/14.2.01.006%20Entity%20TA98%20EN.htm>)

function transmission of visual information

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