

# Tractus corticonuclearis

**Tr. corticonuclearis** is a direct, single-neuron pathway. It runs from the cortex as a pyramidal tract to the nuclei of the cranial nerves.

## Function

It ensures free movements of the muscles innervated by the given nucleus of the cranial nerve (part of the motor cortex). A part of the sensitive cortex functions as a control system for the transmission of sensitive impulses.

## Progress

From the cortical motor area for the muscles of the head and neck, the tract goes to the motor nuclei of the cranial nerves. From the area of the lower third of the postcentral gyrus, which is the primary somatosensitive area for the head, face and neck, it runs to the sensitive nuclei of the cranial nerves. In the area of the capsula interna, it runs in front of the pyramidal tract. Together with it, it then goes to the brainstem and from there the ending leads to the nuclei of the cranial nerves. The pathway terminates directly on the motor neurons of the respective nuclei, except for the nuclei of the oculomotor nerves, where it terminates via interneurons in the area pretectalis and superior colliculus.

## Termination

1. **Ncl. originis n. trigemini:** fibers are uncrossed. Part for free movements of the masticatory muscles.
2. **Ncl. orig. n. facialis:** crossed and uncrossed fibers. Free mimicry of the muscles of the forehead, eye socket, facial muscles of the lower part of the face.
3. **Ncl. ambiguus** (n. glossopharyngeus, n. vagus). Free movements during swallowing and phonation.
4. **Ncl. orig. n. accessorii** (part of ncl. ambiguus). For free movement of the muscles of the larynx.
5. **Ncl. orig. n. hypoglossi.** Free movements of the tongue muscles.
6. **Nuclei of oculomotor nerves** - n. III, n. IV, n. VI.

## Links

### Related articles

- Free motor skills
- Tractus corticospinalis

### References

- ČIHÁK, Radomír – GRIM, Miloš. *Anatomie 3*. 2. edition. Grada, 2004. 673 pp. pp. -. ISBN 80-247-1132-X.
- PETROVICKÝ, Pavel. *Anatomie s topografií a klinickými aplikacemi : Neuroanatomie, smyslová ústrojí a kůže*. 1. edition. Osveta, 2002. 542 pp. vol. 3. ISBN 80-8063-048-8.