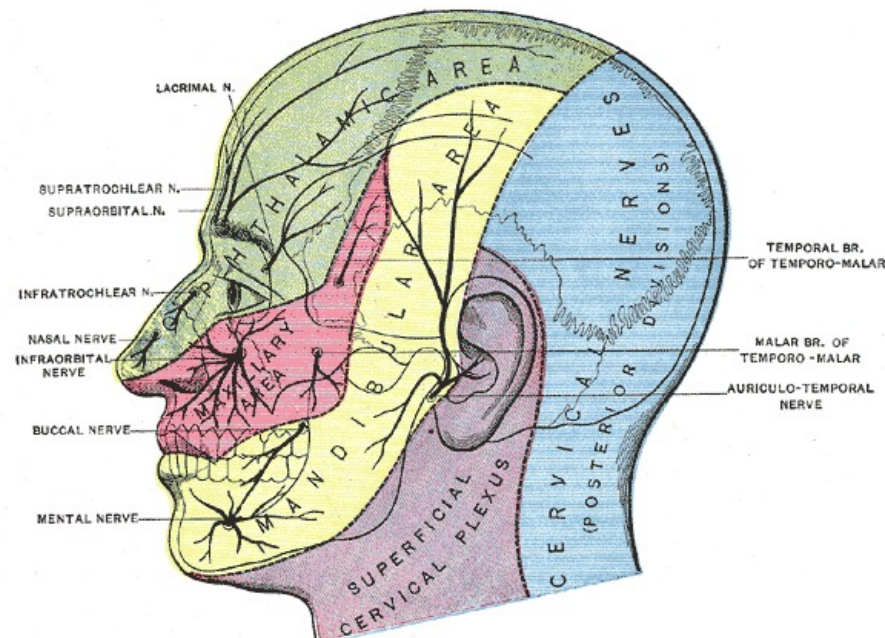


Trigeminal Nerve: Anatomy

The trigeminal nerve is the 5th and largest cranial nerve with combined sensory and motor functions. It arises from the mid-pons and traverses to Meckel's or the trigeminal cave where it forms a ganglion and splits into 3 branches:

- The ophthalmic nerve (V1) provides sensation to the forehead, scalp, eye, nose, superior nasal cavity, frontal sinus, and portions of the dura. It also provides sympathetic innervation to the eye. It exits the skull via the superior orbital fissure. It then branches out and a main sub-branch, the supraorbital nerve, comes out the supraorbital foramen
- The maxillary nerve (V2) provides sensation between the eye and mouth including the inferior nasal cavity, maxillary teeth and maxillary sinus. It exits the skull via the foramen rotundum. It then branches out and the main branch, the infraorbital nerve, goes through the infraorbital foramen.
- The mandibular nerve (V3) provides sensation for the face below the mouth, mandibular teeth, general sensation of the anterior 2/3rds of the tongue, and the floor and buccal surfaces of the mouth. It also has a motor component providing innervation to the 4 muscles of mastication: masseter, temporalis, lateral pterygoids, medial pterygoids. It also provides sensation to the tensor veli palatini and tensor tympani. It exits the skull via the foramen ovale.

This nerve is complicated and the information above is not comprehensive, further independent study is required for complete understandin.



Further reading and image source: Huff T, Weisbrod LJ, Daly DT. Neuroanatomy, Cranial Nerve 5 (Trigeminal) [Updated 2022 Nov 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482283/>