

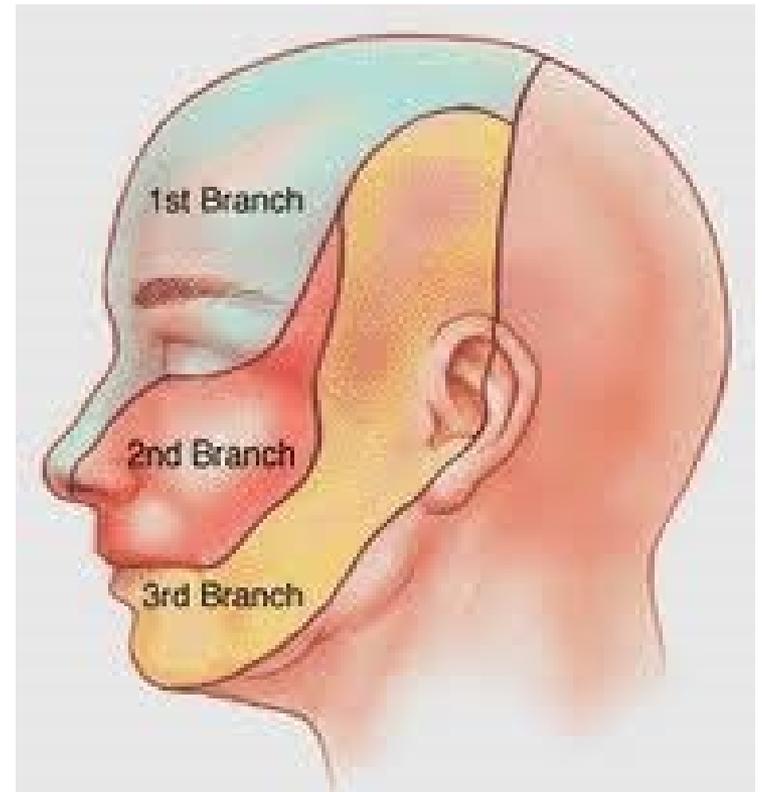
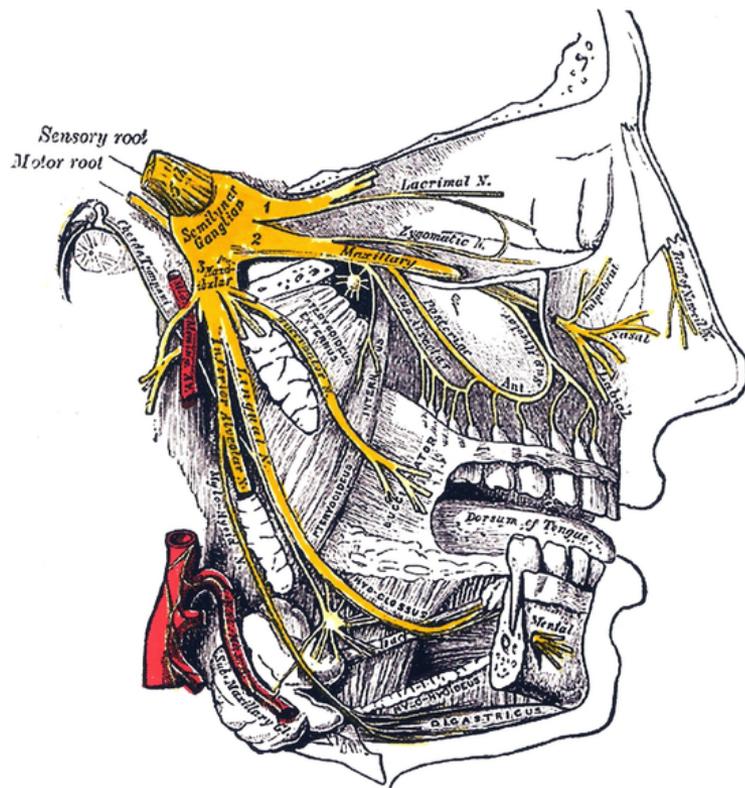
# TRIGEMINAL NEURALGIA

# 三叉神经痛

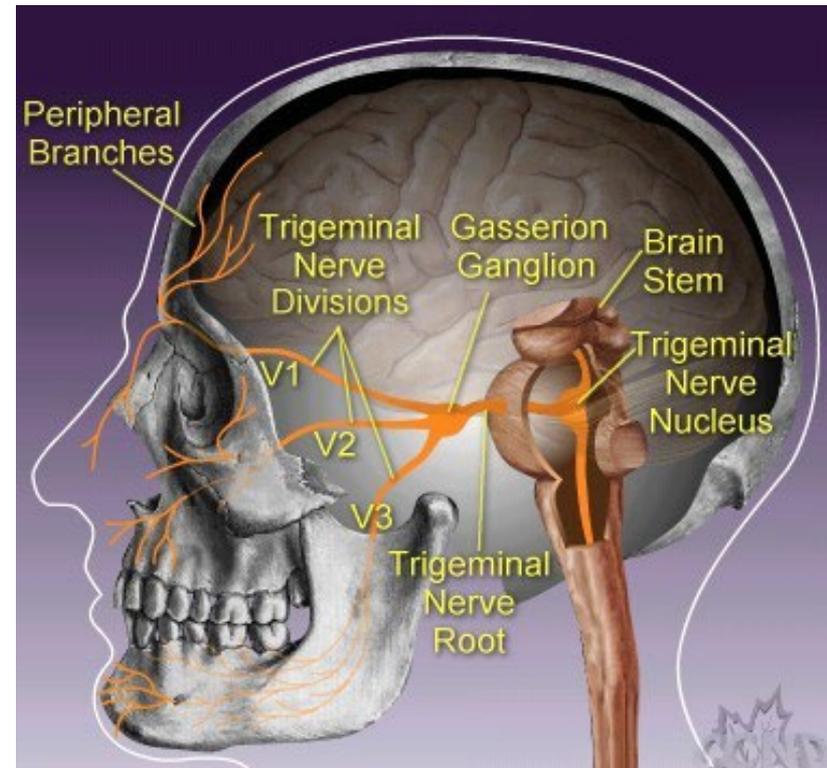


**Giovanni Maciocia**

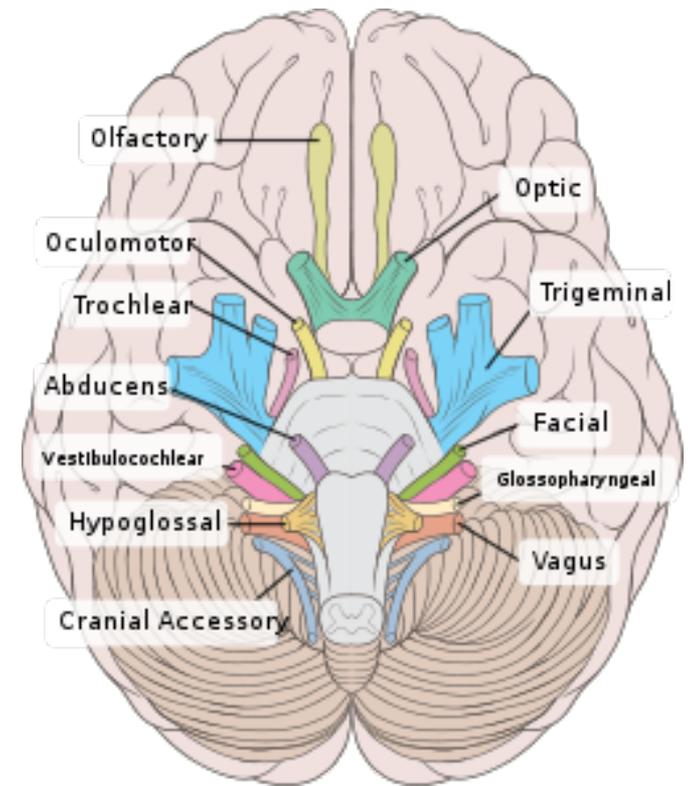
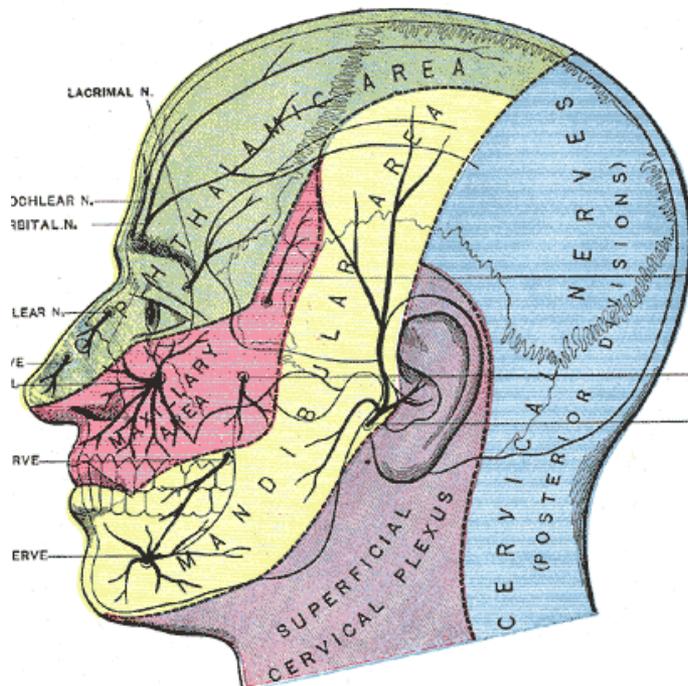
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**The term trigeminal nerve refers to one of twelve cranial nerves (5<sup>th</sup>) that attach to the brain and pass out of the cranial cavity through openings at the base of the cranium. The part of the nerve identified on the basis of dissection is not part of the brain but part of the peripheral nervous system. The nerve is composed of axons leading to and from several trigeminal nuclei in the midbrain and hindbrain. The bundles of its axons located within the brain are referred to as trigeminal nerve fibers, tracts and roots. Defined on the basis of connectivity the trigeminal nerve includes the trigeminal nerve fibers, tracts and roots as well as the parts outside the brain.**



**The trigeminal nerve (the fifth cranial nerve, also called the fifth nerve, or simply CNV or CN5) contains both sensory and motor fibers. It is responsible for sensation in the face and certain motor functions such as biting, chewing, and swallowing. Sensory information from the face and body is processed by parallel pathways in the central nervous system. The motor division of the trigeminal nerve is derived from the basal plate of the embryonic pons, while the sensory division originates from the cranial neural crest.**



**The *ophthalmic nerve* (V1) carries sensory information from the scalp and forehead, the conjunctiva and corner of the eye, the nose (not the ala nasi), the nasal mucosa, the frontal sinuses.**

**The *maxillary nerve* (V2) carries sensory information from the lower eyelid and cheek, the nares and upper lip, the upper teeth and gums, the nasal mucosa, the palate and roof of the pharynx, the maxillary, ethmoid and sphenoid sinuses, and parts of the meninges.**

**The *mandibular nerve* (V3) carries sensory information from the lower lip, the lower teeth and gums, the chin and jaw (except the angle of the jaw, which is supplied by C2-C3), parts of the external ear, and parts of the meninges. The mandibular nerve carries touch/position and pain/temperature sensation from the mouth. It does not carry taste sensation (chorda tympani is responsible for taste), but one of its branches, the lingual nerve, carries multiple types of nerve fibers that do not originate in the mandibular nerve**

**Trigeminal neuralgia is a nerve disorder that causes a stabbing or electric-shock-like pain in parts of the face.**

### **Causes, incidence, and risk factors**

**The pain of trigeminal neuralgia comes from the trigeminal nerve. This nerve carries pain, feeling, and other sensations from the brain to the skin of the face. It can affect part or all of the face, and the surface of the eye.**

**The condition usually affects older adults, but it may affect anyone at any age. Trigeminal neuralgia may be part of the normal aging process.**

**The presumed cause of TN is a **blood vessel pressing on the trigeminal nerve** as it exits the brainstem. This compression causes the wearing away of the protective coating around the nerve (the myelin sheath). TN may be part of the normal aging process—as blood vessels lengthen they can come to rest and pulsate against a nerve.**