

sensory fibers from the middle ear region. A few splanchnic sensory fibers are also present.

The **motor root** *arises* from a nucleus which lies deeply in the reticular formation of the lower part of the pons. This nucleus is situated above the nucleus ambiguus, behind the superior olivary nucleus, and medial to the spinal tract of the trigeminal nerve. From this origin the fibers pursue a curved course in the substance of the pons. They first pass backward and medialward toward the rhomboid fossa, and, reaching the posterior end of the nucleus of the abducent nerve, run upward close to the middle line beneath the colliculus fasciculus. At the anterior end of the nucleus of the abducent nerve they make a second bend, and run downward and forward through the pons to their point of emergence between the olive and the inferior peduncle.

The **sensory root** *arises* from the genicular ganglion, which is situated on the geniculum of the facial nerve in the facial canal, behind the hiatus of the canal. The cells of this ganglion are unipolar, and the single process divides in a T-shaped manner into central and peripheral branches. The central branches leave the trunk of the facial nerve in the internal acoustic meatus, and form the sensory root; the peripheral branches are continued into the chorda tympani and greater superficial petrosal nerves. Entering the brain at the lower border of the pons between the motor root and the acoustic nerve, the fibers of the sensory root pass into the substance of the medulla oblongata and end in the upper part of the terminal nucleus of the glossopharyngeal nerve and in the fasciculus solitarius.

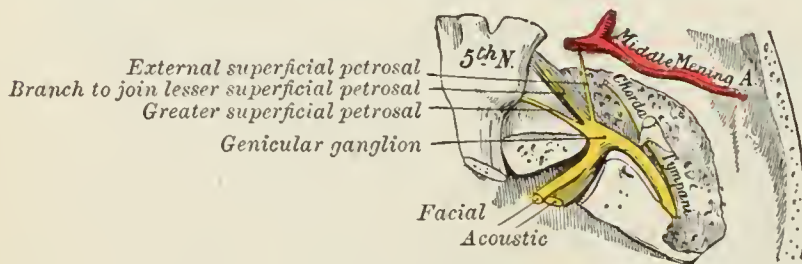


FIG. 789.—The course and connections of the facial nerve in the temporal bone.

From their superficial attachments to the brain, the two roots of the facial nerve pass lateralward and forward with the acoustic nerve to the internal acoustic meatus. In the meatus the motor root lies in a groove on the upper and anterior surface of the acoustic nerve, the sensory root being placed between them.

At the bottom of the meatus, the facial nerve enters the facial canal, which it traverses to its termination at the stylomastoid foramen. It is at first directed lateralward between the cochlea and vestibule toward the medial wall of the tympanic cavity; it then bends suddenly backward and arches downward behind the tympanic cavity to the stylomastoid foramen. The point where it changes its direction is named the **geniculum**; it presents a reddish gangliform swelling, the **genicular ganglion** (*ganglion geniculi*; *geniculate ganglion*; *nucleus of the sensory root of the nerve*) (Fig. 789). On emerging from the stylomastoid foramen, the facial nerve runs forward in the substance of the parotid gland, crosses the external carotid artery, and divides behind the ramus of the mandible into branches, from which numerous offsets are distributed over the side of the head, face, and upper part of the neck, supplying the superficial muscles in these regions. The branches and their offsets unite to form the **parotid plexus**.

**Branches of Communication.**—The branches of communication of the facial nerve may be arranged as follows: