

(2) **Sympathetic afferent fibers** from the pharynx and middle ear are supposed to terminate in the dorsal nucleus. Connections are probably established with motor nuclei concerned in chewing and swallowing; very little is known, however, about the connections with other parts of the brain.

(3) **Taste fibers** from the tongue probably terminate in the nucleus of the tractus solitarius. These fibers together with similar fibers from the facial (*nervus intermedius*) and the vagus are supposed to form the tractus solitarius and terminate in its nucleus. The central connections have been considered under the vagus.

(4) **Somatic motor fibers** to the Stylopharyngeus muscle arise in the upper end of the nucleus ambiguus. The existence of these fibers in the roots of the glossopharyngeal is uncertain, as there are other paths by which such fibers might reach the glossopharyngeal from the vagus. The sources of impulses passing to the nucleus ambiguus are considered under the vagus.

(5) **Sympathetic efferent fibers** (*motor and secretory fibers*) arise from the nucleus dorsalis. Some authors believe that the secretory fibers to the parotid gland arise from a distinct nucleus, the inferior salivatory nucleus, situated near the dorsal nucleus. The preganglionic fibers from this nucleus terminate in the otic ganglion; the postganglionic fibers from the otic ganglion pass to the parotid gland.

The **Acoustic Nerve** (*VIII cranial*) consists of two distinct nerves the **cochlear nerve**, the nerve of hearing, and the **vestibular nerve**, the nerve of equilibration.

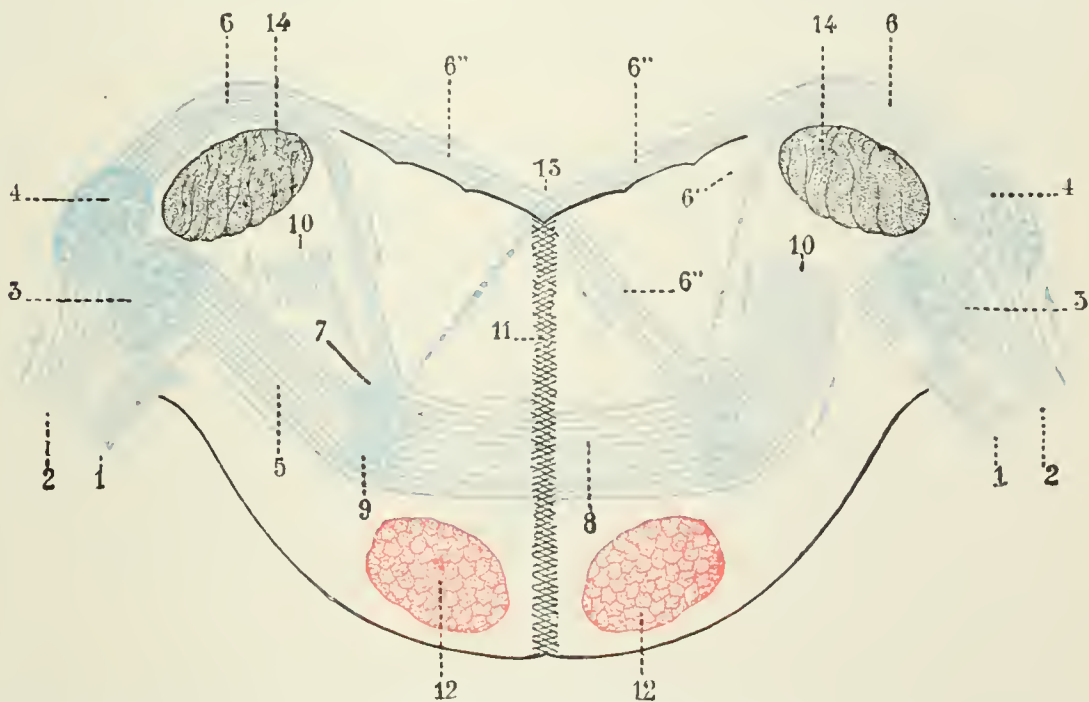


FIG. 760.—Terminal nuclei of the cochlear nerve, with their upper connections. (Schematic.) The vestibular nerve with its terminal nuclei and their efferent fibers have been suppressed. On the other hand, in order not to obscure the trapezoid body, the efferent fibers of the terminal nuclei on the right side have been resected in a considerable portion of their extent. The trapezoid body, therefore, shows only one-half of its fibers, viz., those which come from the left. 1. Vestibular nerve, divided at its entrance into the medulla oblongata. 2. Cochlear nerve. 3. Accessory nucleus of acoustic nerve. 4. Tuberculum acusticum. 5. Efferent fibers of accessory nucleus. 6. Efferent fibers of tuberculum acusticum, forming the *striae medullares*, with 6', their direct bundle going to the superior olivary nucleus of the same side; 6'', their decussating bundles going to the superior olivary nucleus of the opposite side. 7. Superior olivary nucleus. 8. Trapezoid body. 9. Trapezoid nucleus. 10. Central acoustic tract (*lateral lemniscus*). 11. Raphé. 12. Cerebrospinal fasciculus. 13. Fourth ventricle. 14. Inferior peduncle. (Testut.)

The **Cochlear Nerve** arises from bipolar cells in the spiral ganglion of the cochlea; the peripheral fibers end in the organ of Corti, the central fibers bifurcate as they enter the **cochlear nucleus**; the short ascending branches end in the ventral portion of the nucleus, the longer descending branches terminate in the dorsal portion of the nucleus. From the dorsal portion of the cochlear nucleus axons arise which pass across the dorsal aspect of the inferior peduncle and the floor of the fourth ventricle, the **striae medullares**, to the median sulcus. Here they dip into the substance of the pons, cross the median plane, and join the lateral lemniscus. Some