The upper face muscles include

- corrugator supercilii (oblique and transverse heads) (Fig 9-3), depressor supercilii, and procerus muscles that animate the glabella and medial eyebrow and cause vertical and oblique rhytids
- the orbicularis oculi muscle, which depresses the eyebrows and enables eyelid protraction (ie, closure)
- the frontalis, which is the sole elevator of the eyebrows; contraction of this muscle causes transverse forehead rhytids

The lower face muscles include

- superficial mimetic muscles, which receive their neurovascular supply on the posterior surfaces and include the platysma, zygomaticus major, zygomaticus minor, and risorius
- deep mimetic muscles, which receive their neurovascular supply anteriorly and include the buccinator, mentalis, and levator anguli oris

Other facial muscles include the orbicularis oris, levator labii superioris, levator labii superioris alaeque nasi, depressor anguli oris, depressor labii inferioris, masseter, nasalis, and temporalis.

Facial Nerve

In the neck, the superficial cervical fascia and platysma are continuous with the SMAS, and the deep cervical fascia is found on the superficial surface of the strap muscles,

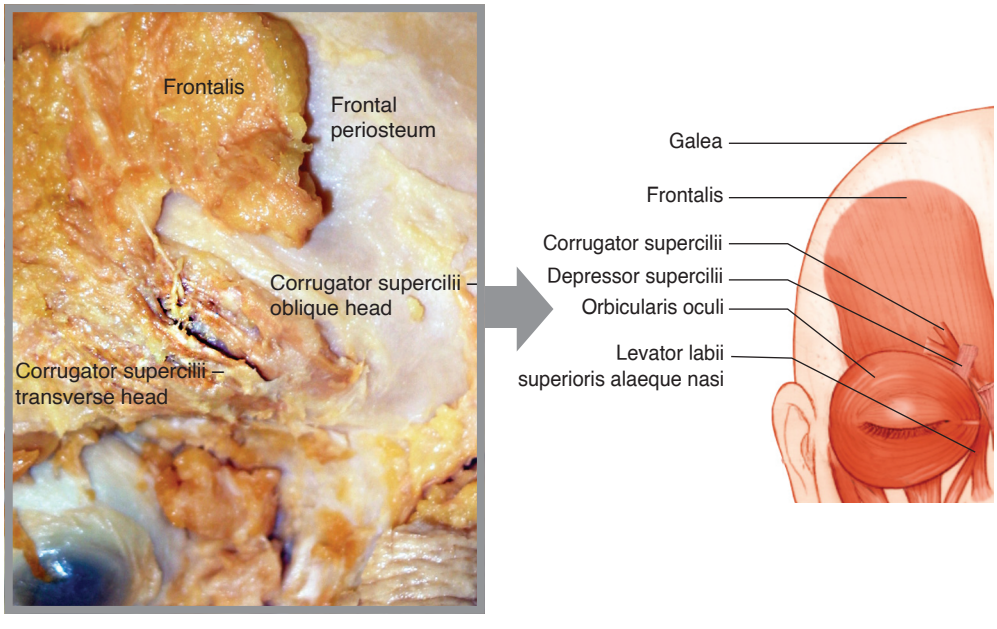

Figure 9-3 Oblique and transverse heads of the corrugator supercilii muscle. *(Photograph courtesy of Cat N. Burkat, MD; illustration by Christine Gralapp.)*

superior to the hyoid bone. The deep cervical fascia overlies the mylohyoid muscle and extends superiorly over the body of the mandible, continuing as the parotideomasseteric fascia. The facial nerve lies deep to this thin layer in the lower face. Above the zygomatic arch in the temporal region, the parotideomasseteric fascia is continuous with the deep temporal fascia, and the temporal (frontal) branch of the facial nerve lies superficial to this fascial layer. The transition of the temporal branch of the facial nerve from deep to superficial occurs as the nerve crosses over the zygomatic arch. When biopsy of the superficial temporal artery is performed, care is taken to avoid injury to the temporal branch of the facial nerve that passes just inferior to the artery, both of which lie in the temporoparietal fascial plane (Fig 9-4).

The facial nerve, cranial nerve (CN) VII, innervates the mimetic muscles and divides into 5 major branches within or deep to the parotid gland (Fig 9-5): temporal (frontal), zygomatic, buccal, marginal mandibular, and cervical. Two surgical planes help surgeons avoid CN VII when they operate: dissection on top of the deep temporal fascia (see Fig 9-4), which is deep to the SMAS and deep to CN VII, in the upper face and temporal region; and dissection superficial to the SMAS and CN VII branches in the lower face.

In the temporal area, the temporal branch of CN VII (see Fig 9-5) crosses the zygomatic arch and courses superomedially in the deep layers of the temporoparietal fascia. The temporoparietal fascia is continuous with the SMAS of the lower face and the galea aponeurosis of the upper face. Deep to the temporoparietal fascia is the previously mentioned *deep temporal fascia*, a dense, immobile fascia that overlies the temporalis muscle and is continuous with the frontal periosteum (see Fig 9-1C). Dissection along this

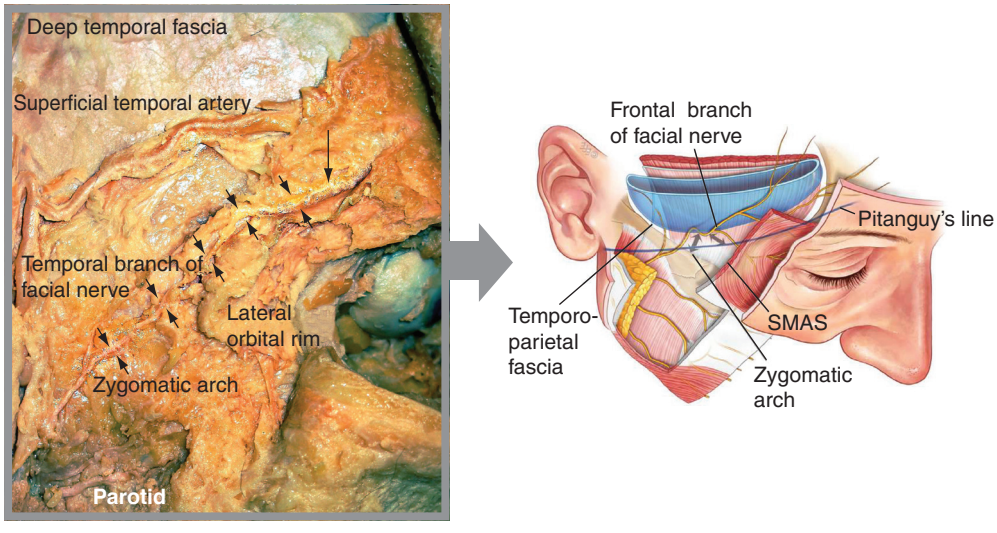

Figure 9-4 Temporal branch of the facial nerve, which is located here, approximately 2 cm inferior to the superficial temporal artery. *(Photograph courtesy of Cat N. Burkat, MD. Illustration reproduced with permission from Pankratz J, Baer J, Mayer C et al. Depth transitions of the frontal branch of the facial nerve: implications in SMAS rhytidectomy.* JPRAS Open. *2020; 26:101–108. © 2019 Published by Elsevier Ltd on behalf of British Association of Plastic, Reconstructive and Aesthetic Surgeons.)*

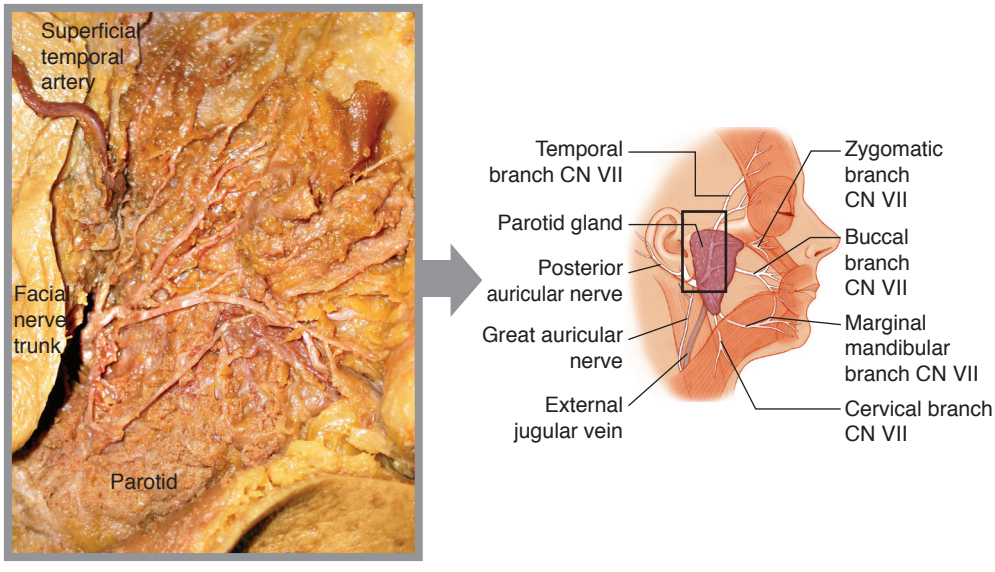

Figure 9-5 Branches of the facial nerve. *Left:* Dissection of the facial nerve showing its branching within the parenchyma of the parotid gland. *Right:* The 5 major branches of the facial nerve, cranial nerve (CN) VII. Note that the branches are buried within the parotid gland at the lateral face and become more superficial when they cross the zygomatic arch and approach the anterior edge of the SMAS. *(Photo courtesy of Cat N. Burkat, MD; illustration by Christine Gralapp.)*

fascia allows mobilization of the temporal forehead while avoiding the overlying temporal branch of the facial nerve. This anatomic principle is important when surgeons perform brow-lifting and forehead-lifting procedures. The safety zone is within 2 cm (on average) from the lateral canthus to avoid the frontal branch of the facial nerve as it crosses over the zygomatic arch (Fig 9-6).

In the lower face, the facial nerve branches, sensory nerves, vascular networks, and parotid gland and duct are deep to the SMAS (see Figs 9-1A, 9-5). Dissection just superficial to the SMAS, parotid gland, and parotideomasseteric fascia in the lower face avoids injury to these structures. The face receives sensory innervation from the 3 branches of CN V: V_1, ophthalmic; V_2, maxillary; and V_3, mandibular (Fig 9-7). Damage to these nerves causes facial numbness and paresthesia. Fortunately, overlap of the distal branches makes permanent sensation loss unusual, unless injury occurs at the proximal neurovascular bundles or with extensive distal disruption, as can be seen with a coronal incision.

Arterial Network

An understanding of the vascular supply of the eyelids and face is crucial during facial surgery, as well as when nonsurgical facial procedures, such as soft-tissue filler augmentation and neurotoxin chemodenervation, are performed. Although very rare (<0.001%–0.5% of nonsurgical facial procedures), skin necrosis can result from direct injection into a facial artery; this has been reported for every filler type. The risk is highest