

Muscles of the Head and Neck

Nathaniel Yomogida, SPT

Chloë Kerstein, SPT

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0.1 Muscles of Facial Expression

Table 1: Muscles of Facial Expression OIAN

| Muscle | Origin | Insertion | Nerve | Action |
|---------------------------------------------|--------------------------------------------------|-------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------|
| Calvaria | | | | |
| Occipitofrontalis (Frontal belly) | Epicranial aponeurosis | Skin and subcutaneous tissue of eyebrows and forehead | Facial Nerve CN VII | Elevates eyebrows; wrinkles skin of forehead |
| Palpebral Fissure and Nose | | | | |
| Procerus | Nasal bone, Lateral nasal cartilage (upper part) | Skin of lower forehead between eyebrows | Facial Nerve CN VII | Pulls medial angle of eyebrows inferiorly, producing transverse wrinkles over bridge of nose |

| Muscle | Origin | Insertion | Nerve | Action |
|---------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------|
| Orbicularis Oculi | Medial orbital margin, medial palpebral ligament, lacrimal bone | Skin around margin of orbit, superior and inferior tarsal plates | Facial Nerve CN VII | Acts as orbital sphincter (closes eyelids): Palpebral portion gently closes, orbital portion tightly closes (winking) |
| Nasalis | Maxilla (superior region of canine ridge) | Nasal cartilages | Facial Nerve CN VII | Flares nostrils by drawing ala (side) of nose toward nasal septum |
| Levator Labii superioris alaeque nasi | Maxilla (Frontal process) | Alar cartilage of nose and upper lip | Facial Nerve CN VII | Elevates upper lip; Opens nostril |
| Ear | | | | |
| Anterior Auricular Muscle | Temporal fascia (ant. portion) | Helix of the ear | Facial Nerve CN VII | Pulls ear superiorly and anteriorly |
| Muscle | Origin | Insertion | Nerve | Action |
| Superior Auricular Muscle | Epicranial aponeurosis on side of head | Upper portion of auricle | Facial Nerve CN VII | Elevates ear |
| Posterior Auricular Muscle | Mastoid process | Convexity of concha of ear | Facial Nerve CN VII | Pulls ear superiorly and posteriorly |
| Mouth | | | | |
| Zygomaticus major | Zygomatic bone (lateral surface, post. part) | Skin at the corner of the mouth | Facial Nerve CN VII | Pulls corner of mouth superiorly and laterally |
| Zygomaticus Minor | Zygomatic bone (Lat surface, post. part) | Upper lip just medial to corner of the mouth | Facial Nerve CN VII | Pulls upper lips superiorly |
| Levator Labii superioris alaeque nasi | Maxilla (Frontal process) | Alar cartilage of nose and upper lip | Facial Nerve CN VII | Elevates upper lip; Opens nostril |

| Muscle | Origin | Insertion | Nerve | Action |
|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Levator Labii superioris | Maxilla (Frontal process) and infraorbital region | Skin of upper lip, Alar cartilages of nose | Facial Nerve CN VII | Elevates upper lip, Dilates nostril, Raises angle of mouth |
| Depressor labii inferioris | Mandible (anterior portion of oblique line) | Lower lip at midline; blends with muscle from opposite side | Facial Nerve CN VII | Pulls lower lip inferiorly and laterally |
| Levator Anguli Oris | Maxilla (below infraorbital foramen) | Skin at corner of mouth | Facial Nerve CN VII | Raises angle of mouth, Helps form nasolabial furrow |
| Depressor Anguli Oris | Mandible (oblique line below canine, premolar, and 1st molar teeth) | Skin at corner of the mouth; Blends with orbicularis oris | Facial Nerve CN VII | Pulls angle of mouth inferiorly and laterally |
| Buccinator | Mandible, Alveolar process of maxilla and mandible, Pterygomandibular raphe | Angle of mouth, Orbicularis Oris | Facial Nerve CN VII | BIL: Presses cheek against molar teeth, working with tongue to keep food between occlusal surfaces and out of oral vestibule; expels air from oral cavity/resists distension when blowing; UNIL: Draws mouth to one side |

| Muscle | Origin | Insertion | Nerve | Action |
|--------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Orbicularis Oris | Deep surface of skin; Superiorly: maxilla (median plane); Inferiorly: mandible | Mucous membrane of lips | Facial Nerve CN VII | Acts as oral sphincter: Compresses and protrudes lips (whistling, sucking, kissing); Resists distension (when blowing) |
| Risorius | Fascia over masseter | Skin of corner of the mouth | Facial Nerve CN VII | Retracts corner of mouth as in grimacing |
| Mentalis muscle | Mandible (incisive fossa) | Skin of chin | Facial Nerve CN VII | Elevates and protrudes lower lip |
| Neck Platysma muscle | Skin over lower neck and upper lateral thorax | Mandible (inferior border), Skin over lower face, Angle of mouth | Facial Nerve CN VII | Depresses and wrinkles skin of lower face and mouth; Tenses skin of neck; Aids in forced depression of the mandible |

i Innervation

*There are no bony insertions for the muscles of facial expression¹

**All muscles of facial expression are innervated by the facial nerve (CN VII) via temporal, zygomatic, buccal, mandibular, or cervical branches arising from the parotid plexus¹

0.2 Muscles of Mastication

Table 2: Muscles of Mastication OIAN

| Muscle | Origin | Insertion | Nerve | Action |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Masseter muscle | SF layer: zygomatic arch (ant 2/3); Deep layer: Zygomatic arch (post. 1/3) | Mandibular angle (Masseteric tuberosity) | Trigeminal CN V: Mandibular (V ₃) | Entire muscle: Elevates mandible; SF Fibers: Protrude mandible |
| Temporalis muscle | Temporal fossa (inferior temporal line) | Coronoid process of mandible (apex and medial surface) | Mandibular (V ₃) divison of CN V via deep temporal nn | Vertical fibers: Elevate mandible; Horizontal Fibers: Retract (retrude) mandible; Unilateral Fibers: Lateral movement of mandible (chewing) |
| Lateral Pterygoid | Superior Head: Greater wing of sphenoid bone (infratemporal crest); Inferior head: Lateral surface of pterygoid plate (lat surface) | Superior Head: Tem- pormandibular joint (articular disc); Inferior head: Mandible (condylar process) | Mandibular (V ₃) divison of CN V via lateral pterygoid n. | BIL: Protrudes mandible (pulls articular disk forward); UNIL: Lateral movements of mandible (chewing) |
| Medial Pterygoid | SF Head: Maxilla (tuberosity); Deep head: Medial surface of lateral pterygoid plate and pterygoid fossa | Pterygoid tuberosity on medial surface of the mandibular angle | Mandibular (V ₃) divison of CN V via medial pterygoid n. | BIL: Elevates mandible with masseter and contributes to protrusion; UNIL: Small grinding movements |

0.3 Muscles of the Neck

0.3.1 Superficial Neck Muscles

- Platysma
- Sternocleidomastoid
- Trapezius

0.3.2 Nuchal muscles (Intrinsic back muscles)

Table 3: Nuchal muscles (Intrinsic back muscles)

| Muscle | Origin | Insertion | Nerve | Action |
|---------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Semispinalis Capitis | C4-T7 (TP and Articular process) | Occipital bone (between superior and inferior nuchal lines) | Spinal nn. (Posterior Rami) | BIL: Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); UNIL: I/L SB of head, cervical, and thoracic spine; C/L Rotation |
| Semispinalis Cervicis | T1-T6 (TP) | C2-C5 (SP) | Spinal nn. (Posterior Rami) | BIL: Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); UNIL: I/L SB of head, cervical, and thoracic spine; C/L Rotation |
| Splenius Capitis | Nuchal ligament , C7-T3/T4 SP | Lateral 1/3 nuchal line (occipital bone), Mastoid process (temporal bone) | spinal nn. C1-C6 (Post rami, lateral branches) | BIL: Extends C/S and head; UNIL: I/L head SB and Rotation |

| Muscle | Origin | Insertion | Nerve | Action |
|--------------------------------|-----------------------------------------------|-----------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------|
| Splenius Cervicis | T3-T6/T7 (SP) | C1–C3/4 (TP) | Spinal nn. C1–C6 (Post rami, lateral branches) | BIL: Extends C/S and head; UNIL: I/L head SB and Rotation |
| Longissimus Capitis | T1-T3 (TP), C4-C7 (TP & articular process) | Temporal bone (Mastoid process) | Spinal nn. C1-L5 (Post rami, lateral branches) | BIL: Extends head; UNIL: Flexes and I/L rotation |
| Longissimus Cervicis | T1-T6 (TP) | C2-C5 (TP) | Spinal nn. C1-L5 (Post rami, lateral branches) | BIL: Extends spine; UNIL: I/L SB |
| Iliocostalis cervicis | 3rd-7th ribs | C4-C6 TP | Spinal nn. C8-L1 (Post rami, lateral branches) | BIL: Extends spine; UNIL: I/L spine lat-flexion |
| Rectus Capitis Posterior Major | C2 (SP) | Occipital bone (inferior nuchal line, middle third) | Suboccipital N. | BIL: Extend head; UNIL: I/L head rotation |
| Rectus Capitis Posterior Minor | C1 (posterior tubercle) | Occipital bone (inferior nuchal line, inner 1/3) | Suboccipital N. | BIL: Extend head; UNIL: I/L head rotation |
| Obliquus Capitis Superior | C1 (TP) | Occipital bone (inferior nuchal line, middle third) | Suboccipital N. | BIL: Extend head; UNIL: I/L SB, C/L rotation |
| Obliquus Capitis Inferior | C2 (SP) | C1 TP | Suboccipital N. | BIL: Extend head; UNIL: I/L rotation |

1. Gilroy AM, MacPherson BR, Wikenheiser JC, Voll MM, Wesker K, Schünke M, eds. *Atlas of Anatomy*. 4th ed. Thieme; 2020.