

Muscles

I. Craniofacial muscles

- A. Buccinator [L. bucca, cheek]
 - attachments – from alveolar processes of the maxilla & mandible, pterygoid hamulus & pterygomandibular raphe to the buccal angle
 - function – compresses cheek
 - innervation – facial n. (buccal branches)
- B. Corrugator supercilii
 - attachments – from medial super ciliary arch to eyebrow
 - function – draws eyebrow medial and downward
 - innervation – facial n. (temporal branch)
- C. Depressor anguli oris
 - attachments – from mandible to buccal angle
 - function – depresses buccal angle laterally
 - innervation – facial n. (marginal mandibular branch)
- D. Depressor labii inferioris
 - attachments – from lower oblique line of mandible to skin & mucosa of lower lip
 - function – draws lower lip downward
 - innervation – facial n. (marginal mandibular branch)
- E. Frontalis
 - attachments – from the superficial fascia of the eyebrows to the epicranial aponeurosis
 - function – protracts the scalp or elevates eyebrows & nose
 - innervation – facial n. (temporal branch)
- F. Levator anguli oris
 - attachments – from canine fossa of maxilla to angle of mouth
 - function – raises angle of mouth
 - innervation – facial n. (buccal branches)
- G. Levator labii superioris
 - attachments – from the inferior orbital margin to the lateral aspect of the upper lip
 - function – raises & everts upper lip
 - innervation – facial n. (buccal branches)
- H. Levator labii superioris alaeque nasi
 - attachments – from frontal process of maxilla to lateral upper lip
 - function – raises and everts upper lip
 - innervation – facial n. (buccal branches)
- I. Mentalis
 - attachments – from incisive fossa of mandible to skin of chin
 - function – raises lower lip
 - innervation – facial n. (marginal mandibular branch)
- J. Nasalis
 - attachments – from the maxilla lateral & inferior to the nasal notch to the bridge & ala of the nose
 - function – transverse fibers compress & alar fibers widen the nasal aperture
 - innervation – facial n. (buccal branch)
- K. Occipitalis
 - attachments – from superior nuchal line to epicranial aponeurosis
 - function – retracts the scalp
 - innervation – facial n. (posterior auricular)
- L. Orbicularis oculi
 - attachments – from orbital margin & medial palpebral lig. to superficial fascia of the eyelid
 - function – palpebral sphincter
 - innervation – temporal & zygomatic branches of the facial n.
- M. Orbicularis oris
 - attachments – from the angle of the mouth to the superficial fascia of the upper lip
 - function – oral sphincter
 - innervation – facial n. (buccal & marginal mandibular branches)
- N. Platysma (G. platys, flat, broad)
 - attachments – from the lower border of the mandible to the superficial fascia of the skin of the neck overlying the clavicle

function – wrinkles the anterior nuchal skin

innervation – facial n. (cervical branch)

O. Procerus

attachments – from nasal bone to skin of lower medial forehead

function – depresses medial end of eyebrow

innervation – facial n. (buccal branch)

P. Risorius

attachments – from masseteric & parotid fascia to modiolus

function – draws buccal angle laterally

innervation – facial n. (buccal branch)

Q. Zygomaticus major [G. zygon, yoke, a joining or pair]

attachments – from zygomatic bone to angle of the mouth

function – raises the buccal angle

innervation – facial n. (buccal branch)

R. Zygomaticus minor

attachments – from zygomatic bone to upper lip

function – elevates upper lip

innervation – facial n. (buccal branch)

II. Extraocular muscles

A. Inferior oblique

attachments – from the maxilla lateral to the nasolacrimal groove to the inferolateral, posterior aspect of the sclera

function – elevation, abduction and extorsion of the eye

innervation – inferior ramus of the oculomotor n.

B. Inferior rectus (L. straight)

attachments – from the common tendinous ring to the inferior aspect of the sclera

function – depression, adduction & extorsion of eye

innervation – inferior ramus of the oculomotor n.

C. Lateral rectus

attachments – from the common tendinous ring to the lateral aspect of the sclera

function – abduction of the eye

innervation – abducens n.

D. Levator palpebrae superioris

attachments – from the inferior aspect of the lesser wing of the sphenoid to the tarsus and skin of the upper lid

function – elevation of the upper lid

innervation – superior ramus of the oculomotor n.

E. Medial rectus

attachments – from the common tendinous ring to the medial aspect of the sclera

function – adduction of the eye

innervation – inferior ramus of the oculomotor n.

F. Superior oblique

attachments – from the superomedial, posterior aspect of the orbit to the superolateral, posterior aspect of the sclera passing around the trochlea (superomedial, anterior aspect of the orbit)

function – abduction, depression & intorsion of the eye

innervation – trochlear n.

G. Superior rectus

attachments – from the common tendinous ring to the superior aspect of the sclera

function – elevation, adduction & intorsion of the eye

innervation – superior ramus of the oculomotor n.

III. Muscles of mastication

A. Masseter

attachments – from the zygomatic arch to the angle of the mandible & lateral aspect of the ramus

function – elevation, protraction and retraction (deep fibers) the mandible

innervation – mandibular nerve

B. Temporalis

attachments – from the temporal fossa to the coronoid process & anterior border of the ramus of the mandible

function – elevation & retraction (posterior aspect of the muscle) of the mandible

innervation – mandibular n.

C. Lateral pterygoid

attachments – from the infratemporal surface of the sphenoid & lateral surface of the lateral pterygoid plate to the neck of the mandible & the TMJ disc

function – protraction of the mandible & acts with the ipsilateral medial pterygoid to rotate the mandible to produce the side-to-side movements during trituration of food

innervation – mandibular n.

D. Medial pterygoid

attachments – from the medial surface of the lateral pterygoid plate & adjacent pterygoid fossa to the medial aspect of the angle of the mandible

function – elevation of the mandible & acts with the ipsilateral lateral pterygoid to rotate the mandible to produce the side-to-side movements during trituration of food

innervation – mandibular n.

IV. Anterolateral neck muscles

A. Anterior digastric

attachments – from the digastric fossa of the mandible to the intermediate tendon (greater cornu of hyoid)

function – depression of the mandible or elevation of the hyoid

innervation – mylohyoid branch of the inferior alveolar n.

B. Posterior digastric

attachments – from the temporal mastoid notch to the intermediate tendon (greater cornu of hyoid)

function – depression of the mandible or elevation of the hyoid

innervation – facial n.

C. Geniohyoid

attachments – from the inferior genial tubercle of the mandible to the anterior aspect of the body of the hyoid

function – elevation & anterior displacement of the hyoid, or depression of the mandible with a fixed hyoid

innervation – ventral ramus of C1 (via the hypoglossal n.)

D. Longus capitis

attachments – from the anterior tubercles of the transverse processes of cervical vertebrae to the basilar occipital bone

function – flexion of the head & neck

innervation – ventral rami of cervical spinal n.

E. Longus coli (L. neck)

attachments – from cervical vertebral bodies to cervical vertebral bodies & transverse processes

function – flexion of the neck

innervation – ventral rami of cervical spinal n.

F. Mylohyoid

attachments – from the mylohyoid line of the mandible to the midline raphe & anterior aspect of body of the hyoid

function – elevation of the floor of the oral cavity

innervation – mylohyoid branch of the inferior alveolar n.

G. Omohyoid (G. omos, shoulder)

attachments – from the superior border of the scapula medial to the scapular notch to the lateral aspect of the hyoid passing through an intermediate tendon sling loosely associated with the clavicle & 1st rib

function – depression of the hyoid

innervation – ansa cervicalis

H. Rectus capitis anterior

attachments – from lateral atlantal mass to occipital bone

function – flexes head

innervation – ventral rami C1 & 2

I. Rectus capitis lateralis

attachments – from atlantal transverse process to occipital bone

function – lateral flexion of head

innervation – ventral rami C1 & 2

J. Scalenus anterior

attachments – from the anterior tubercles of middle cervical vertebrae to the scalene tubercle of the 1st rib

function – elevation of 1st rib (during forced inspiration) & flexion & rotation of the neck

innervation – ventral rami of cervical spinal n.

K. Scalenus medius

attachments – from the transverse processes of cervical vertebrae to 1st rib

function – elevation of 1st rib (during forced inspiration) & lateral flexion of the neck

innervation – ventral rami of cervical spinal n.

L. Scalenus posterior

attachments – from lower cervical transverse processes to the 2nd rib

function – elevation of the rib (during forced inspiration)

innervation – ventral rami of cervical spinal n.

M. Sternocleidomastoid

attachments – from the lateral aspect of the mastoid process & superior nuchal line to the manubrium & medial 1/3rd of the clavicle

function – flexion of the head & neck, & contralateral rotation of the head

innervation – accessory n

N. Sternohyoid

attachments – from the posterior side of the proximal clavical & adjacent manubrium to the inferior border of body of the hyoid

function – depresses the hyoid

innervation – ansa cervicalis

O. Sternothyroid

attachments – from the posterior aspect of the manubrium to the thyroid lamina

function – depression of the elevated larynx

innervation – ansa cervicalis

P. Stylohyoid

attachments – from the styloid process to the greater cornu of the hyoid

function – elevation & retraction of the hyoid

innervation – facial n.

Q. Thyrohyoid

attachments – from the thyroid lamina to the hyoid bone

function – depression of the hyoid or elevation of the thyroid cartilage

innervation – ventral ramus of C1 via the hypoglossal n.

V. Deep muscles of the neck and suboccipital triangle

A. Splenius capitis (G. splenion, bandage)

attachments – from the ligamentum nuchae and lower cervical & upper thoracic spinous processes to the lateral third of the superior nuchal line

function – extension & lateral flexion of the head

innervation – dorsal rami of cervical spinal n.

B. Splenius cervicis

attachments – from spinous processes of upper thoracic vertebrae to posterior tubercles of upper three cervical vertebrae

function – together extend neck, single side does ipsilateral rotation

innervation – dorsal rami of cervical spinal n.

C. Longissimus capitis

attachments – from the upper thoracic transverse processes to the posterior margin of the mastoid process

function – extension & ipsilateral rotation of the head

innervation – dorsal rami of spinal n.

D. Semispinalis capitis

attachments – from upper thoracic & cervical transverse processes to the occipital bone between the inferior & superior nuchal lines

function – extension of the head

innervation – dorsal rami of cervical spinal n.

E. Semispinalis cervicis

attachments – from upper thoracic transverse processes to cervical spinous processes

function – extension of the neck

innervation – dorsal rami of cervical spinal n.

F. Rectus capitis posterior major

attachments – from the spinous process of the axis to the adjacent occipital bone

function – extension of the head

innervation – suboccipital n. (dorsal ramus C1)

G. Rectus capitis posterior minor

attachments – from the posterior tubercle of the atlas to the adjacent occipital bone

function – extension of the head

innervation – suboccipital nerve (dorsal ramus C1)

H. Obliquus capitis inferior

attachments – from the spinous process of the axis to the transverse process of the atlas

function – ipsilateral rotation of the head

innervation – suboccipital n. (dorsal ramus C1)

I. Obliquus capitis superior

attachments – from the transverse process of atlas to the occipital bone between superior & inferior nuchal lines

function – posterolateral flexion of the head

innervation – suboccipital n. (dorsal ramus C1)

VI. Muscles of the tongue

A. Genioglossus

attachments – from the superior genial tubercle to the hyoid, middle constrictor & length of the ventral aspect of the tongue

function – protrusion of the tongue

innervation – hypoglossal n.

B. Hyoglossus (G. glossa, tongue)

attachments – from the greater cornu & body of the hyoid to the lateral aspect of the tongue

function – depression of the tongue

innervation – hypoglossal n.

C. Styloglossus

attachments – from the styloid process to the lateral base of the tongue

function – elevation & retraction of the tongue

innervation – hypoglossal n.

VII. Muscles of the palate

A. Levator veli palatini

attachments – from the petrous temporal bone adjacent to the carotid canal & the cartilaginous portion of the auditory tube to the soft palate

function – elevates the soft palate

innervation – vagus nerve (pharyngeal branch)

B. Musculus uvulae (L. uva, grape)

attachments – from the hard palate to the uvular mucosa

function – aids in palatopharyngeal closure

innervation – vagus n. (pharyngeal branch)

C. Palatoglossus

attachments – from the palatine aponeurosis to the lateral aspect of the tongue

function – elevation of the root of the tongue & approximation of the palatoglossal folds

innervation – vagus n. (pharyngeal branch)

D. Palatopharyngeus

attachments – from posterior hard palate and palatine aponeurosis to the wall of the pharynx

function – elevation of the pharynx & approximation of the palatopharyngeal folds

innervation – vagus n. (pharyngeal branch)

E. Tensor veli palatini

attachments – from the scaphoid fossa, cartilage of the auditory tube & spine of the sphenoid to the palatine aponeurosis (after deflecting around the hamulus)

function – unilateral deviation & bilateral tension of the soft palate

innervation – mandibular n.

VIII. Muscles of the pharynx [G., throat]

A. Inferior constrictor

attachments – from the cricoid & thyroid cartilages to median pharyngeal raphe

function – general sphincteric & peristaltic action in swallowing

innervation – pharyngeal plexus (X), recurrent laryngeal n & external laryngeal n.

B. Middle constrictor

attachments – from the greater & lesser cornu of hyoid & stylohyoid ligament to the median pharyngeal raphe

function – general sphincteric & peristaltic action in swallowing

innervation – pharyngeal plexus (X)

C. Superior constrictor

attachments – from pterygoid hamulus & pterygomandibular raphe to the median pharyngeal raphe

function – general sphincteric & peristaltic action in swallowing

innervation – pharyngeal plexus (X)

D. Salpingopharyngeus (G. salpinx, trumpet)

attachments – from the cartilage of the auditory tube to the lateral wall of the pharynx

function – elevation of the superior lateral aspect of the pharyngeal wall

innervation – vagus n.

E. Stylopharyngeus

attachments – from the styloid process to the posterolateral aspect of the pharyngeal wall

function – elevation of the pharyngeal wall

innervation – glossopharyngeal n.

IX. Muscles of the larynx

A. Aryepiglotticus

attachments – from the oblique arytenoids to the aryepiglottic folds

function – closes the aryepiglottic folds

innervation – recurrent laryngeal n.

B. Lateral cricoarytenoid (G. krikos, a ring)

attachments – from the arch of the cricoid cartilage to the muscular process of the arytenoid

function – closes the glottis (adducts the vocal folds)

innervation – recurrent laryngeal n.

C. Posterior cricoarytenoid

attachments – from the posterior surface of the cricoid lamina to the muscular process of the arytenoid cartilage

function – opens the glottis (abducts the vocal folds)

innervation – recurrent laryngeal n.

D. Cricothyroid

attachments – from the anterolateral external aspect of the cricoid cartilage to the lower border of the thyroid cartilage & inferior cornu

function – tenses the vocal folds

innervation – external laryngeal n.

E. Interarytenoids (transverse & oblique)

attachments – from arytenoid to arytenoid

function – closes glottis & assists in closing aryepiglottic folds

innervation – recurrent laryngeal n.

F. Thyroarytenoid

attachments – from the lower half of the thyroid angle to the anterolateral aspect of the arytenoid cartilage

function – closes glottis or slackens vocal folds

innervation – recurrent laryngeal n.

G. Thyroepiglotticus

attachments – from the thyroid angle to the epiglottic margin

function – widens glottis

innervation – recurrent laryngeal n.

H. Vocalis

attachments – from the thyroid angle to the vocal process of the arytenoid cartilage

function – slackens tensed vocal ligaments for changes in pitch

innervation – recurrent laryngeal n.

X. Muscles of the middle ear

A. Stapedius

attachments – stapes

function – dampens vibrations of the stapes

innervation – facial n.

B. Tensor tympani

attachments – malleus

function – dampens movement of the malleus

innervation – mandibular n.