

## Muscles of the Head and Neck region

106, G. Blevins / SFCC / Fall 2011

<u>Muscles</u>	<u>(Innervation)</u>	<u>Origin = O:</u>	<u>Insertion = I:</u>	<u>Action</u>
<b><u>Movements related to facial expression:</u></b>				
<u>Epicranius</u>				
Frontalis	(Facial Nerve)	○ Epicranial aponeurosis		Draws scalp anteriorly, raises eyebrows, and wrinkles skin of forehead horizontally.
Occipitalis		○ Occipital bone and mastoid process		
		I Epicranial aponeurosis		Draws scalp posteriorly.
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Orbicularis oris				Closes and protrudes lips (kissing), compresses lips against teeth, and shapes lips during speech.
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Zygomaticus major	(Facial Nerve)	○ Zygomatic bone		Draws angle of mouth superiorly and laterally, as in smiling or laughing.
		I Fascia of the orbicularis oris		
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Levator labii superioris				Elevates upper lip.
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Depressor labii inferioris				Depresses lower lip.
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Buccinator	(Facial Nerve)	○ Alveolar processes of the maxilla mandible and pterygomandibular raphe		Presses cheeks against teeth and lips, as in whistling, blowing and sucking; draws corner of mouth laterally; assists in mastication by keeping food between the teeth and not between teeth and cheeks.
		I Fascia of orbicularis oris		
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Mentalis	(Facial Nerve)			Elevates and protrudes lower lip and pulls skin of chin up, as in pouting.
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Platysma	(Facial Nerve)	○ Fascia over deltoid and pectoralis major		Pulls lower lips inferiorly and posteriorly as in pouting; depresses mandible.
		I Mandible, muscles of the angle of the mouth		
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Risorius	(Facial Nerve)	○ Fascia over parotid gland		Draws angle of mouth laterally.
		I Deep fascia of skin at angle of the mouth		
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Orbicularis oculi				Closes the eye.
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<b><u>Movement of mandible, tongue and pharynx:</u></b>				
Masseter	(Trigeminal Nerve Mandibular branch)	○: Maxilla and zygomatic arch.		Elevates mandible, as in closing mouth, and retracts (draws back) mandible.
		I: Angle and ramus of mandible.		
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Temporalis	(Trigeminal Nerve Mandibular branch)	○: Temporal and frontal bones.		Elevates and retracts mandible.
		I: Coronoid process and ramus of mandible.		
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Medial pterygoid	(Trigeminal Nerve Mandibular branch)	○: Medial pterygoid process		Elevates and protracts (protrudes) and moves mandible from side to side.
		I: Angle and medial surface of the ramus		

Lateral pterygoid	(Trigeminal Nerve Mandibular branch)	<b>O:</b> Lateral pterygoid and greater wing <b>I:</b> Condyle or head of mandible at TMJ	Protracts mandible, depresses mandible as in opening mouth, and moves mandible from side to side.
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**Movement of mandible, tongue and pharynx:**

Genioglossus	(Hypoglossal)	<b>O:</b> Mandible <b>I:</b> Under surface of tongue and hyoid bone.	Depresses tongue and thrusts it anteriorly (protraction).
Styloglossus	(Hypoglossal)	<b>O:</b> Styloid process <b>I:</b> tongue	Elevates tongue and draws it posteriorly (retraction).
Stylohyoid	(Hypoglossal)	<b>O:</b> Styloid process on temporal bone. <b>I:</b> Body of hyoid bone.	Elevates the hyoid bone and draws it posteriorly.
Hyoglossus	(Hypoglossal)	<b>O:</b> Greater horn and body of hyoid <b>I:</b> side of tongue	Depresses tongue.
Digastric		<b>O:</b> Anterior belly from inner side of inferior border of mandible; posterior belly from mastoid process of temporal bone.	Elevates hyoid bone and depresses mandible, as in opening the mouth.
Anterior belly	(Trigeminal Nerve Mandibular branch)		
Posterior belly	(Facial Nerve)	<b>I:</b> Body of hyoid bone via an intermediate tendon.	

**Movements of head and neck:**

Sternocleidomastoid	(Accessory Nerve)	<b>O:</b> Sternum and clavicle. <b>I:</b> Mastoid process of temporal bone.	Acting together (bilaterally), flex cervical portion of vertebral column and extend head; acting singly (unilaterally), laterally flex and rotate head to side opposite contracting muscle.
Splenius capitis	(Cervical Spinal Nerves)	<b>O</b> Ligamentum nuchae, spinous process of seventh cervical vertebra, 1 - 4 thoracic vertebra <b>I</b> mastoid process	Acting together, extend head; acting singly, laterally flex and rotate head to same side as contracting muscle.
semispinalis capitis	(Cervical Spinal Nerves)	<b>O</b> Transverse processes of 1 - 7 thoracic vertebra <b>I</b> Occipital bone	Bilaterally: Extension of head. Unilaterally: Lateral flexion of head.
Semispinalis cervicis	(Cervical Spinal Nerves)	<b>O</b> Transverse processes of superior five or six thoracic vertebra <b>I</b> Spinous processes of 1 -5 cervical vertebra	Bilaterally: Extension of spine. Unilaterally: Lateral flexion of spine.
Longissimus capitis	(Cervical Spinal Nerves)	<b>O</b> Transverse processes of superior five or six thoracic <b>I</b> Mastoid process	Bilaterally: Extension of head Unilaterally: Rotate head to same side as muscle
Longissimus cervicis	(Cervical Spinal Nerves)	<b>O</b> Transverse processes of 4th and 5th thoracic vertebra <b>I</b> Transverse processes of 2 - 6 cervical vertebra	Bilaterally: Extension of spine. Unilaterally: Lateral flexion of spine.

Iliocostalis cervicis	(Cervical and Thoracic Spinal nerves)	<b>O:</b> superior 6 ribs <b>I:</b> Transverse processes of 4th -6th cervical vertebra	Bilaterally: Extension of spine. Unilaterally: Lateral flexion of spine.
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**Muscles of the Pectoral Girdle Associated with the Neck**

Levator scapulae	(Dorsal scapular nerve)	<b>O:</b> Superior four or five cervical vertebrae. <b>I:</b> Superior vertebral border of scapula.	Elevates scapula and rotates in downward.
Trapezius	(Accessory nerve and C3 - C5)	<b>O:</b> Superior nuchal line of occipital bone, ligamentum nuchae, and spines of seventh cervical and all thoracic vertebrae. <b>I:</b> Clavicle and acromion and spine of scapula.	Elevates, depresses and adducts scapula; extends head, Stabilizes scapula and rotates it upwards.
<b>Scalene Mucels</b>			
Anterior	Cervical nerves C4 - C6	<b>O:</b> Transverse processes of C3 to C6 vertebra <b>I:</b> Upper surface of 1st rib	Flexion of the neck, Assists in elevation of 1st rib
Middle	Cervical nerves C4 - C8	<b>O:</b> Transverse processes of C2 to C7 vertebra <b>I:</b> Upper surface of 1st rib	Lateral flexion of the neck, Assists in elevation of 1st rib
Posterior	Cervical nerves C6 - C8	<b>O:</b> Transverse processes of C4 to C6 vertebra <b>I:</b> Outer surface of 2nd rib	Lateral flexion of the neck, elevation of 2nd rib