

Muscles Involved in Swallowing

	Innervated by	Muscle	Function		
Facial	V Trigeminal (S)	Obicularis oris *	Seal lips/mouth		
	VII Facial (M)	Buccinator *	Tense cheek to maintain food btwn molars Help close mouth Active during sucking		
Masticatory	V Trigeminal	Temporalis	Retract mandible		
		Masseter	Raise mandible to CLOSE jaw		
		Medial pterygoid	Brace mandible		
		Lateral pterygoid	Lower mandible to OPEN jaw Protrude mandible Rotary motion of jaw		
Intrinsic Tongue	XII Hypoglossal	Superior longitudinal	Curl tongue tip/sides up	Shorten tongue	
		Inferior longitudinal	Curl tongue tip/sides down		
		Transversus	Narrow & Lengthen tongue	(Occupy same space in tongue; fibers interlace)	
		Verticalis	Widen & Flatten tongue		
Extrinsic	XII Hypoglossal	Hyoglossus	Pull tongue back toward hyoid bone	Lower tongue	
		Genioglossus	Protrude tongue		
		Styloglossus	Raise & Retract tongue		
	IX Glossopharyng	Palatoglossus *	Raise floor of tongue to approx tongue to palatoglossal arch to close off oropharynx		
Suprahyoid	XII Hypoglossal	Geniohyoid	Protract hyoid	Lower mandible	
	V Trigeminal	Mylohyoid	Raise & Stabilize tongue, mouth floor		
		VII Facial	Anterior belly of digastric	Lower mandible to OPEN jaw WHILE hyoid is held in place	
	Posterior belly of digastric				
		Stylohyoid	Retract hyoid Lengthen mouth floor		
Infrahyoid		Omohyoid	Pull mandible inferiorly to OPEN jaw		
	XII Hypoglossal	Thyrohyoid			Raise thyroid cartilage/larynx to hyoid
		Sternohyoid			Lower thyroid cartilage
		Sternothyroid	Lower hyoid		

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Palatal	V Trigeminal	Tensor veli palatini	Tense soft palate	
	X Vagus	Levator veli palatini *	Raise & Retract soft palate Elevate & Retract palate to assist w/VP closure and seal back oral cavity	
	XII Hypoglossal	Palatoglossus *	Raise posterior tongue Lower and pull forward soft palate to contact back of tongue Seal back oral cavity from oropharynx via VP closure	
		Uvular	Raise uvula Brace soft palate	
Laryngeal	X Recurrent laryngeal branch of Vagus	Thyroarytenoid	Regulate tension of VF	Adduct VF
		Transverse arytenoid		
		Oblique arytenoid	Adduct false folds	
		Lateral cricoarytenoid		
		Posterior cricoarytenoid	ABduct VF (at end of swallow)	
		Interarytenoid	Approximate arytenoids to epiglottis	
		Aryepiglottic	Lower epiglottis	
		Thyroepiglottic		
Pharyngeal	V (Vagus)	Cricopharyngeus	Relax UES to allow passage of bolus	
	IX Glossopharyng	Stylopharyngeus		Raise & Shorten pharynx
	XI (Accessory)	Palatopharyngeus *	Lower palate Raise & Retract palate to assist w/VP closure and seal oral cavity	
		Salpingopharyngeus		
		Superior pharyngeal constrictor *	Raises soft palate to seal nasopharynx Part of musculature 'sling' to create tone necessary for positive pressure buildup during bolus propulsion	Narrow pharyngeal lumen
	X Vagus	Middle pharyngeal constrictor	Bolus transport	
	XI (Accessory)	Inferior pharyngeal constrictor		(Distalmost component of PES)

- Muscles involved in creating pressure for bolus propulsion are indicated with *
- All of the floor of the mouth muscles (geniohyoid, mylohyoid, anterior belly of digastric) attach to the body of the mandible anteriorly and the body of the hyoid posteriorly
- Intrinsic muscles are within the tongue only. Extrinsic muscles attach to part of the skeleton