

## Palate

- Forms the arched roof of the mouth and floor of the nasal cavities
- Separates oral cavity from the nasal cavities and nasopharynx
- Superior surface covered in respiratory mucosa, and inferior surface with oral mucosa
- 2 regions – hard and soft palate

### Hard palate

- Vaulted area mostly filled by the tongue
- Anterior 2/3 has a bony skeleton formed by palatine processes of the maxillae and palatine bones
- Incisive fossa is the depression in the midline, posterior to central incisors, where incisive canals open
- Nasopalatine nerves pass from nose through incisive canals
- Greater palatine foramen pierces the bony palate medial to 3<sup>rd</sup> molar tooth, where greater palatine vessels and nerves emerge
- Lesser palatine foramina are posterior, transmitting lesser palatine nerves

### Soft palate

- Moveable posterior 1/3 of the palate
- Palatine aponeurosis attaches to posterior edge of hard palate; blends with muscular part
- Posteriorly is the curved free margin, where the uvula hangs
- During swallowing, the bolus is squeezed against the soft palate by the tongue; the soft palate is then elevated posteriorly and superiorly against the wall of the pharynx, preventing passage of food into the nasal cavity
- Laterally it is continuous with the wall of the pharynx, and is joined to the tongue and pharynx by the palatoglossal and pharyngeal arches
- Fauces is the space between the oral cavity and the pharynx, bounded
  - Superiorly: soft palate
  - Inferiorly: root of the tongue
  - Laterally: pillars of the fauces (palatoglossal and palatopharyngeal arches)
- Isthmus of the fauces is the short space connecting the oral cavity proper with the oropharynx, bounded anteriorly by the palatoglossal folds and posteriorly by the palatopharyngeal folds

Muscle name	Attachments	Innervation	Action
Tensor veli palatini	Sphenoid bone/pterygoid plate/pharyngotympanic tube to palatine aponeurosis	Medial pterygoid nerve (CN V3 branch)	Tenses soft palate
Levator veli palatine	Pharyngotympanic tube/petrous temporal to palatine aponeurosis	Pharyngeal branch of CN X	Elevates soft palate
Palatoglossus	Palatine aponeurosis to sides of tongue		Elevates posterior tongue
Palatopharyngeus	Hard palate/palatine aponeurosis to lateral wall of pharynx		Tenses soft palate Draws walls of pharynx superiorly, anteriorly and medially during swallowing
Musculus uvulae	Posterior nasal spine/palatine aponeurosis to uvula		Shortens uvula and pulls superiorly

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Muscle		Shape and position	Attachment	Innervation	Action
Extrinsic	Genioglossus	Fan shaped, most of tongue	Mental spine to dorsum of tongue	Hypoglossal (CN XII)	Depress tongue, protrudes, lateral movement
	Hyoglossus	Thin, quadrilateral	Hyoid bone to lateral tongue		Depress and shorten
	Styloglossus	Small, short, triangular	Styloid process to sides of tongue		Retrudes and curls sides
	Palatoglossus	Narrow, crescent shaped	Palatine aponeurosis to posterolateral tongue	Vagus nerve (CN X)	Elevates posterior tongue and depresses soft palate
Intrinsic	Superior longitudinal	Thin layer deep to mucous membrane of dorsum	Fibrous layer to margin of tongue	Hypoglossal (CN XII)	Curls tongue longitudinally upward, shortens and retrudes
	Inferior longitudinal	Narrow band close to inferior surface	Root of tongue/hyoid bone to apex		Curls tongue longitudinally downward, shortens and retrudes
	Transverse	Deep to superior longitudinal	Fibrous septum to lateral margins		Narrows and protrudes
	Vertical	Intersects transverse	Fibrous layer to borders		Flattens and broadens