

Palate

by

Dr. Wessam Hamed

Ph D & Associate professor of Anatomy & Embryology
Faculty of dentistry Zarqa university of Jordan
Faculty of medicine Mansoura university Egypt

The palate is divided into:

A) Hard palate:

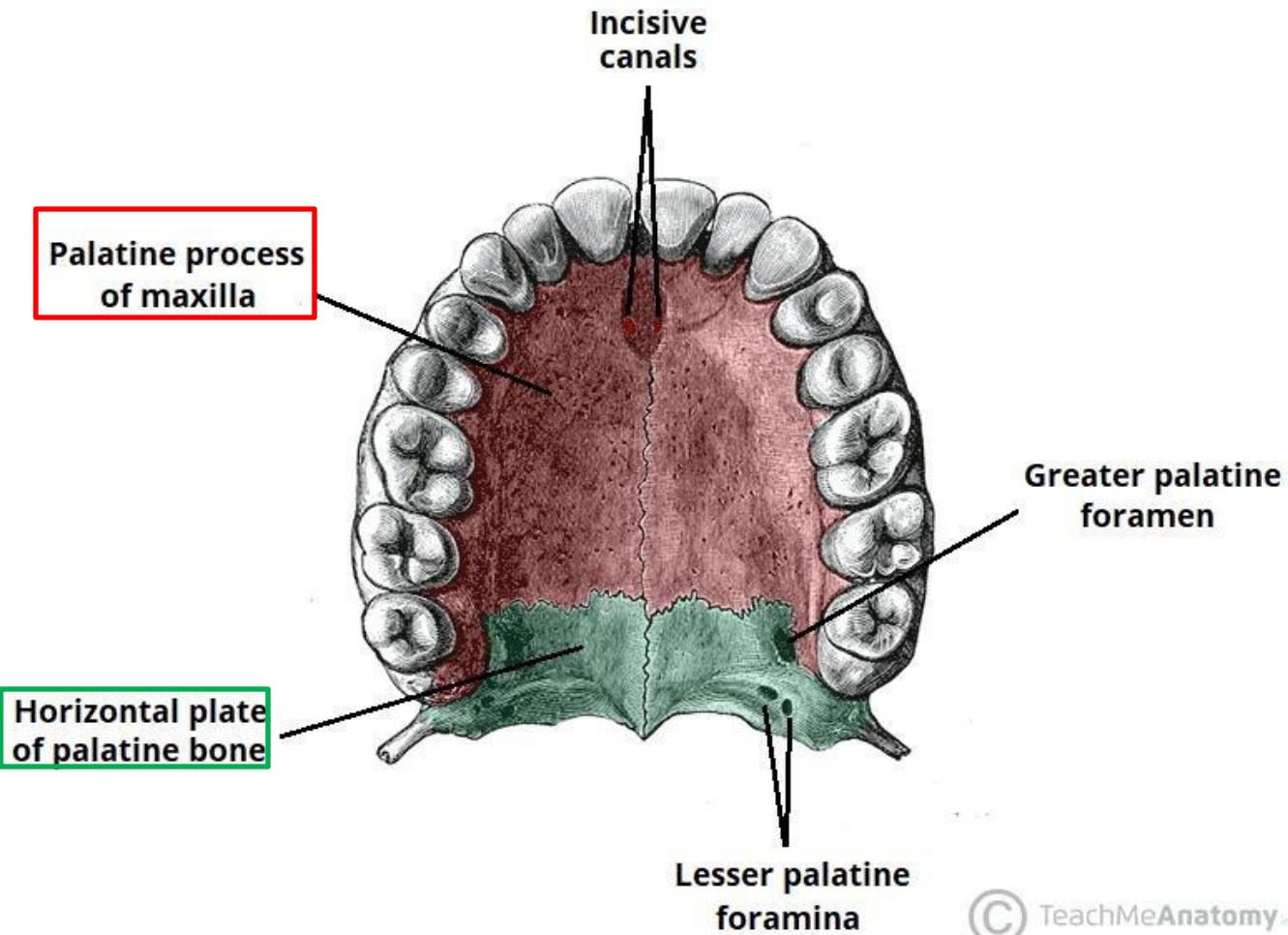
The roof of the mouth

Separates oral cavity

from nasal cavity.

Formed of:

- **Palatine process of maxilla**
(anteriorly)
- **Horizontal plate of palatine bone** (posteriorly)



B) Soft palate:

Site: suspended from posterior border of hard palate.

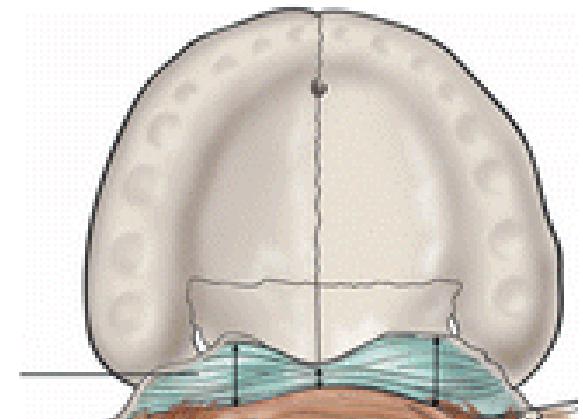
Consists of:

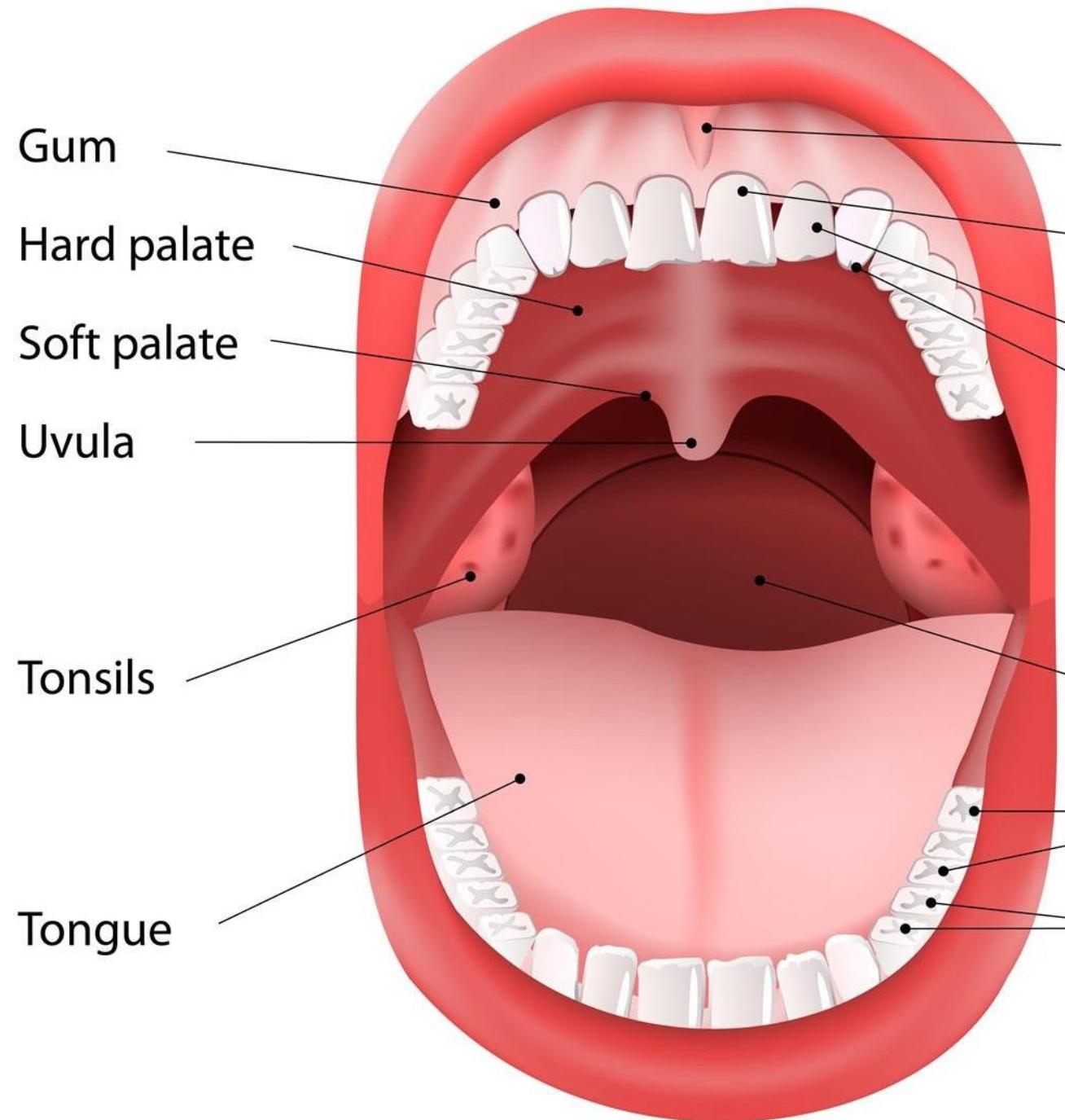
1. **palatine aponeurosis**

2. palatine muscles covered by mucous membrane.

Palatine aponeurosis: is a central firm layer formed by expanded tendon of tensor palati muscle.

Palatine aponeurosis





Muscles of soft palate:

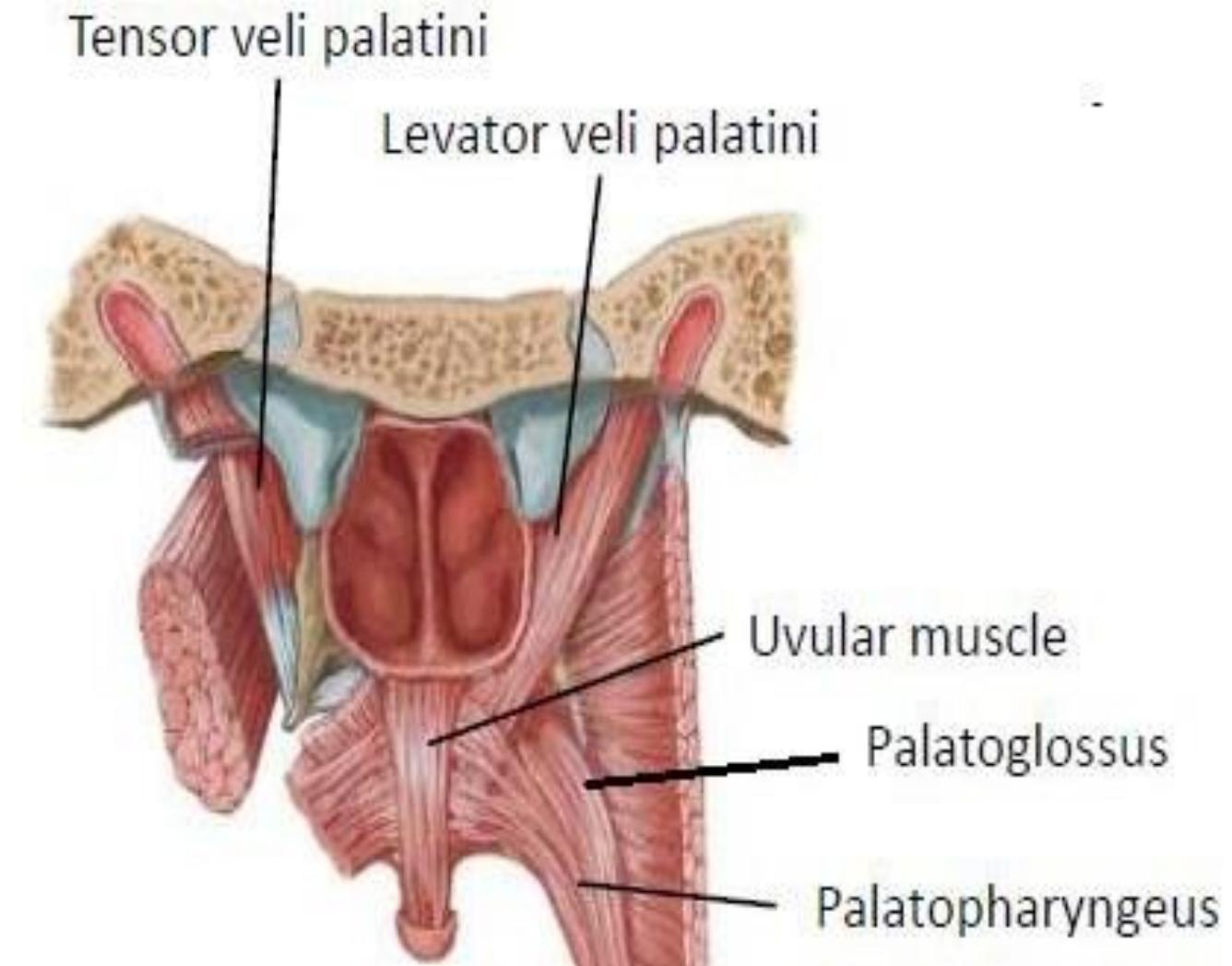
Tensor palati

Levator palati

Palato-glossus

palato-pharyngeus

musculus uvulae



1- Tensor palati:

Origin:

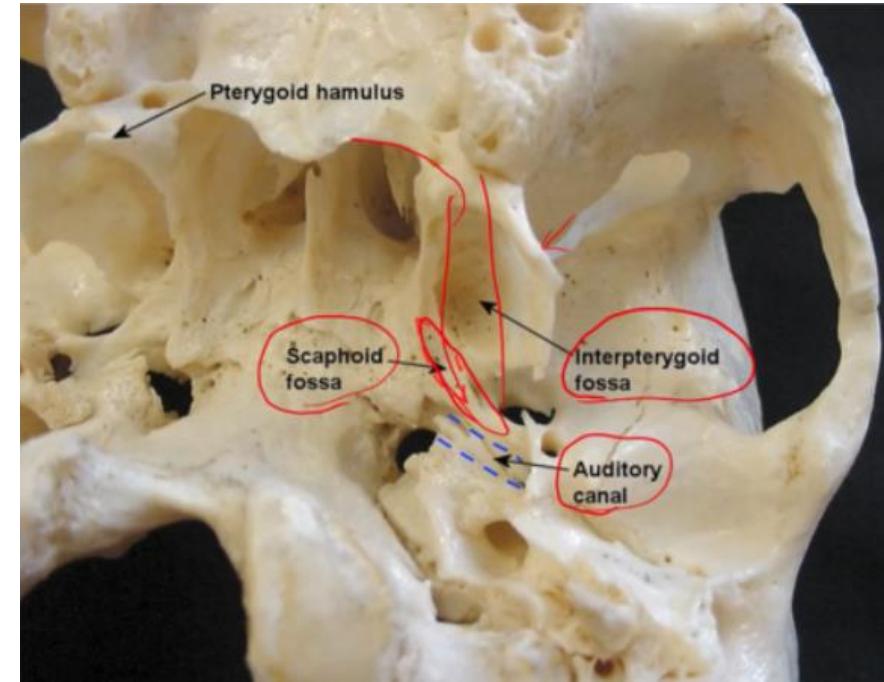
- Scaphoid fossa.
- Lateral side auditory tube.

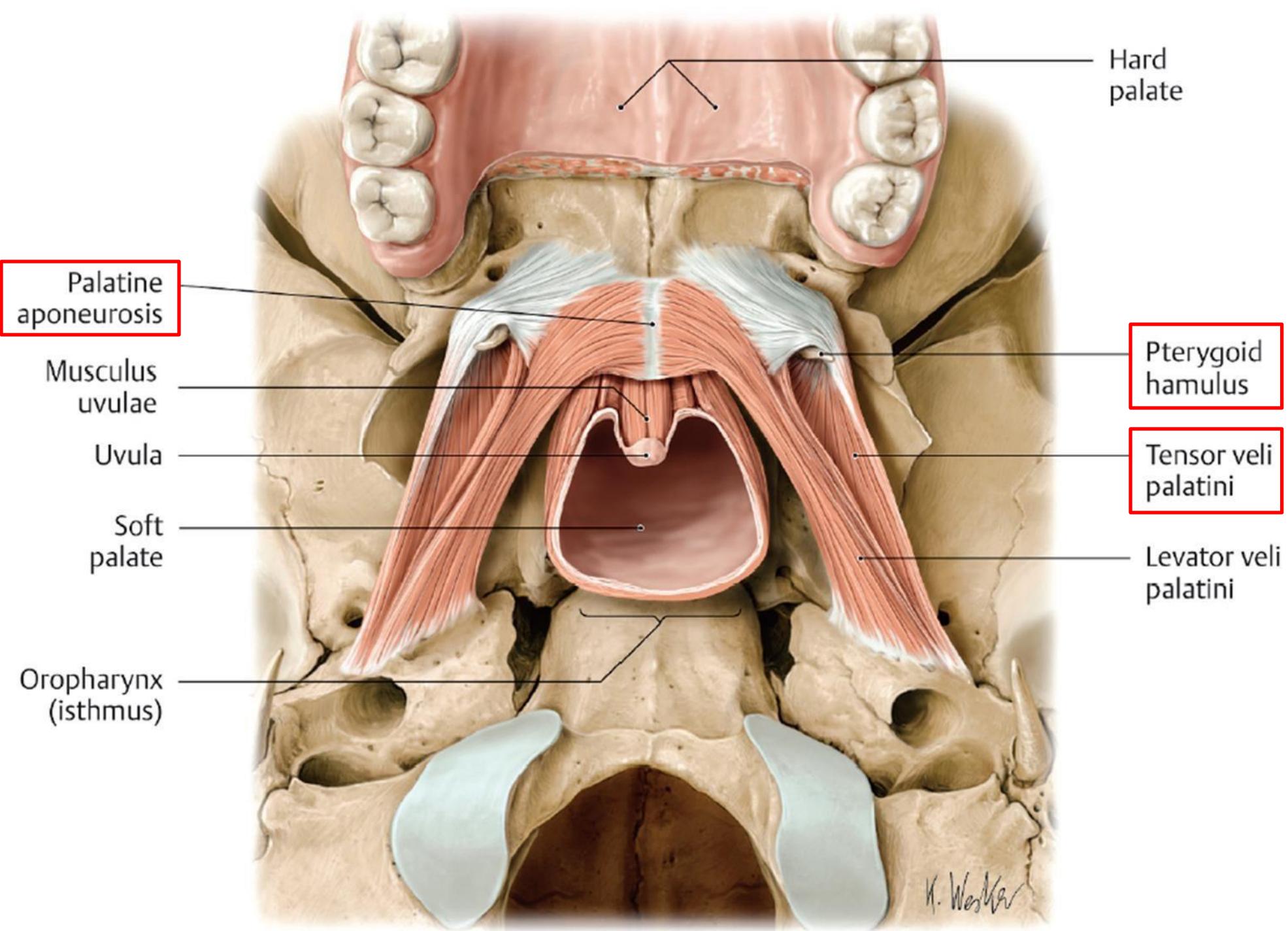
Insertion:

the tendon hook around pterygoid Hamulus
(the end of medial plate of sphenoid bone)

Enter soft palate forming Palatine aponeurosis.

- Posterior border of the hard palate.



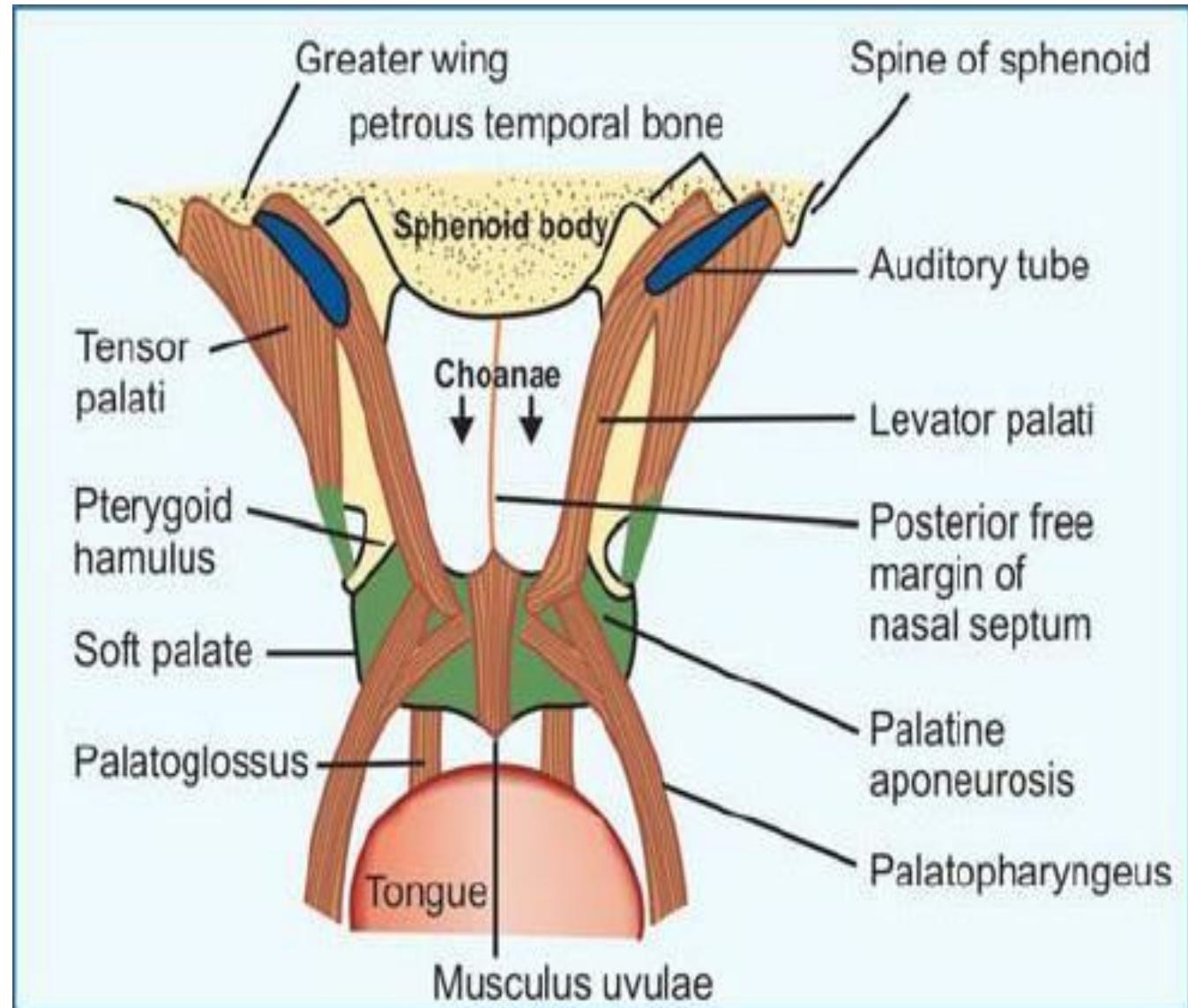


Nerve supply:

Mandibular nerve trunk (from branch to medial pterygoid)

Action:

- Tighten the soft palate.
- Forms a firm base to enables other palatine muscles to act.



2- Levator palati:

Origin:

quadrate area on inferior surface of petrous temporal bone medial to carotid canal.

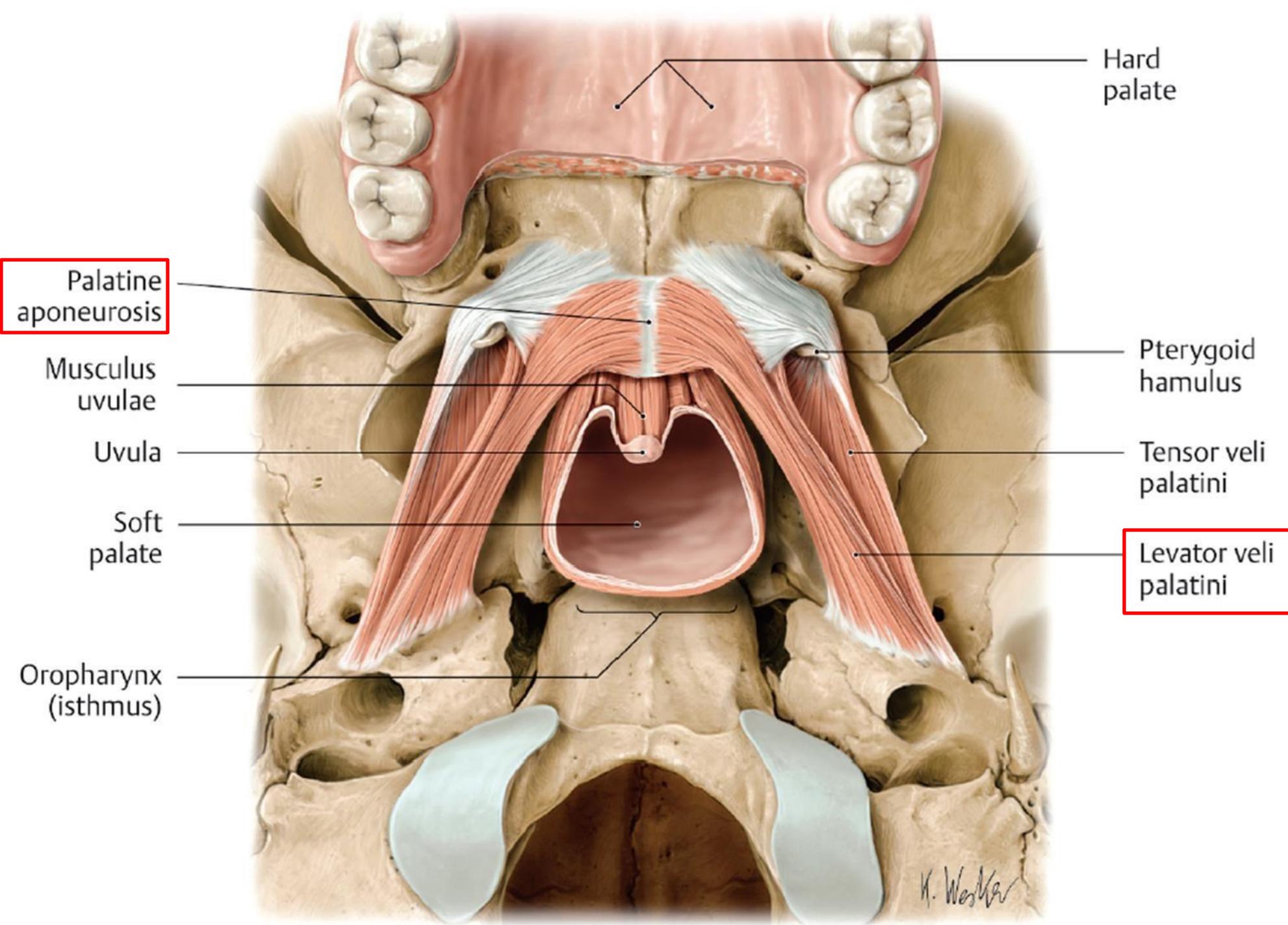
medial side of auditory tube.

Insertion:

Upper surface of palatine aponeurosis.

Nerve supply:

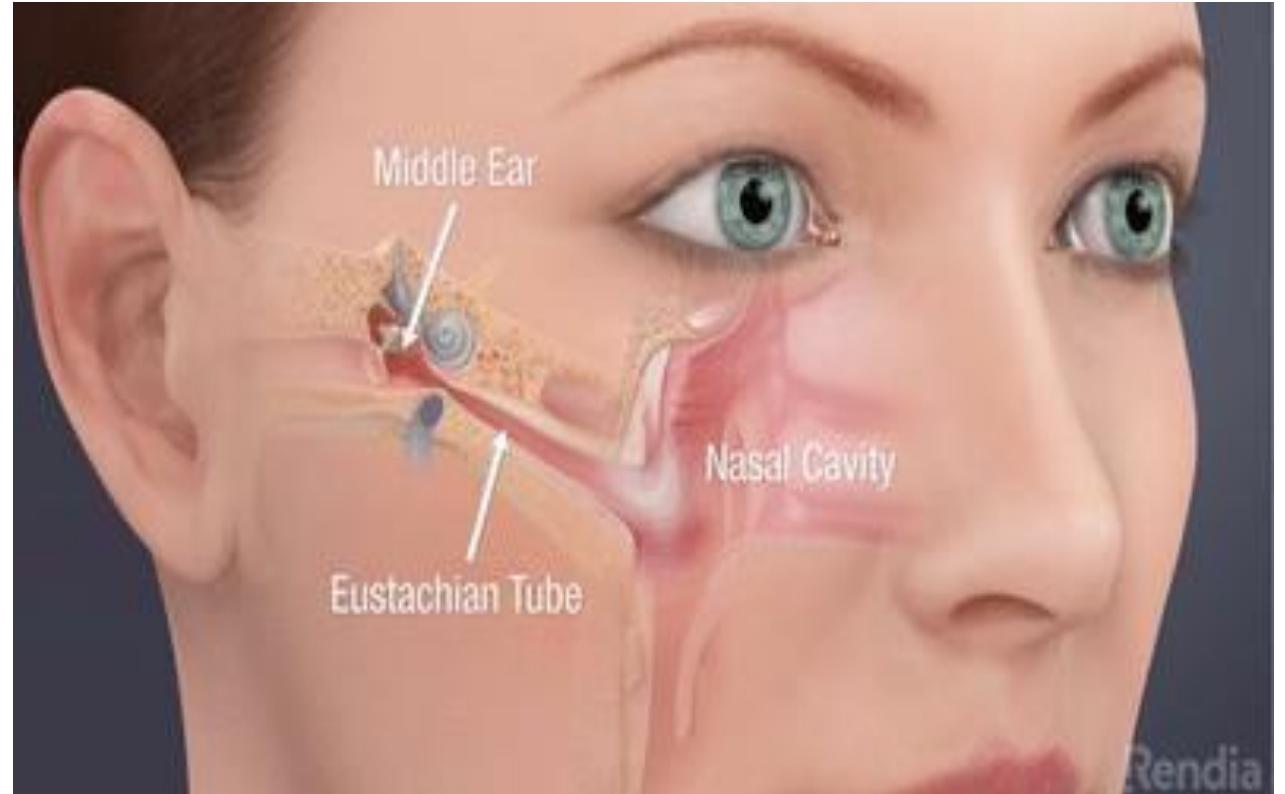
Pharyngeal plexus.



➤ **Action:**

Pull the soft palate upwards and backwards (elevates the soft palate).

Opens auditory tube to equalize pressure between the middle ear & the nose.



3- Palatoglossus muscle

Origin:

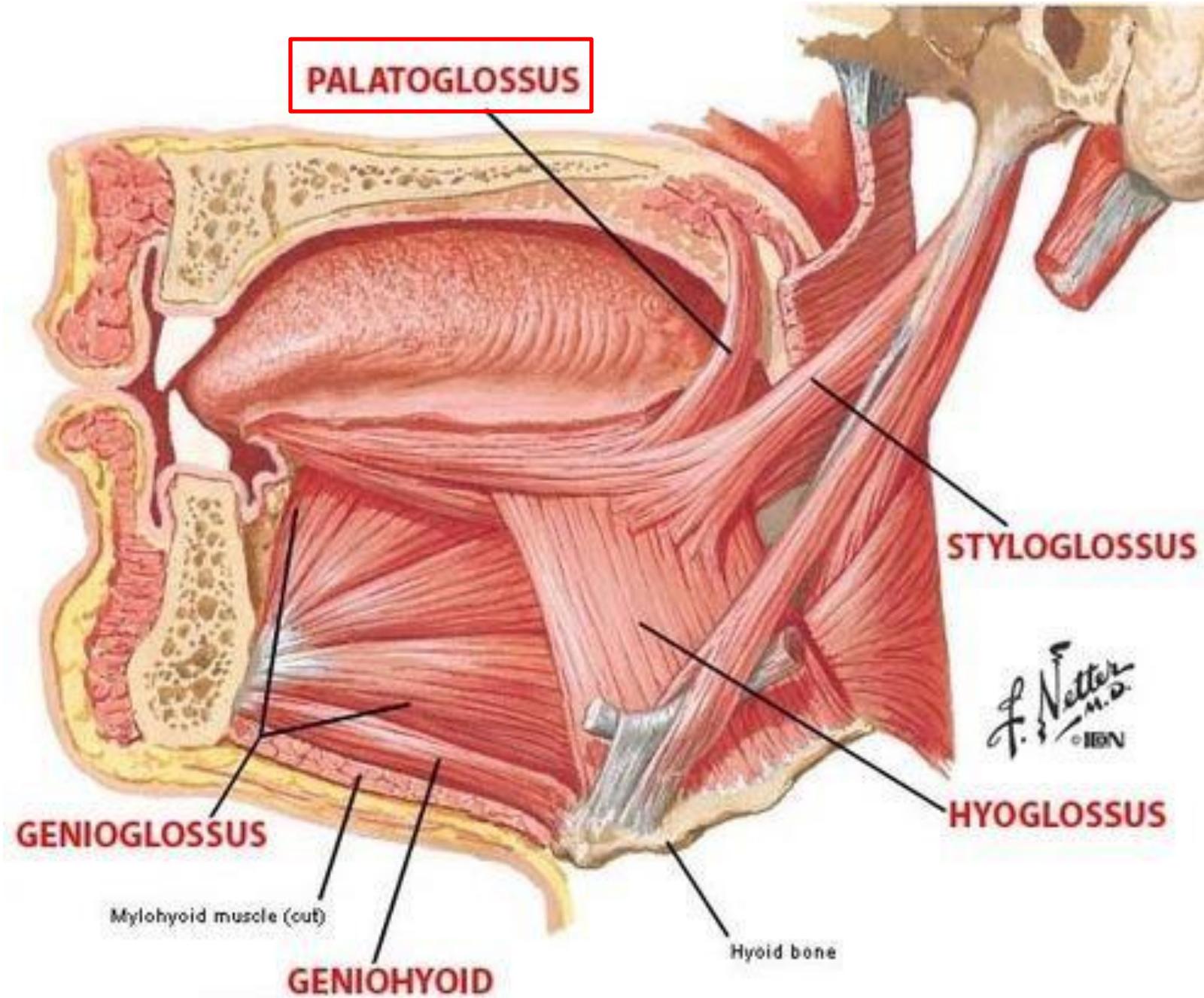
Under surface of palatine aponeurosis.

Insertion:

Side of the posterior part of the tongue.

Nerve supply:

Pharyngeal plexus.

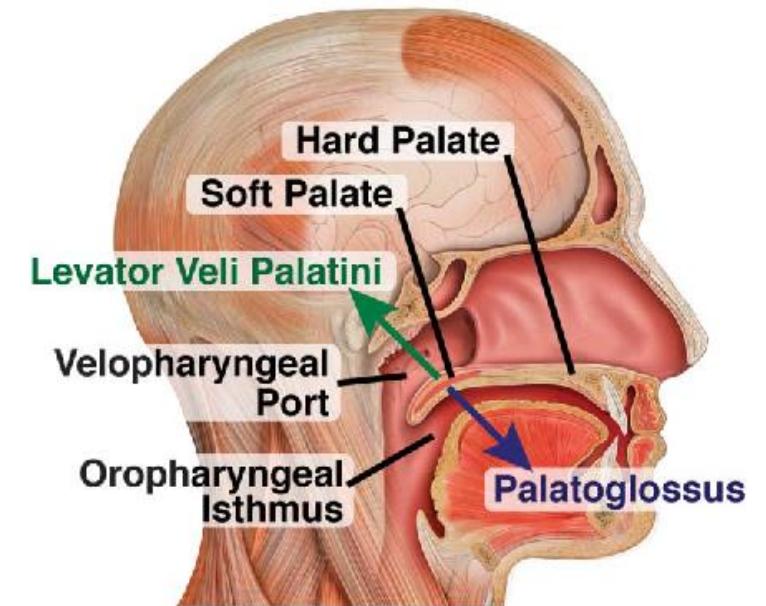


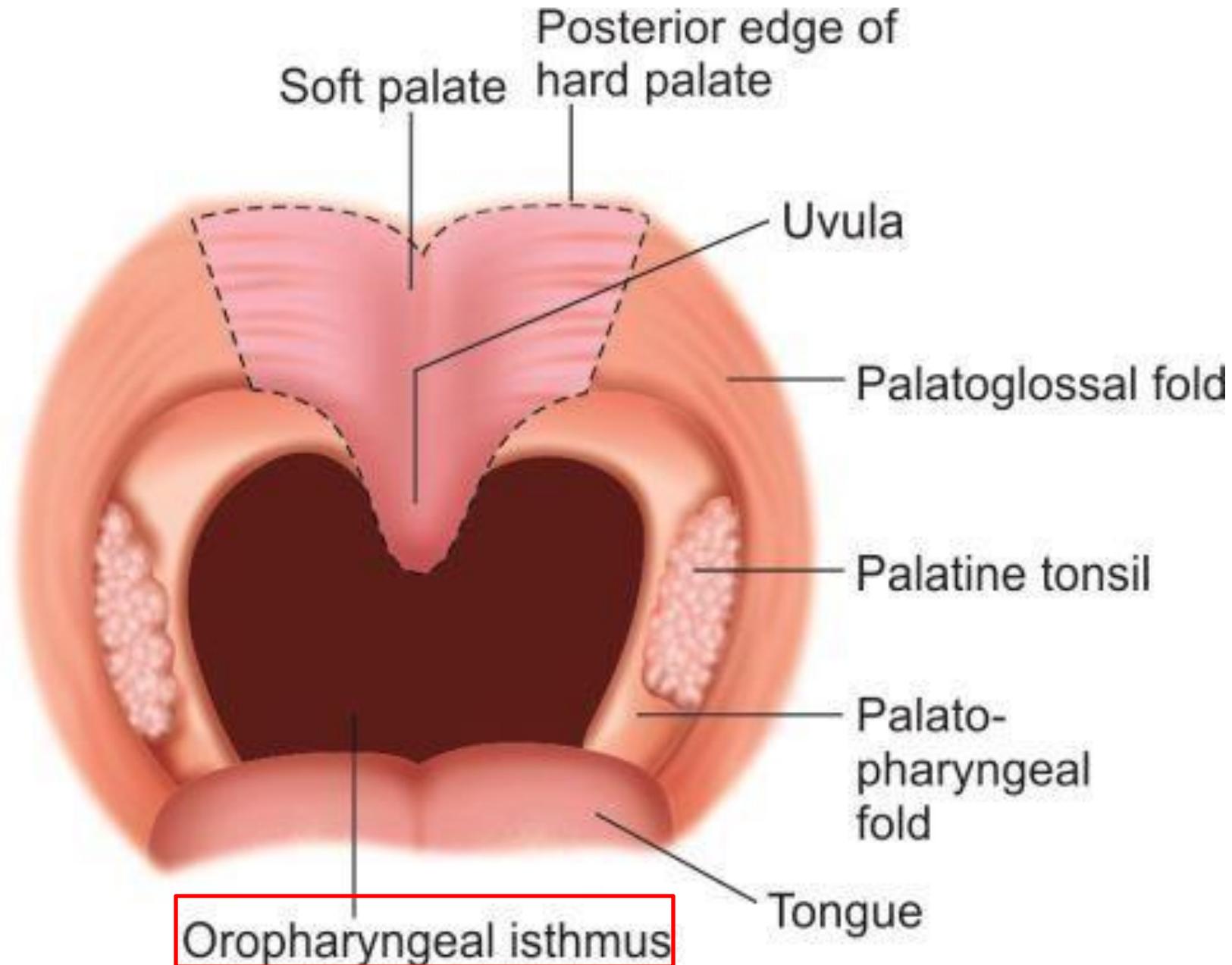
✓ Action:

Elevates posterior part of the tongue

depresses the soft palate.

2 muscles: approximate palatoglossal folds
and to narrow oropharyngeal isthmus.





4- Palato-pharyngeus:

Origin:

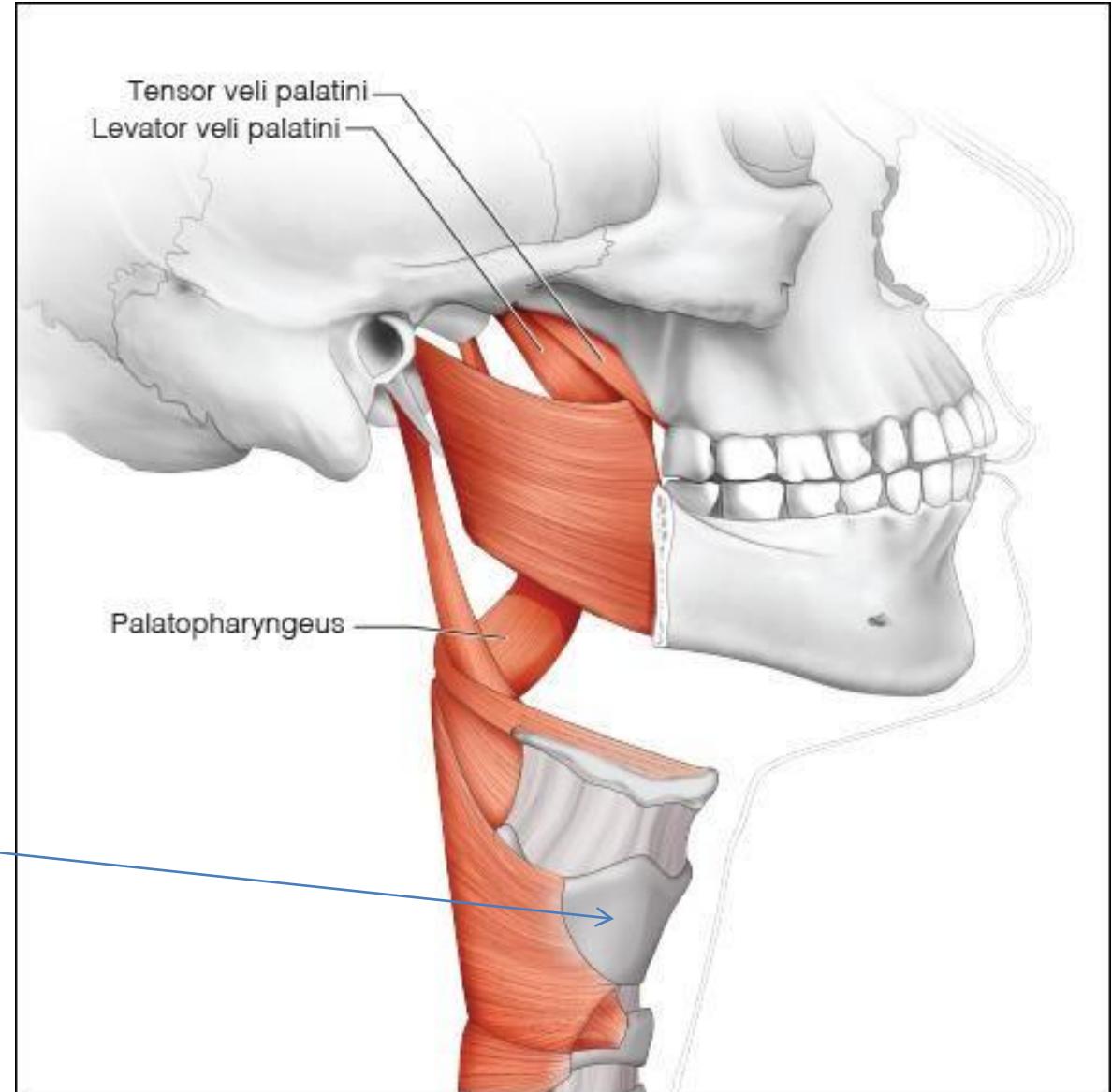
Palatine aponeurosis.

Insertion:

Posterior border of
thyroid cartilage.

Nerve supply:

Pharyngeal plexus.

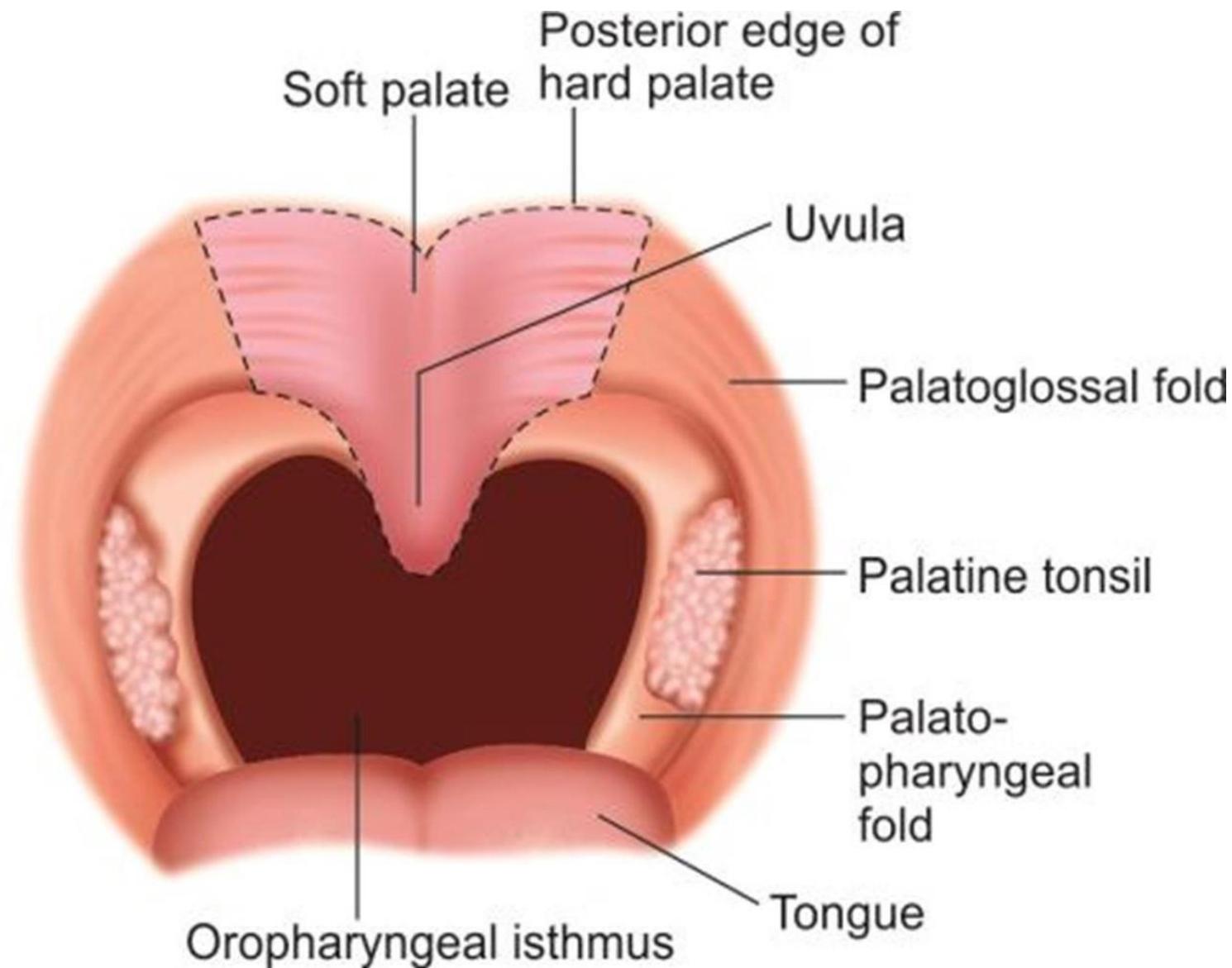


Action:

Elevates the pharynx

depresses the soft palate.

2 muscles acting together approximate palatopharyngeal folds to narrow oropharyngeal isthmus.



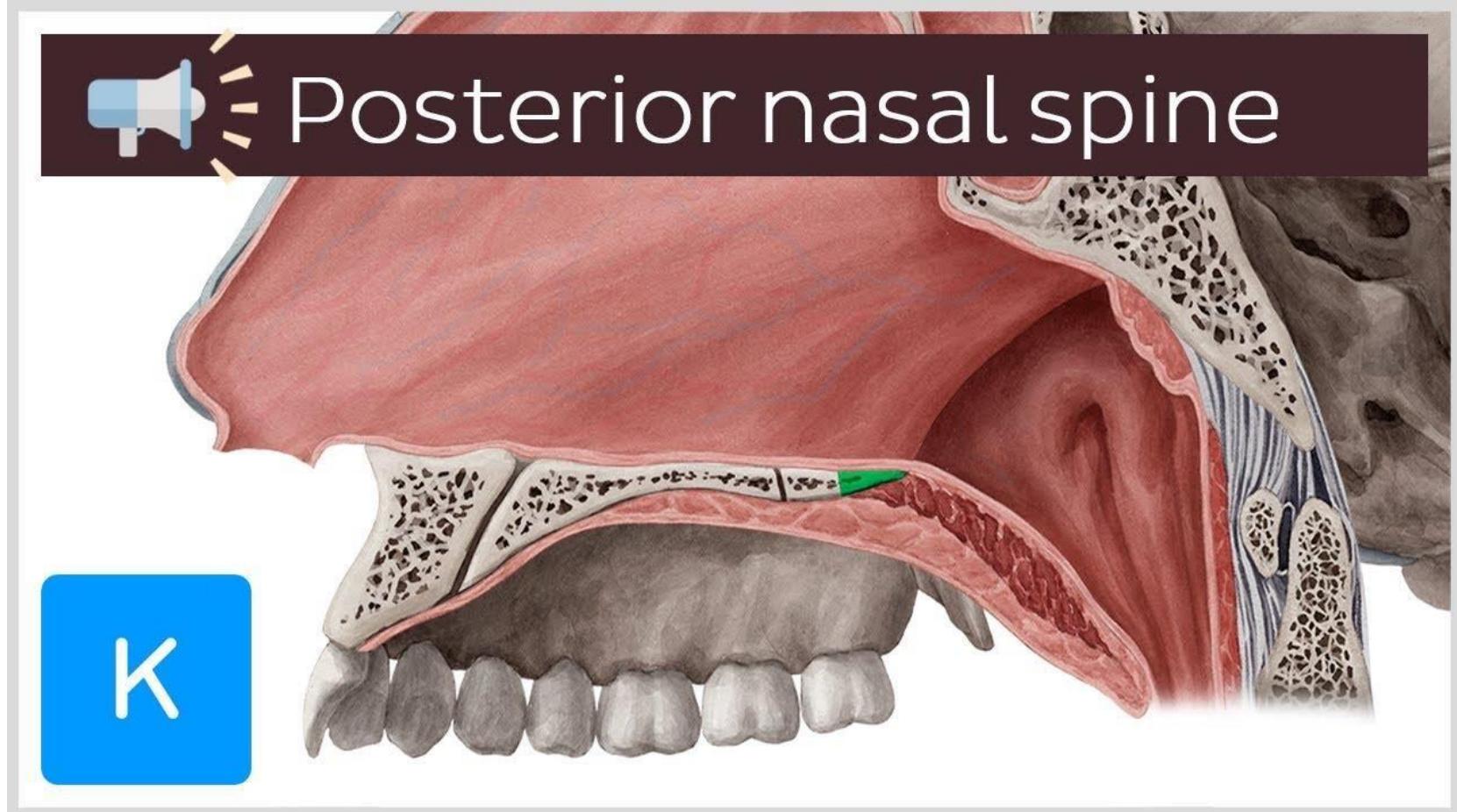
5- Musculus uvulae:

Origin: Posterior nasal spine.

Insertion: tip of uvula.

Nerve supply:
Pharyngeal plexus

Action: Shortens the uvula



Nerve supply of the palate

A) Motor

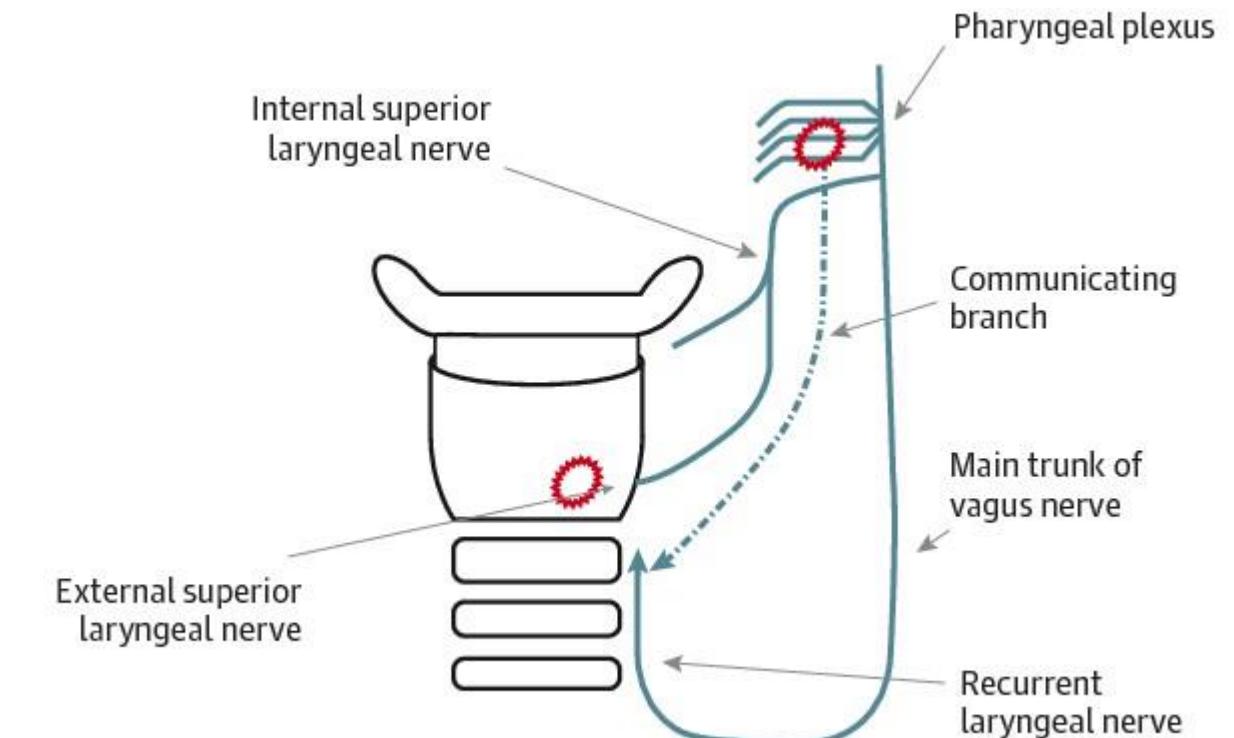
All muscles of the palate by

pharyngeal plexus

(vago-accessory complex),

except **tensor palate**: by

mandibular nerve (N to medial pterygoid muscle).



B) Sensory:

Nasopalatine

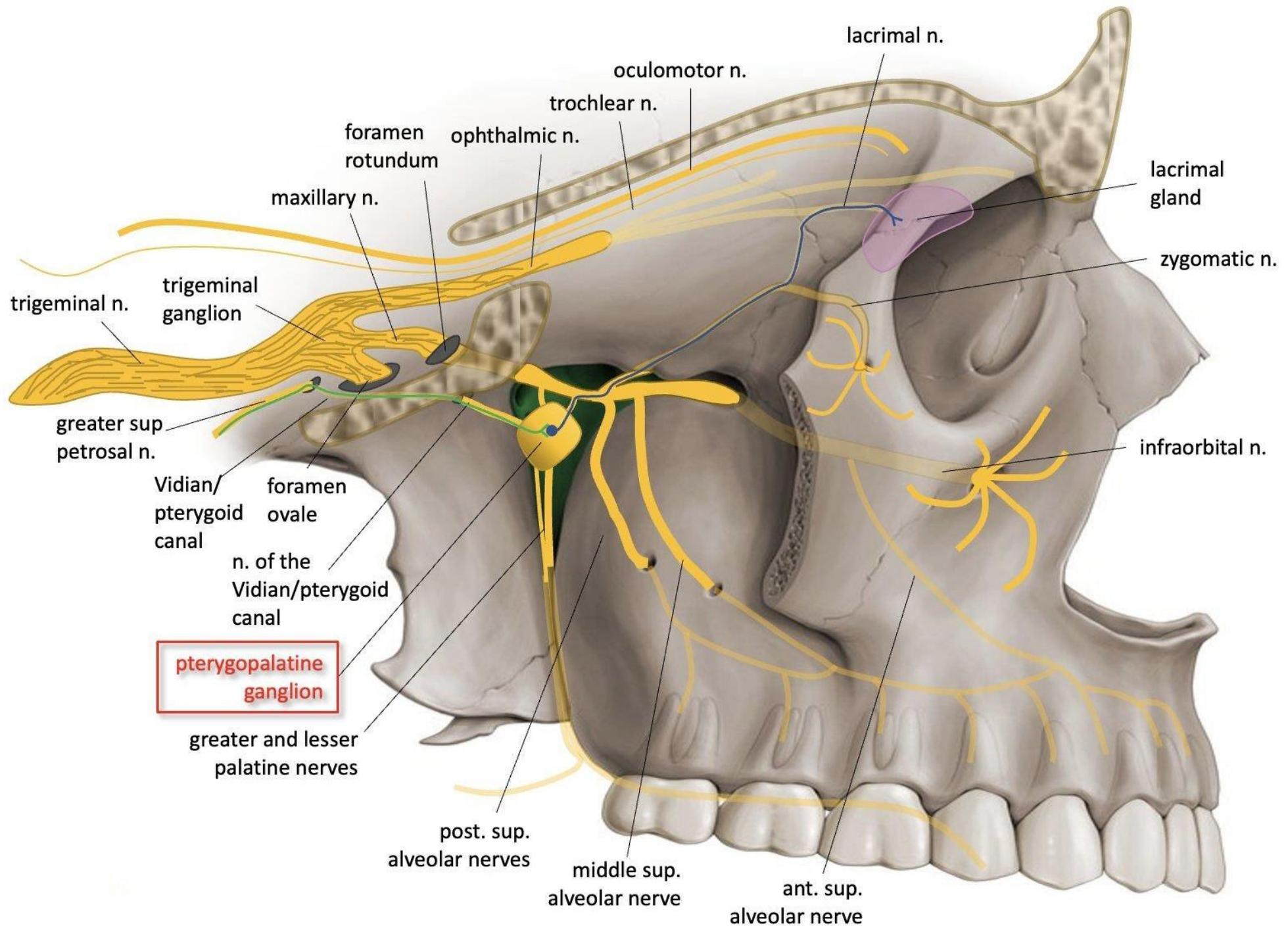
From pterygopalatine ganglion
supplies anterior 1/3 of hard palate.

Greater palatine nerve.

From pterygopalatine ganglion
supplies posterior 2/3 of hard palate.

Lesser palatine nerve

From pterygopalatine ganglion
supplies soft palate.



Nerves of the palate

CN V₂ means Maxillary nerve

Hard palate

Somatic sensory nerves from CN V₂

Nasopalatine nerve ●

Greater palatine nerve ●

Soft palate

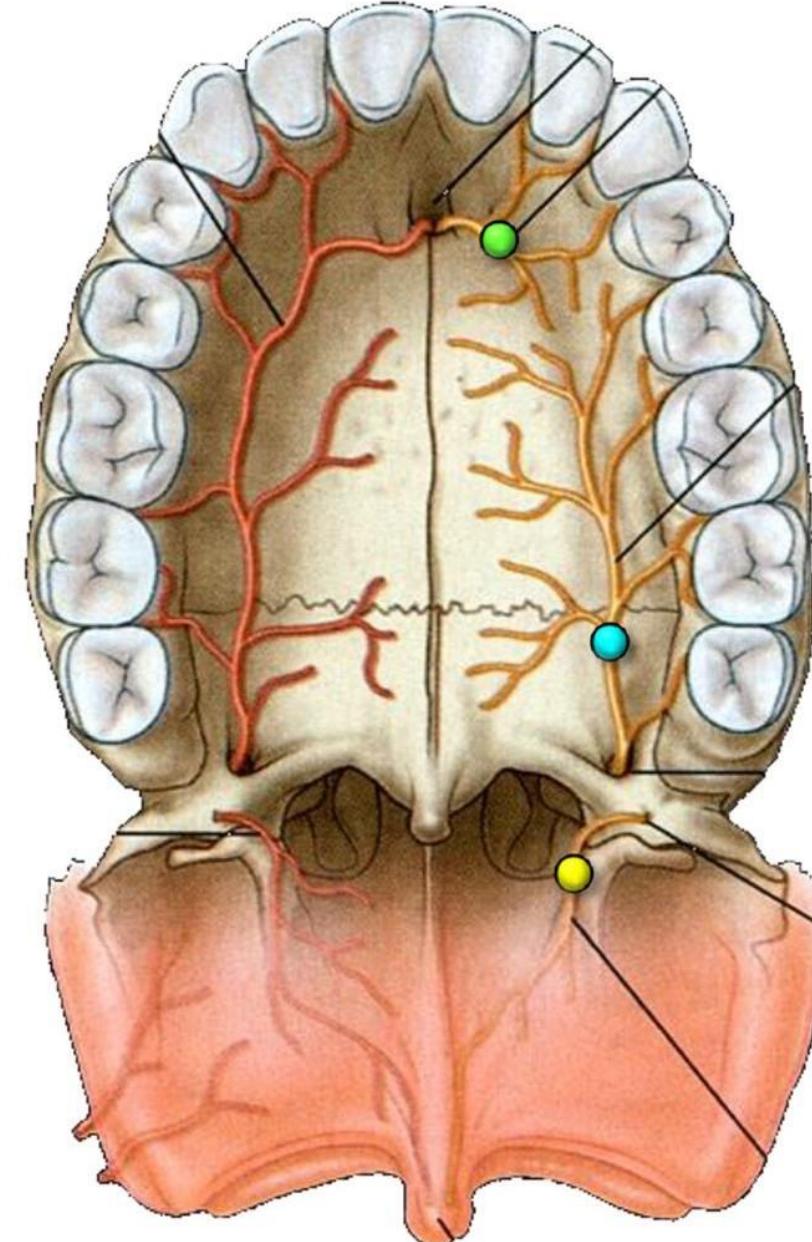
Somatic sensory nerve from CN V₂

lesser palatine nerve ●

Somatic motor—mostly vagus (CN X),

some CN V₃

Means mandibular N



c) Autonomic: through pterygopalatine ganglion

Parasympathetic: secretomotor to palatine gland.

From greater superficial petrosal nerve
from facial nerve.

Sympathetic: vasomotor to palate.

From deep petrosal nerve
from superior cervical sympathetic ganglion.

Arterial supply of the palate:

Ascending palatine from facial artery.

Dorsal lingual branches from lingual artery.

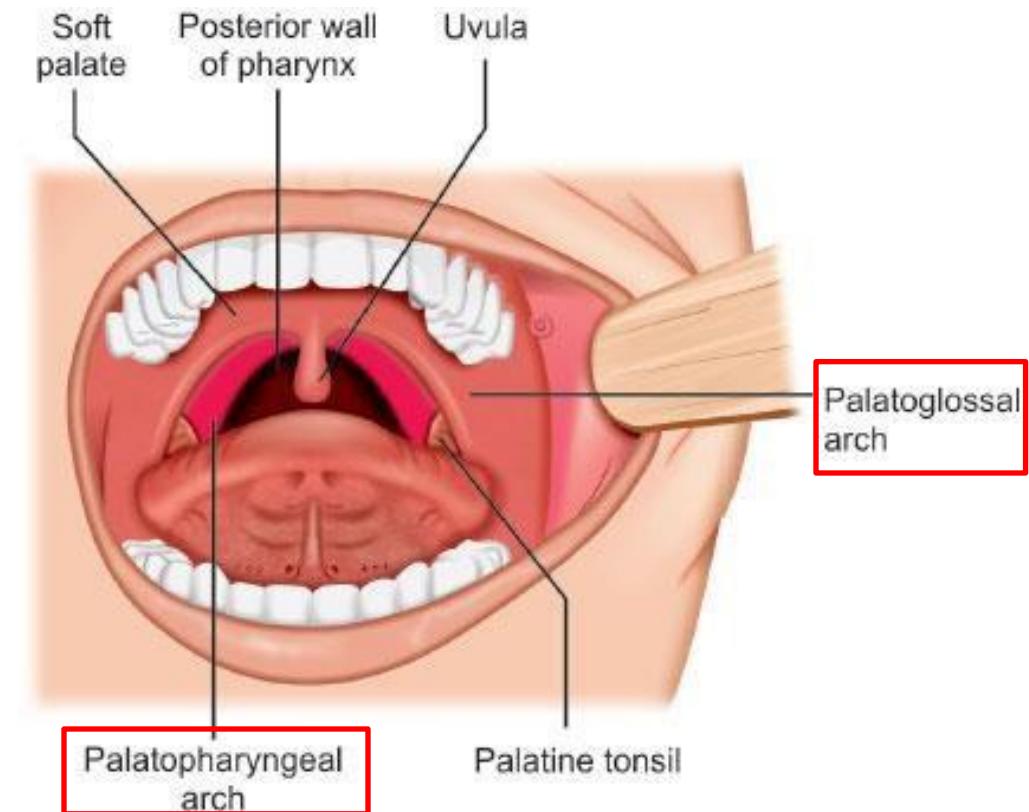
Greater and lesser palatine from maxillary artery.

✓ Palatine tonsil:

Site: Tonsillar fossa
triangular recess bounded by:

palatoglossal fold anteriorly

palatopharyngeal fold
posteriorly.



Nerve supply:

- Lesser palatine nerve.
- Glossopharyngeal nerve.

Arterial supply:

Tonsillar artery from facial artery

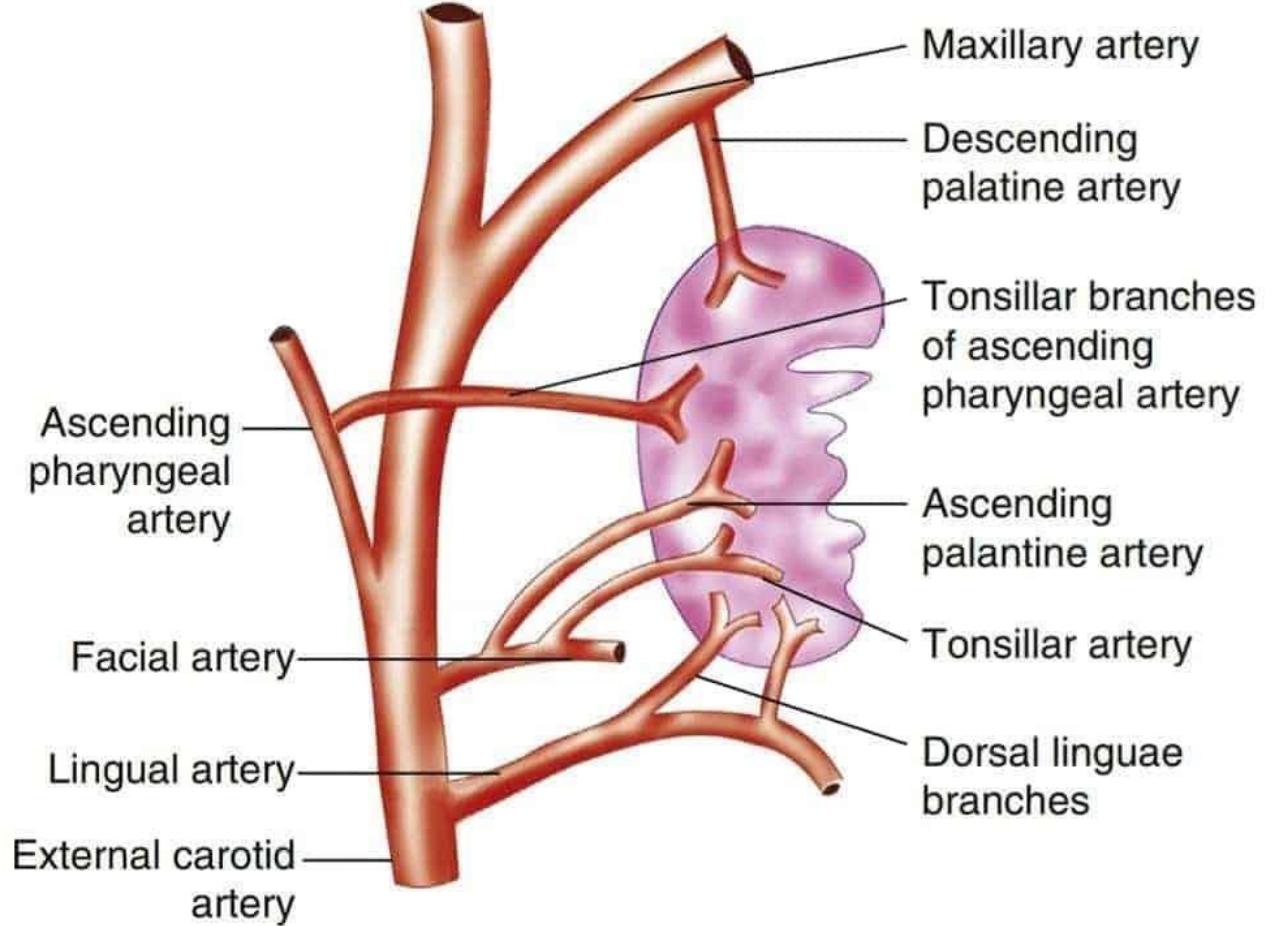
(main artery).

Dorsal lingual from lingual artery

Lesser palatine.

Venous drainage:

veins from tonsil drain in to pharyngeal venous plexus.





Be
honest!

*Goodbye and good
luck Wessam*
Hamed 