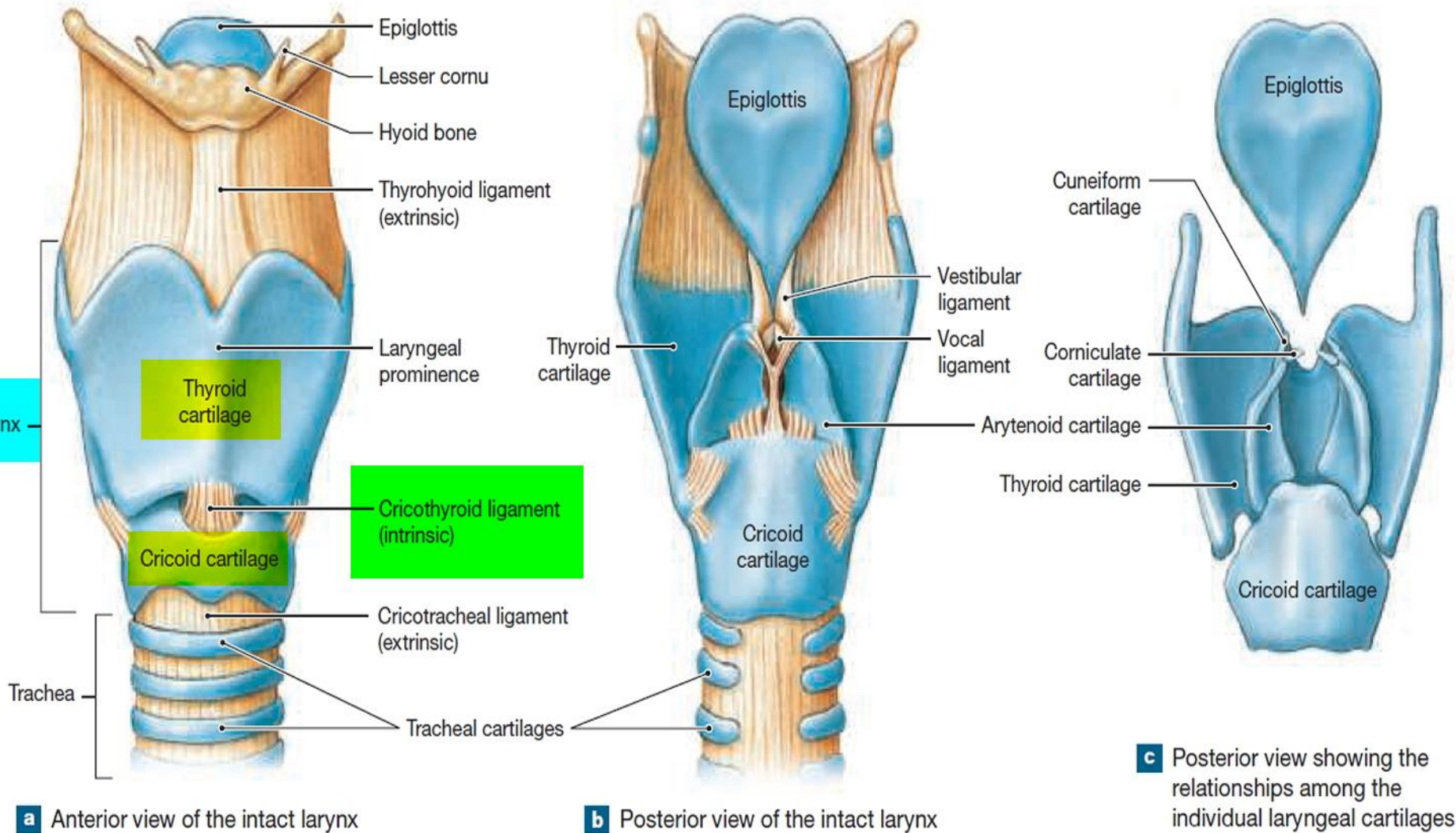


The Larynx

Anatomy of the Larynx



Anatomy

In adult humans, the larynx is found in the [anterior](#) neck at the level of the C3–C6 [vertebrae](#). It connects the inferior part of the [pharynx](#) (hypopharynx) with the [trachea](#). The laryngeal [skeleton](#) consists of six [cartilages](#): three single ([epiglottic](#), [thyroid](#) and [cricoid](#)) and three paired ([arytenoid](#), [corniculate](#), and [cuneiform](#)). The [hyoid bone](#) is not part of the larynx, though the larynx is suspended from the hyoid. The larynx extends vertically from the tip of the [epiglottis](#) to the inferior border of the [cricoid cartilage](#). Its interior can be divided in supraglottis, [glottis](#) and [subglottis](#).

Vocal Cords

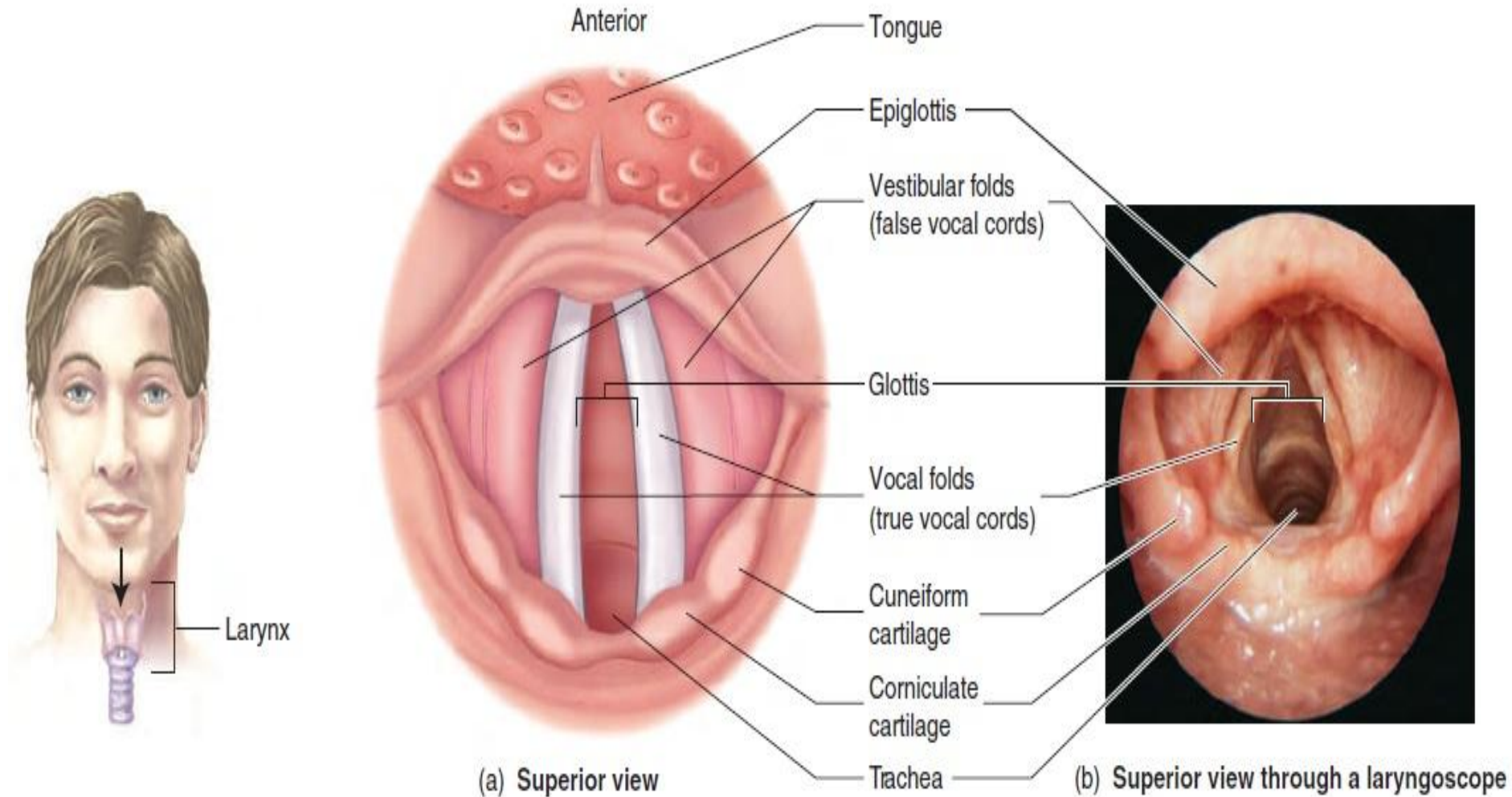
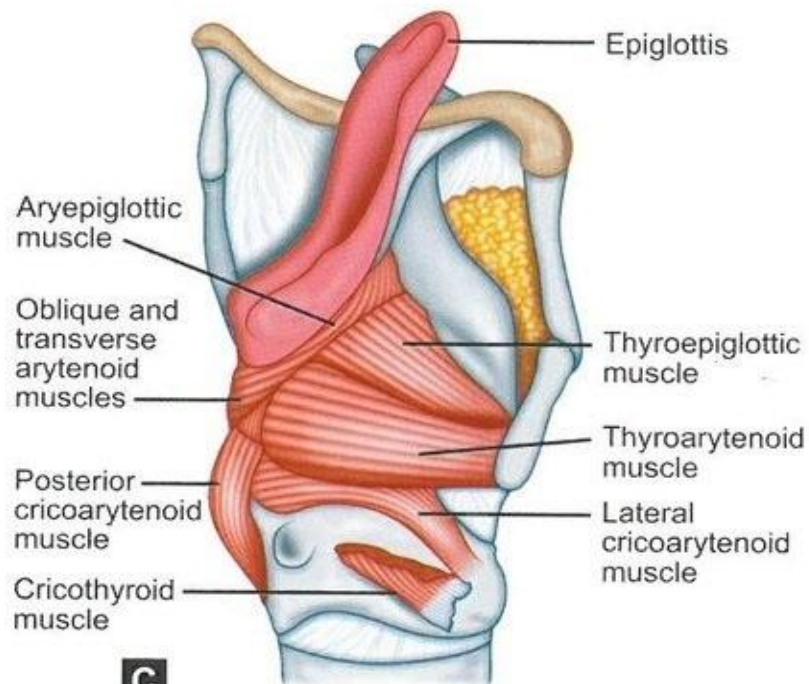
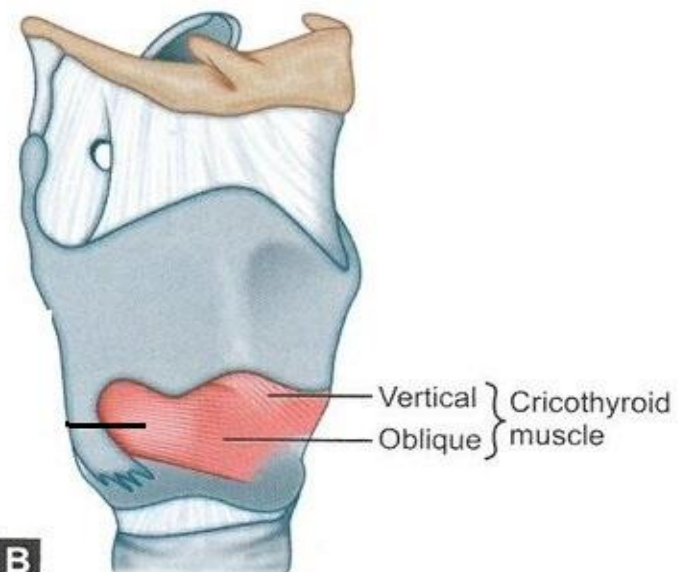
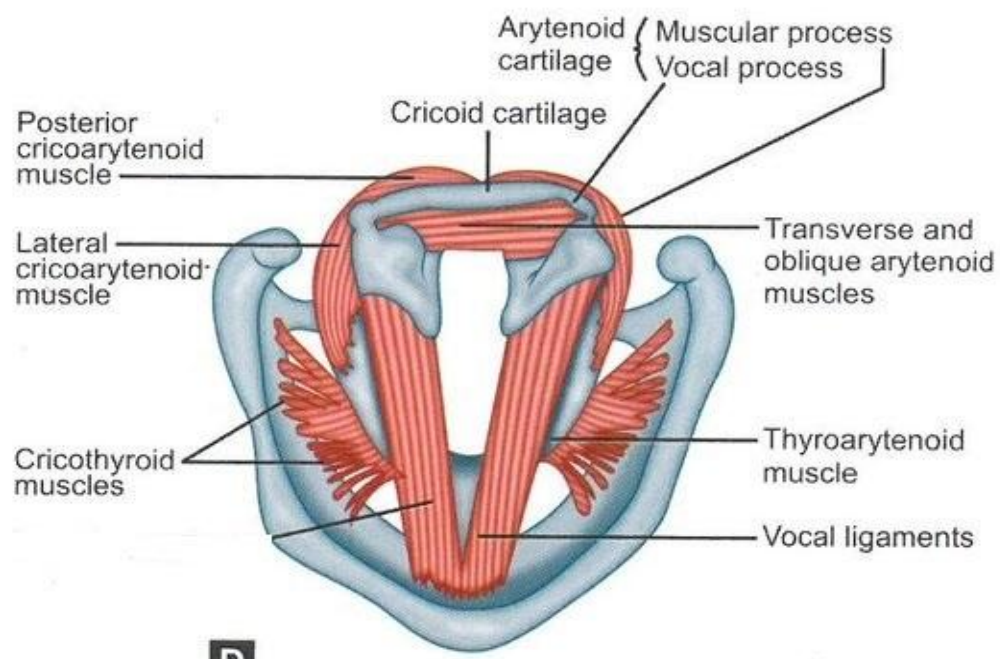
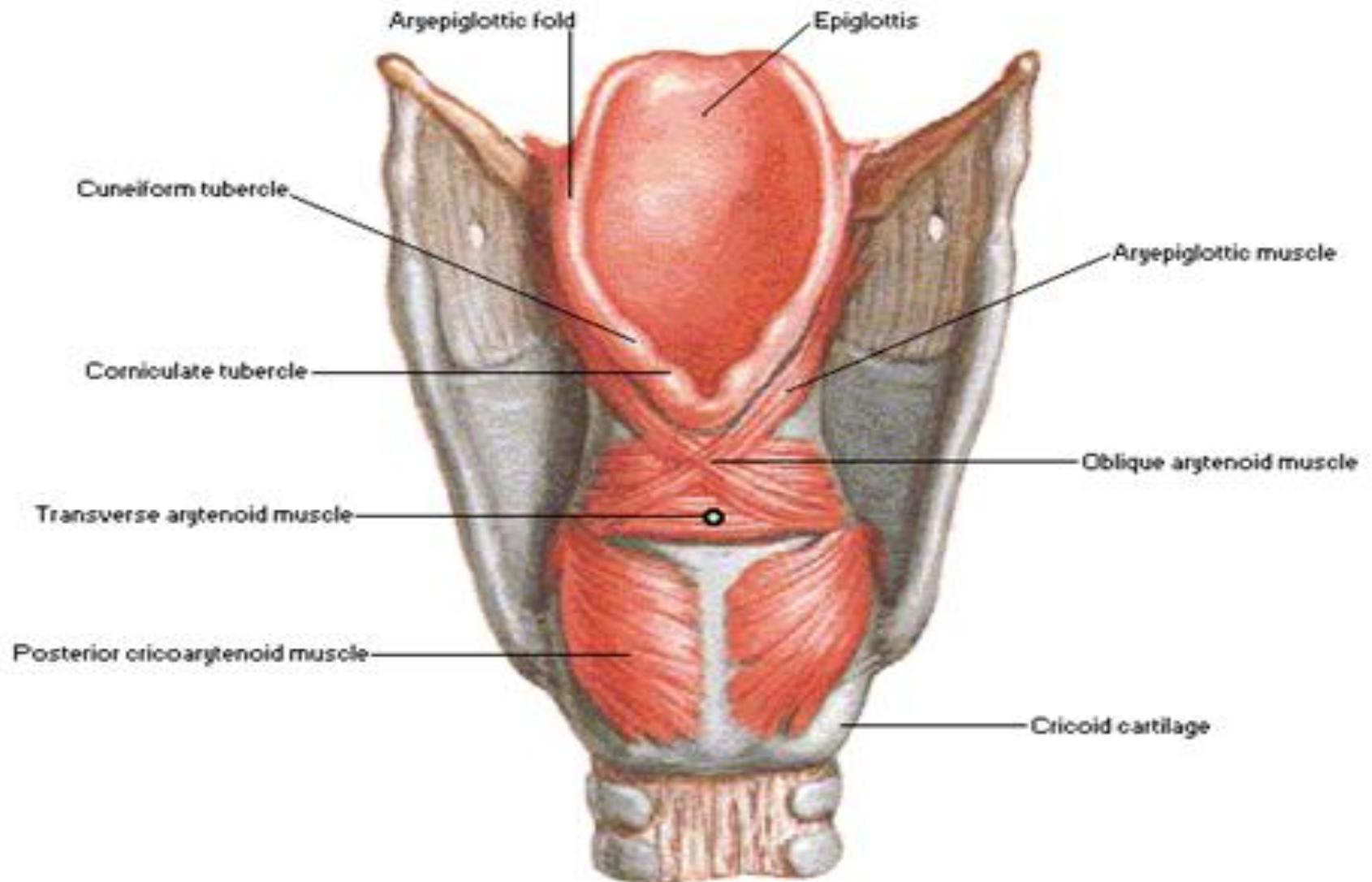


Figure 15.4 **APR** Vestibular and Vocal Folds

(Far left) The arrow shows the direction of viewing the vestibular and vocal folds. (a) The relationship of the vestibular folds to the vocal folds and the laryngeal cartilages. (b) Superior view of the vestibular and vocal folds as seen through a laryngoscope.

A**B****D**

Intrinsic Muscles of Larynx Posterior View



Muscles of the Larynx

Intrinsic

The intrinsic laryngeal muscles are responsible for controlling sound production.

Cricothyroid muscle lengthen and tense the vocal folds.

Posterior cricoarytenoid muscles abduct and externally rotate the arytenoid cartilages, resulting in abducted vocal folds.

Lateral cricoarytenoid muscles adduct and internally rotate the arytenoid cartilages, increase medial compression.

Transverse arytenoid muscle adduct the arytenoid cartilages, resulting in adducted vocal folds.

Oblique arytenoid muscles narrow the laryngeal inlet by constricting the distance between the arytenoid cartilages.

Thyroarytenoid muscles narrow the laryngeal inlet, shortening the vocal folds, and lowering voice pitch.

Cont,d

Muscles of the larynx

Adductors: lateral cricoarytenoid **muscle**, transverse arytenoid **muscle**.

Abductors: posterior cricoarytenoid **muscle**.

Sphincters: transverse arytenoid **muscle**, oblique arytenoid **muscle**, aryepiglottic **muscle**.

Tensors: cricothyroid **muscle**.

Muscles of the larynx.....cont,d

Extrinsic •

The extrinsic laryngeal muscles support and position the larynx within the mid-cervical region. [trachea.] •

Extrinsic laryngeal muscles •

[Sternothyroid muscles](#) depress the larynx. (Innervated by ansa cervicalis) •

[Omohyoid muscles](#) depress the larynx. (Ansa cervicalis) •

[Sternohyoid muscles](#) depress the larynx. (Ansa cervicalis) •

[Inferior constrictor muscles](#). (CN X) •

[Thyrohyoid muscles](#) elevates the larynx. (C1) •

[Digastric](#) elevates the larynx. (CN V₃, CN VII) •

[Stylohyoid](#) elevates the larynx. (CN VII) •

[Mylohyoid](#) elevates the larynx. (CN V₃) •

[Geniohyoid](#) elevates the larynx. (C1) •

[Hyoglossus](#) elevates the larynx. (CN XII) •

[Genioglossus](#) elevates the larynx. (CN XII) •

Nerve supply

Nerve supply

The larynx is innervated by branches of the vagus nerve on each side. Sensory innervation to the glottis and laryngeal vestibule is by the internal branch of the superior laryngeal nerve. The external branch of the superior laryngeal nerve innervates the cricothyroid muscle. Motor innervation to all other muscles of the larynx and sensory innervation to the subglottis is by the recurrent laryngeal nerve.

Nerve supply

