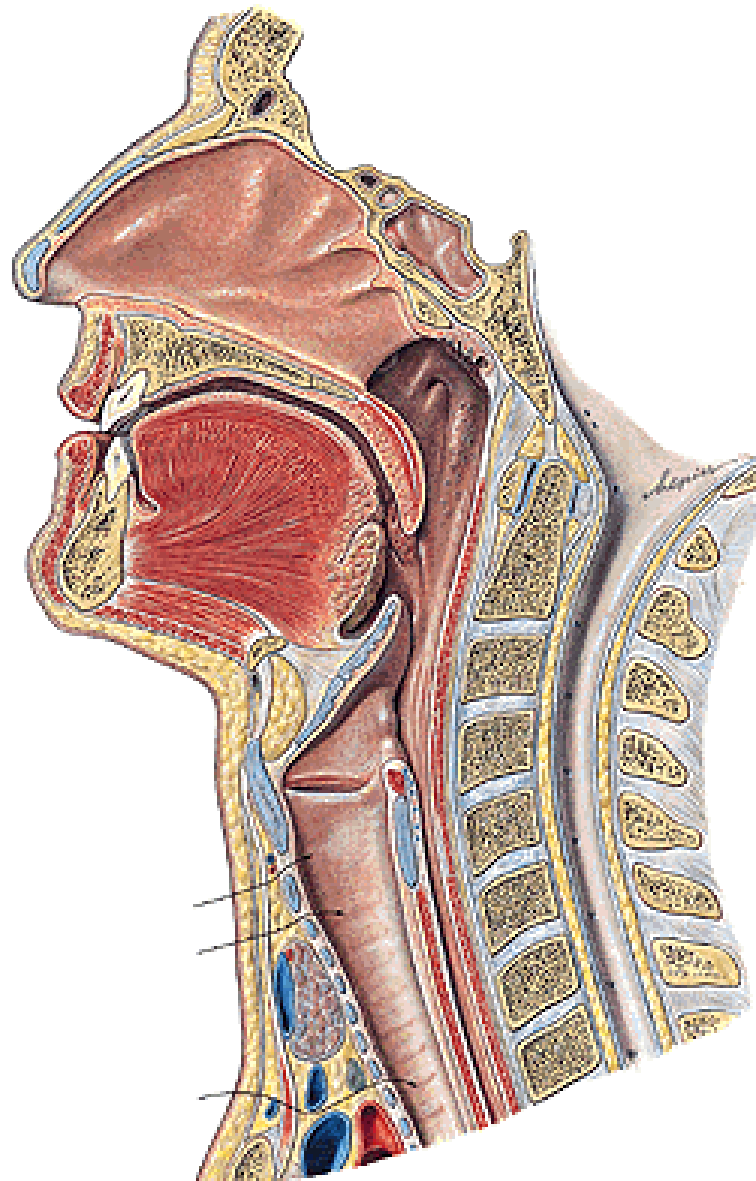


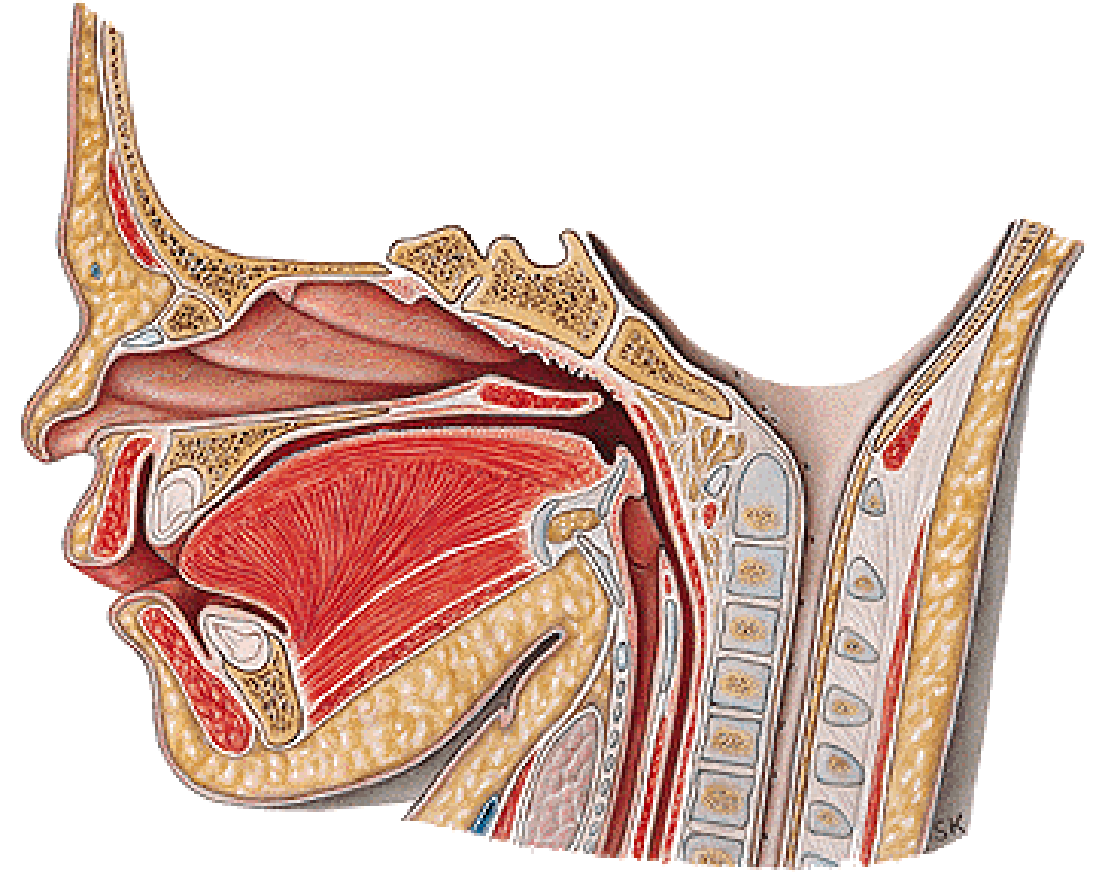
The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the right side and bottom of the frame, creating a modern, dynamic feel. The central area is a plain white space.

LARYNX

LARYNX



← ADULT

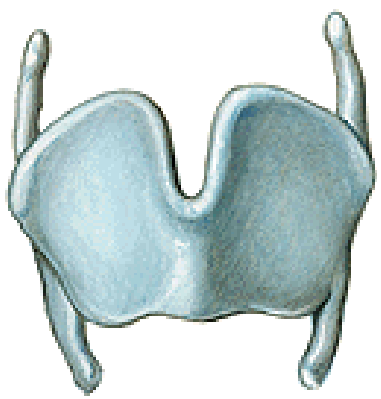


↑ NEONATE

CARTILAGINES LARYNGIS

Cartilago thyroidea
Cartilago cricoidea
Cartilago arytenoidea
Cartilago epiglottica
Cartilago corniculata
Cartilago cuneiformis
Cartilago triticea





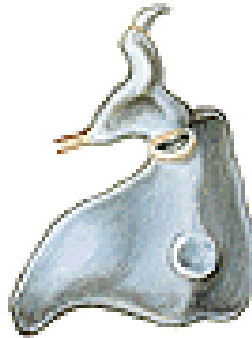
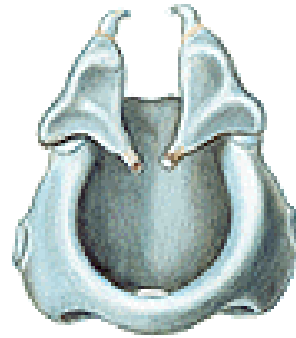
CARTILAGO THYROIDEA

- lamina dextra
- lamina sinistra
- incisura thyroidea sup.
- incisura thyroidea inf.
- cornua superiora
- ligg. thyroidea lateralia
- cornua inferiora
- facies art. cricoidea
- linea obliqua
- foramen thyroideum



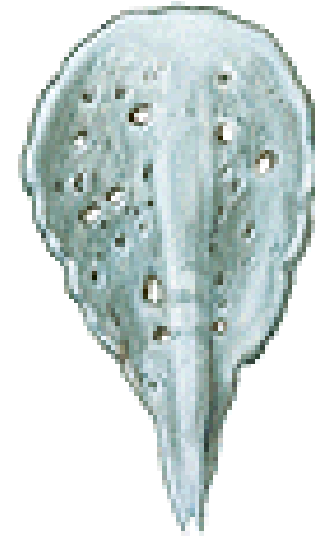
CARTILAGO CRICOIDEA

- arcus
- lamina
- facies articularis arytenoidea
- facies articularis thyroidea



CARTILAGO ARYTENOIDEA

- apex
- basis
 - facies art. cricoidea
- processus vocalis
- processus muscularis
- facies anterolateralis
 - colliculus
 - crista arcuata
 - fossa triangularis
 - fovea oblonga
- facies medialis
- facies posterior



CARTILAGO EPIGLOTTICA

- petiolus epiglottidis
- lamina

CARTILAGO CORNICULATA

CARTILAGO CUNEIFORMIS

CARTILAGO TRITICEA

Connections-ligaments

Membrana thyrohyoidea

Lig. cricothyroideum (coniotomy)

Membrana quadrangularis

(epiglottis - arytenoid c., ligg. vestibularia)

Conus elasticus

(ligg. vocalia and arcus cartilaginis cricoideae)

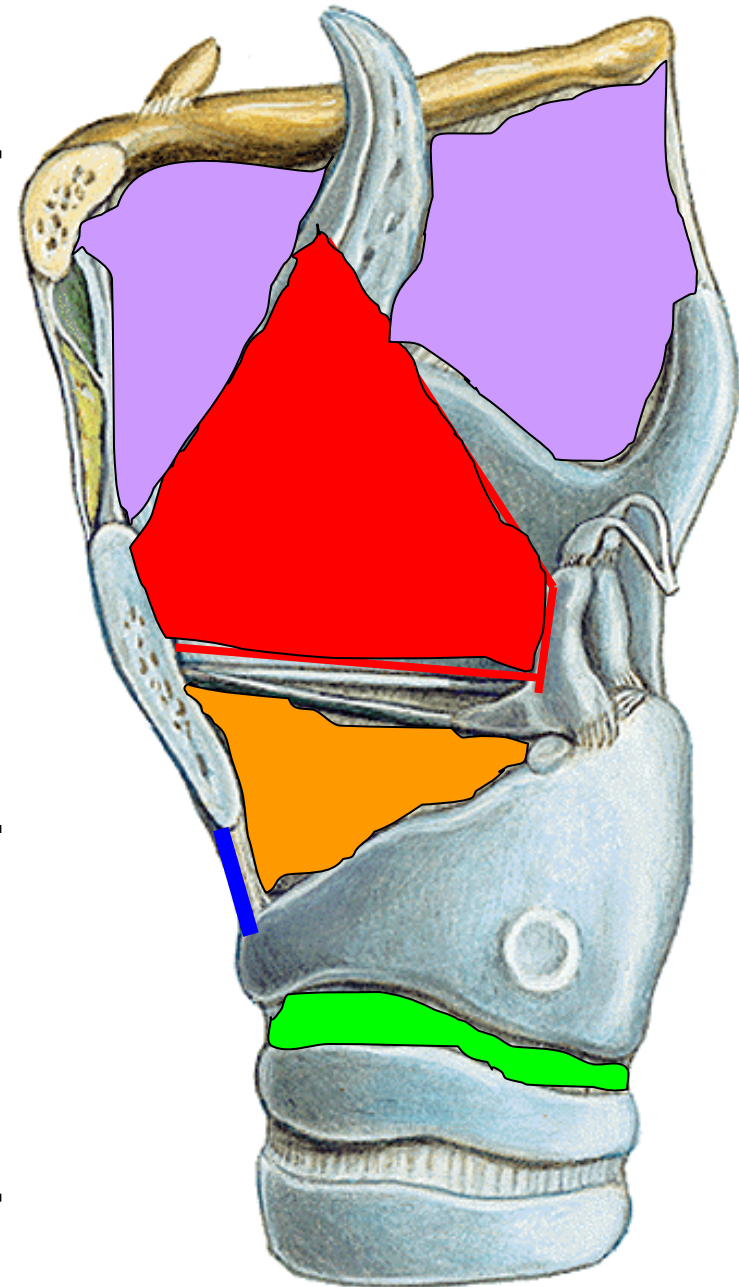
Membrana fibrocartilaginea laryngis

conus elasticus + membrana quadrangularis

Ligg. vestibularia (thickened margin of membrana quadrangularis)

Ligg. vocalia (thickened margin of conus elasticus)

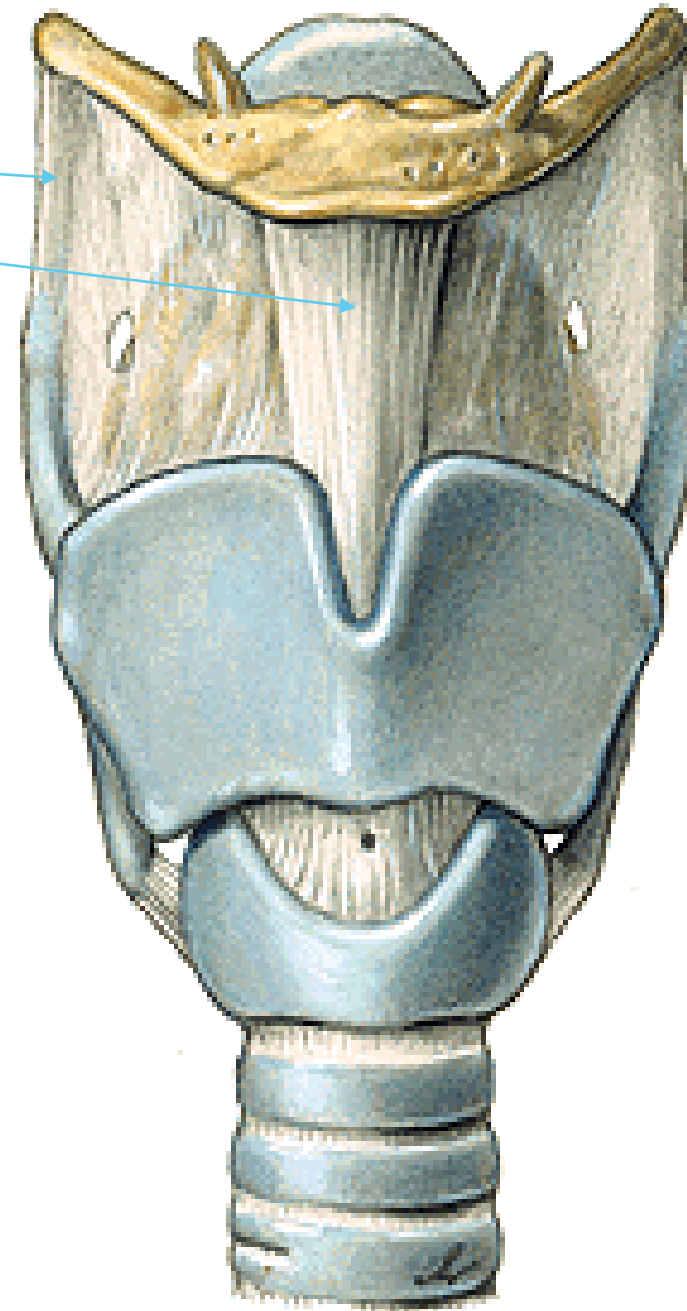
• stratified squamous epithelium - due to strain during phonation



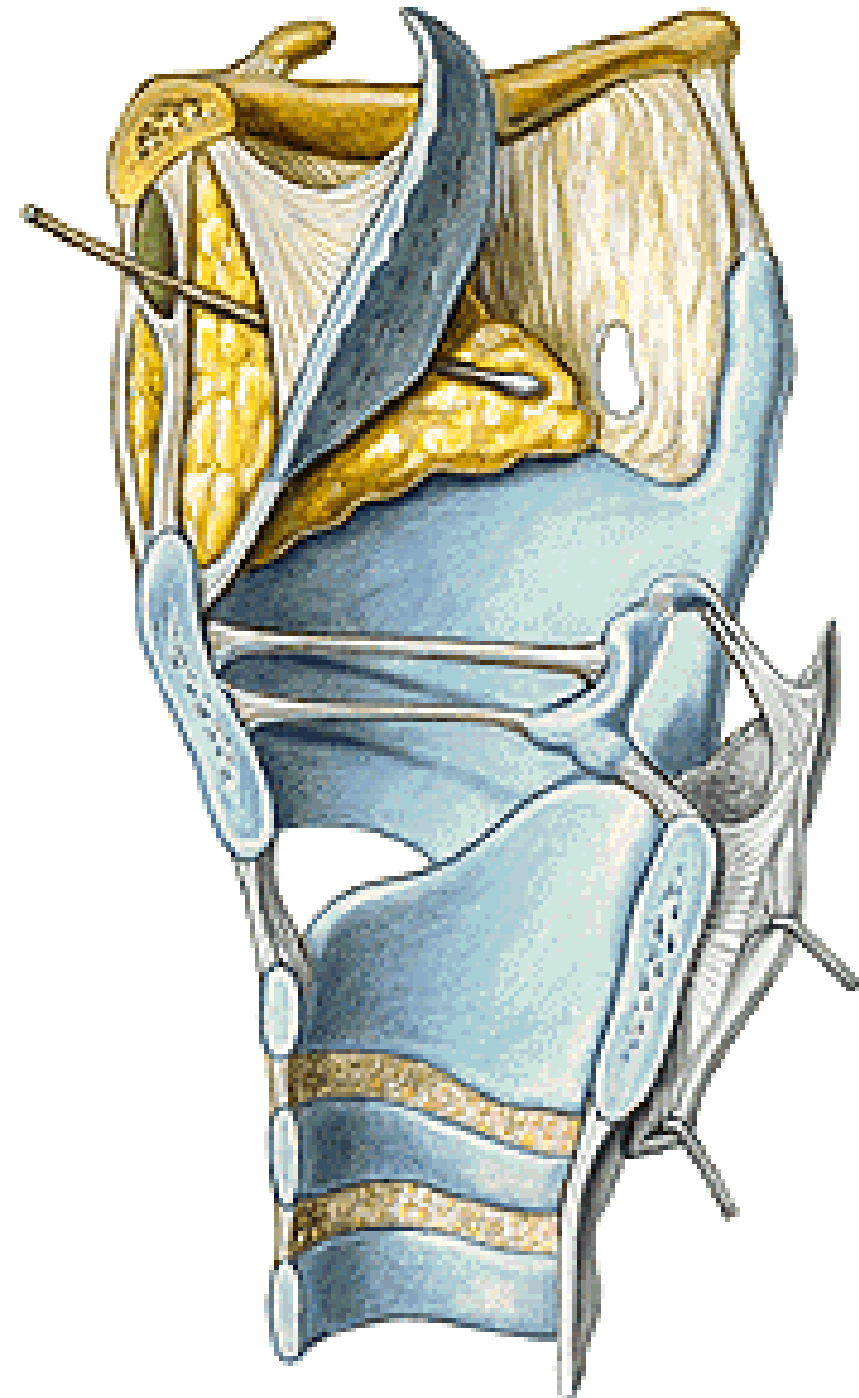
MEMBRANA THYROIDEA

lig. thyroideum laterale

lig. thyroideum medianum



Lig thyroepiglotticum
Lig. hyoepiglotticum
Spatium praepiglotticum

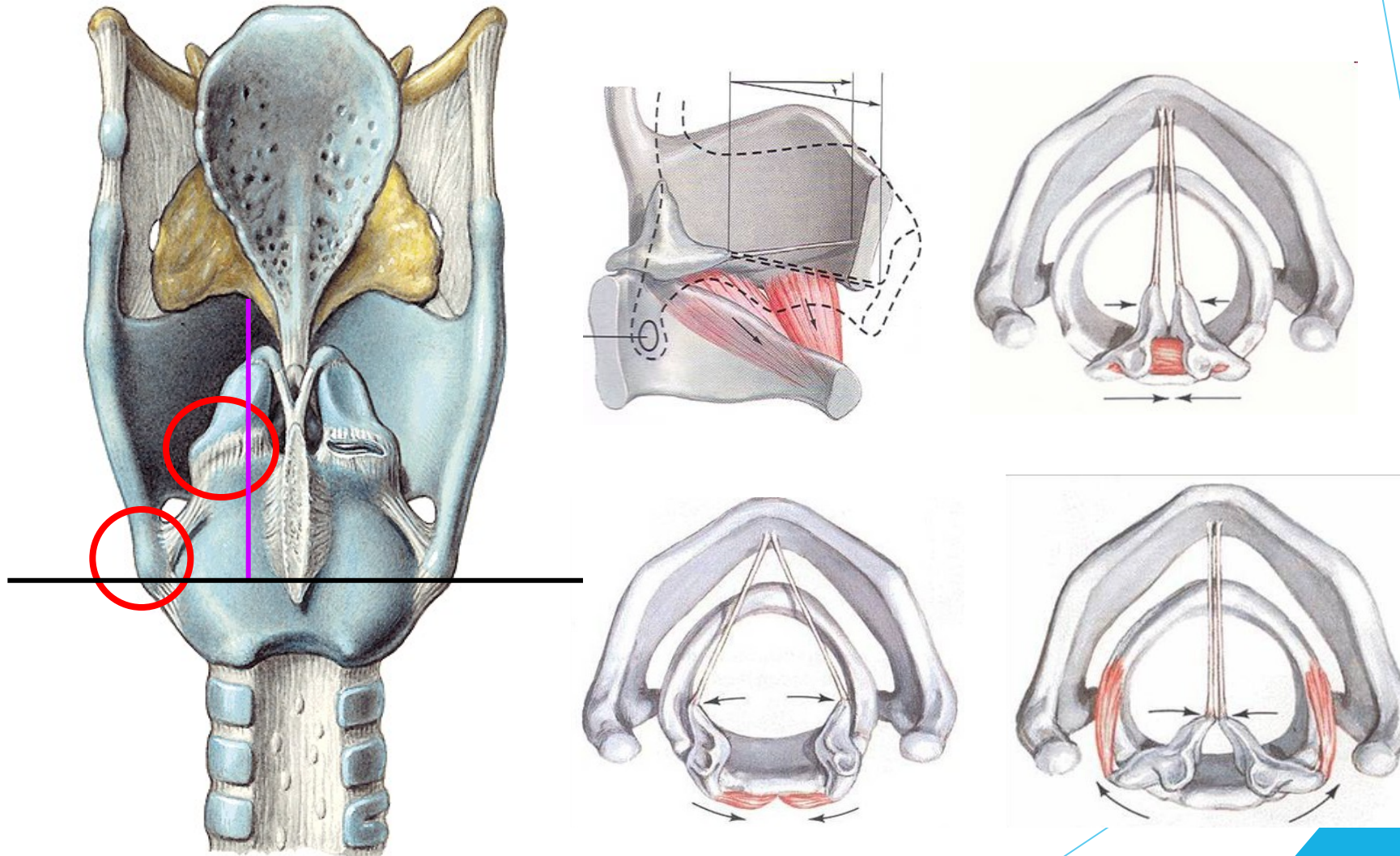


JOINTS

Art. cricothyroidea (oscilating movements)

Lig. cricoaerytaenoideumpost.

Art. cricoarytaenoidea (rotation and sliding movements - result in abduction and adduction of vocal cords)

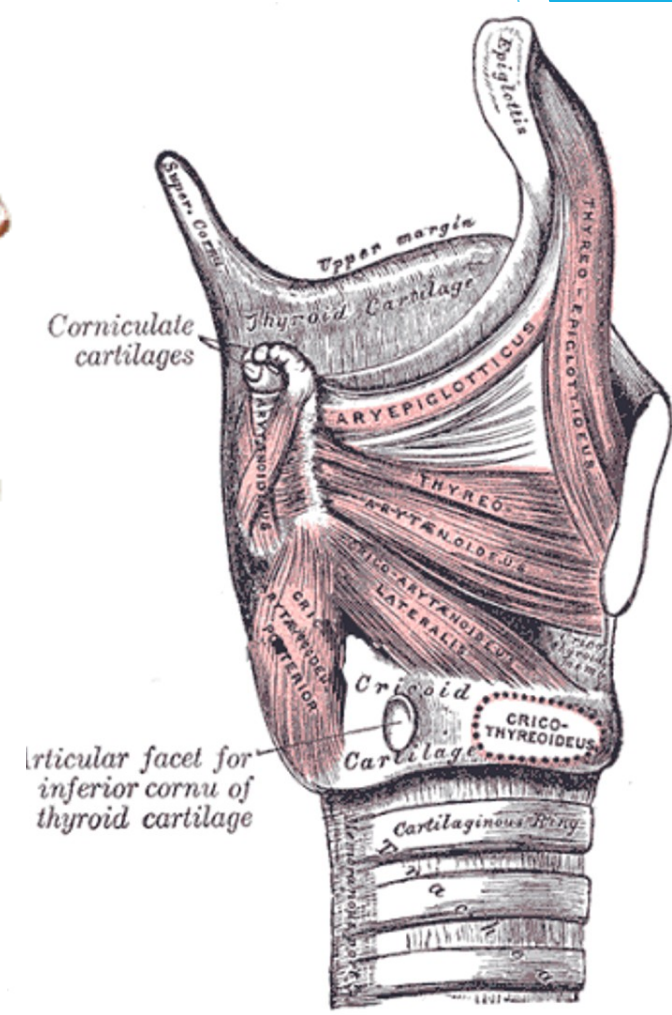
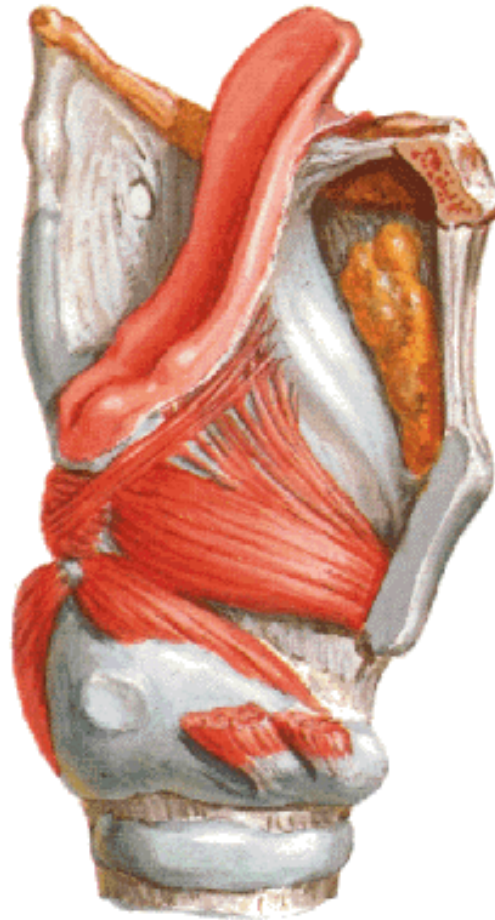


MUSCLES

- according to their function

1) Muscles moving with epiglottis:

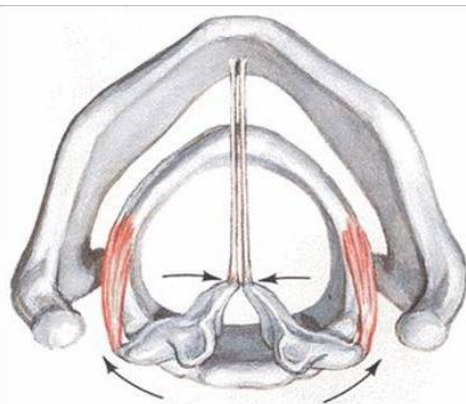
- Musculus thyroepiglotticus opens *aditus laryngis*
- Musculus aryepiglotticus closes *aditus laryngis*



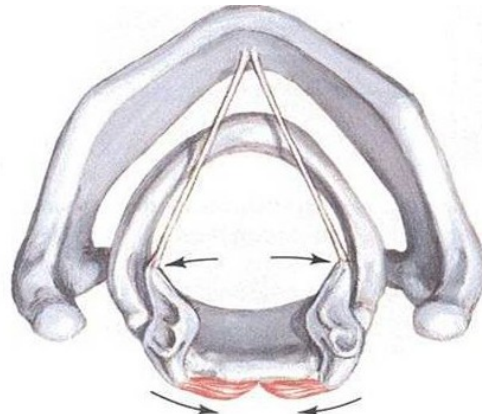
2) Muscles responsible for respiration and phonation position of vocal cords:

- a) Musculus cricoarytaenoideus lateralis
narrows the rima glottidis (**adduktion** of vocal cords) - phonation
- b) Musculus cricoarytaenoideus posterior
(musculus posticus) opens rima glottidis – **abduktion** of vocal cords (ligg. vocalia) – respiration position
- c) Musculus arytaenoideus
Strongest adduktor - phonation

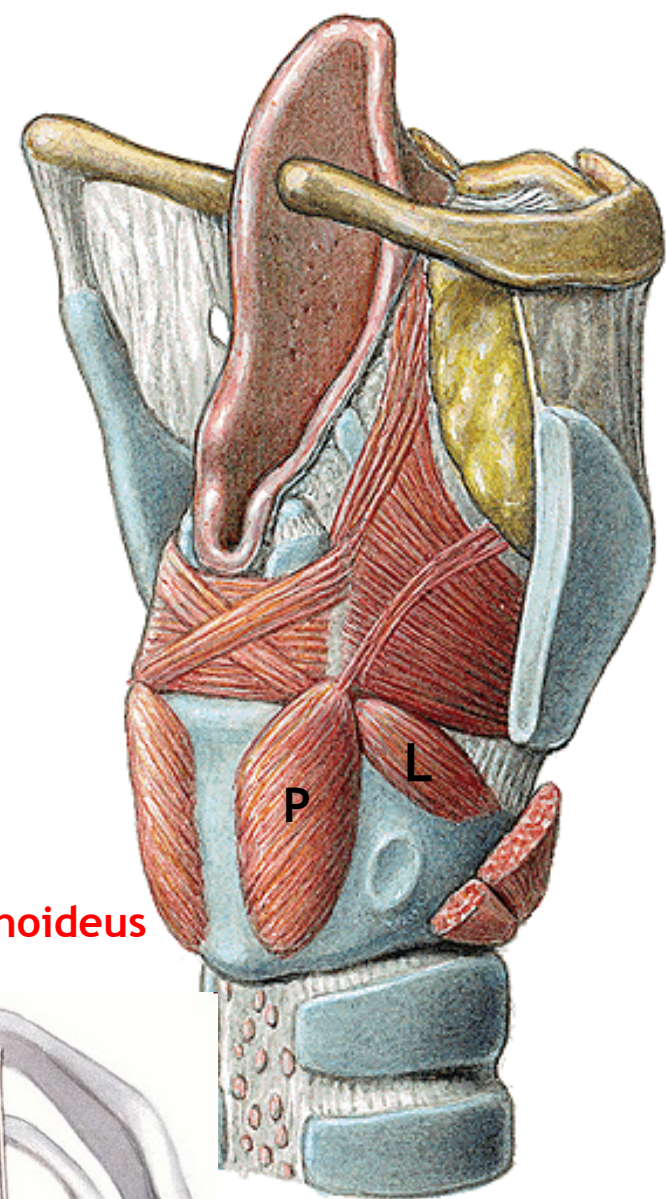
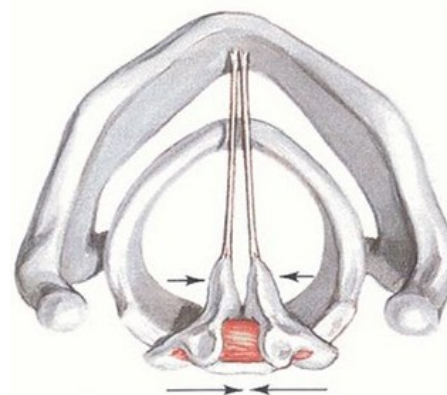
m. cricoarytaenoideus lateralis



m. cricoarytaenoideus posterior

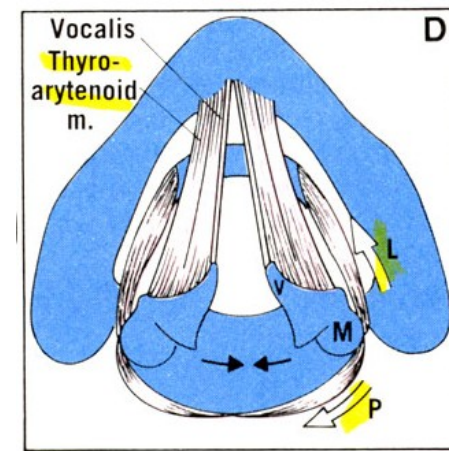
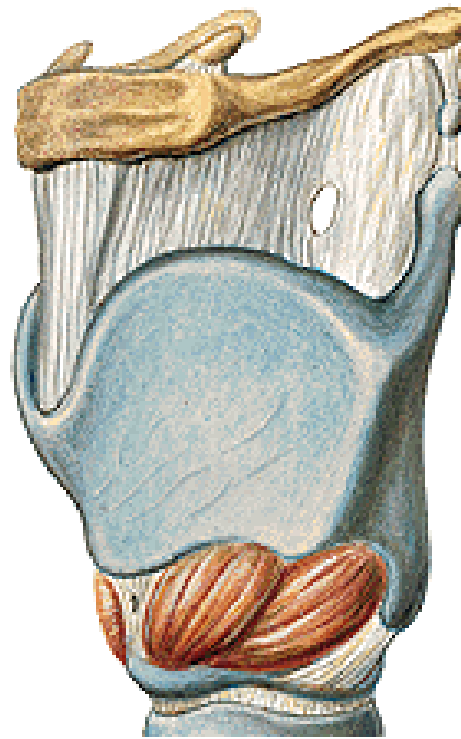
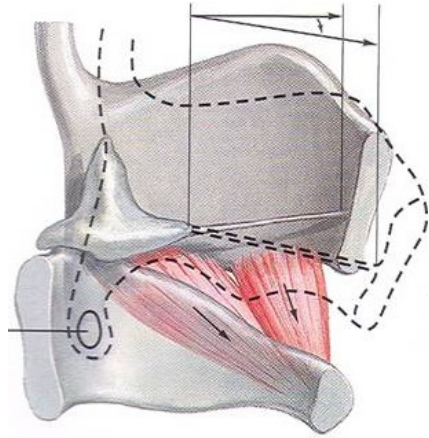


m. arytaenoideus

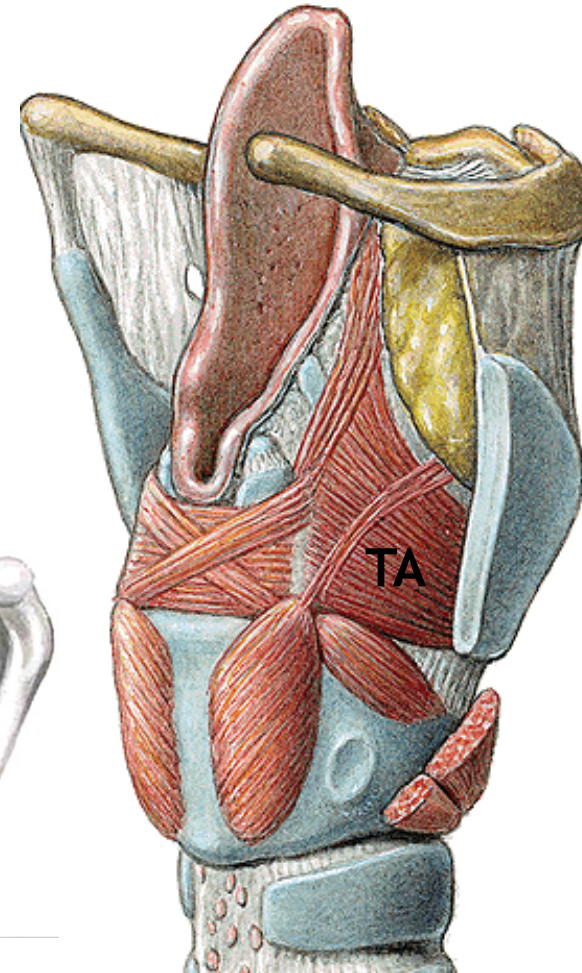
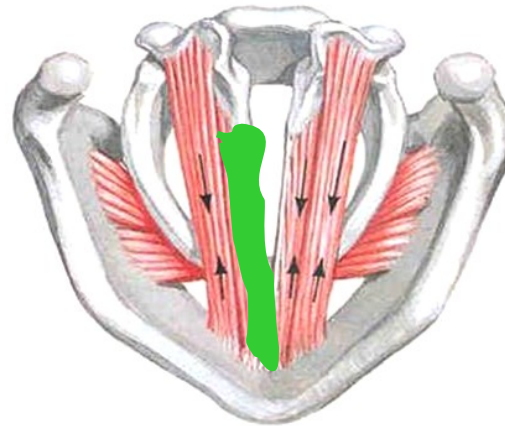


3) Muscles responsible for the tension of the vocal cords:

a) Musculus cricothyroideus tenses the vocal cords



b) Musculus thyroarytaenoideus relaxes the tension of vocal cords



c) Musculus vocalis fine regulation of the vocal cord tension

Respiration position

Vocal cords in **abduktion**

Phonation position

Vocal cords in **adduktion**

Relaxation of vocal cords m.
thyroarytenoideus and vocalis

Tension of v.c. m. cricothyroideus

m. cricoarytaenoideus
posterior

m. cricoarytaenoideus
lateralis

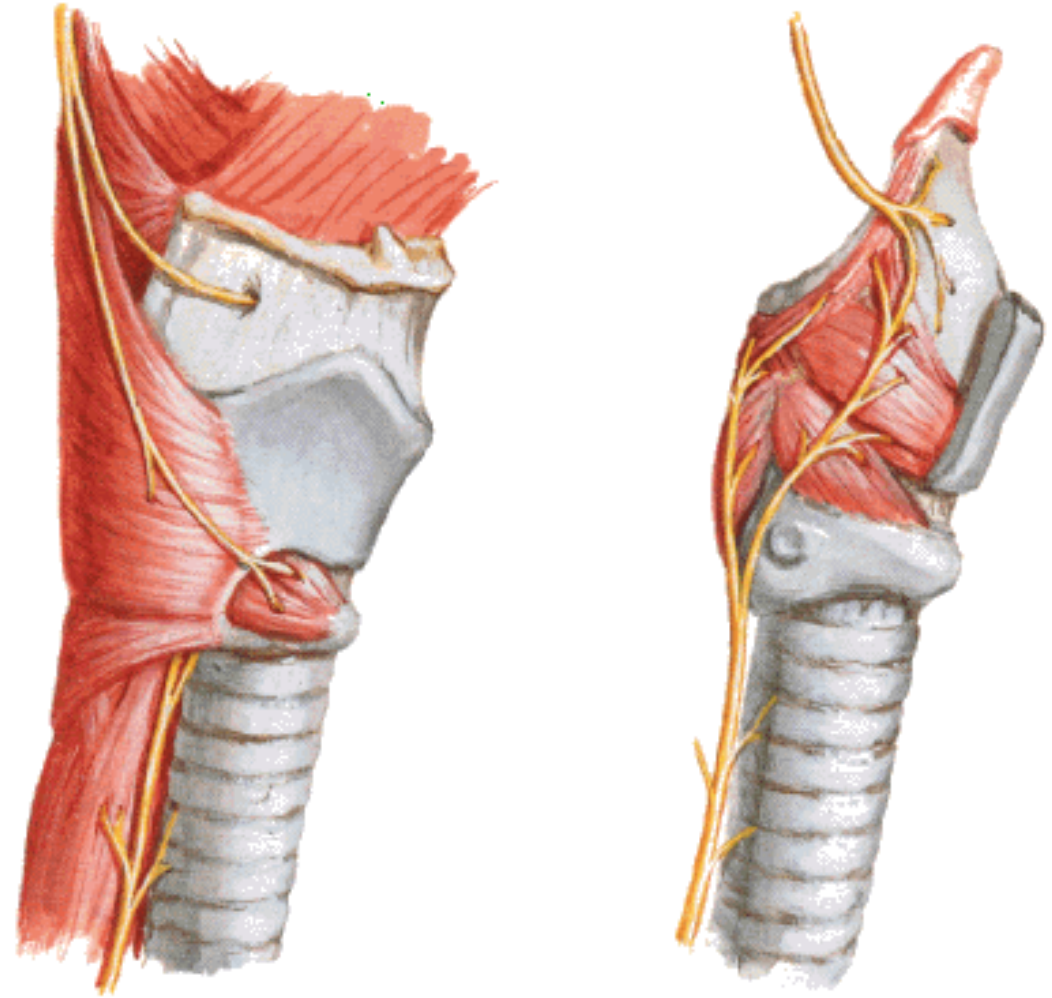
m. thyroarytaenoideus

m. cricothyroideus

Inervation of laryngeal muscles
nervus vagus via:

nervus laryngeus superior
(*musculus cricothyroideus*)

nervus laryngeus inferior
(*n. laryngeus recurrens*)
(all others)

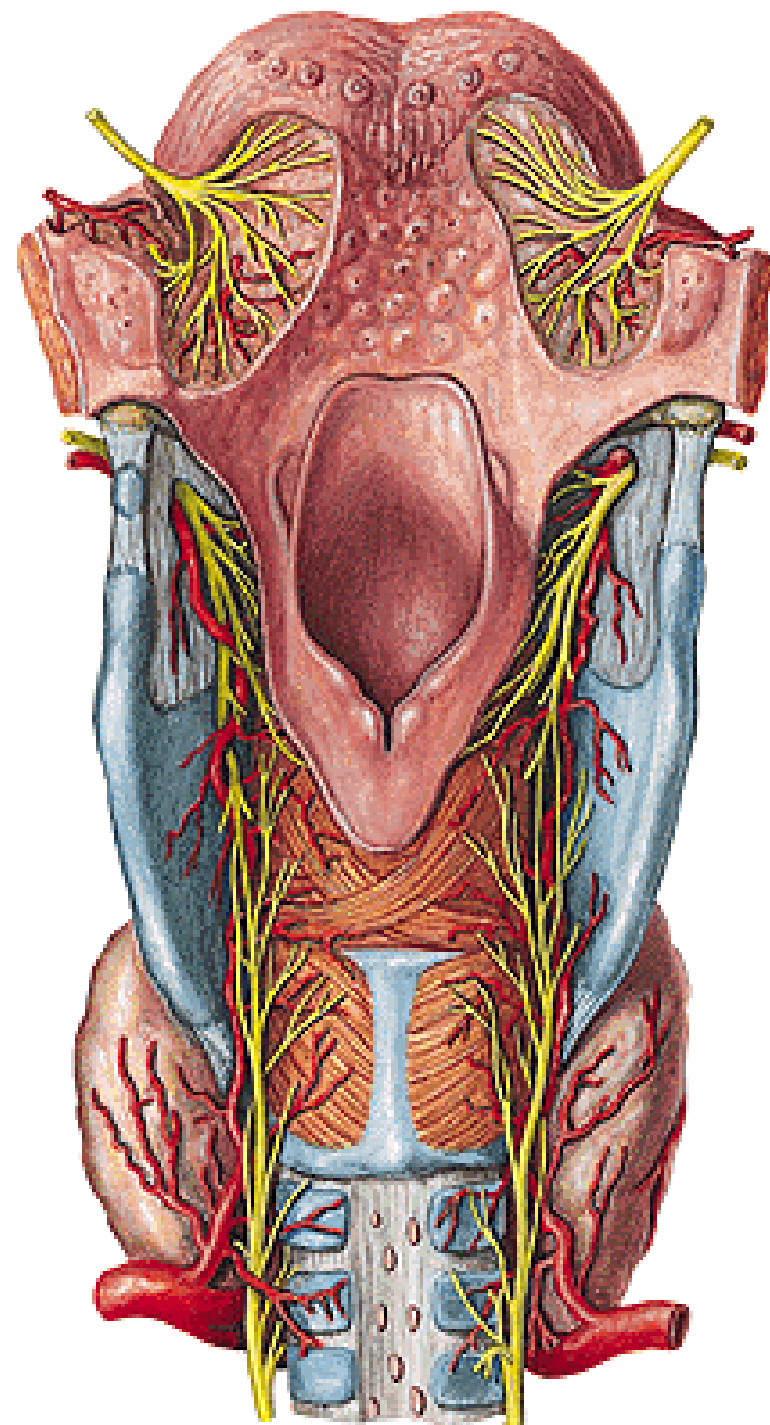


A. laryngea sup. - A. thyroidea sup.
A. laryngea inf. – A. thyroidea inf.

Subcutaneous tissue- oedema

Folliculi lymph. laryngei
Tonsilla laryngea

Posterior side of epiglottis-
taste buds



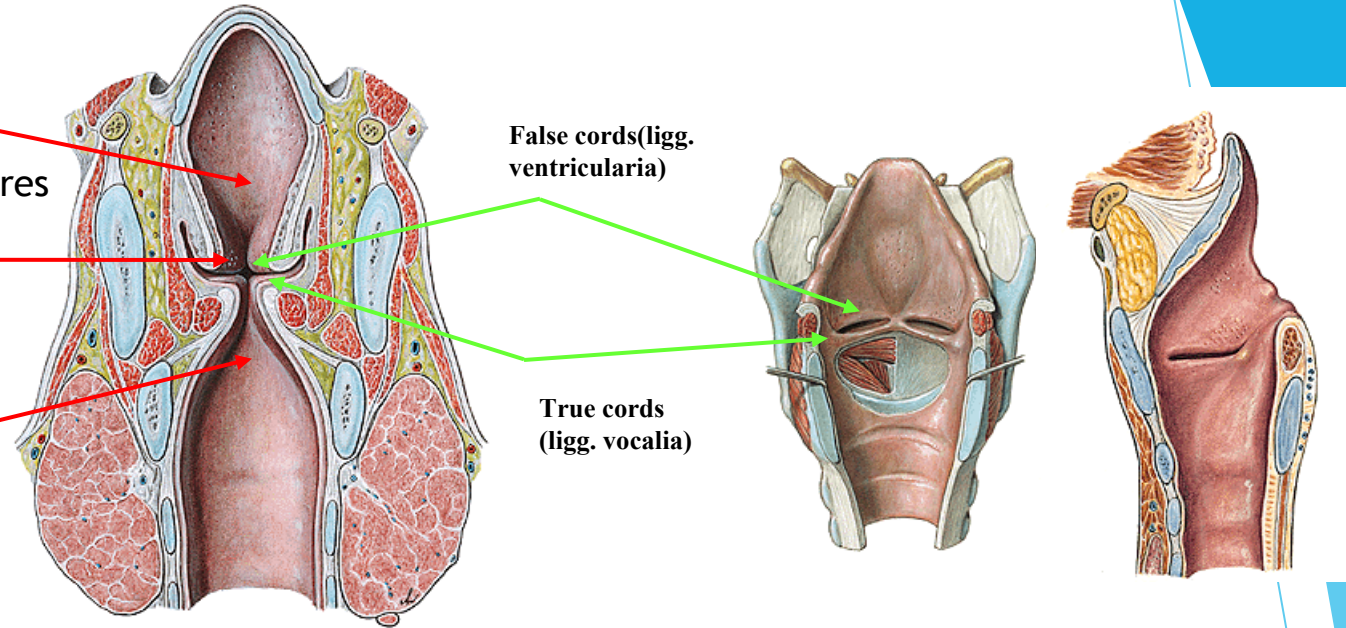
1) Vestibulum laryngis

epiglottis (aditus laryngis) - plicae vestibulares

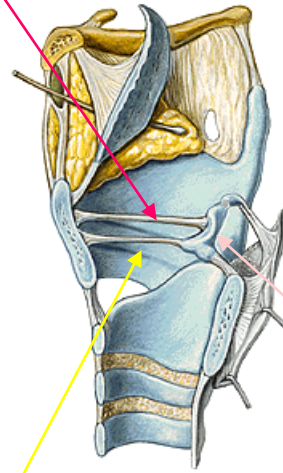
2) Glottis

plicae vestibulares - plicae vocales
rima glottidis - sagittal slit
between vocal cords

3) Cavitas infraglottica

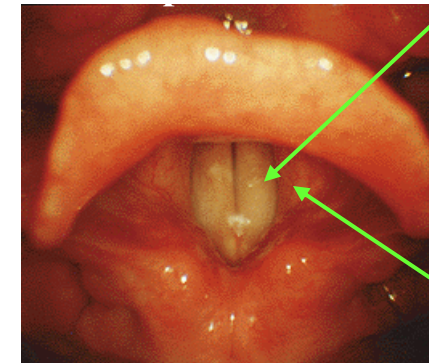
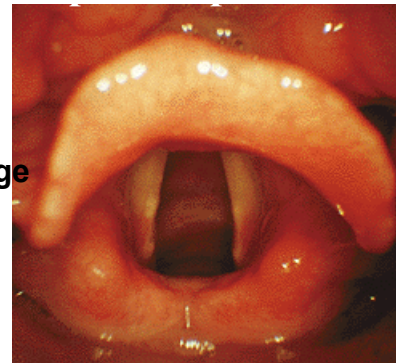


False vocal cords



Arytaenoid cartilage

True vocal cords



True vocal
cords

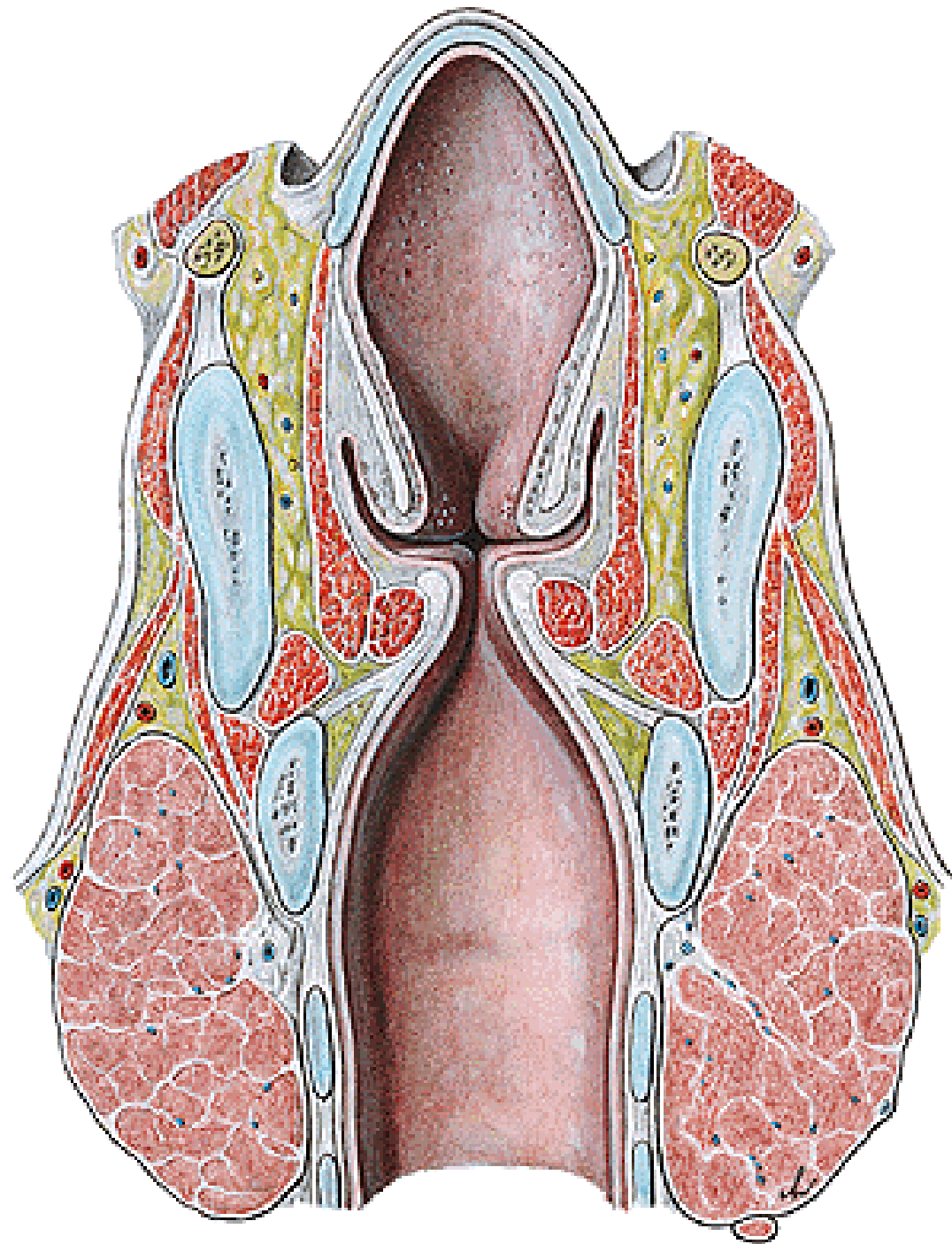
(ligg.
vocalia)

False vocal
cords

(ligg.
ventricularia)

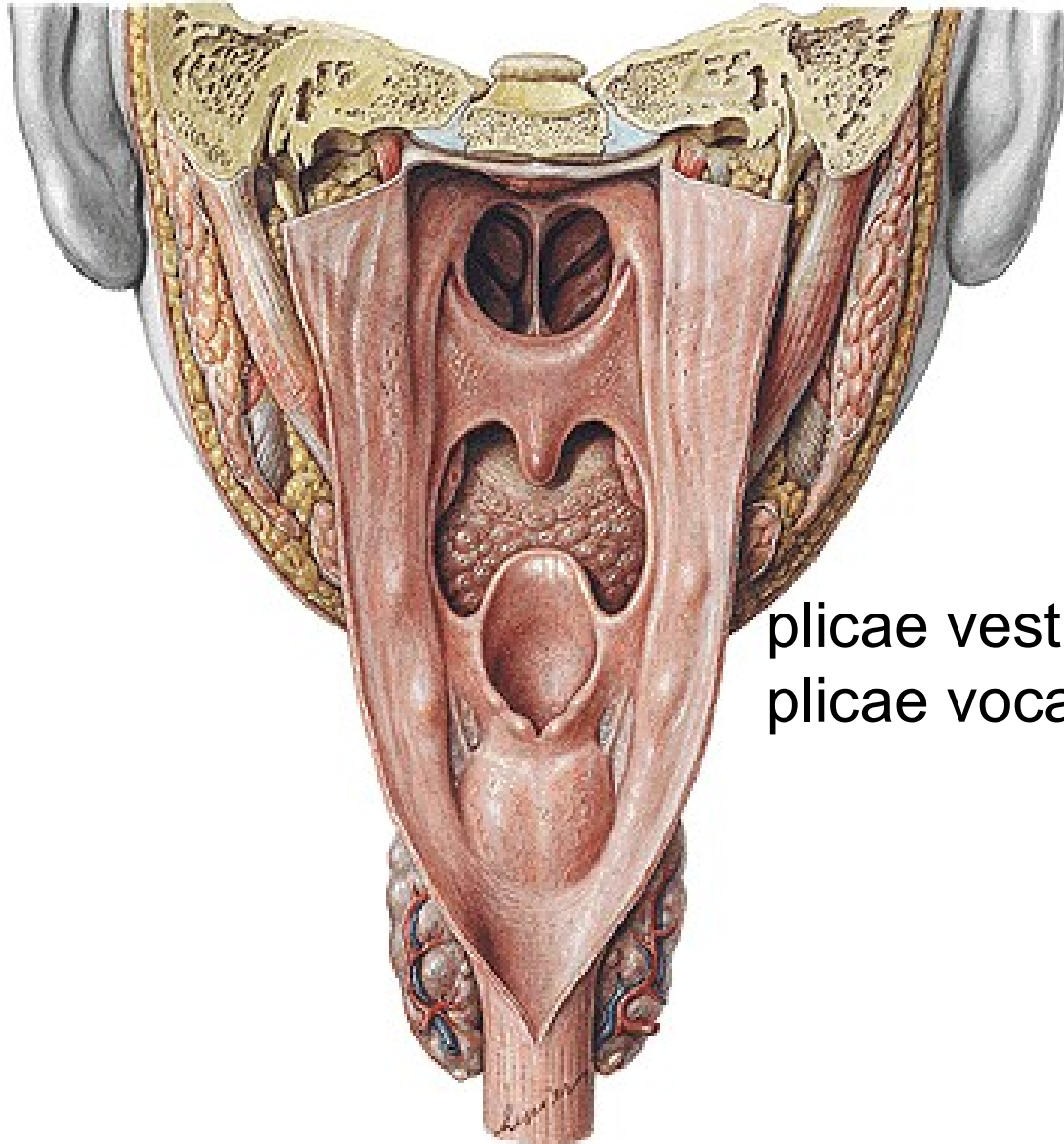
CAVITAS LARYNGIS

- vestibulum laryngis
- plicae vestibulares
- rima vestibuli
- plicae vocales
- rima glottidis
- glottis
- ventriculus laryngis
- sacculus laryngis
- cavum infraglotticum

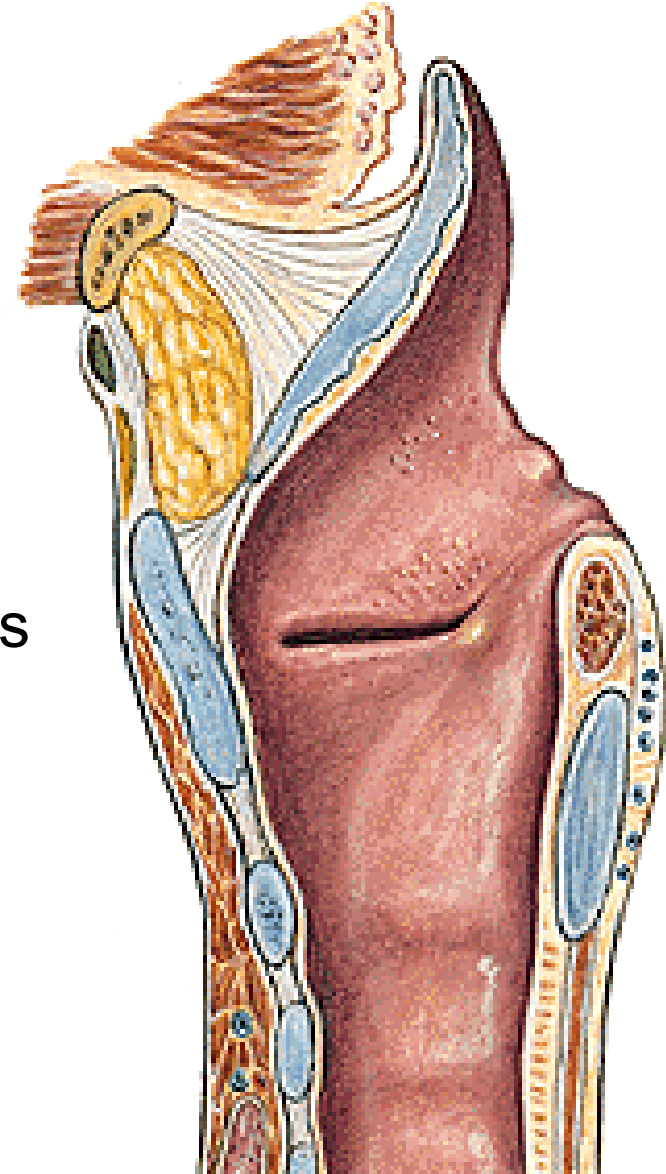


CAVITAS LARYNGIS

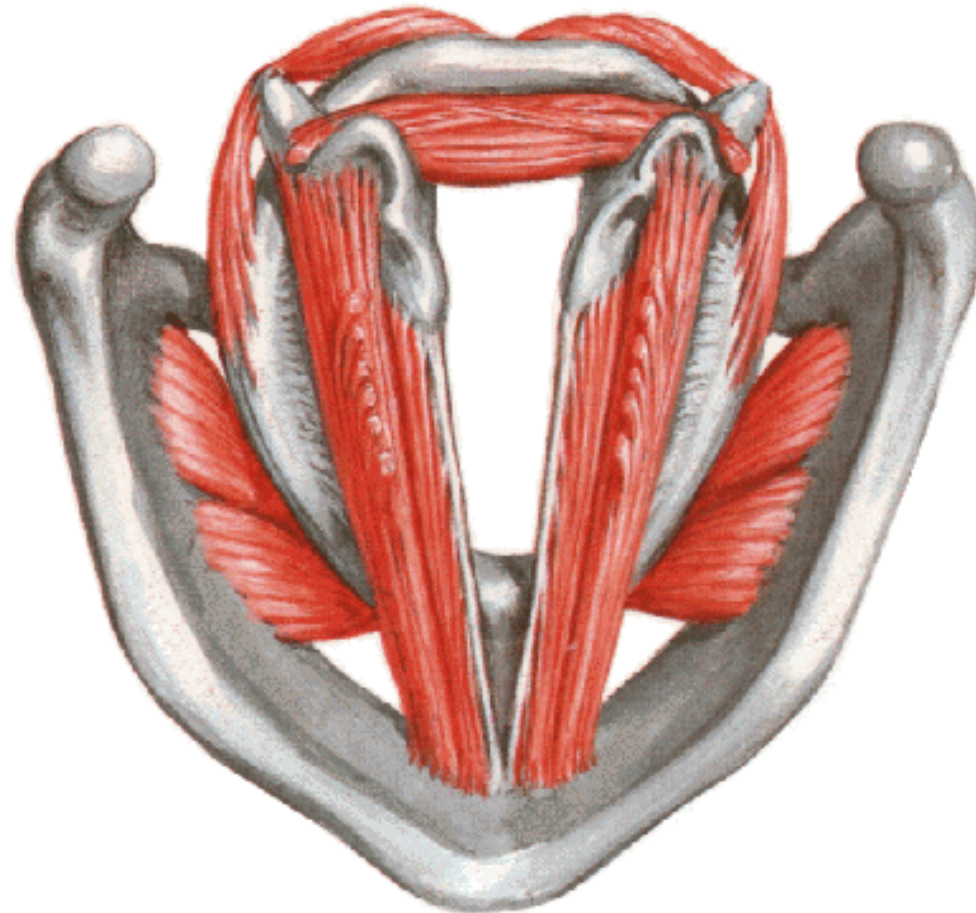
-aditus laryngis-plicae aryepiglotticae (tuberculum cuneiforme et corniculatum), plica interarytenoidea, incisura interarytenoidea

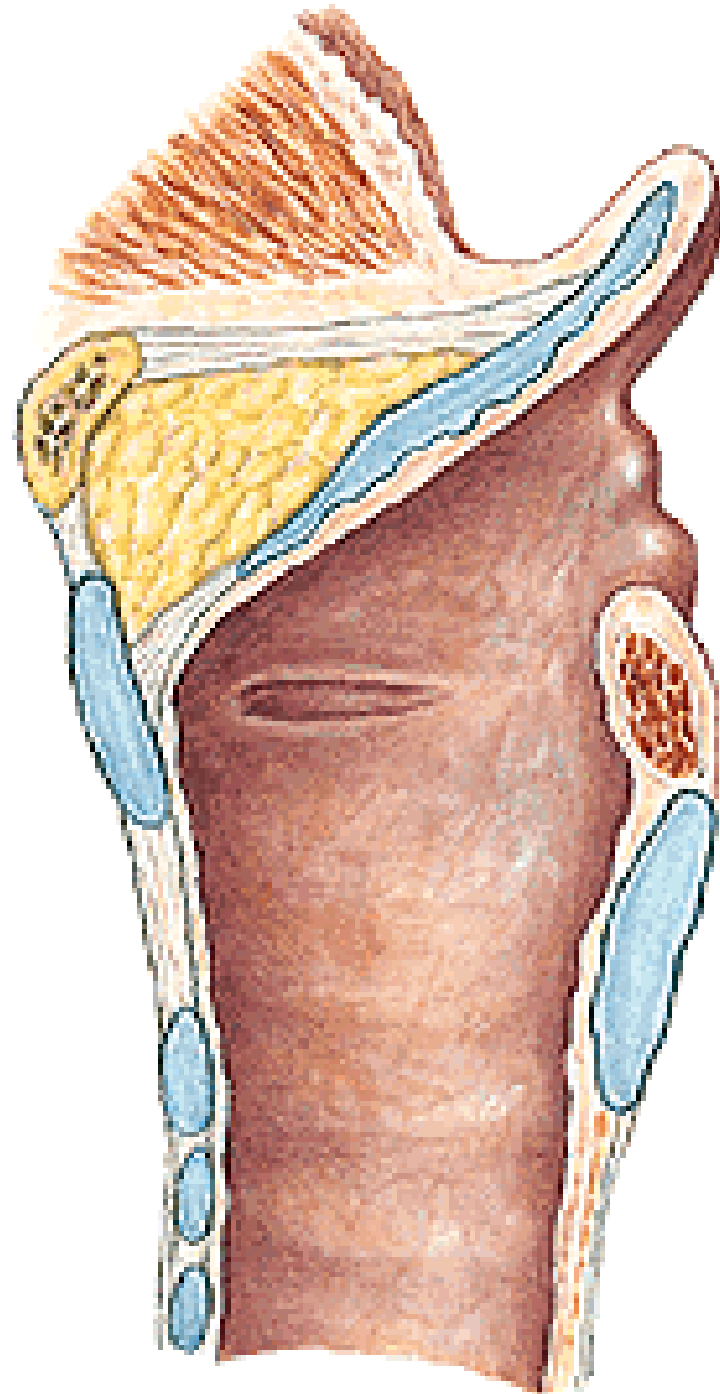
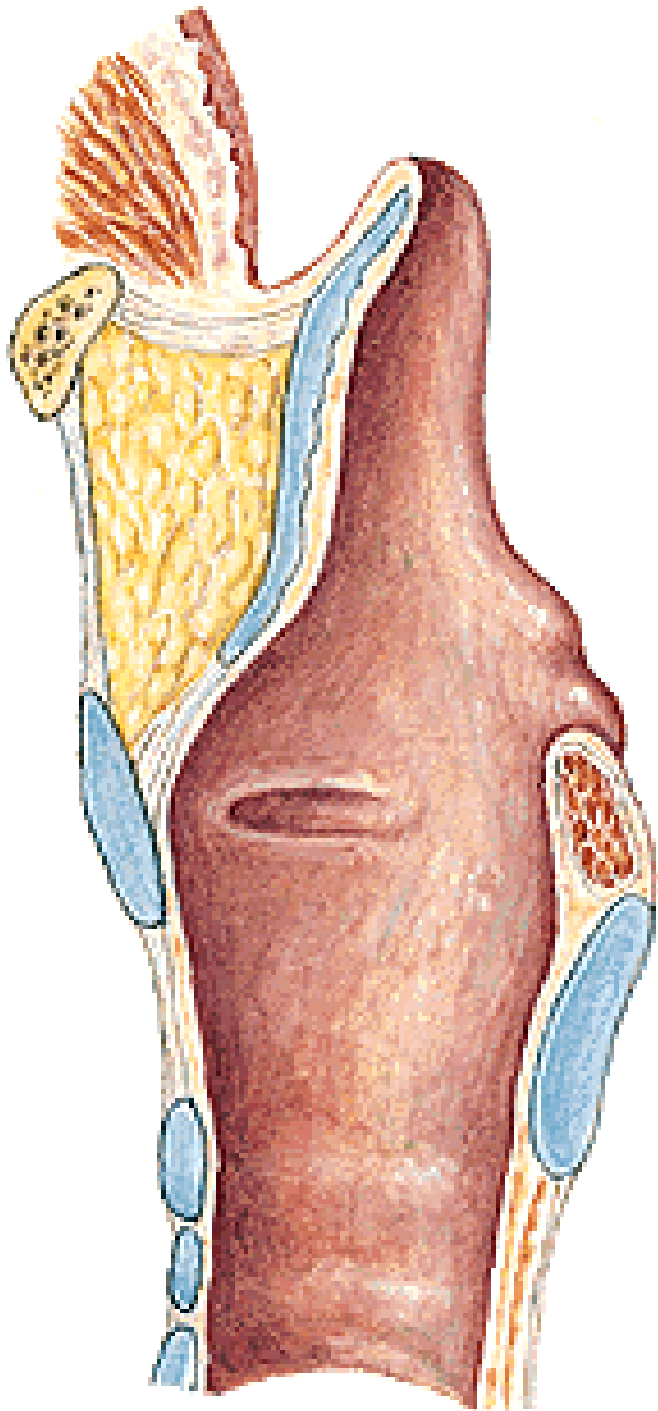


plicae vestibulares
plicae vocales



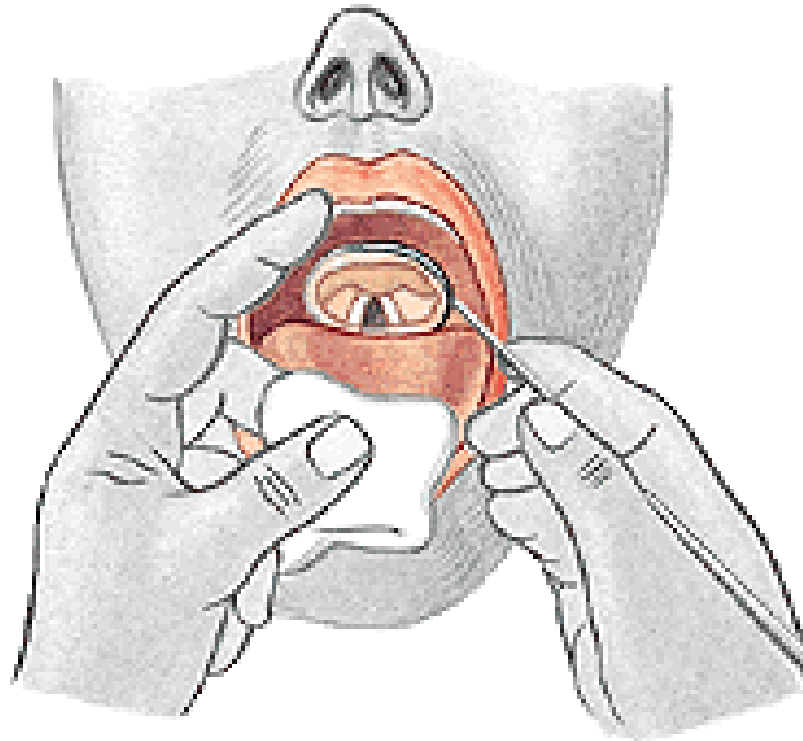
Rima glottidis
pars inter-
membranacea
pars inter-
cartilaginea



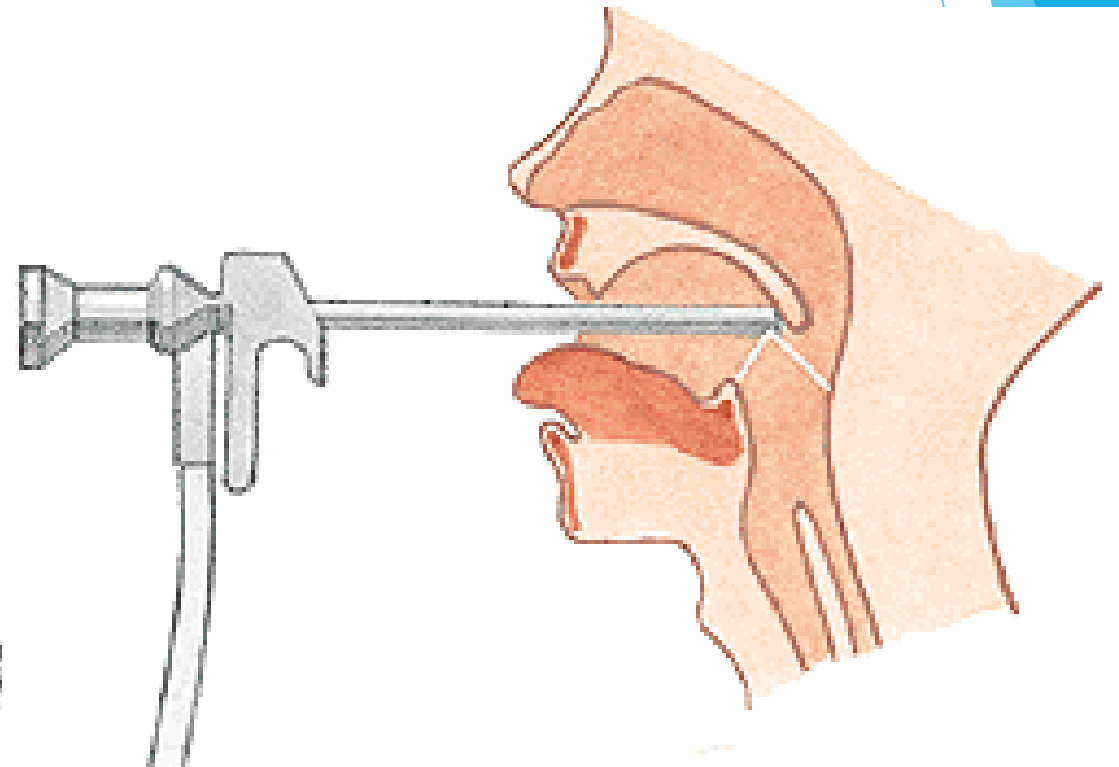


LARYNGOSCOPY

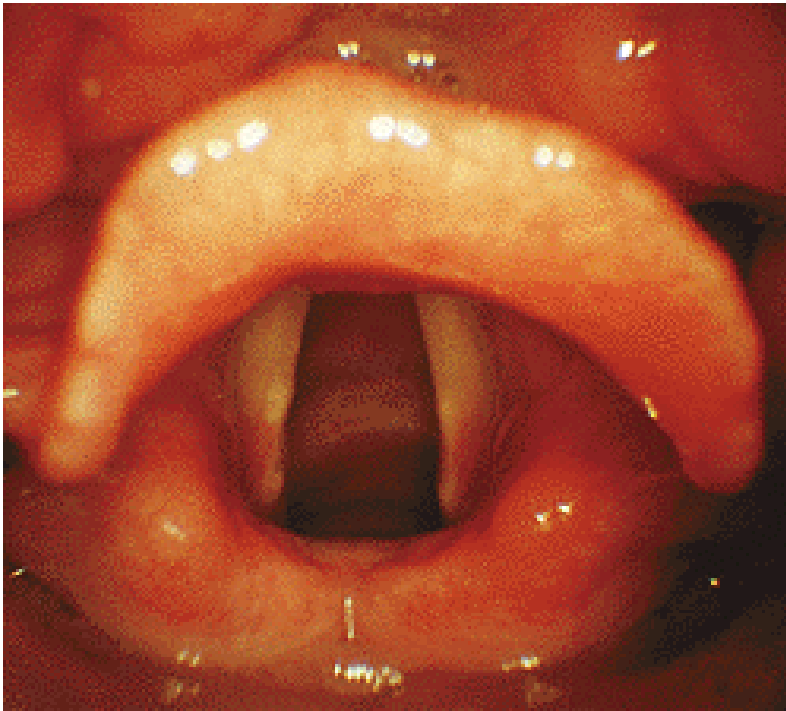
indirect



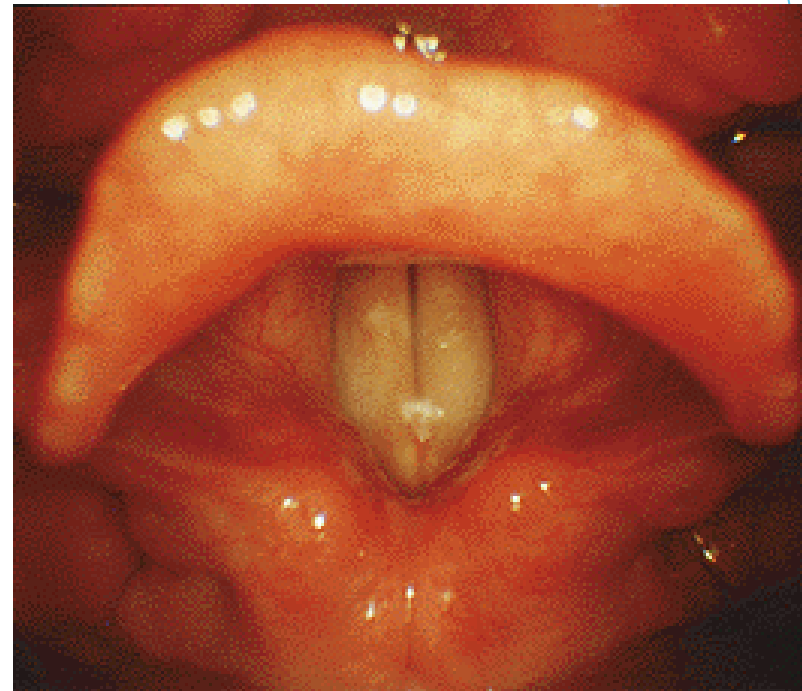
direct



RESPIRATION



PHONATION



Vocal Cords up close while singing

<http://www.youtube.com/watch?v=-XGds2GAvGQ>

Illustrations and photographs were copied from:
Atlas der Anatomie des Menschen/Sobotta.
Putz,R., und Pabst,R. 20. Auflage. München:
Urban & Schwarzenberg, 1993
Netter: Interactive Atlas of Human Anatomy.
Windows Version 2.0