

***Tikrit University***

***College of Nursing***

***Basic Nursing Sciences***



**First Year - 2023-2024**

**Anatomy**

**Respiratory system**

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## + respiratory system

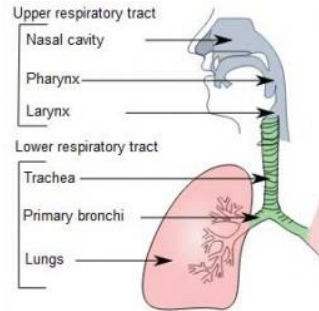
❖ The respiratory system includes

### A-Upper respiratory tracts

1. Nose
2. pharynx
3. larynx

### B- Lower respiratory tracts

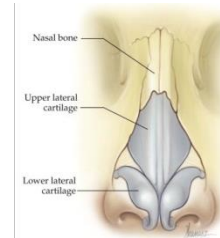
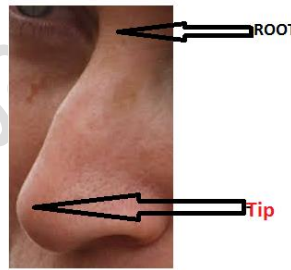
4. trachea
5. bronchi
6. bronchioles
7. alveolar duct
8. Alveoli



❖ Nose

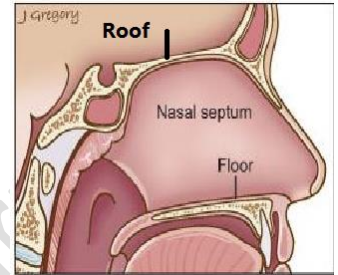
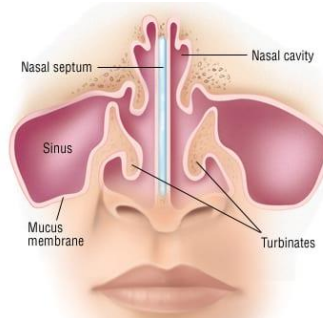
### a-External nasal

- It is pyramidal in shape
- nasal **root** is located superiorly
- The apex of the nose ends inferiorly in a rounded '**tip**'
- The external nose consists of
  - **bony part (fixed)**
  - **cartilaginous part(mobile)**



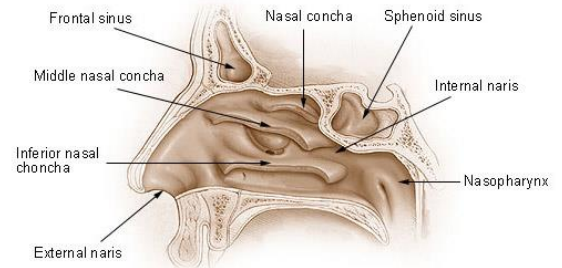
**b-Nasal cavity:**

- Internal nose is divided into right and left nasal cavities by a nasal septum



- Each nasal cavity communicates with external through **external nares**
- Each nasal cavity communicates with the nasopharynx through the **internal nares (choana)**

**Nose and Nasal Cavities**



❖ Parts of Nasal Cavity: **two parts**

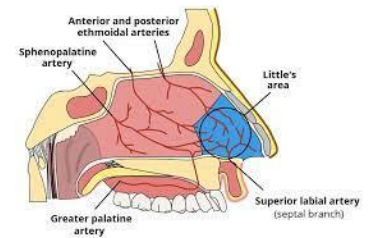
- 1) Vestibule: A small anteroinferior part. Lined by skin.
- 2) Nasal cavity proper

☒ **Boundaries**

- a) **Roof.**
- b) **Floor.**
- c) **Medial wall (Nasal Septum).**

☒ An area in anteroinferior part of nasal septum just above the vestibule called

**Little's Area**, is common site of nose bleeds (**Epistaxis**)

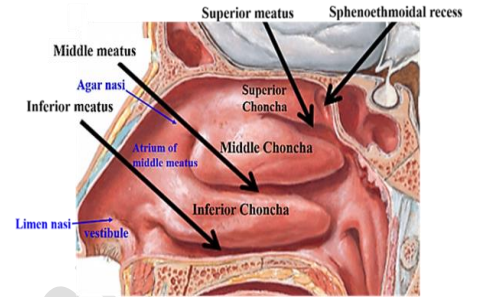


**d-Lateral wall: We can find 3 nasal conchae**

- 1) Superior nasal concha
- 2) Middle nasal concha
- 3) Inferior nasal concha

- Beneath each concha present **3 meatus** receiving the openings of Para nasal sinuses

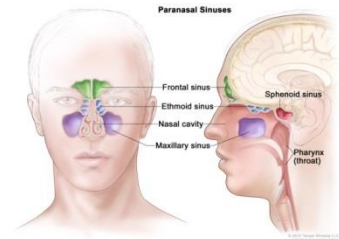
- 1) Superior meatus
- 2) Middle meatus
- 3) Inferior meatus



❖ Para nasal sinuses

- **four paired** air-filled spaces that surround the nasal cavity.

- 1) The maxillary sinuses are located under the eyes
- 2) The frontal sinuses are above the eyes
- 3) The ethmoidal sinuses are between the eyes
- 4) The sphenoidal sinuses are behind the eyes.



❖ Larynx

- Organ of phonation
- Lies in anterior of mid line of neck

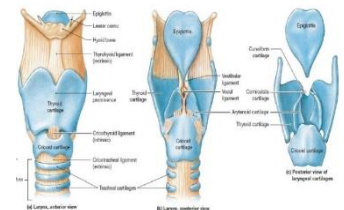


- The components of larynx are

- 1) **Cartilages:** There are **nine cartilages**, form its skeleton.

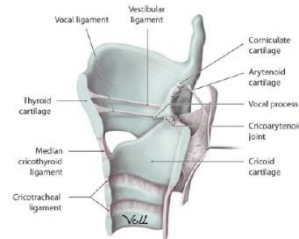
- **three unpaired:**

1. (thyroid (Adam's apple))
2. epiglottis,
3. cricoid

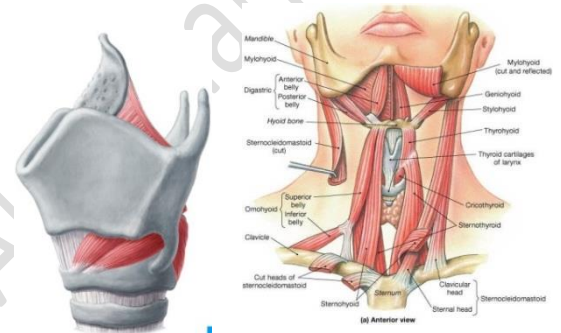


- **three Paired :**
  1. (Arytenoid ,
  2. corniculate ,
  3. cuneiform )

## 2) vocal cords

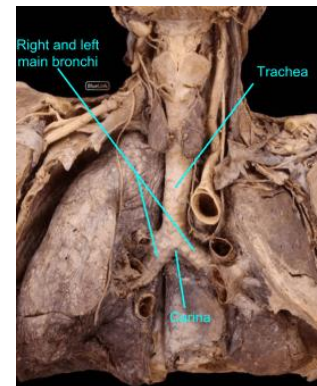


## 3) muscles (intrinsic and extrinsic)



### ❖ Trachea

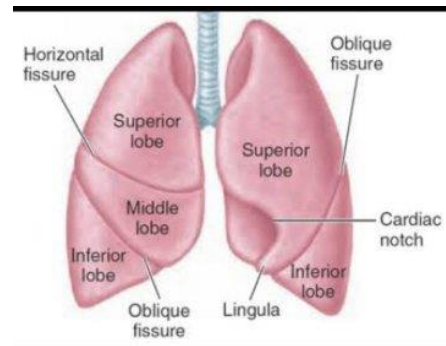
- **length** : 10 cm long
- The trachea has two parts
  1. **Cervical trachea** (in neck).
  2. **Thoracic trachea** (in chest)
- trachea is made up of incomplete rings of cartilage
- It extends from the level of the 6th cervical vertebrae to the 4th thoracic vertebrae. it divides into left and right main bronchi
  - ⊗ **right main bronchus**: shorter and wider and more vertical
  - ⊗ **Left main bronchus**: longer and narrower and more horizontal



❖ **Lungs**

Difference between right and left lungs

Right Lung	Left Lung
- Larger and heavier.	- Smaller and lighter.
- Shorter and wider.	- Longer and narrower.
- Two fissures. - Three lobes.	- One fissure. - Two lobes.
- No cardiac notch.	- Cardiac notch & lingula.



❖ **pleura**

- Double-layered serous membrane enclosing the lung
- Has two layers:
  - Parietal layer, which lines the thoracic walls.
  - Visceral layer, which covers the surfaces of the lung
- The space between the two layers, the pleural cavity, contains a thin film of pleural serous fluid ( 5-10 ml).