

ANATOMY OF THE RESPIRATORY SYSTEM

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Major Functions of the Respiratory System

- To supply the body with oxygen and dispose of carbon dioxide
- Respiratory system and circulatory system

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- Respiration – four distinct processes must happen

Respiratory System

- Consists of the respiratory and conducting zones
- Respiratory zone

Respiratory System

- Conducting zone
- Respiratory muscles – diaphragm and other muscles that promote ventilation

CONDUCTING ZONE

- UPPER RESPIRATORY TRACT

- Nose
- Pharynx
- Larynx

- LOWER RESPIRATORY TRACT

- Trachea
- Bronchi
- Intrapulmonary air conducting zone

NOSE (nagus – rhinos)

- Respiration and olfaction.
- The nose is divided into two regions
- The external nares (nostrils) are bounded laterally by the alae

Nasal Cavity

- Vestibule – nasal cavity superior to the nares
 - Vibrissae – hairs that filter coarse particles from inspired air
- Olfactory mucosa
 - Lines the superior nasal cavity
 - Contains smell receptors

Nasal Cavity

- Respiratory mucosa
- Inspired air is:
- Ciliated mucosal cells remove contaminated mucus

Nasal Cavity

- Roof:
 - Septal cartilage
 - Nasal
 - Ethmoidal
 - Sphenoidal
- Floor:
 - Maxilla
 - Palatine

Functions of the Nasal Mucosa and Conchae

- Filter, heat, and moisten air
- Reclaim heat and moisture
- Minimize heat and moisture loss

Paranasal Sinuses

- Sinuses in bones that surround the nasal cavity
- Sinuses lighten the skull and help to warm and moisten the air

Nasal Cavity

- Respiratory Region
- Olfactory Region

PHARYNX

- Nasopharynx
- Oropharynx
- Laryngopharynx

TRACHEA

- 11-12 cm
- Diameter: 2.5 cm
- C6-T4

TRACHEA

- Cervical part
- Thoracal part

- Tracheal cartilage (16-20)
- Annular ligament
- Tracheal muscle
- Membranous wall
- Otonomous nervous system

LUNGS

- Left lung
- Right lung
- There are 10 bronchopulmonary segments in each lung