

Respiratory System

Respiratory System

1. Introduction

- The respiratory system is responsible for the exchange of oxygen and carbon dioxide in the body.
- Consists of the nose, pharynx, larynx, trachea, bronchi, and lungs.

2. Major Organs and Functions

- *Nose*: Warms, moistens, and filters air entering the respiratory system.
- *Pharynx*: Common passageway for air and food.
- *Larynx*: Contains vocal cords for sound production.
- *Trachea*: Windpipe that carries air to the bronchi.
- *Bronchi*: Branches of the trachea leading into the lungs.
- *Lungs*: Main organs of respiration where gas exchange occurs.

3. Gas Exchange

- Oxygen from inhaled air diffuses into the bloodstream in the lungs.
- Carbon dioxide, a waste product, is removed from the bloodstream and exhaled.

4. Breathing Process

- *Inspiration*: Diaphragm contracts, chest cavity expands, air is drawn into the lungs.
- *Expiration*: Diaphragm relaxes, chest cavity decreases in size, air is pushed out of the lungs.

5. Respiratory Disorders

- *Asthma*: Chronic inflammation of the airways.
- *Pneumonia*: Infection that causes inflammation in the air sacs in the lungs.
- *Chronic Obstructive Pulmonary Disease (COPD)*: Progressive lung disease causing breathing difficulties.

6. Importance of Respiratory System

- Essential for survival as it provides oxygen for cellular functions and removes carbon dioxide.
- Supports speech and vocalization through the larynx.

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7. Healthy Habits for Respiratory Health

- Avoid smoking and exposure to pollutants.
- Regular exercise to maintain lung function.
- Practice good hygiene to prevent respiratory infections.

8. Conclusion The respiratory system plays a vital role in maintaining the body's overall health and functioning. Understanding its structure and functions can help in adopting healthy habits to support optimal respiratory function.