

**What is the first organ to develop during embryonic respiratory development**

- A. heart
- B. brain
- C. liver
- D. lungs

**Answer: D. lungs**

**At what stage of embryonic development does the respiratory diverticulum form**

- A. During the first week
- B. During the second week
- C. During the third week
- D. During the fourth week

**Answer: D. During the fourth week**

**What is the primary function of the pharyngeal arches during respiratory development**

- A. To form the structures of the respiratory system
- B. To produce hormones
- C. To aid in digestion
- D. To regulate body temperature

**Answer: A. To form the structures of the respiratory system**

**What is the role of the mesoderm in respiratory development**

- A. Mesoderm plays no role in respiratory development

- B. Mesoderm produces hormones for the respiratory system
- C. Mesoderm gives rise to muscle and connective tissue in the respiratory system
- D. Mesoderm forms the airways in the respiratory system

**Answer: C. Mesoderm gives rise to muscle and connective tissue in the respiratory system**

**What signaling pathway is essential for the branching morphogenesis of the respiratory system?**

- A. TGF-beta signaling pathway
- B. Notch signaling pathway
- C. FGF signaling pathway
- D. Wnt signaling pathway

**Answer: C. FGF signaling pathway**

**What is the function of surfactant in the lungs?**

- A. Reduce surface tension
- B. Regulate blood pressure
- C. Promote inflammation
- D. Increase oxygen levels

**Answer: A. Reduce surface tension**

**What is the name of the primitive lung bud that forms during embryonic development?**

- A. Tracheal diverticulum
- B. Bronchial bud
- C. Alveolar sac
- D. Pulmonary bud

**Answer: A. Tracheal diverticulum**

### **What is the role of the diaphragm in breathing**

- A. The diaphragm helps with digestion.
- B. The diaphragm releases carbon dioxide from the lungs.
- C. The diaphragm contracts to increase the volume of the chest cavity, allowing air to be drawn into the lungs.
- D. The diaphragm filters the air before entering the lungs.

**Answer: C. The diaphragm contracts to increase the volume of the chest cavity, allowing air to be d**

### **What is the function of the respiratory bronchioles in the lungs**

- A. Storing oxygen
- B. Gas exchange
- C. Producing mucus
- D. Regulating blood flow

**Answer: B. Gas exchange**

### **What is the name of the process by which oxygen is exchanged for carbon dioxide i**

- A. Circulation
- B. Photosynthesis
- C. Digestion
- D. Respiration

**Answer: D. Respiration**

## **What is the role of the pleura in the respiratory system**

- A. To regulate body temperature
- B. To protect and lubricate the lungs
- C. To help with digestion
- D. To produce mucus for breathing

**Answer: B. To protect and lubricate the lungs**

## **What is the function of the alveoli in the lungs**

- A. Gas exchange
- B. Regulating blood flow
- C. Filtering air
- D. Producing mucus

**Answer: A. Gas exchange**

## **What is the name of the protein that helps to transport oxygen in the blood**

- A. insulin
- B. hemoglobin
- C. collagen
- D. amylase

**Answer: B. hemoglobin**

## **What is the name of the process by which surfactant is produced in the lungs**

- A. Lung secretion

- B. Pulmonary surfactant synthesis
- C. Alveolar fluid secretion
- D. Surfactant production

**Answer: D. Surfactant production**

**What is the role of the epiglottis in the respiratory system**

- A. To produce mucus for lubrication
- B. To regulate breathing rate
- C. To filter air entering the lungs
- D. To prevent food from entering the trachea

**Answer: D. To prevent food from entering the trachea**

**What is the function of the ciliated epithelium in the respiratory tract**

- A. To absorb oxygen
- B. To produce mucus
- C. To help with digestion
- D. To sweep mucus and debris out of the airways

**Answer: D. To sweep mucus and debris out of the airways**

**What is the name of the condition in which the bronchial tubes become inflamed and**

- A. COPD
- B. Asthma
- C. Pneumonia
- D. Bronchitis

**Answer: B. Asthma**

**What is the role of the bronchial smooth muscle in the lungs**

- A. Aids in digestion
- B. Controls the diameter of the bronchial tubes
- C. Produces mucus in the lungs
- D. Regulates blood flow in the lungs

**Answer: B. Controls the diameter of the bronchial tubes**

**What is the function of the pulmonary arteries in the respiratory system**

- A. Regulate breathing rate.
- B. Exchange gases in the alveoli.
- C. Transport oxygenated blood from the lungs to the heart.
- D. Transport deoxygenated blood from the heart to the lungs.

**Answer: D. Transport deoxygenated blood from the heart to the lungs.**

**What is the name of the condition in which the alveoli become damaged and lose the**

- A. Bronchitis
- B. Pneumonia
- C. Asthma
- D. Emphysema

**Answer: D. Emphysema**

