What is the Pleura?

Worksheet

The pleura is a two-layered serous membrane - visceral (covering the lung) and parietal (lining the chest wall) - enclosing a thin fluid-filled pleural cavity that lets the lungs slide smoothly during breathing.

Questions

1. Which pleural layer directly covers the lung surface?

A) Parietal pleura
B) Visceral pleura
C) Mediastinal pleura
D) Cervical pleura

2. Which nerves supply pain sensation to the parietal pleura?

A) Vagus only
B) Phrenic and intercostal nerves
C) Recurrent laryngeal nerve
D) Glossopharyngeal nerve

3. What is the largest pleural recess, where fluid commonly collects?

A) Costomediastinal recess
B) Costodiaphragmatic recess
C) Cervical recess
D) Hilar recess

4. What causes lung collapse in a pneumothorax?

A) Excess pleural fluid
B) Loss of negative intrapleural pressure
C) Bronchial obstruction
D) Rib fracture

5. A patient develops sharp, localized chest pain worsened by breathing. Which pleural layer is likely irritated?

6. Why does air in the pleural cavity cause the lung to collapse (pneumothorax)?

7. Where would fluid most likely accumulate first in a patient with a pleural effusion sitting upright?

8. Define: What are the two layers of pleura?

9. Define: Which pleural layer is pain-sensitive?

10. Define: What is the costodiaphragmatic recess?

Answer Key

1. B) Visceral pleura - The visceral pleura directly covers the lung, including dipping into its fissures.

2. B) Phrenic and intercostal nerves - The parietal pleura is somatically innervated by phrenic and intercostal nerves.

3. B) Costodiaphragmatic recess - The costodiaphragmatic recess is the deepest and largest pleural recess.

4. B) Loss of negative intrapleural pressure - Air entering the pleural cavity abolishes negative pressure, letting the lung collapse.

5. The parietal pleura is innervated by somatic pain fibers (intercostal and phrenic nerves) The visceral pleura has no pain fibers Sharp, well-localized pain points to parietal pleural inflammation (pleurisy).

6. Normally, negative intrapleural pressure holds the visceral and parietal pleura together This keeps the lung expanded against the chest wall Air entering the cavity equalizes pressure with the atmosphere The lung's elastic recoil then causes it to collapse.

7. The costodiaphragmatic recess is the deepest, most dependent part of the pleural cavity In an upright patient, gravity pulls fluid to this lowest point It's the first and most common site of pleural effusion accumulation.

8. Visceral (covers the lung) and parietal (lines the thoracic wall).

9. The parietal pleura, via intercostal and phrenic nerves.

10. The deepest pleural recess between the costal and diaphragmatic parietal pleura; a common site of fluid accumulation.