

Pleural Membranes

The lungs are covered by 2 continuous membranes. Each lung's membranes are independent of each other, which is why one lung can be afflicted by a pleural problem and the other lung could be fine.

- **Visceral Pleura – Membrane covers the entire lung within the chest wall cavity. This membrane has no pain receptors.**
- **Parietal pleura – Membrane covers the entire chest wall cavity and is just outside of the visceral pleura. This membrane has pain receptors.**

The two membranes sit next to or on top of each other and between them is a very thin fluid that allows the membranes to easily slide along one another as the lungs enlarge for inspiration and relax on exhalation.

Disorders of the pleura are covered in year 2 of the program, but we must know the basics to understand parts of Pt assessment.

- **Pleural effusions – Fluid builds up within the pleural space and tends to gravitate towards the bases of the lung.**
- **Hemothorax – Blood builds up within the pleural space.**
- **Pneumothorax – Air is allowed to enter the pleural space, either by a tiny hole or “bleb” within the lung parenchyma or from the outside of the body, e.g. a stab wound.**
- **Empyema – Pus in the pleural space caused by an infection.**
- **Pleurisy – Inflammation of the pleural space.**

Pulmonary Embolism or PE

Emboli can be a blood clot, air, or fat. The key is that it somehow enters the pulmonary circulation.

The emboli lodges itself somewhere in or before the capillary system of the lung. As the capillaries get smaller in size, the emboli gets trapped.

Look back at your diagram of the heart and lungs to understand where the emboli get trapped; it's somewhere between the pulmonary arteries and the pulmonary capillaries.

The outcome of this is a lack of blood flow to some alveoli and a backup of pressure behind the emboli.

- If the emboli is large enough or in a precarious place, the buildup of pressure behind it may be enough to cause some leakage of plasma, fluid, and/or RBCs into the lung, causing the coughing up of bloody sputum.**
- Worse than the bloody sputum, the emboli interrupt the life-giving circulation to alveoli that allows oxygen into the blood and this causes a decrease in oxygenation. PE is a very good example of dead space.**