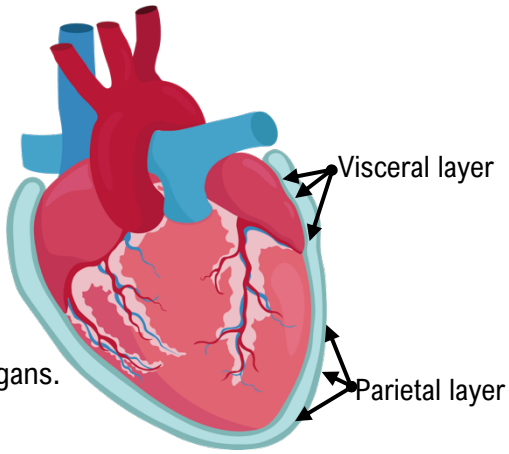
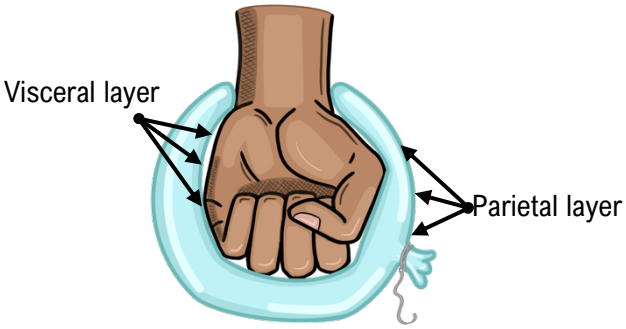
TOPIC: ORGANIZATION OF THE BODY: SEROUS MEMBRANES



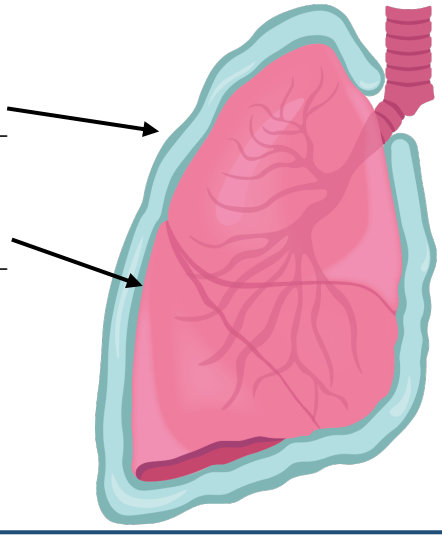
- Body cavities are further divided by serous membranes.
- **Serous Membranes (Serosa):**
  - Thin sheet of tissue that forms double layer membrane.
  - Wrap many _____ (viscera).
- Imagine serous membranes like pushing your hand into a soft balloon.
  - **Visceral layer**: "inside layer", attached to the _____ or organs.
  - **Parietal layer:** "outside layer", attached the body _____.



EXAMPLE: The lungs are surrounded by the serous membrane called the pleura. The image below shows the right lung and the pleural membrane that surrounds it. Label the visceral and parietal layers of the pleural membrane.

_____

_____



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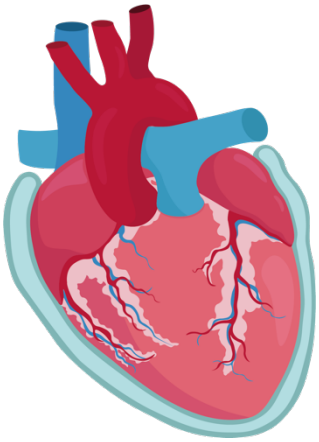
Serous Cavities and Fluid

- *Recall:* Serous membranes are a double layer membrane.
- **Serous Cavity:** _____ (or potential space) between the double layered serosa.
- **Serous Fluid:** fluid found in the _____ cavity.
  - Lubricates the membrane so organs can move easily.

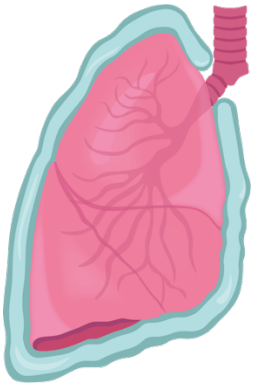


EXAMPLE: The disease pleurisy causes an increase in serous fluid in the serosa surrounding the lungs. How do you think this might affect breathing?

_____

_____

_____



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PRACTICE: During an organ transplant some serous membrane is transplanted along with the organ. Based on the anatomy of serous membranes, which part of the serous membrane would likely be transplanted along with the organ?

a) Both the parietal and visceral serosa.
b) The parietal serosa.
c) The visceral serosa.
d) Whether the visceral or parietal membrane is transferred would depend on the specific organ.

PRACTICE: The disease pericarditis refers to inflammation of the serous membrane around the heart and can cause intensely sharp chest pain. How does the function of the serous membranes relate to the symptoms of chest pain from pericarditis?

a) Serous membranes like the pericardium have many nerve endings to provide feedback relating to organ function.
b) Despite the lubricating properties of serous fluid, the constant movement of the heart may irritate the already inflamed tissue.
c) Pain from inflamed tissue indicates a likely viral or bacterial infection. A major function of the serous membranes is to prevent bacteria and viruses from reaching vital organs.
d) Inflammation of the visceral side of the serous membrane may reduce the rate of diffusion of vital nutrients and ions from the serous fluid into the cardiac muscle.