

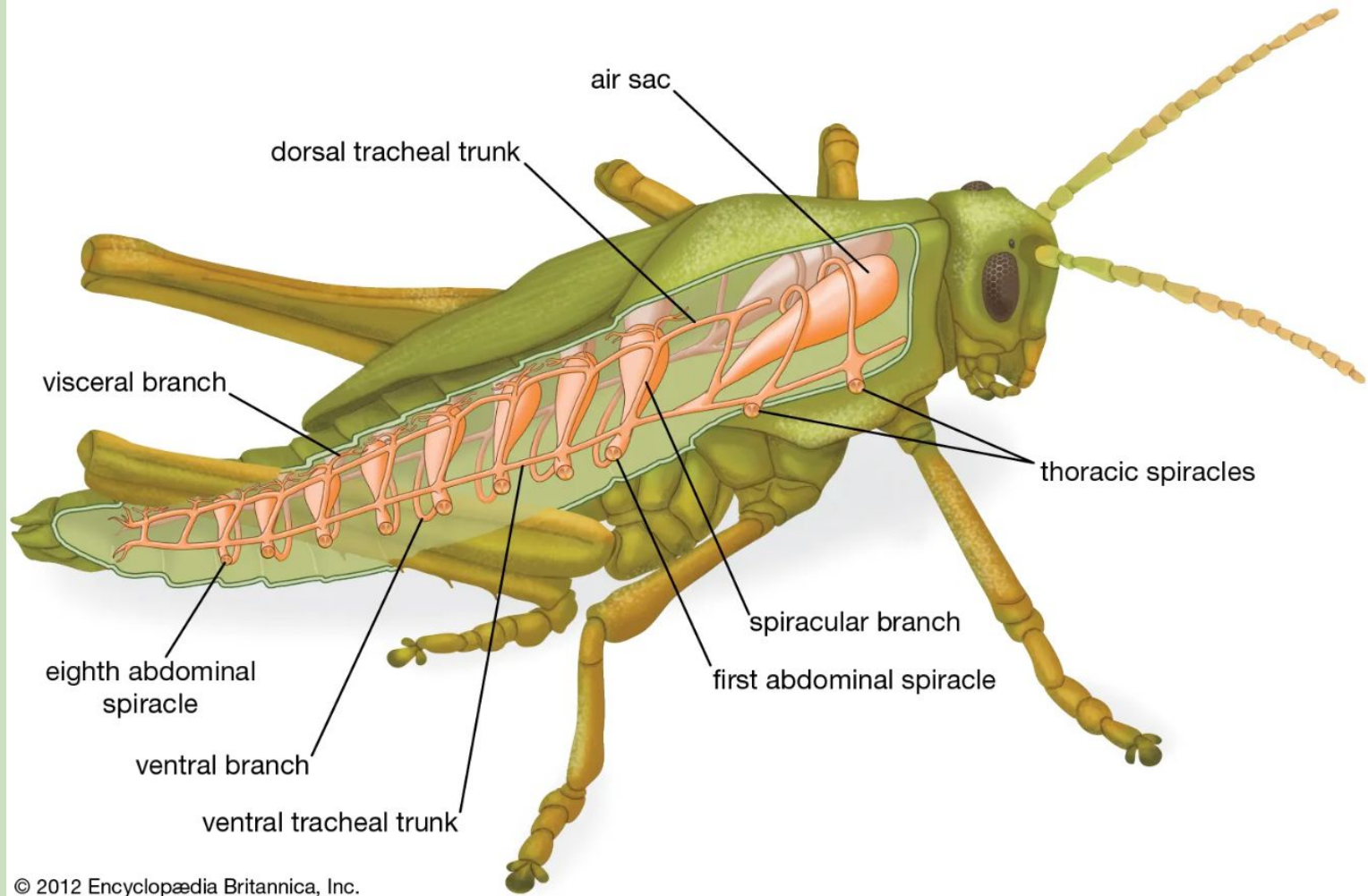
Respirationen: Andning, Gasutbyte och Hälsa

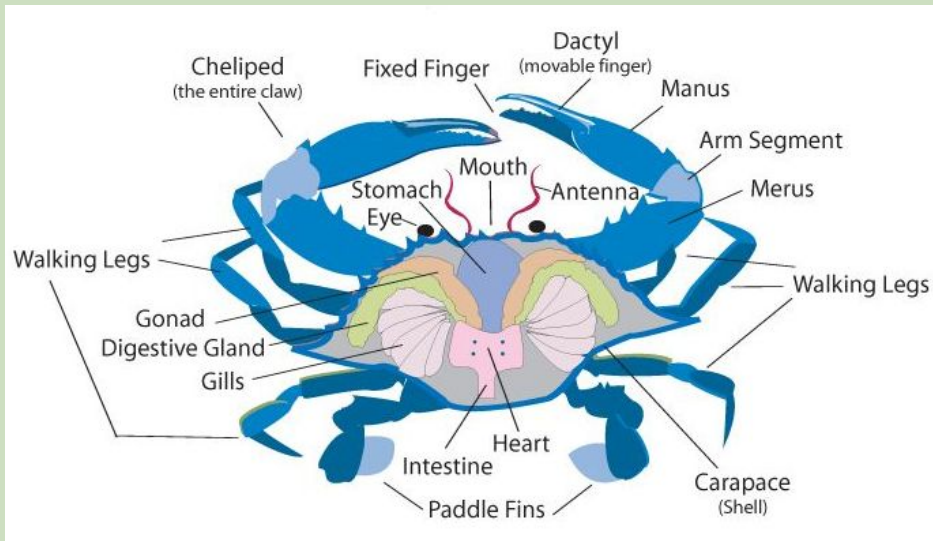
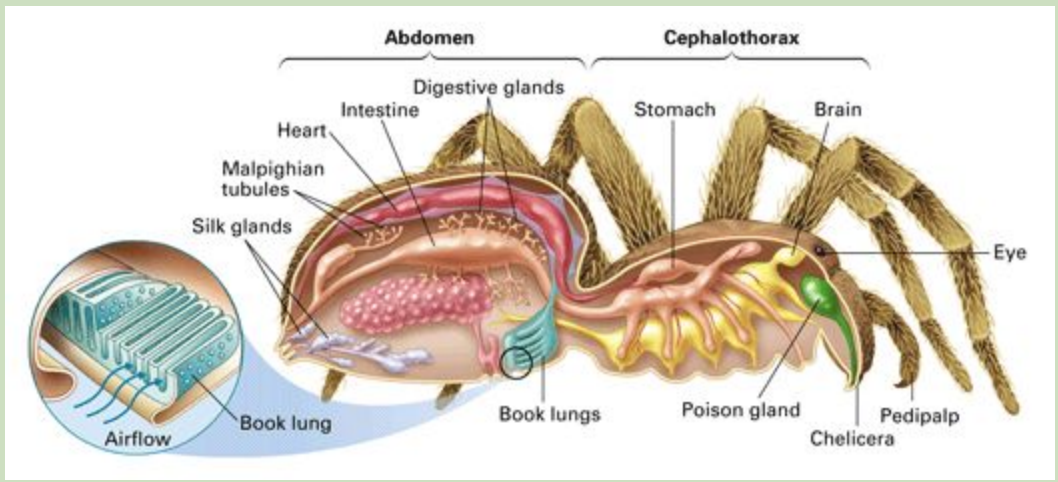
Kråka Larsen VFU 2025

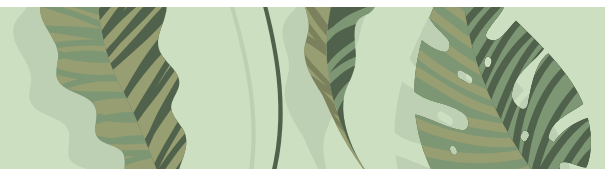
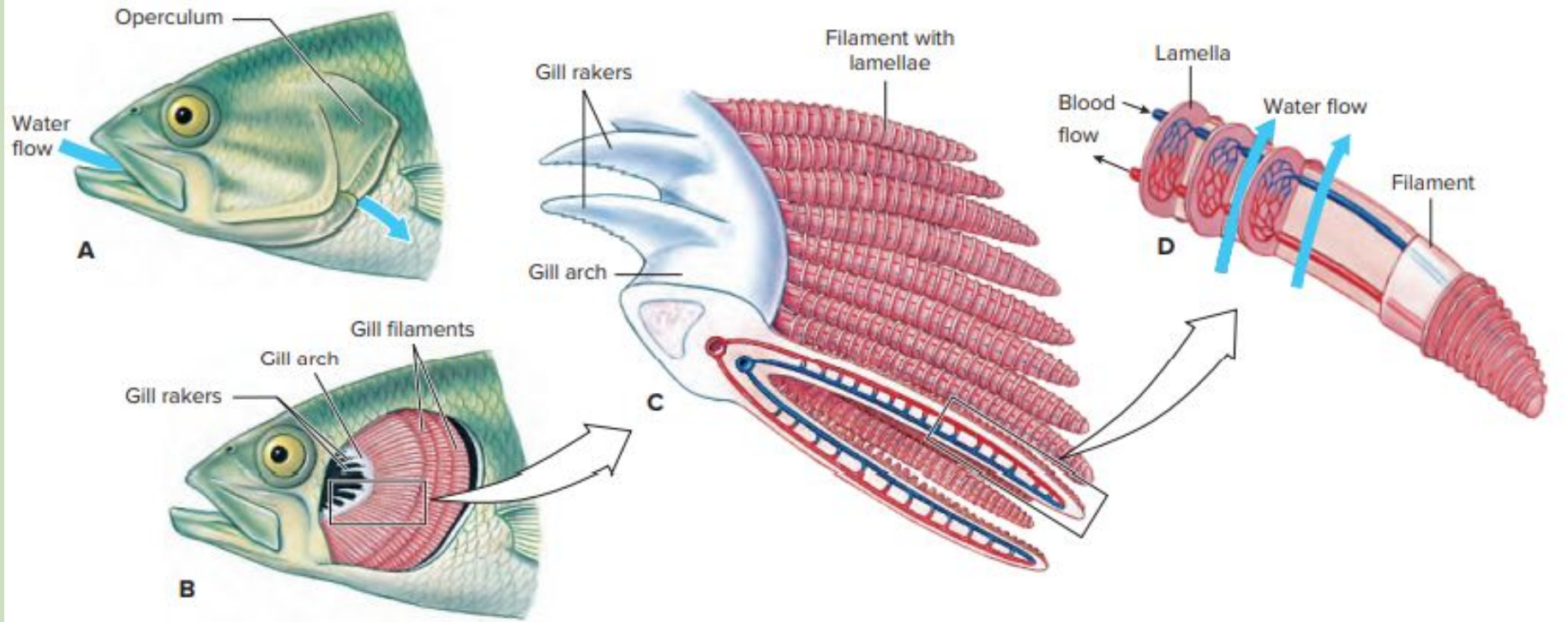


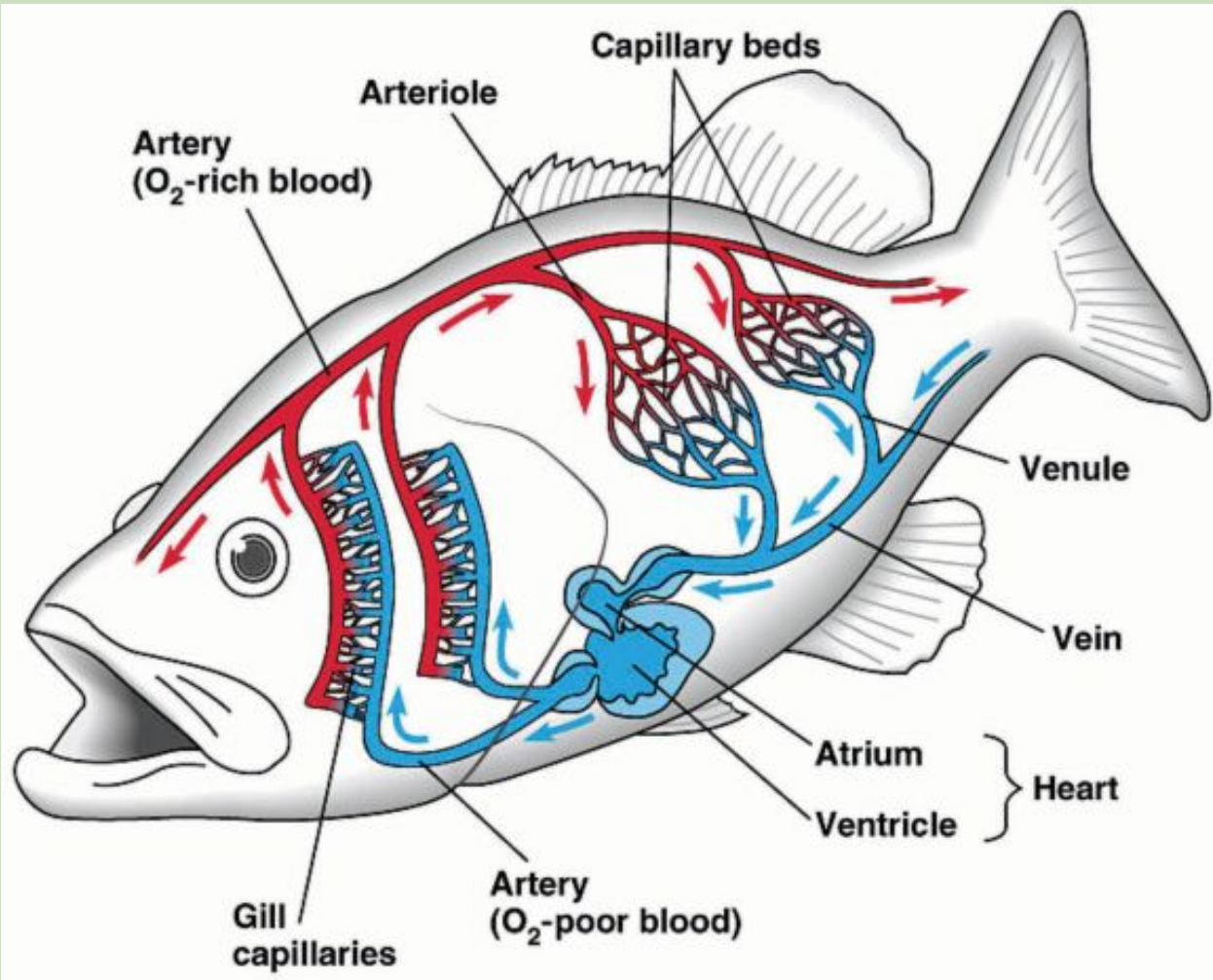
Respirationssystemet



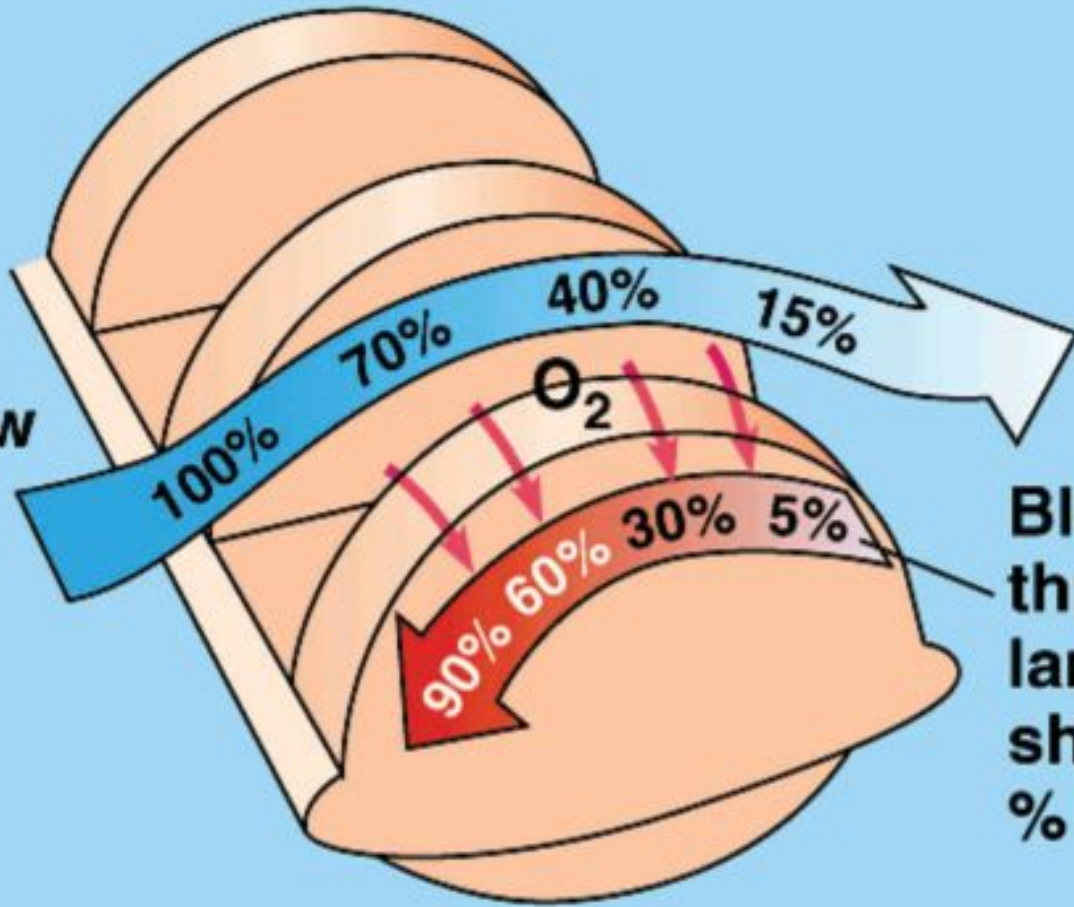




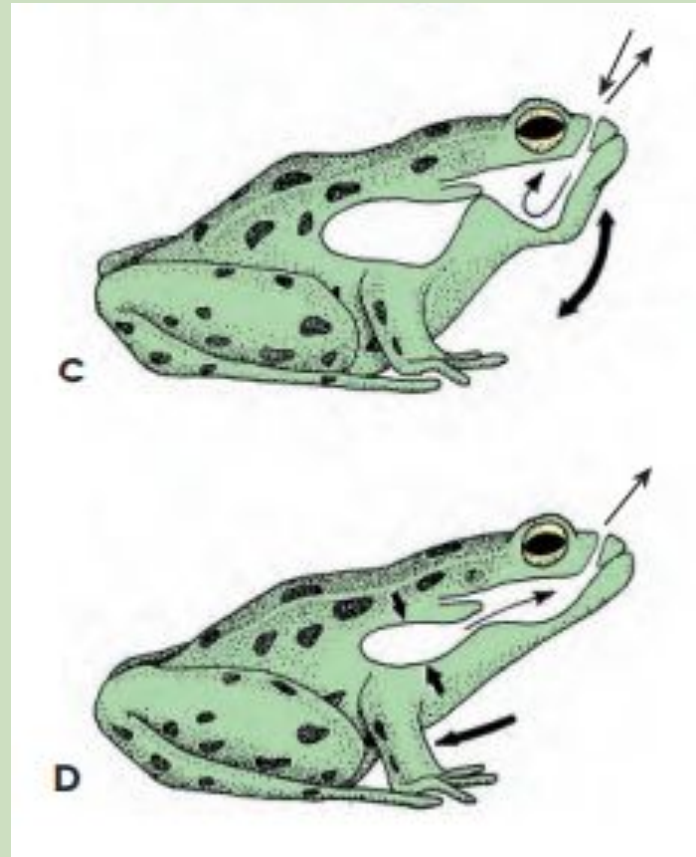
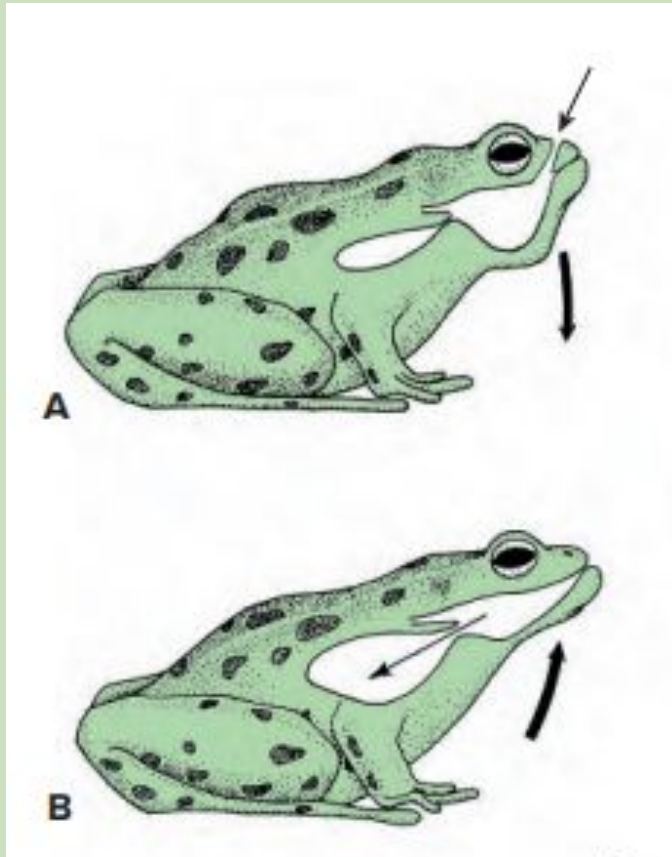




Water flow
over
lamellae
showing
% O_2



Blood flow
through
lamellae
showing
% O_2







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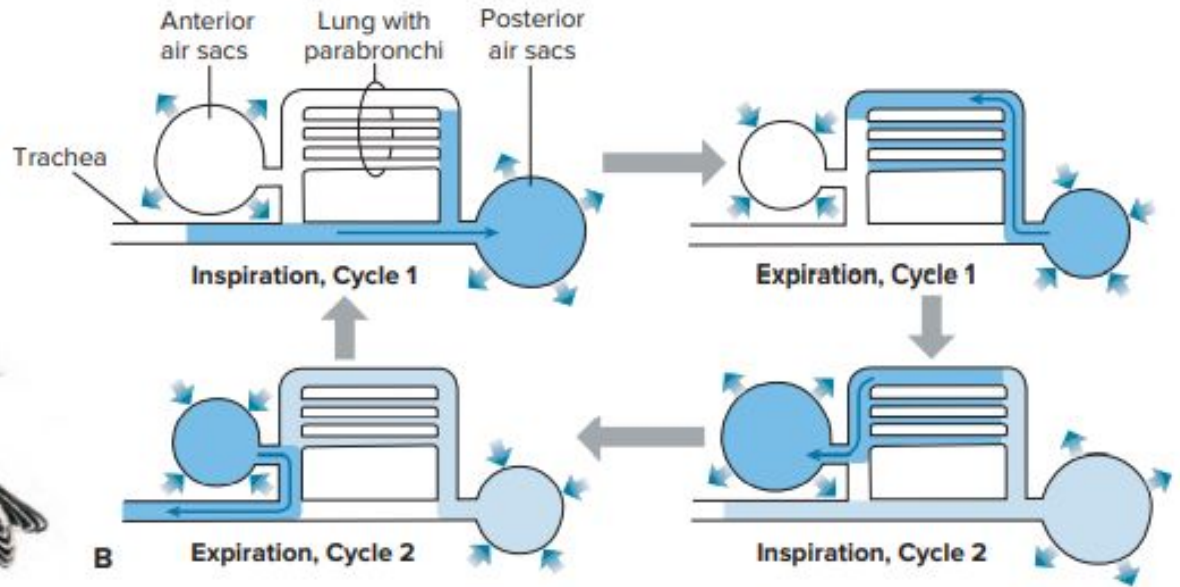
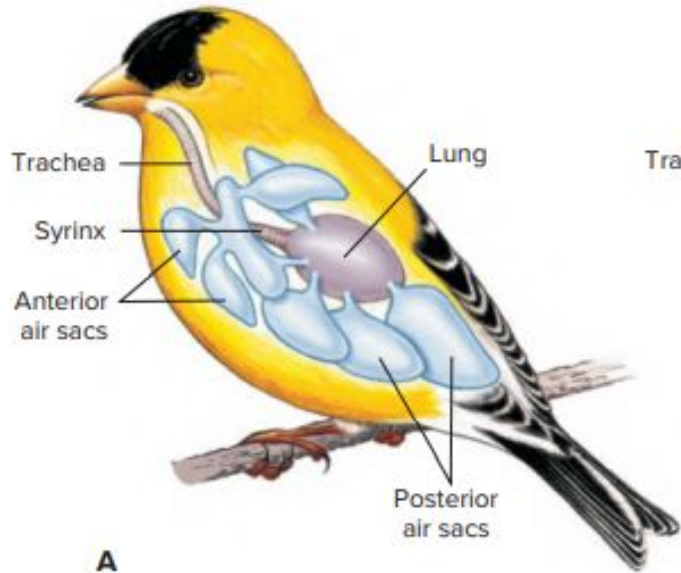
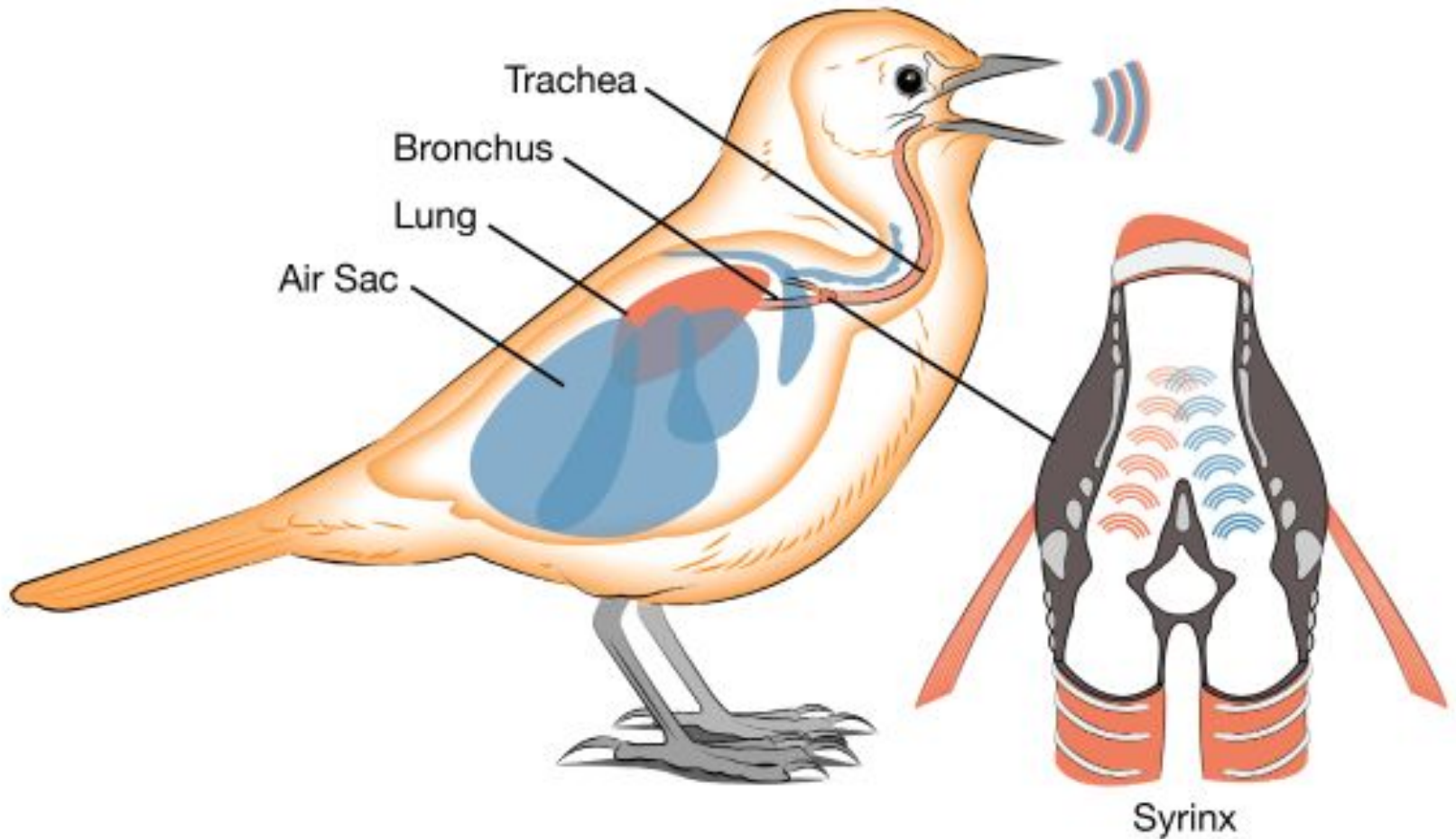


Figure 27.12 Respiratory system of a bird. **A**, Lung and air sacs. One side of the bilateral air sac system is shown. **B**, Movement of a single volume of air through a bird's respiratory system. Two full respiratory cycles are required to move air through the system. The first breath of air is shown in dark blue, while the second breath of air is shown in light blue. Note that air actually moves continually through the parabronchi, but we depict individual phases to make air flow easier to follow.



Syrinx

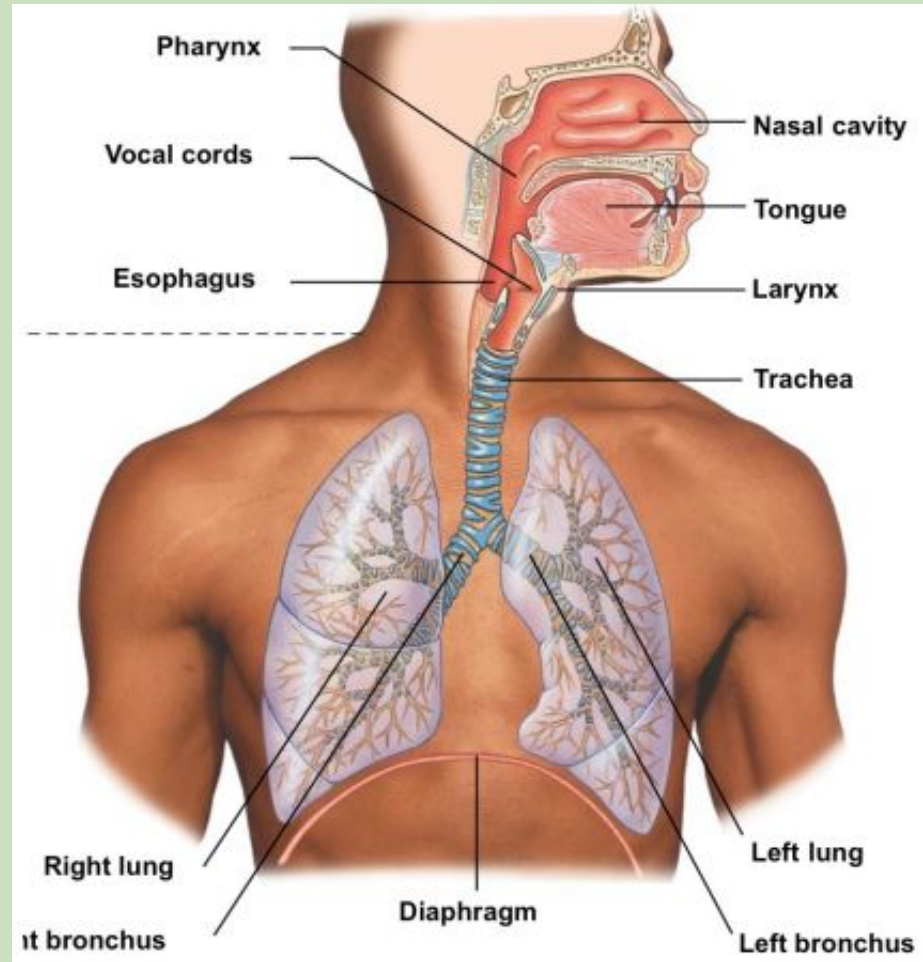
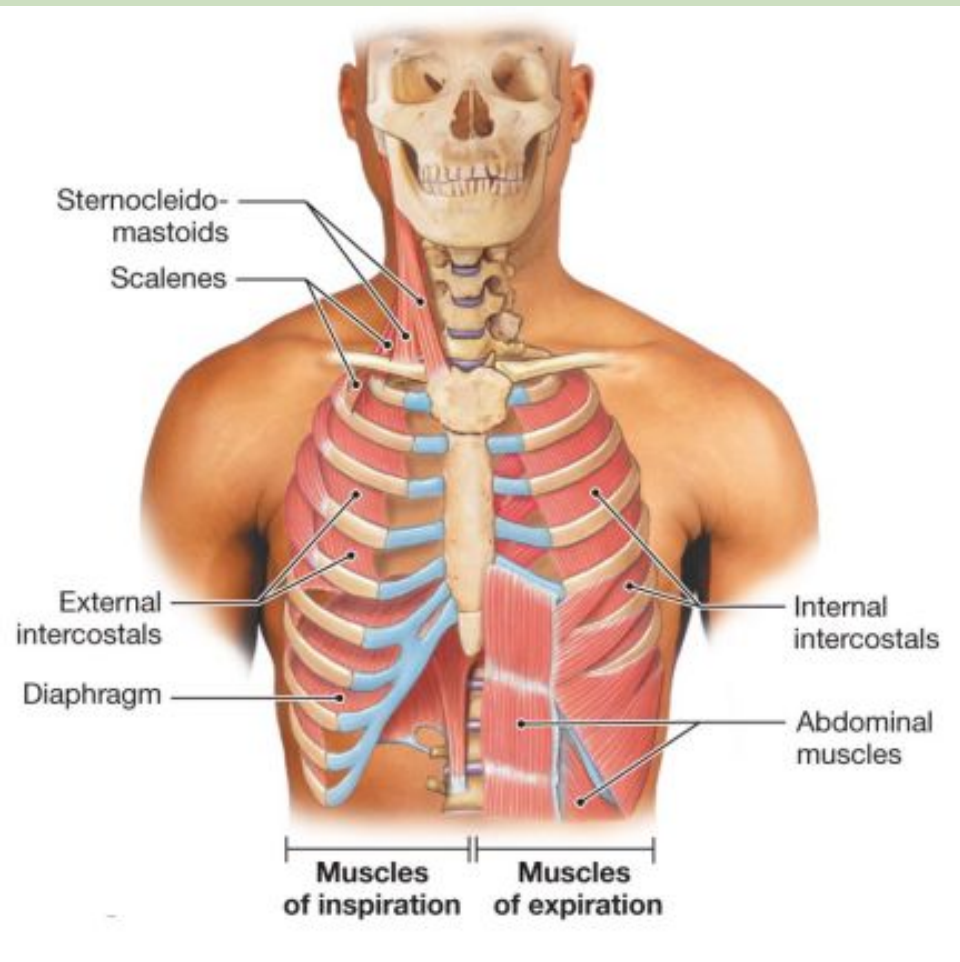
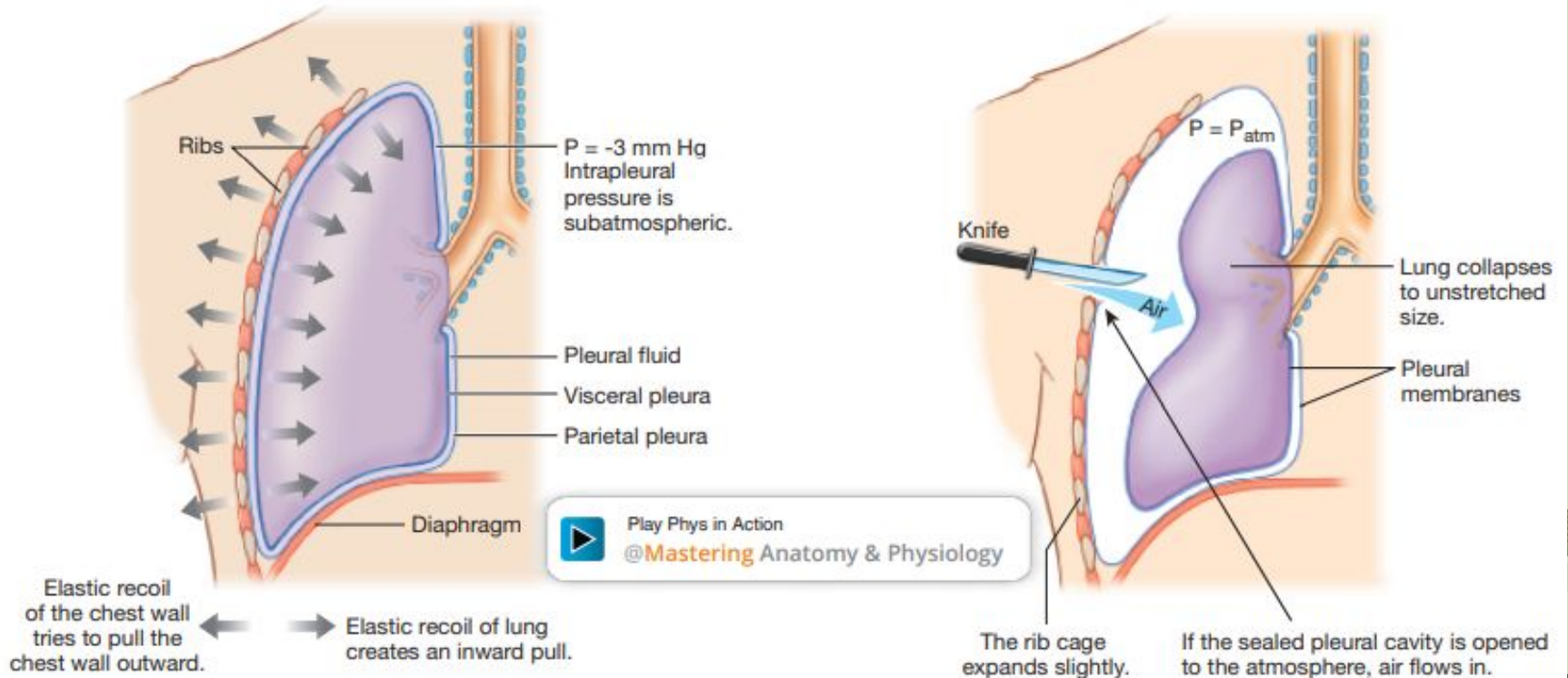


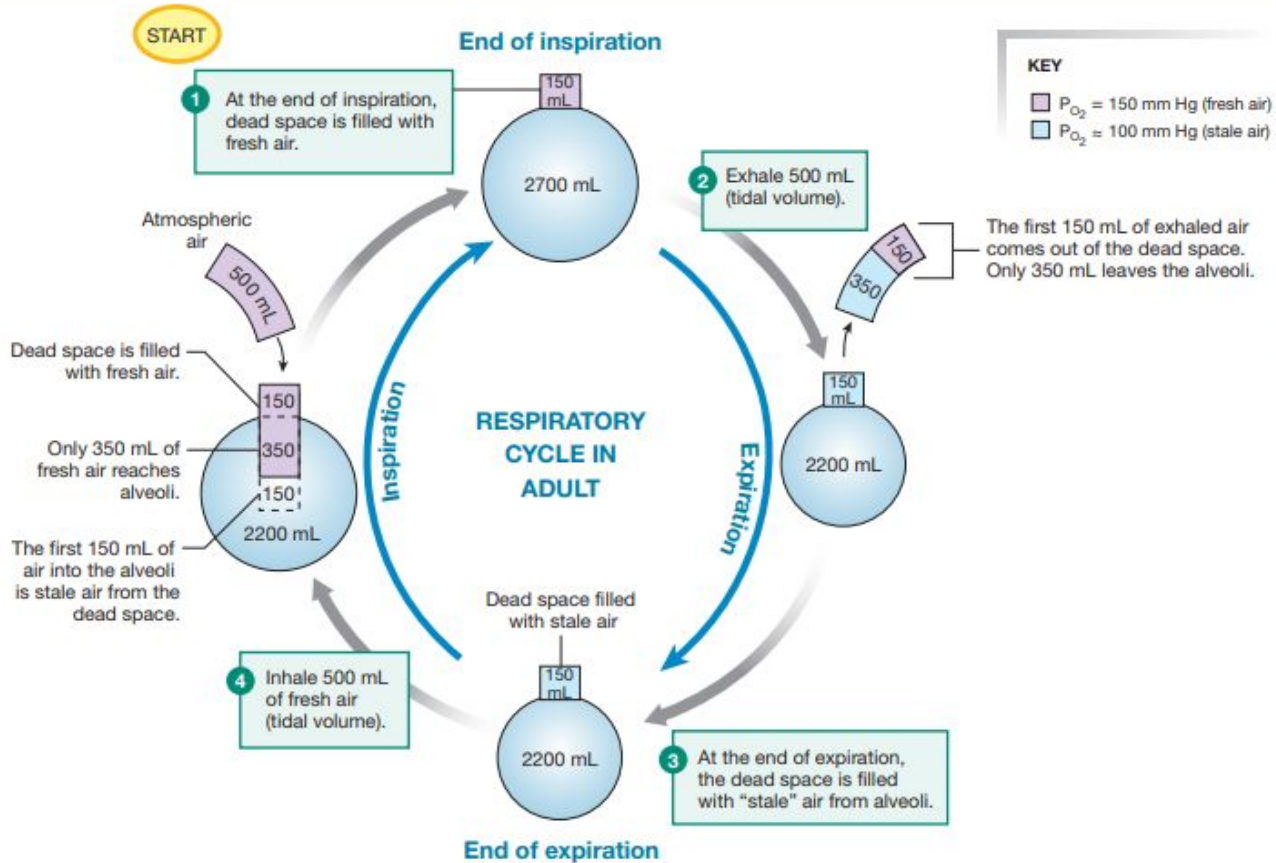
FIG. 17.10 Subatmospheric pressure in the pleural cavity helps keep the lungs inflated

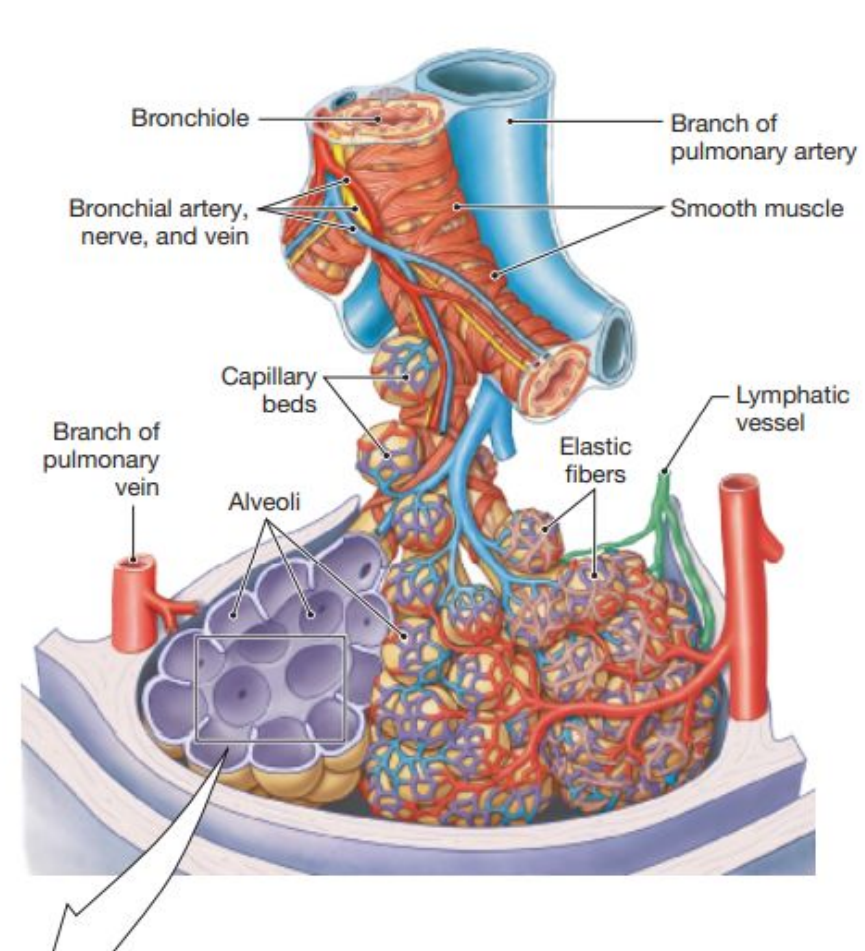
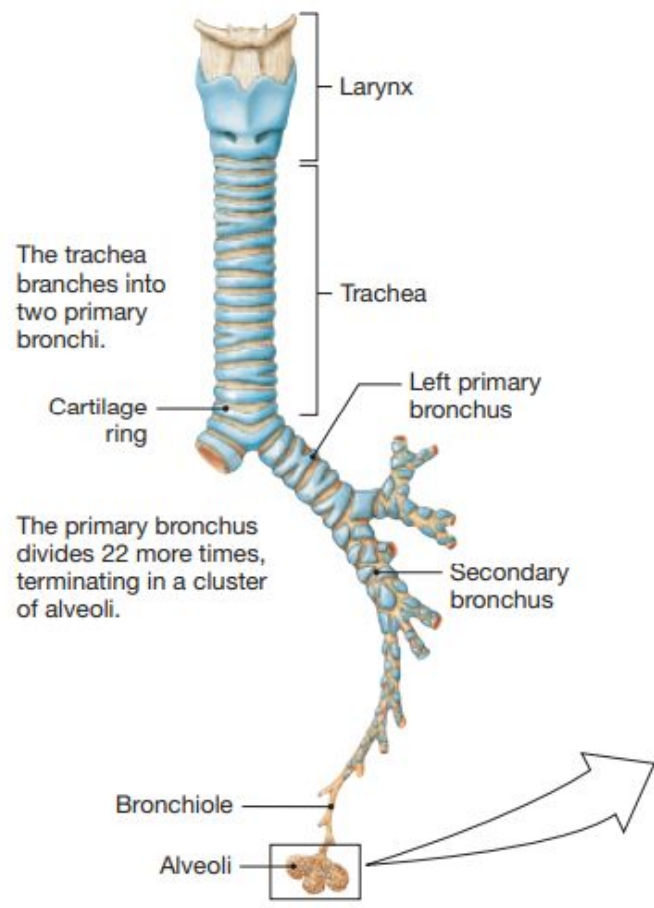
(a) In the normal lung at rest, pleural fluid keeps the lung adhered to the chest wall.

(b) **Pneumothorax.** If the sealed pleural cavity is opened to the atmosphere, air flows in. The bond holding the lung to the chest wall is broken, and the lung collapses, creating a pneumothorax (air in the thorax).

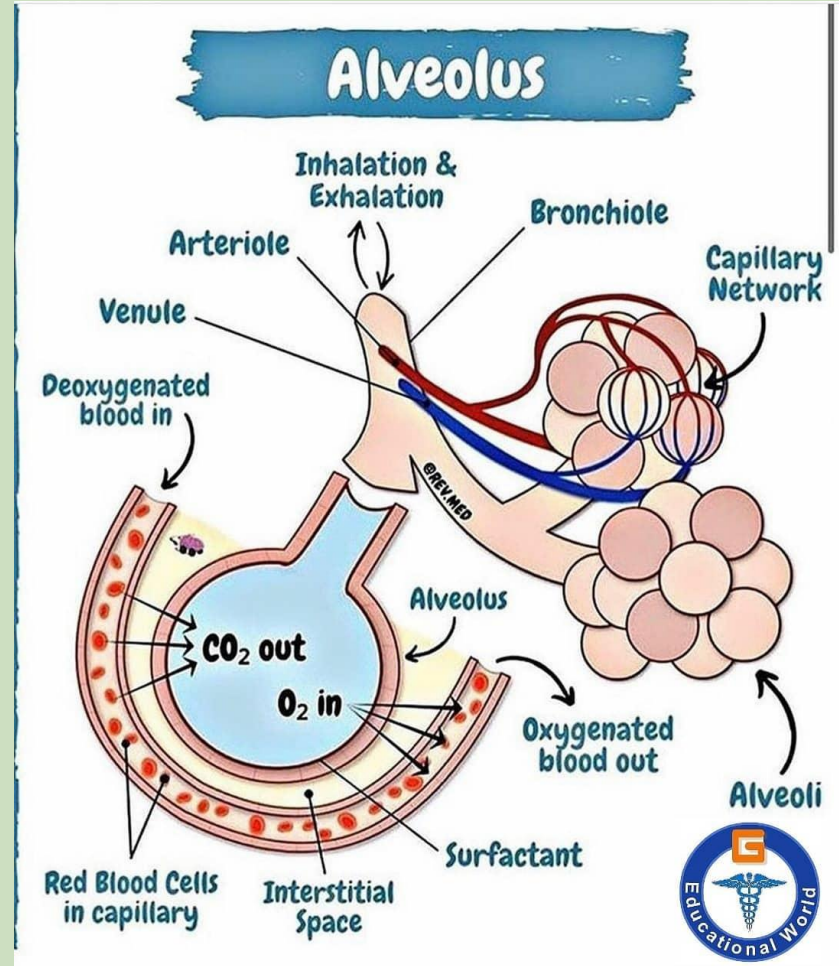
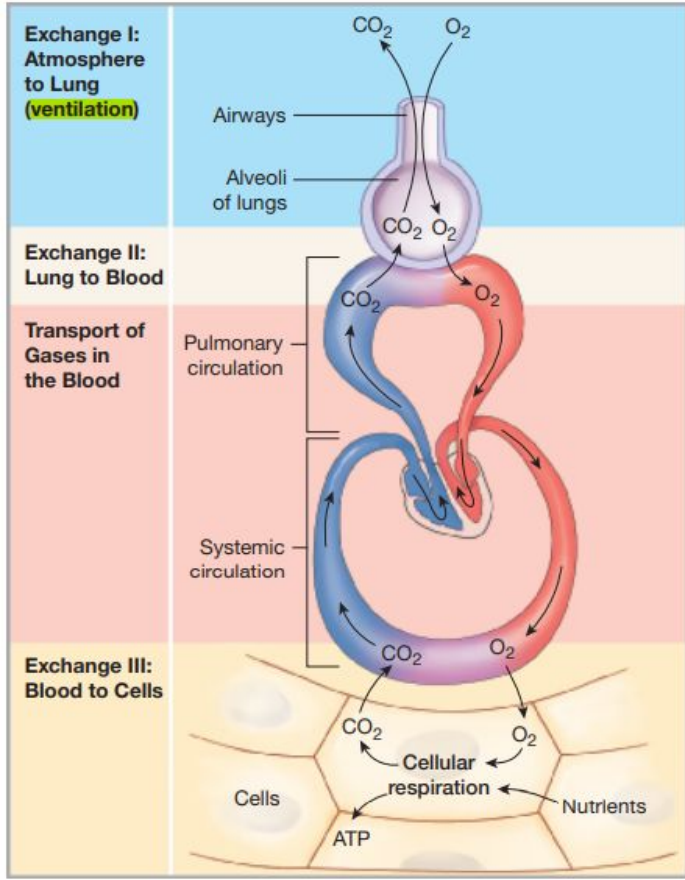


(b) Because the conducting airways do not exchange gases with the blood, they are known as **anatomic dead space**.



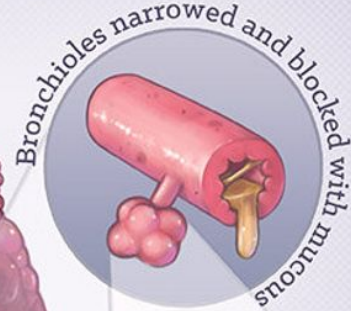
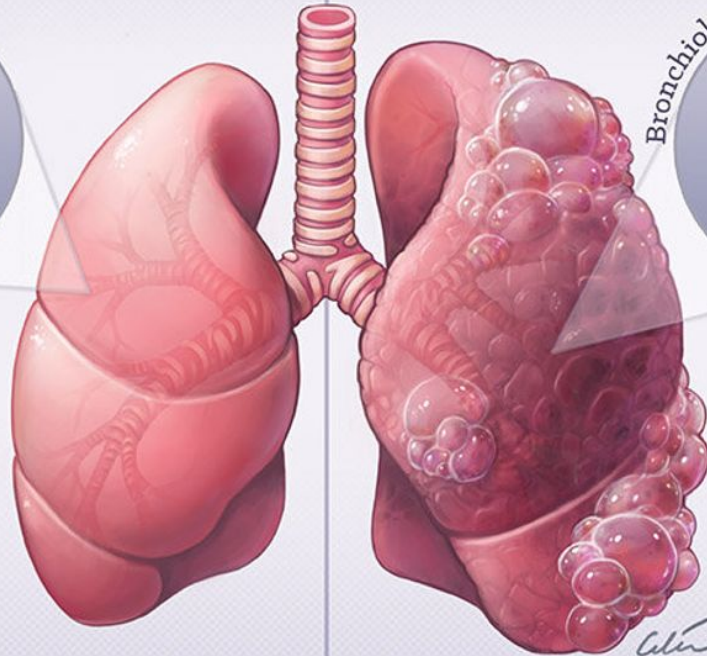
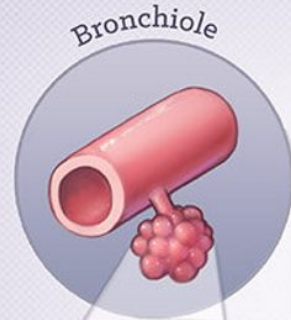


The respiratory and circulatory systems coordinate the transfer of O_2 and CO_2 between the atmosphere and the cells.



Health

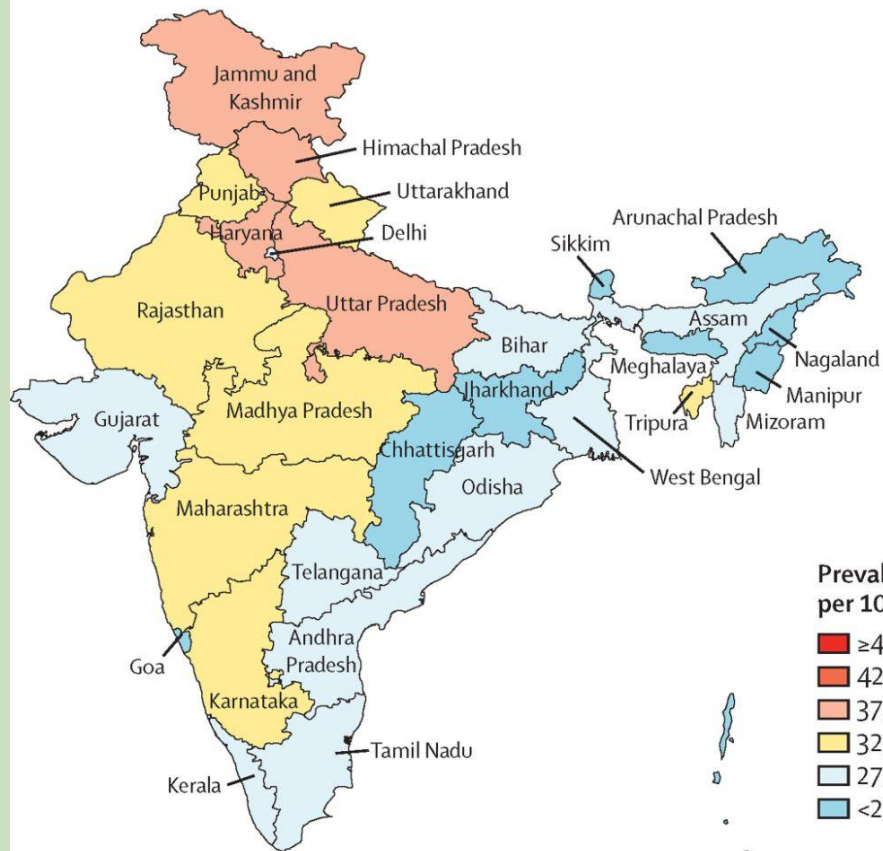
COPD



Calvin



COPD 1990



COPD 2016

