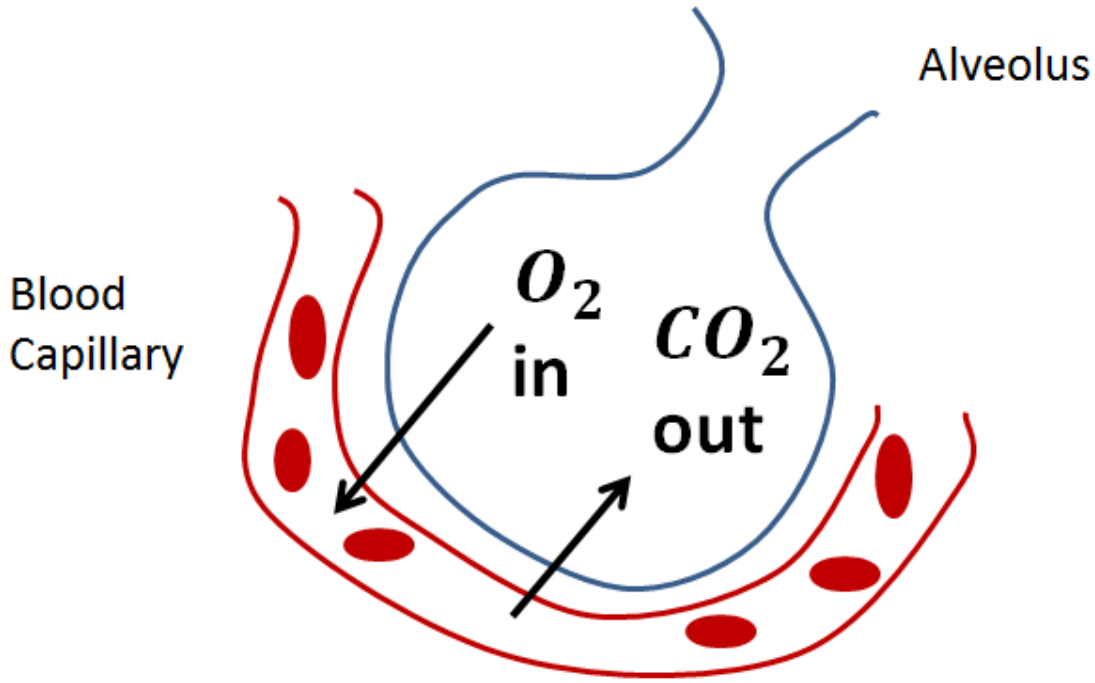
RESPIRATORY GAS EXCHANGE

Gas exchange takes place:

1. At the level of the lungs:
   Between alveolus and blood, where the blood absorbs O_2 gas and releases CO_2 gas.

2. At the level of body organs:
   Where the cells absorb O_2 gas and release CO_2 gas from the blood.

Title: document showing the diffusion of respiratory gases at the level of an alveolus.

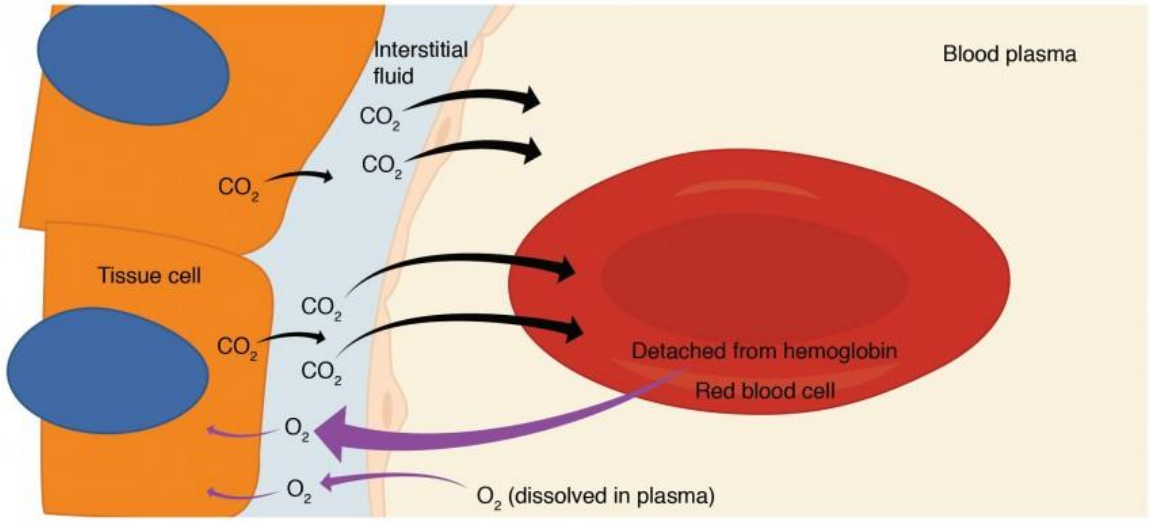


NOTE!!

→CO_2 gas will diffuse from the blood (high concentration) to the alveolus (low concentration).

→O_2 gas will diffuse from the alveolus (high concentration) to the blood (low concentration).

Title: document showing gas exchange in the tissue.



At the level of body tissue and cells, gas exchange also takes place, where the cell absorbs O_2 gas from the blood and eliminates CO_2 into the blood.

NOTE!!

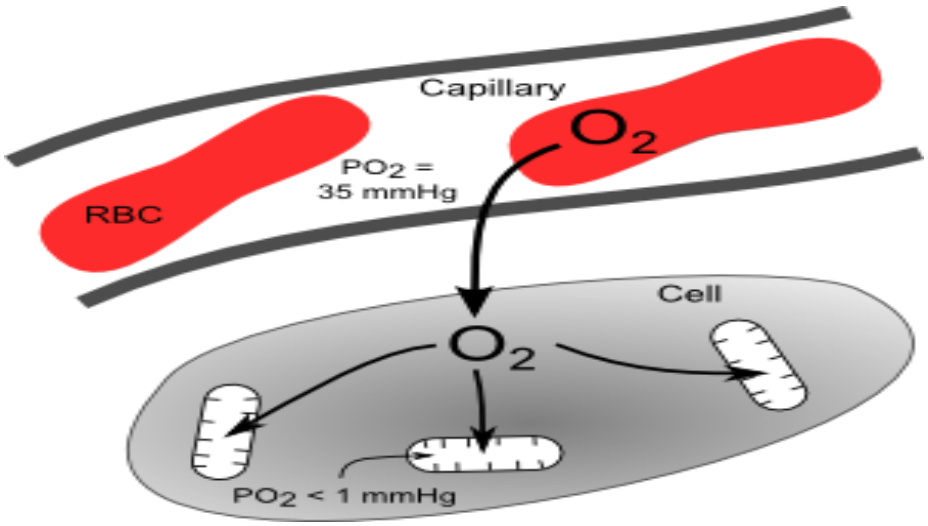
→The cell produces waste products such as CO_2, water vapor and urea.

→CO_2 results from oxidation of nutrients.

Explain what happens to CO_2 after it diffuses to the blood.

CO_2 gas will be carried to the lungs (alveoli) where it will be eliminated through exhalation.

Title: diagram showing the gas exchange at the level of the tissue (between blood capillary and cells)



Which factors favors the exchange between blood and tissue?

The factors that favor the gas exchange between blood and tissue:

- ✓ The tissues are surrounded by a large number of blood capillaries.
- ✓ The blood circulates very slowly inside the blood capillaries to allow diffusion and exchange of gases.
- ✓ Blood capillaries have a very thin wall.

NOTE!!!

The Nicotine found in smoke decreases the respiratory function of the lungs, so gas exchange doesn't take place easily. It may also destroy some alveoli.