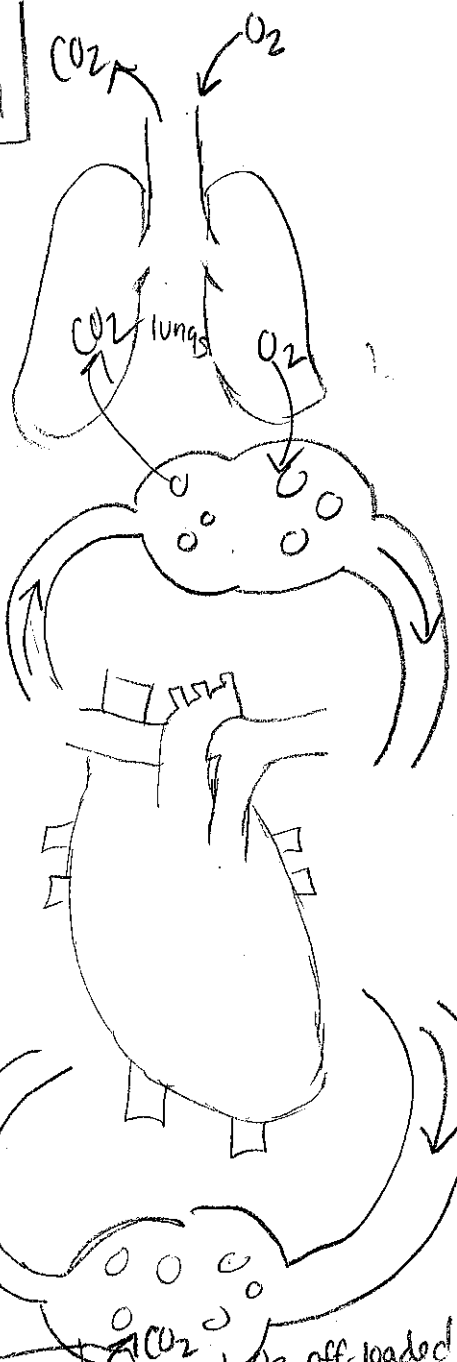


Carbon dioxide transport in the blood

- dissolved as CO_2
- reversibly converted to bicarbonate ions
- bound to plasma membranes



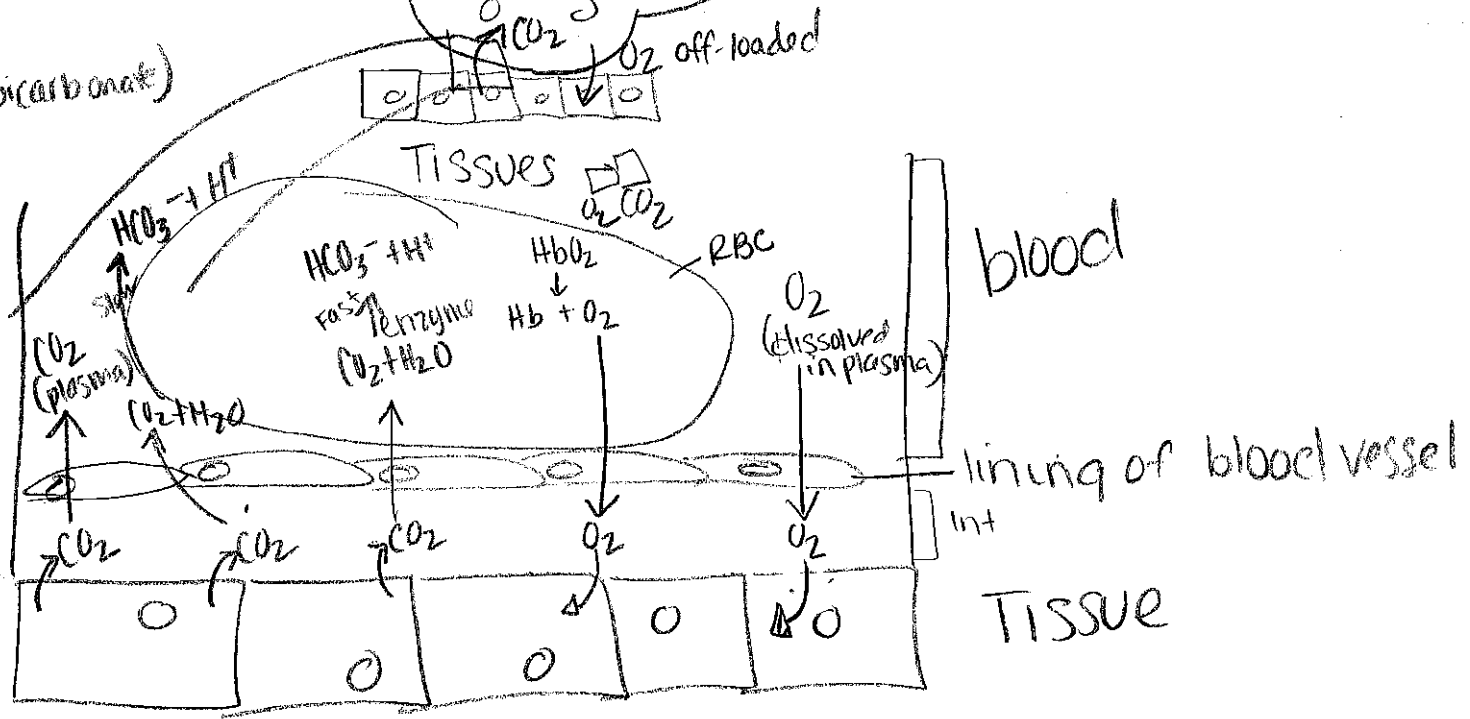
higher partial pressure of CO_2

oxygenated blood

deoxygenated blood

oxygenated blood

HCO_3^- (bicarbonate)



blood

lining of blood vessel

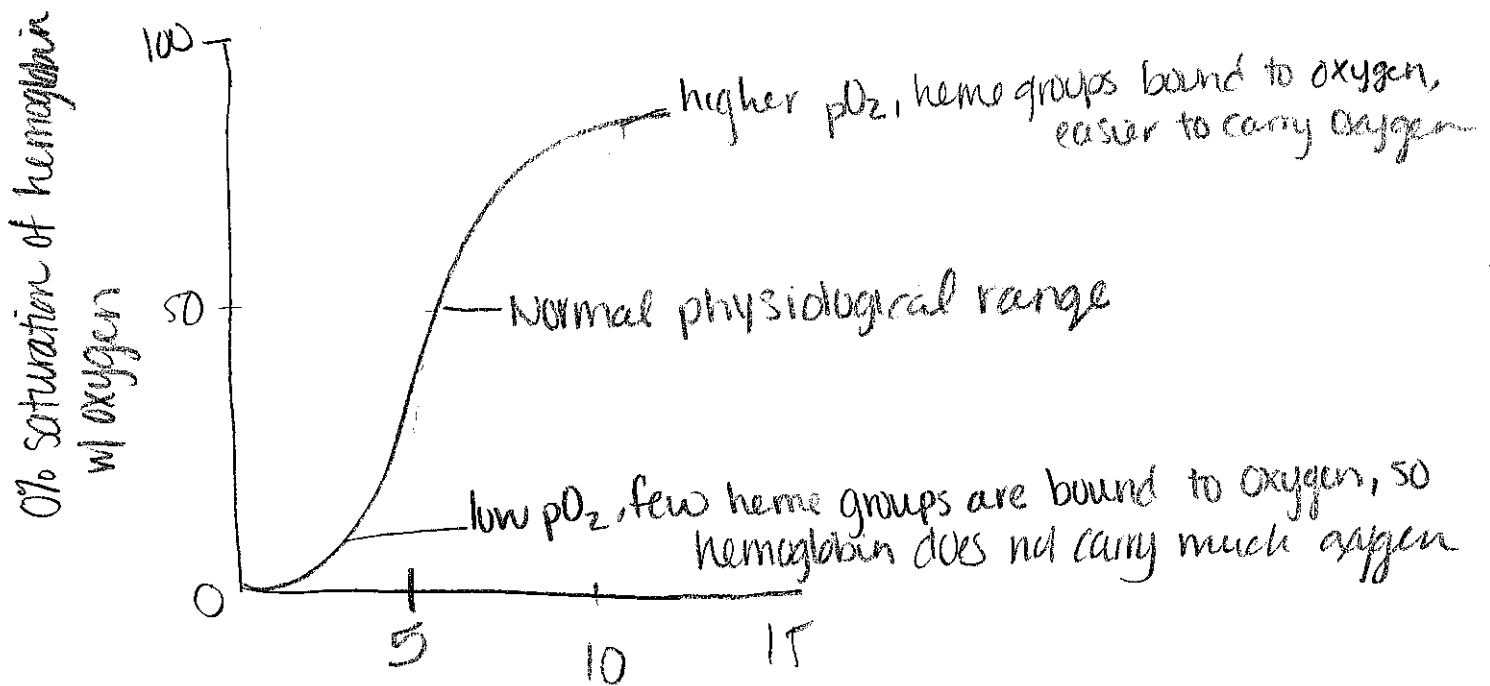
Tissue

CO₂ and pH

↑ CO₂ ↓ pH (acidic)

↓ CO₂ ↑ pH (alkaline)

Oxygen dissociation curve



Partial pressure of Oxygen

The Bohr Shift

- shift curve to the right to ensure muscle have enough oxygen
- decreases hemoglobin affinity for oxygen (releases oxygen) giving muscles the oxygen.
- The body increases ventilation during exercise to rid the body of CO_2 (which makes blood acidic)

Regulation of respiration is controlled by the medulla oblongata, nerves travel to intercostal muscles stimulating them.

Chemoreceptors are sensitive to pH change resulting in

Fetal hemoglobin has a higher affinity for O_2 req in higher O_2 pressures.

- high altitude - less O_2 pressure ($p\text{O}_2$), blood may not be completely saturated w/ O_2 .