

Hamburger effect

Most of the CO_2 produced in the tissues is transported to the lungs in the form of HCO_3^- . Bicarbonate anion is formed mainly in erythrocytes (to a limited extent also in plasma), where carbonic acid H_2CO_3 is formed from CO_2 and H_2O , which dissociates into bicarbonate anion HCO_3^- and hydrogen cation H^+ . Most of the free hydrogen cations react with reduced hemoglobin, while bicarbonate anions are moved from the red blood cell to the plasma in exchange for chloride anions. This exchange is referred to as chloride shift. The entry of chloride anions into erythrocytes is accompanied by the movement of water, which leads to a slight increase in the volume of erythrocytes in venous blood. For this reason, the hematocrit of venous blood is slightly higher than the hematocrit of arterial blood.

Links

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References

- TROJAN, Stanislav. *Lékařská fyziologie*. 4. edition. Grada Publishing, a.s., 2003. 771 pp. ISBN 80-247-0512-5.