Erythrocytes/Catalog of methods in biophysics

Erythrocytes, red blood cells, have the shape of a biconcave disc, sponge-like from the side view. The biconcave shape represents an optimal surface-to-volume ratio and is advantageous with regard to the deformations that red blood cells undergo when passing through capillaries. The content of erythrocytes is liquid, their shape and plasticity are determined by the properties of the membrane, which contains 50% proteins, 40% lipids and about 10% carbohydrates, which are covalently bound to proteins, partly also to lipids. The diameter of erythrocytes is 7.2–7.65 μm, thickness varies between 1.44–2.84 μm, surface area 129,95 μm^2 and volume 97,91 μm^3. There are no significant differences in terms of age and gender. The average lifespan of human erythrocytes is 120 days, after which they enlarge to a spherical shape and hemolyze.

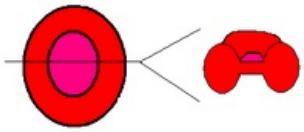

Diagram of an erythrocyte.

Links

Sources

- KYMPLOVÁ, Jaroslava. *Katalog metod v biofyzice* [online]. [cit. 2012-09-20]. <https://portal.lf1.cuni.cz/clanek-793-katalog-metod-v-biofyzice>.