Erythrocytes Encyclopedia Article

Erythrocytes

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Erythrocytes

Erythrocytes, also known as red **blood** cells, contain the pigment **hemoglobin** that has the remarkable capacity to combine with and release oxygen. Human red blood cells contain a 33% solution of hemoglobin. Oxygen is transported to living tissues of the body as oxyhemoglobin in red blood cells. The human red blood cell is a biconcave disc with an average of about 0.0003 in. (7.5 m) in diameter. Erythrocytes are the most common cell type in blood (with an average of about 5,500,000 per ml in men and 5,000,000 per ml in women). Newborn babies have an even greater number of erythrocytes, with as many as 7,000,000 per ml. Red blood cells are suspended in **plasma**, which is the straw colored liquid part of the blood. The characteristic red color of blood is due to the erythrocytes. Human, and most mammalian erythrocytes have nuclei while they develop in the bone marrow. The nuclei and some cytoplasmic structures are lost as the red blood cell matures. The life span of an erythrocyte is about 120 days. Old cells are removed from the circulation by the spleen and bone marrow. The old cells are constantly being replaced by fresh new red blood cells.

The pathological condition of having too few erythrocytes, or erythrocytes containing too little hemoglobin, is known as anemia. Anemia can be caused by blood loss or by other conditions. Too many red blood cells is referred to as polycythemia and may occur as an adaptation to living in mountains to compensate for reduced oxygen in the air.