Glossary

D.2.4. Pathophysiology of Anemia and Polycythemia

Anemia	Lack of red blood cells (=erythrocytes) in the blood
Aplastic anemia	Anemia due to a lack of bone marrow where the erythrocytes are developed
Megaloblastic anemia	Large, fragile and odd-shaped erythrocytes caused by a lack of vitamin B12, intrinsic factors and/or folic acid.
Hemolytic anemia	Anemia caused by abnormal red blood cells with a too short life span
Hereditary spherocytosis	In this hereditary disease, the erythrocytes are not disk-shaped but (small) spheres.
Sickle Cell Anemia	In these erythrocytes, the hemoglobin molecule has been modified to HbS. This may cause crystallization of the Hb molecule thereby inducing a sickle-shaped erythrocyte. Very painful for the patient!
Erythroblastosis Fetalis	When a fetus is Rhesus positive and the mother is Rhesus negative. This will lead to destruction of the fetal erythrocytes during the embryonic stage.
Thalassemia	Hereditary disease, common in the Middle East, where abnormal hemoglobin is produced in erythrocytes.
Polycythemia	Larger than normal number of erythrocytes in our blood
Secondary Polycythemia	Higher number of erythrocytes due to a pathophysiological situation in the body such as cardiac or pulmonary problems.
Polycythemia Vera	Cancer in the bone marrow inducing larger number of erythrocytes (vera = true)
Auto transfusion	Storing your own blood in the fridge for some time, thereby inducing your body to produce more erythrocytes, and infusing it back, just before a competition that you want to win.

EPO	Artificial erythropoietin used to enhance athletic performance such as cycling or running.