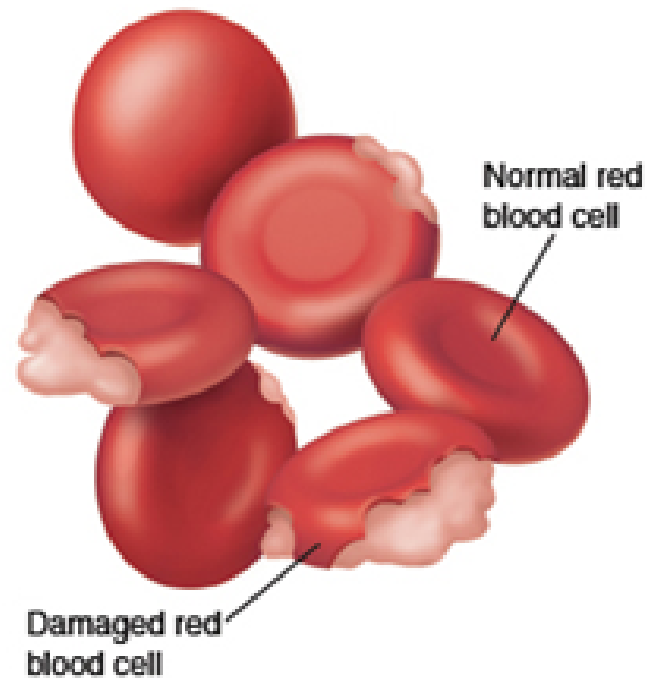
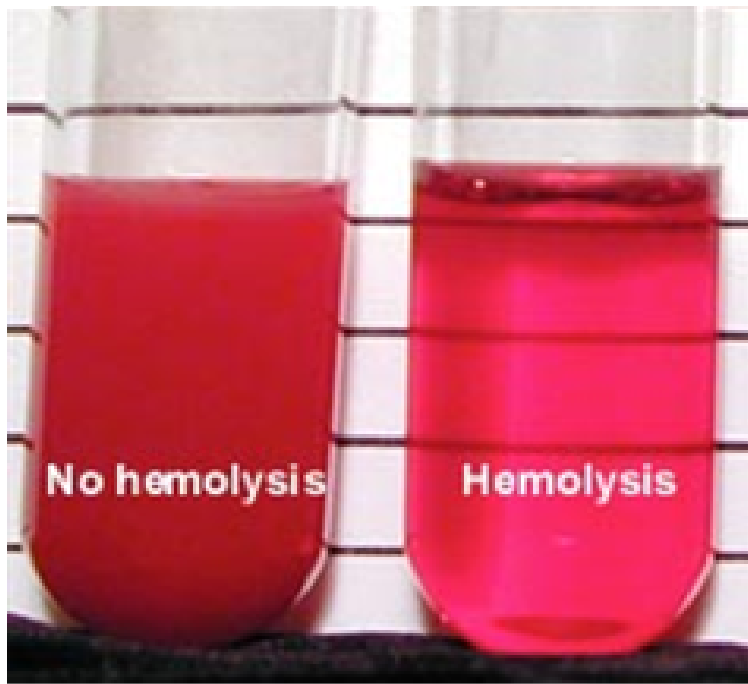
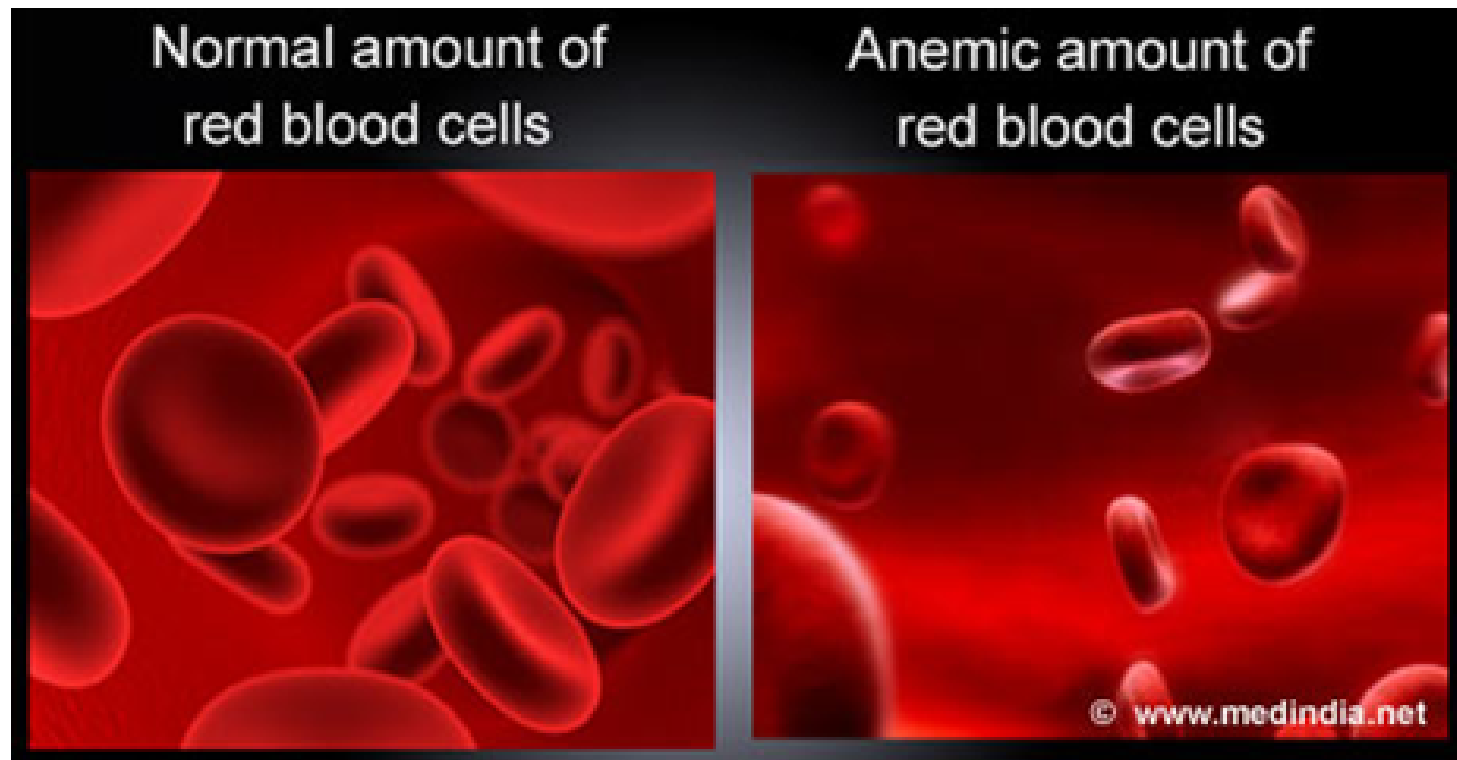


Abnormalities of Blood and Circulatory System

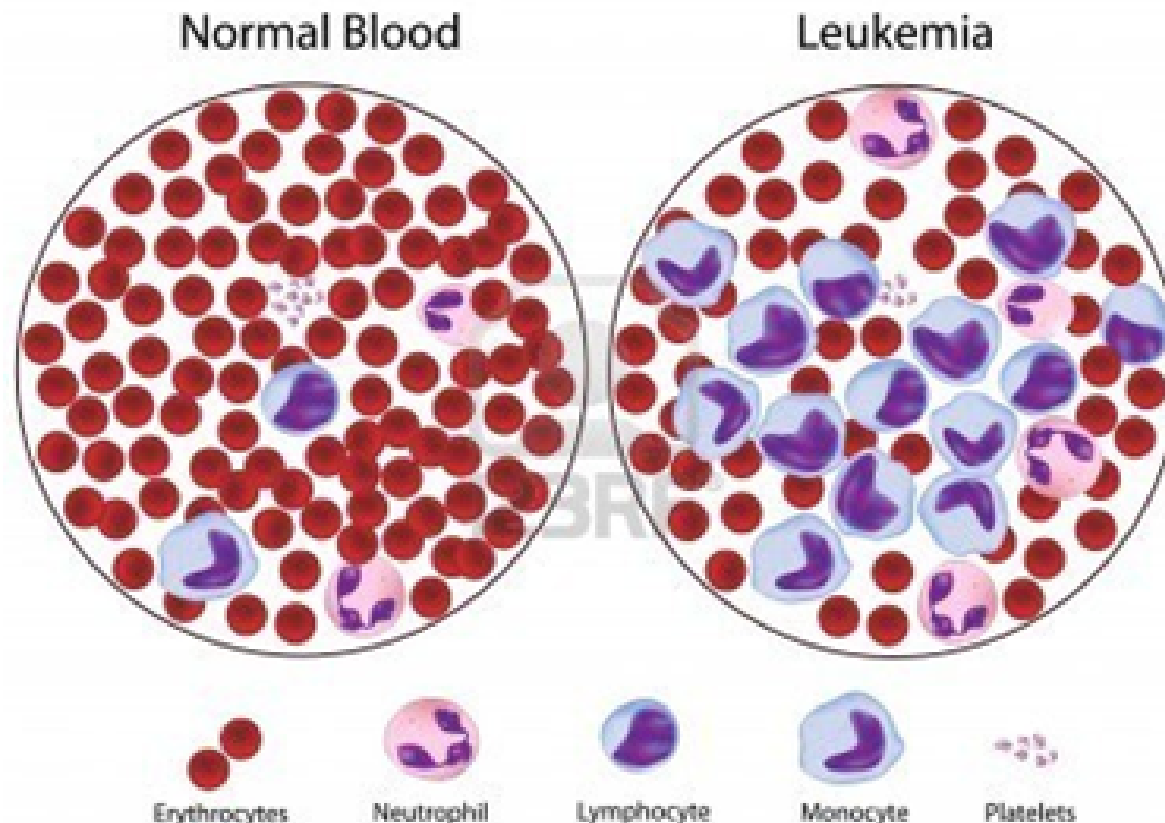
- Hemolysis - bursting of red blood cells, not enough oxygen due to a reduction in the amount of functional hemoglobin or the number of red blood cells



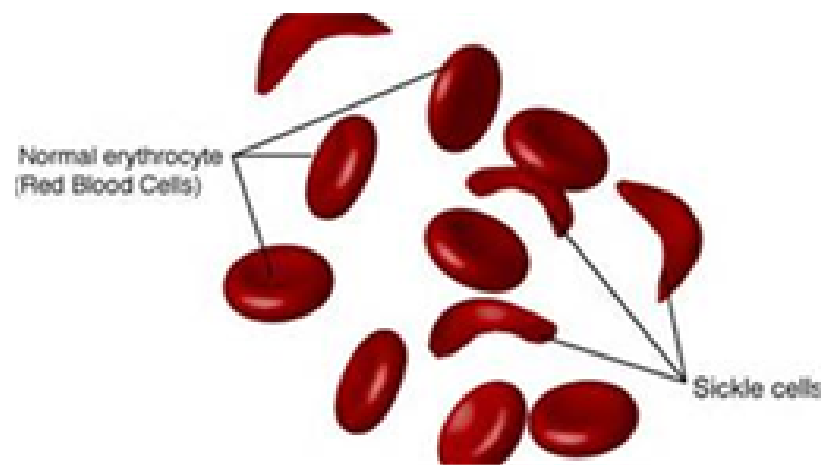
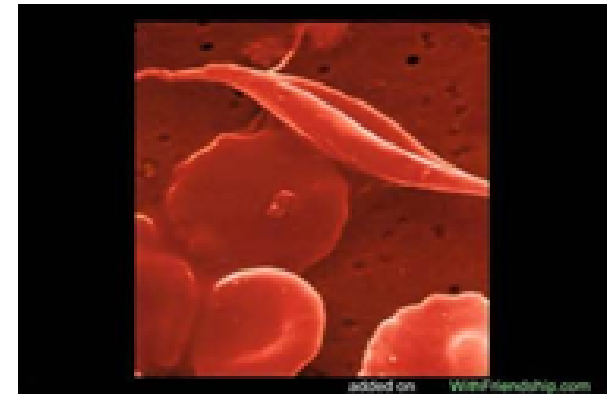
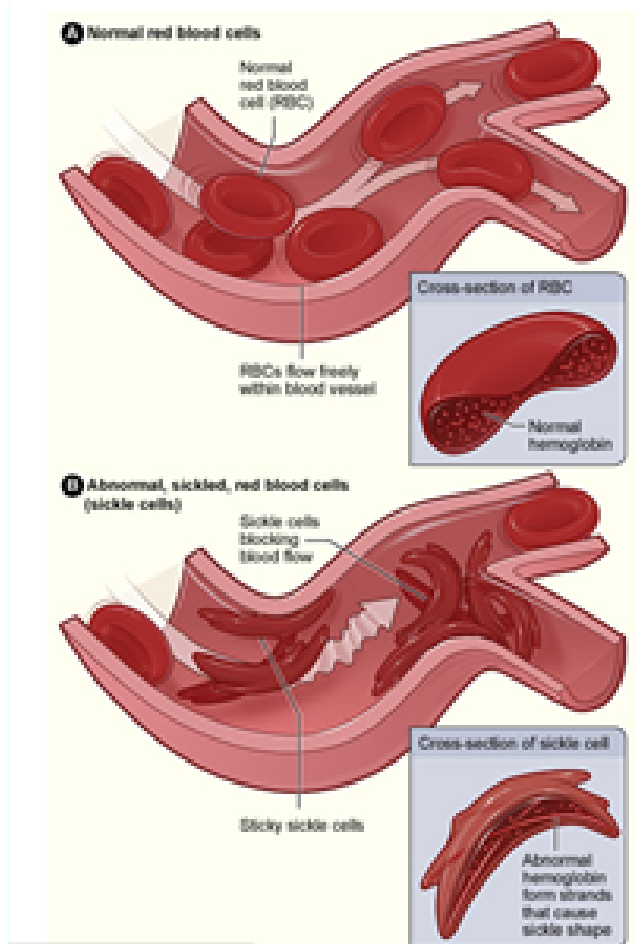
• Anemia - low iron in the blood due to low red blood cells or low hemoglobin (tired run-down feelings)



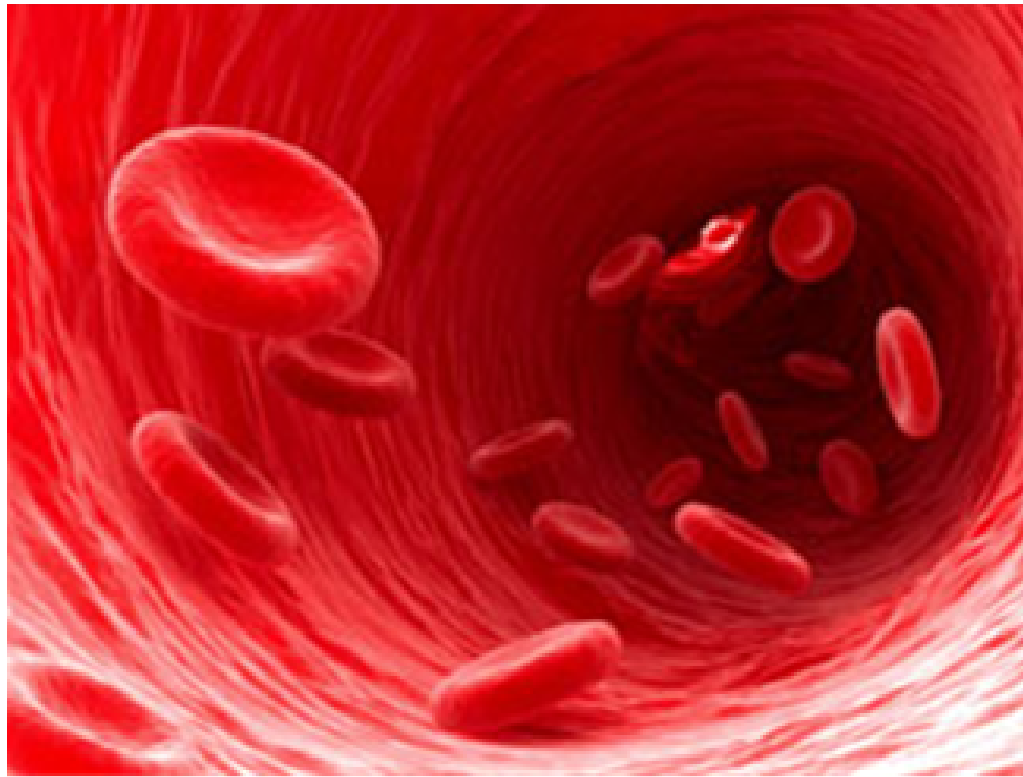
- Leukemia - form of cancer characterized by uncontrolled production of abnormal white blood cells making the organs unable to function properly



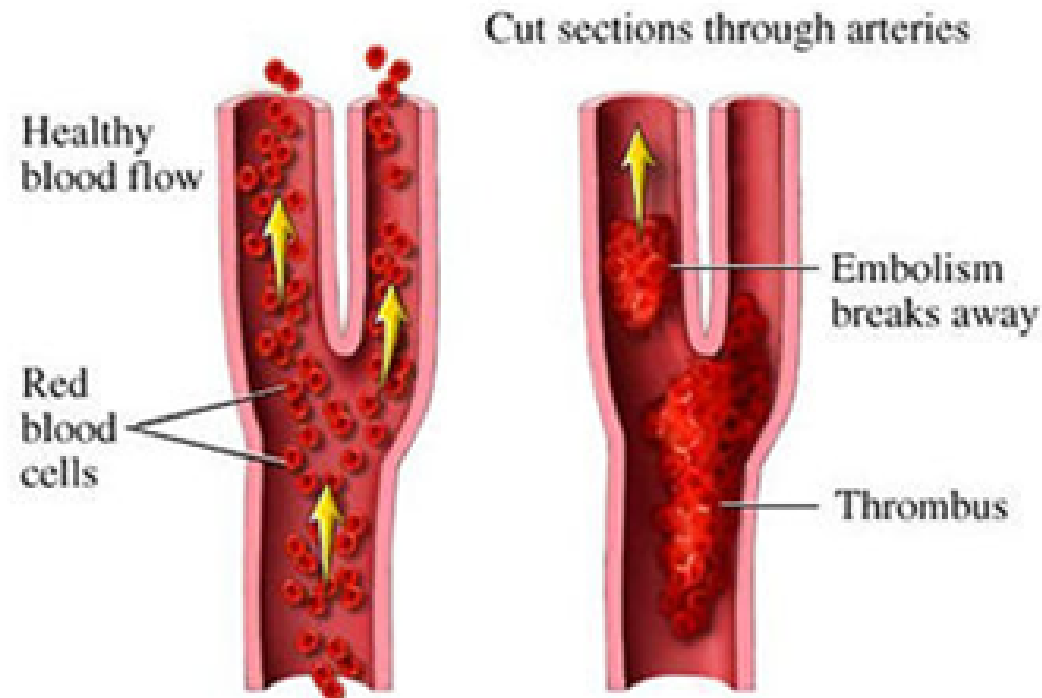
• Sickle-cell disease - hereditary disease in which the individual has fragile disk shaped red blood cells that rupture easily, the ruptured cells can block blood flow (but also protects against malaria)



- Hemophilia - clotting disorder caused by deficiencies of clotting factors



- Thrombus - a clot in the blood vessels that can dislodge and cause oxygen to not reach the blood (stroke is an example)



- Edema - localized swelling that occurs when tissue fluid accumulates, caused by an increase in capillary permeability, a decrease in the uptake of water, an increase in venous pressure

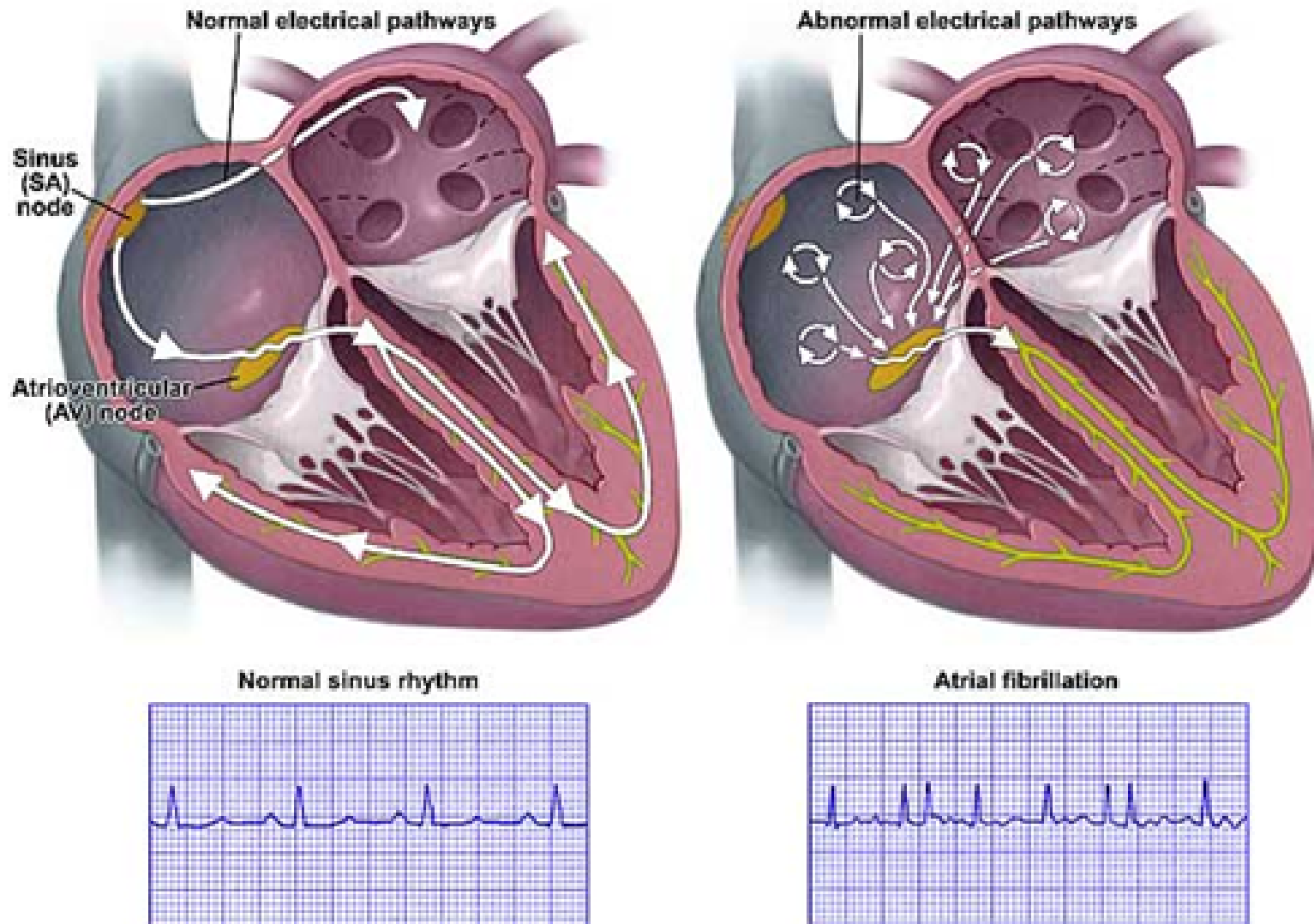
Normal foot



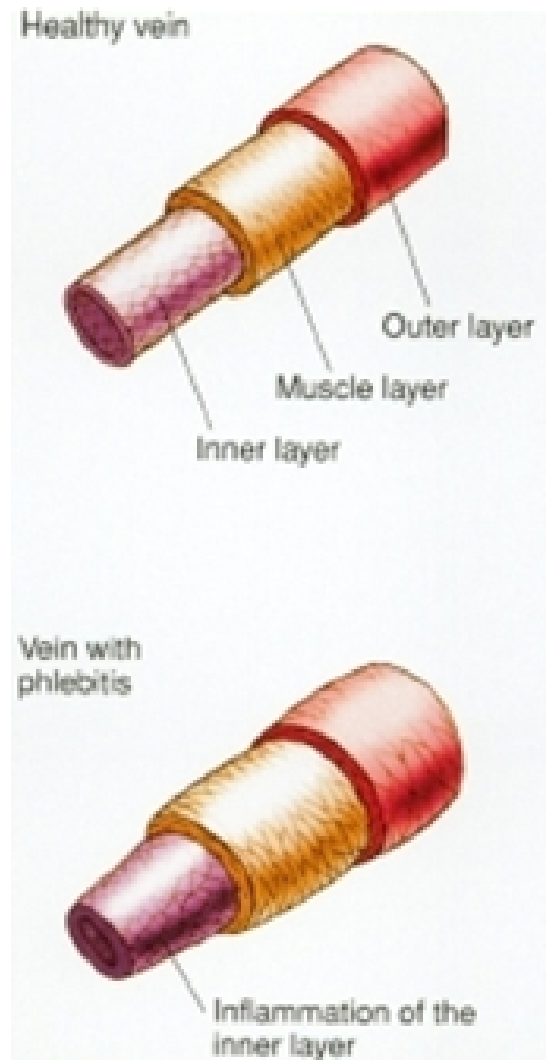
Foot with edema



• Ahythmias - irregular heartbeats

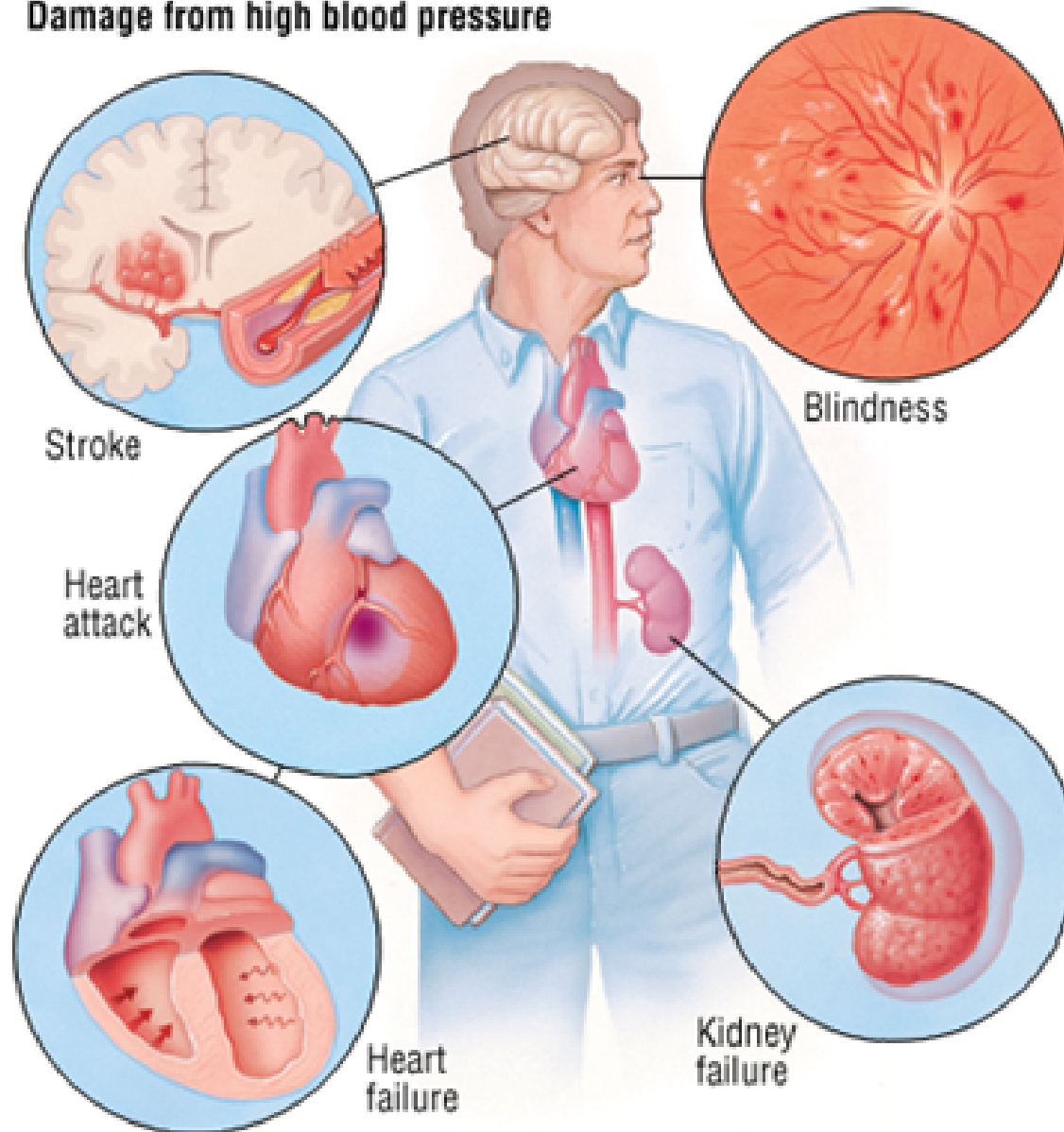


- Phlebitis - inflammation of a vein, can block circulation to the lungs (the blocking of the lungs would be called a pulmonary embolism)

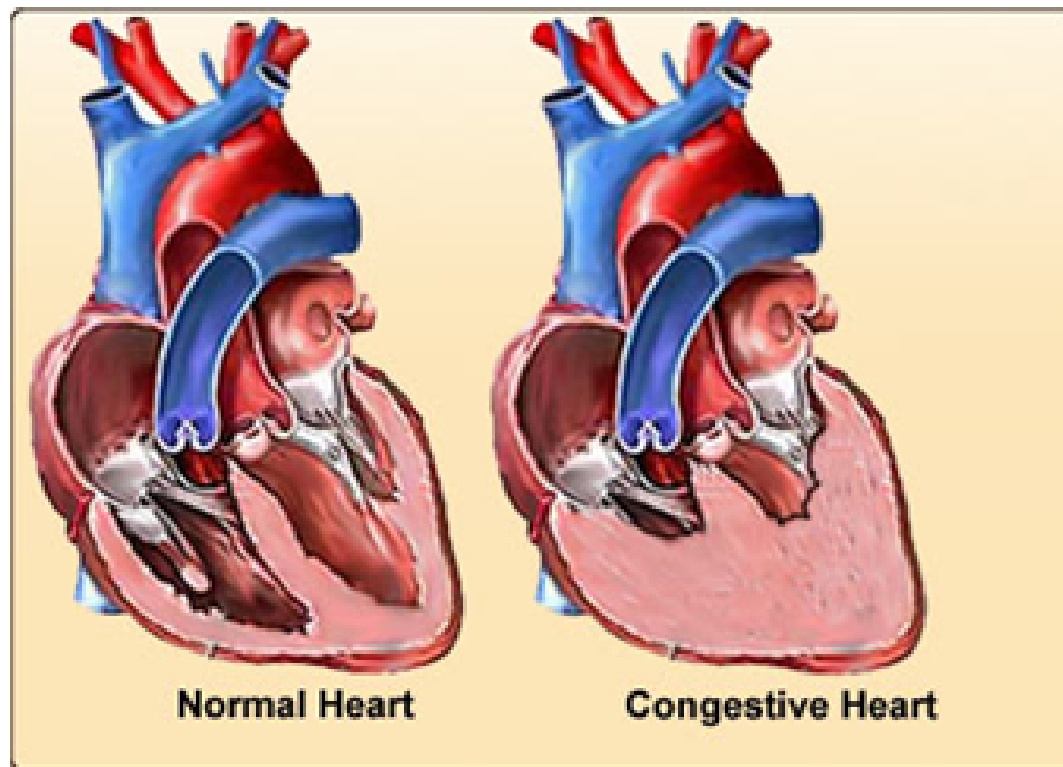


• Hypertension - high blood pressure

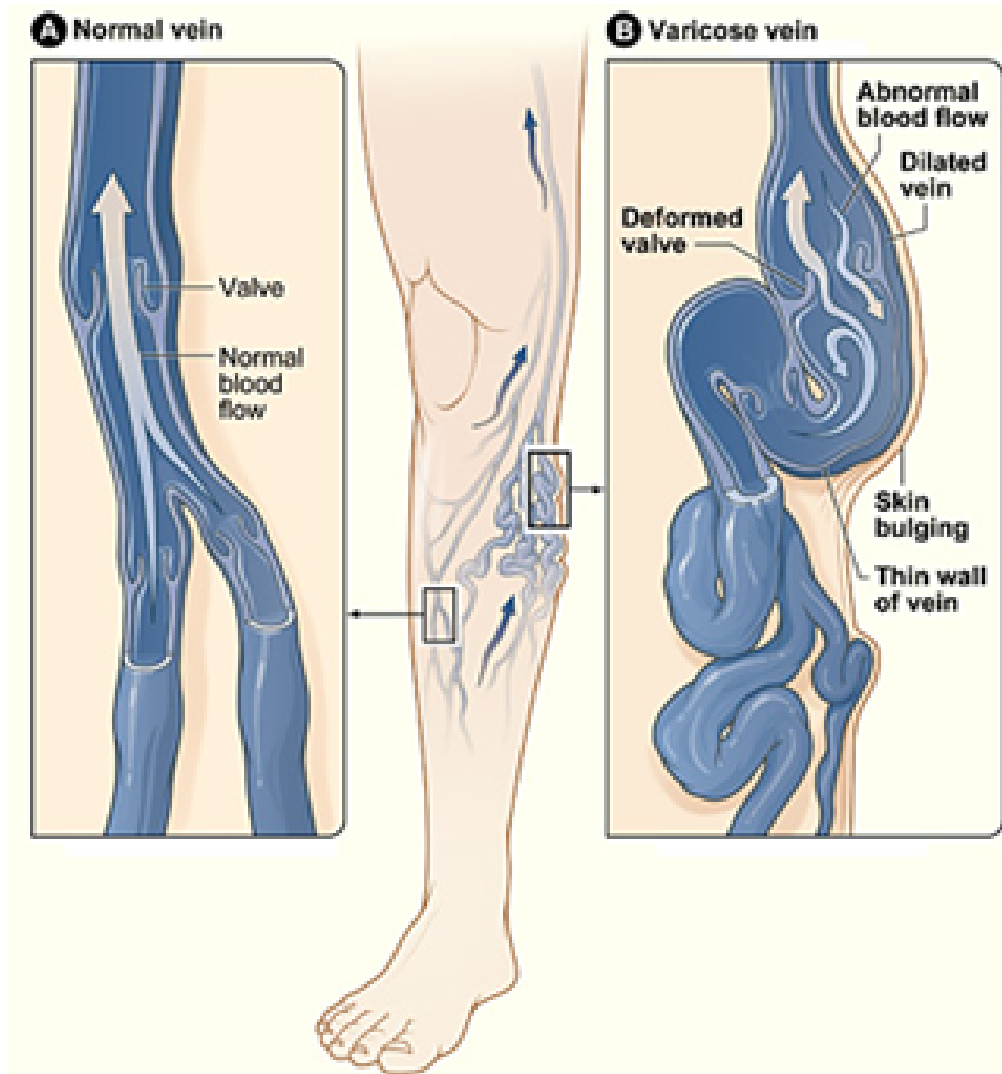
Damage from high blood pressure



- Congestive heart failure - damaged heart tissue fails to pump adequate blood and backs up the pulmonary circuit causing swelling on the heart resulting in shortness of breath, fatigue, constant cough

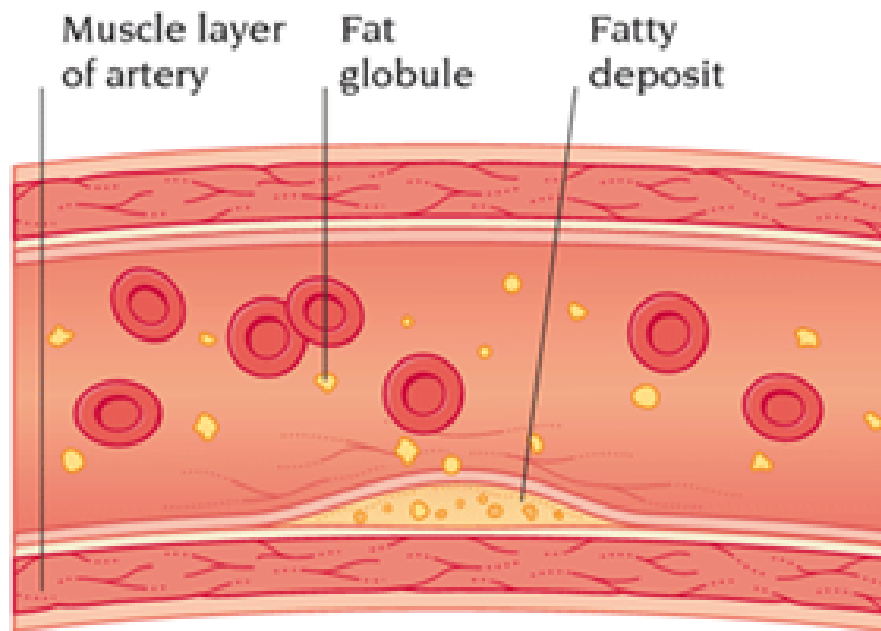


- Varicose veins - veins that have become enlarged, can result in blood clots

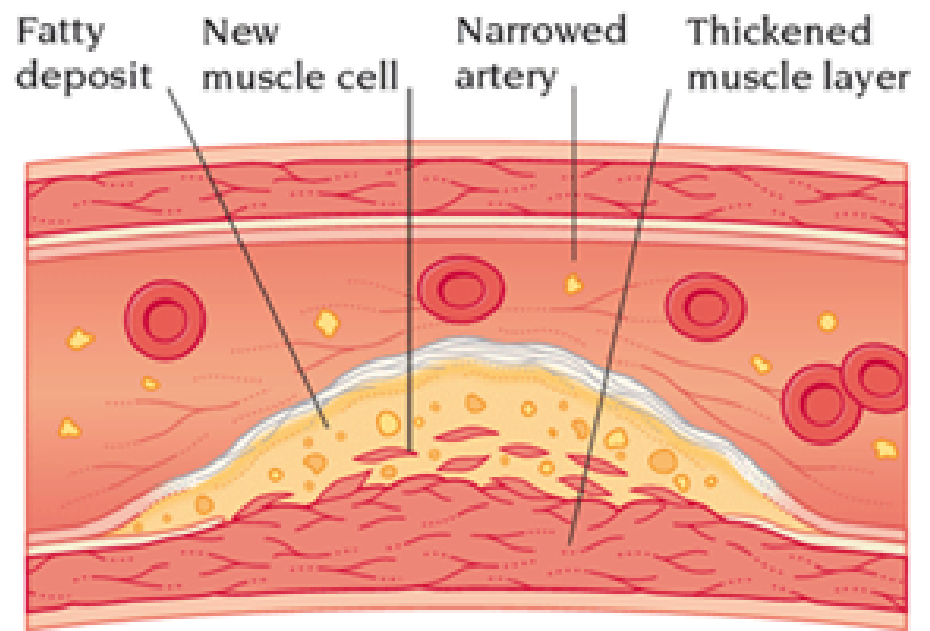


• Atherosclerosis - hardening of the arteries

ATHEROSCLEROSIS



EARLY ATHEROSCLEROSIS



ADVANCED ATHEROSCLEROSIS