

Basics of Blood Guided Notes- HAP

- _____ of Blood
 - Type of _____ tissue
 - Sticky
 - _____ than water
 - _____ content determines color
 - Temp. slightly _____ than rest of body
 - Males (_____), females (_____)
- Composition of Blood
 - _____:
 - _____ of total blood
 - Pale, _____ that surrounds cells
 - _____ water, _____ proteins, and _____ other
 - _____ Elements:
 - _____ of total blood
 - Cells and cell fragments
 - Erythrocytes, _____, thrombocytes
- Plasma _____:
 - _____:
 - _____ of plasma proteins
 - Helps maintain _____ balance
 - _____:
 - _____ of plasma proteins
 - Helps _____ system
 - _____:
 - _____ of plasma proteins
 - Aids in _____ formation
- Erythrocytes
 - Red blood cells (_____)
 - _____ with thick edges
 - Nucleus is _____ during development
 - Live for _____ days
 - Function: transport _____ to tissues
 - Hemoglobin
 - _____ of erythrocytes
 - Transports O₂
 - Each _____ protein is attached to a molecule
 - Each heme contains one _____ atom
 - _____ binds to iron
 - _____: hemoglobin with an O₂ attached
- _____ of Erythrocytes

- _____ blood O₂ levels cause kidneys to increase production of erythropoietin.
- _____ stimulates red bone marrow to produce more erythrocytes.
- Increased erythrocytes cause an _____ in blood O₂ levels.
- Fate of _____ Erythrocytes and Hemoglobin
 - Old rbc's are removed from blood by _____ in spleen and liver
 - _____ is broken down
 - _____ is broken down into amino acids
 - Hemoglobin's _____ is recycled
 - _____ is converted to bilirubin
 - Bilirubin is taken up by _____ and released into _____ as part of bile
- Leukocytes
 - White blood cells (_____)
 - _____ hemoglobin
 - _____ than erythrocytes
 - _____ a nucleus
 - Functions:
 - _____ infections
 - Remove _____ and debris by phagocytosis
- _____ of Leukocytes
 - _____ contain granules
 - _____: most common
 - Remain in blood for _____ then move to tissues
 - Phagocytes
 - _____: reduce inflammation
 - _____: least common
 - Release _____ and heparin
 - _____ no granules
 - _____: largest
 - Produce macrophages
 - _____:
 - Immune response
 - Several different types (_____)
 - Lead to _____ of antibodies
- Platelets
 - _____ cells
 - Produced in _____ marrow
- Hematopoiesis
 - _____ formation
 - In an infant, occurs in _____, and red bone marrow.

- Adults occurs mainly in _____.
- Blood Loss
 - When blood vessels are _____ blood can leak into other tissues and disrupt normal function.
 - Blood that is lost must be _____ by production of new blood or by a transfusion.
 - Preventing Blood Loss
 - _____: temporary constriction of blood vessel
 - _____: can seal up small breaks in blood vessels
 - Blood clotting (_____)
 - Blood can be transformed from a _____ to a gel
 - _____: network of thread-like proteins called that trap blood cells and fluid
 - Depends on clotting factors
 - _____: proteins in plasma
 - Only activated _____ injury
 - Made in liver
 - _____ vitamin K
- Steps in Clot Formation
 - Injury to a blood vessel causes inactive clotting factors to become activated due to exposed _____ or release of thromboplastin
 - _____ (clotting factor) is formed and acts upon prothrombin
 - Prothrombin is switched to its _____ thrombin
 - Thrombin activates _____ into its active form fibrin
 - Fibrin forms a _____ that traps blood (clots)
 - Control of Clot Formation
 - Clots need to be controlled so they don't spread throughout the body
 - _____:
 - Prevent clots from forming
 - Ex. _____ and antithrombin
 - Injury causes enough clotting factors to be activated that anticoagulants can't work in that _____ of the body
 - Clot retraction
 - _____ of clot
 - Serum in _____ is squeezed out of clot
 - Helps _____ healing
 - Fibrinolysis
 - Process of _____ clot
 - _____ (plasma protein) breaks down clot (fibrin)