Chapter 17 Review

*17.1  What does blood do?*

The functions of blood are transport, regulation, and protection

* List eight functions of blood.

17.2  *What is blood made of?*

Blood consists of plasma and formed elements

* Describe the composition and physical characteristics of whole blood.
  + 3 components of blood and what is contained in each
  + Relative density of each component
* Discuss the composition and functions of plasma.
  + 6 components of plasma and the role of albumin

17.3  *Erythrocytes*

Erythrocytes play a crucial role in oxygen and carbon dioxide transport

* Describe the structure and function of erythrocytes.
  + Importance of shape, inside components
  + How the structure helps with oxygen transport
* Describe the structure of hemoglobin.
  + # of globin chains, function of globins, function of heme
* Describe how erythrocytes are produced (hematopoiesis).
  + Location
  + 8 stages of transformation
  + What does the hormone EPO do

17.4 *Leukocytes*

Leukocytes defend the body

* List the classes, structural characteristics, and functions of leukocytes.
  + Granulocytes vs. agranulocytes, lobed vs. non-lobed nuclei, direct vs. indirect pathogen elimination,
  + Role of definsins in neutrophils and histamines in basophils
* Describe how leukocytes are produced.
  + 5 stages in granulocyte production
  + Differences between granulocyte & agranulocyte leukopoeisis

17.5  *Platelets*

Platelets are cell fragments that help stop bleeding

• Describe the structure and function of platelets.

17.6  *What happens when a blood vessel breaks?*

Hemostasis prevents blood loss

* Describe the process of hemostasis.
  + Describe the 3 steps
  + Difference between intrinsic & extrinsic pathways initiation (not individual steps)
  + Role of tissue factor, fibrinogen, and thrombin

17.7  *How do we replace blood in an emergency?*

Transfusion can replace lost blood

* Describe what determines ABO and Rh blood groups.
* Explain what type of blood each blood group can receive; what happens if the an individual gets the wrong blood type.