Objectives – 1

Pages 627-630, 634-635

At the end of lecture 1, the student should be able to:

1. Define the following:
	1. Hemostasis
	2. Coagulation
	3. Vasoconstriction
	4. Primary Hemostasis
	5. Hemorrhage
2. Identify and discuss the 4 phases of hemostasis.
3. Identify the vessel types that comprise the vascular system and compare and contrast their similarities and differences.
4. List and explain 3 functions of the vascular system.
5. List the two primary anatomical areas affected by vascular disorders.
6. Define/describe the 2 most common clinical findings in vascular disorders.

Lecture 1 Outline

1. Hemostasis Overview
	1. General
		1. Define Coagulation:
		2. Define Hemostasis:
	2. Phases of Hemostasis—4 Major
		1. Vasoconstriction:
		2. Platelet plug:
		3. Fibrin formation:
		4. Fibrinolysis and vessel repair:
	3. Stages of Hemostasis
		1. Primary hemostasis:
		2. Secondary hemostasis:

Response time

* + - * vasoconstriction- immediate
			* adhesion- 1-2 seconds
			* aggregation- 10-20 seconds
			* plug formation- 1-3 minutes
			* fibrin formation- 3-5 minutes
			* fibrin stabilization- 5-10 minutes
1. Vascular System
	1. General
		1. Capillaries:
		2. Venules:
		3. Veins:
		4. Arteries:
		5. Arterioles:
	2. Functions of the Vascular System (as related to hemostasis)
		1. Normally has anticoagulant properties
			* Smooth so that blood can flow right through
			* Act as a barrier to the subendothelium collagen
			* Secrete a substance called prostacyclin (potent inhibitor of agulance)
		2. Has procoagulant properties when damaged
			* Secretes a substance called Plasminogen Activator Inhibitor-1 (PAI-1)- regulates Tissue Plasminogen Activator (TPA) so that breakdown of clot is appropriate
			* Collagen🡪vWF🡪Platelet Plug
			* Secretes Tissue Factor (TF)
		3. Helps with fibrinolysis
			* How?
	3. Vascular Disorders/Vessel Problems
		1. Petechiae:
		2. Purpura:
		3. Hemorrhage:
	4. Vessel Structure



Tunica Intima:

Tunica Media:

Tunica Adventitia: