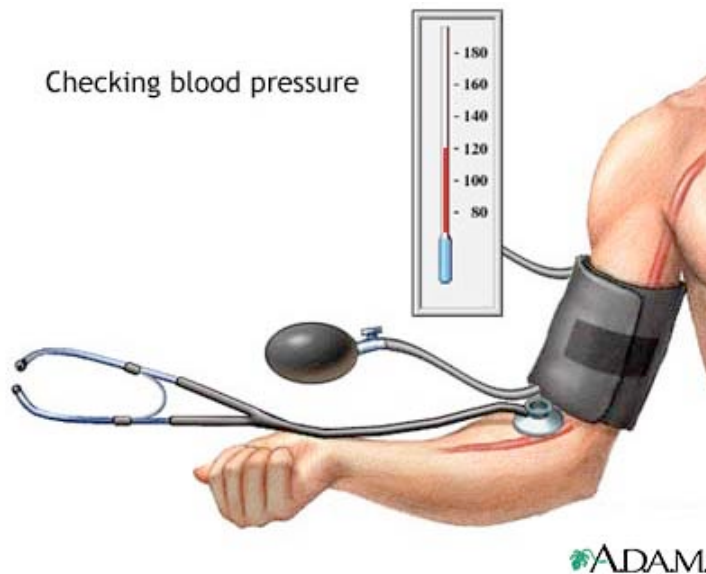


Blood Pressure and Blood Flow

A. Hydrostatic Pressure

1. Definition - Pressure exerted by the blood on the vessel walls
 - a. Systolic Pressure
 - b. Diastolic Pressure



http://www.healthcentral.com/common/images/8/8693_3936_5.jpg

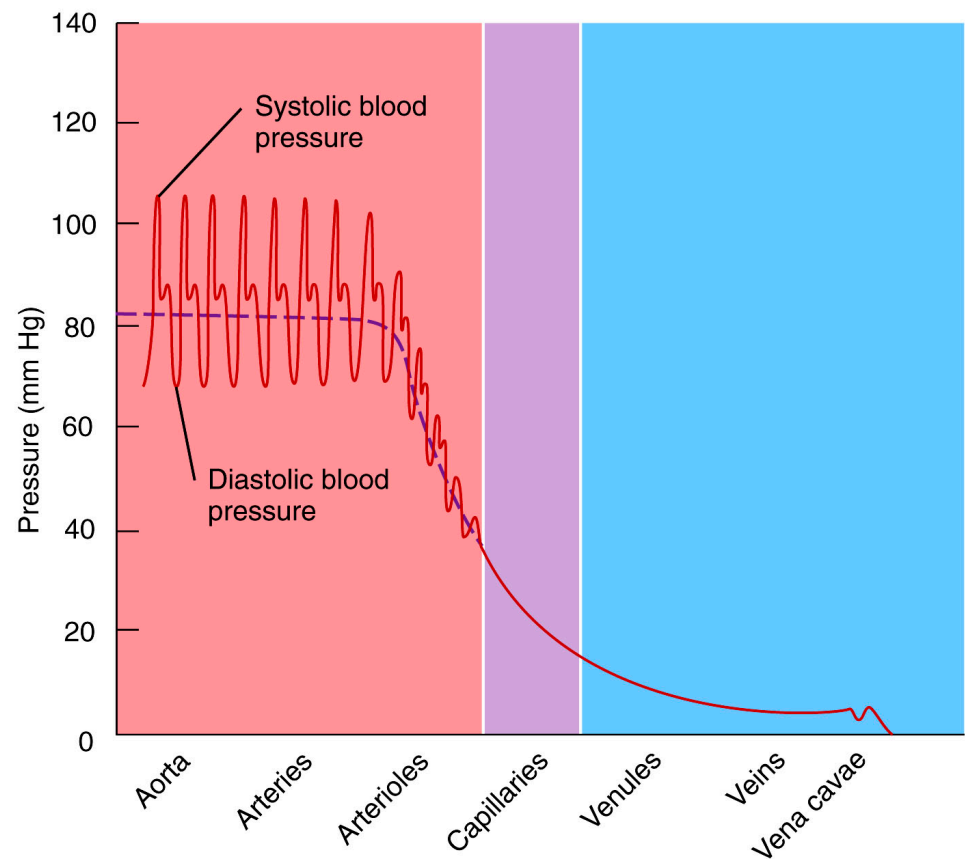
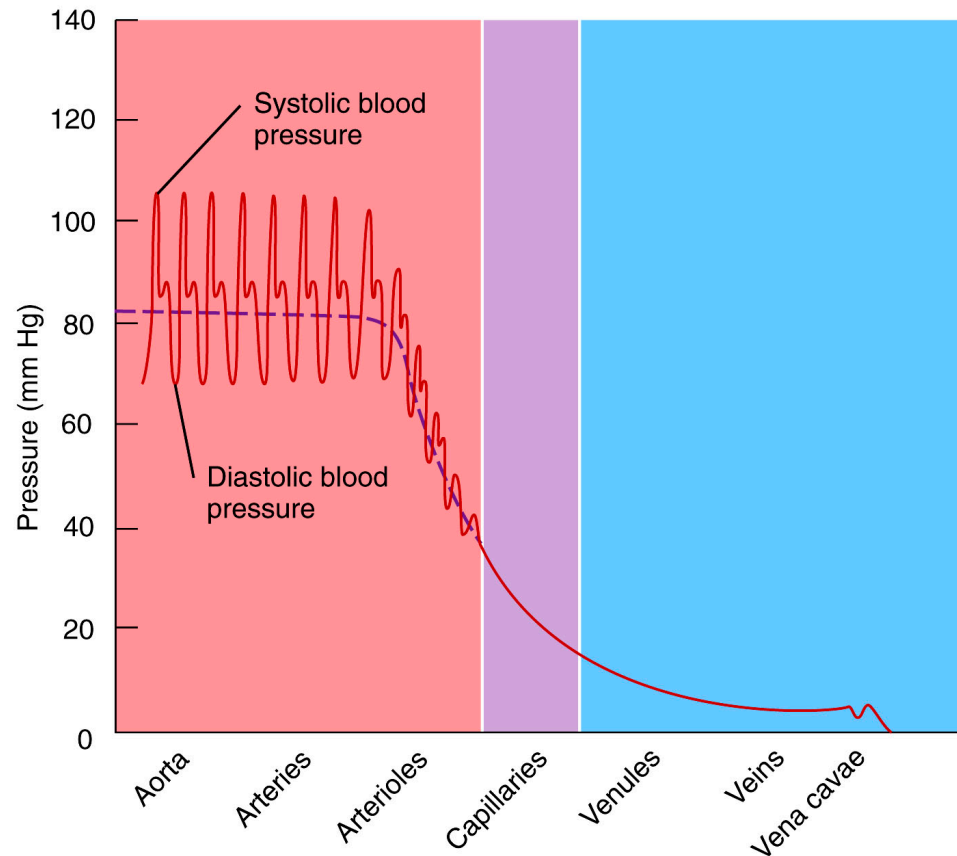


Figure 21.08 Tortora - PAP 12/e
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Blood Pressure and Blood Flow

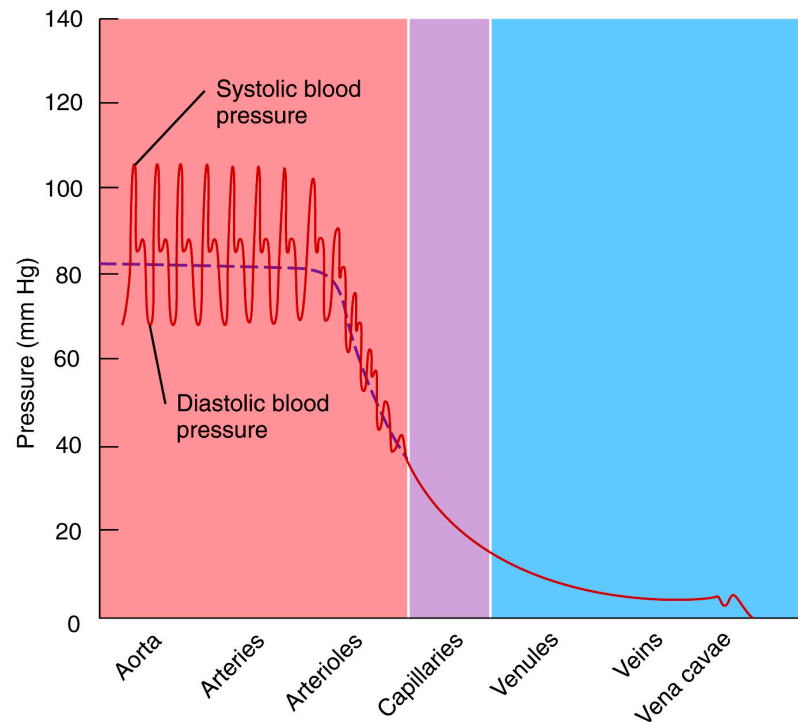
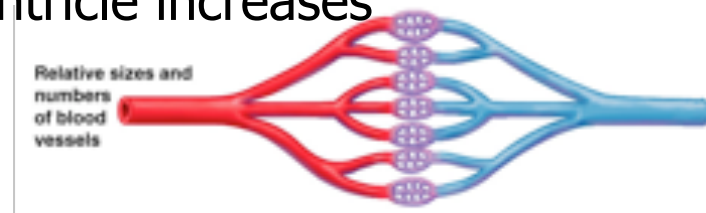
- A. Hydrostatic Pressure
 - 2. Factors that influence blood pressure
 - a. Cardiac output (ml/min)
 - b. Blood volume
 - c. Vascular Resistance



Blood Pressure and Blood Flow

A. Hydrostatic Pressure

3. Hydrostatic Pressure decreases as the distance away from the left ventricle increases



Blood Pressure and Blood Flow

B. Blood flow

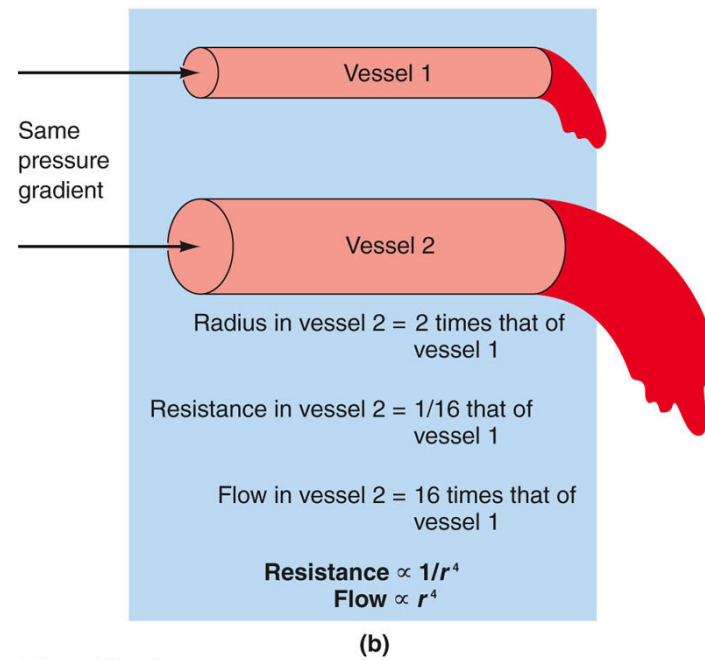
1. Definition (ml/min)
2. = Cardiac output
3. Distribution of flow depends on
 - a. ΔP
 - b. Resistance to flow

$$R \propto \frac{\eta L}{r^4}$$

η = viscosity

L = length

r = radius of vessel



Blood Pressure and Blood Flow

B. Blood flow

- Resistance increases as blood passes from arteries, to arterioles, to capillaries
- What do you think this does to flow rates through the capillaries?
- Why is this advantageous?

$$R \propto \frac{\eta L}{r^4}$$

η = viscosity

L = length

r = radius of vessel

