

CARDIOVASCULAR SYSTEM

Blood Vessels

In the heart, the stroke volume remains relatively _____. According to Starlings Law, the more a cardiac muscle is _____ the stronger the _____ . If you want to change the cardiac output you must change the _____ .

REGULATION OF HEART RATE

Increase the heart rate

- Sympathetic Nervous System

-

-

- Hormones

-

-

-

-

Decrease the heart rate

-

-

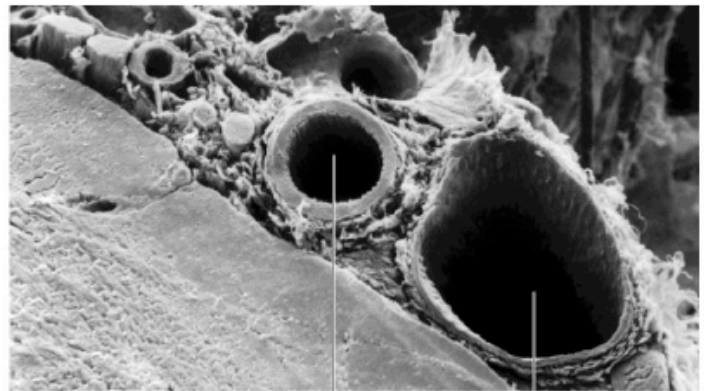
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BLOOD VESSELS



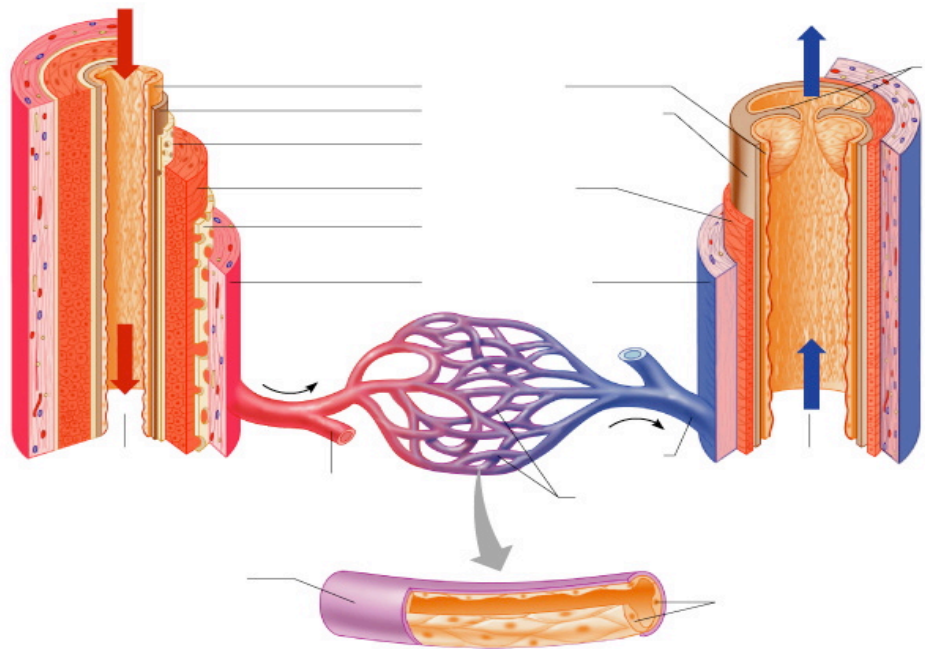
(a)

Artery

Vein

THREE LAYERS (TUNICS)

- Tunica intima
 -
- Tunica media
 -
 -
- Tunica externa
 -



DIFFERENCES BETWEEN BLOOD VESSELS

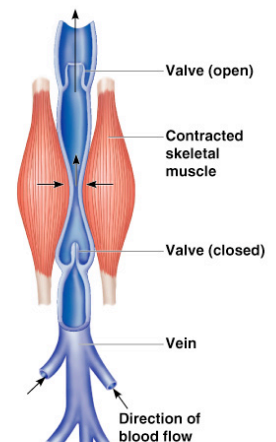
The walls of the arteries are composed of _____ muscle to help move _____.

The skeletal muscles help “_____” the blood of the _____ back to the heart.

The walls of the capillaries are only _____ cell thick so there can be exchange between the blood and the tissues.

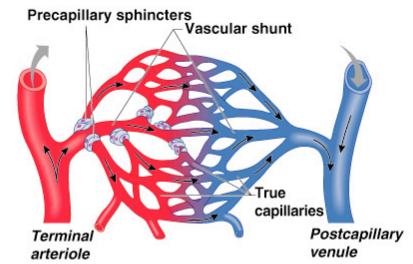
Most of the arterial blood is pumped by the _____

_____ prevent backflow in the veins.

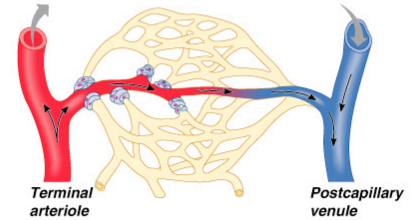


Capillary beds allow for easy exchange between the _____ and the _____.

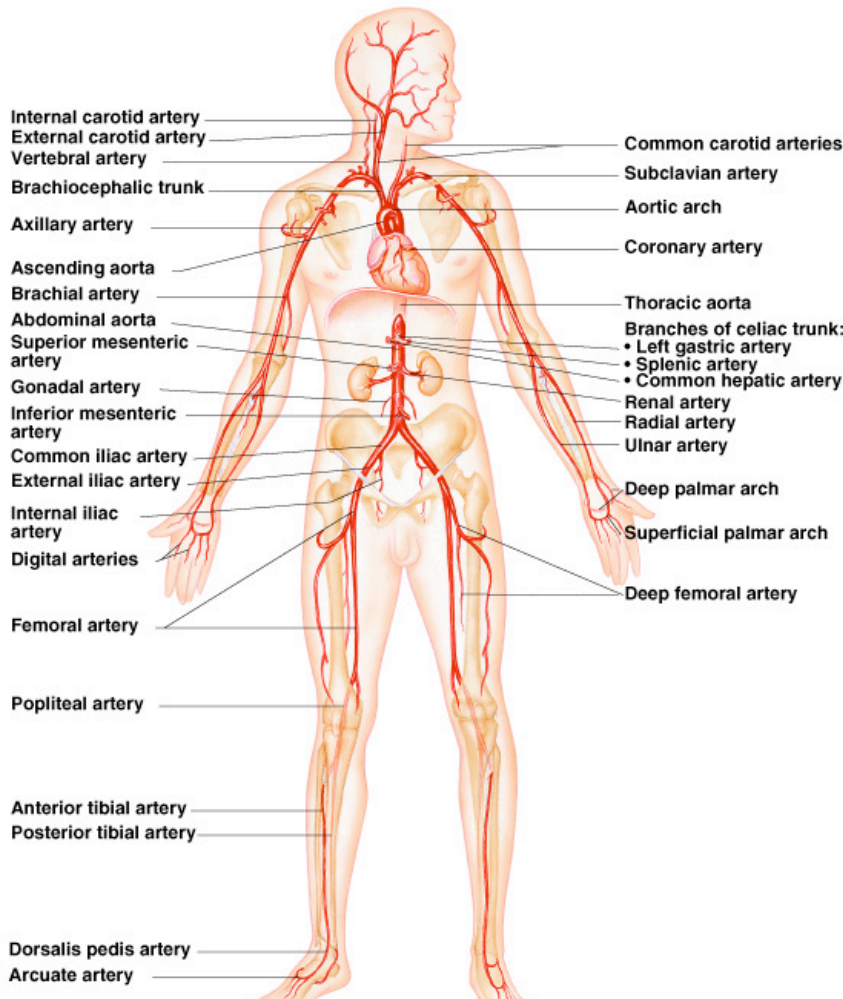
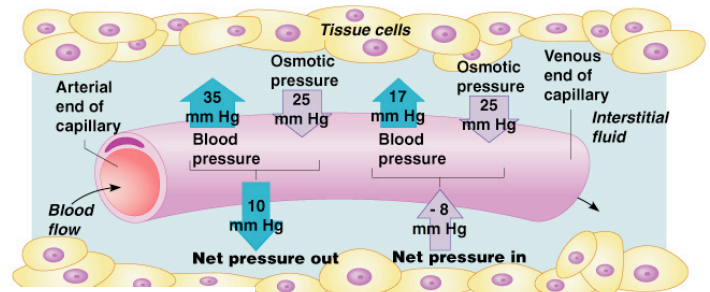
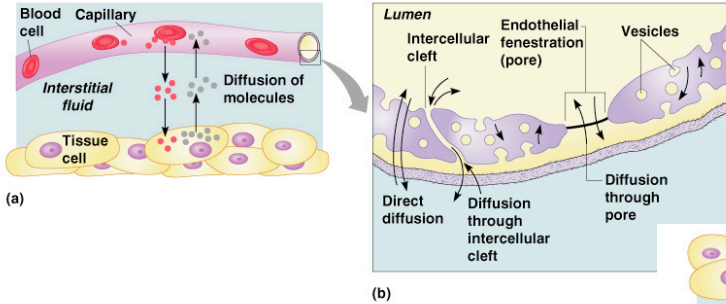
Oxygen and nutrients will pass into the _____ while wastes and carbon dioxide will pass from the cell into the _____.

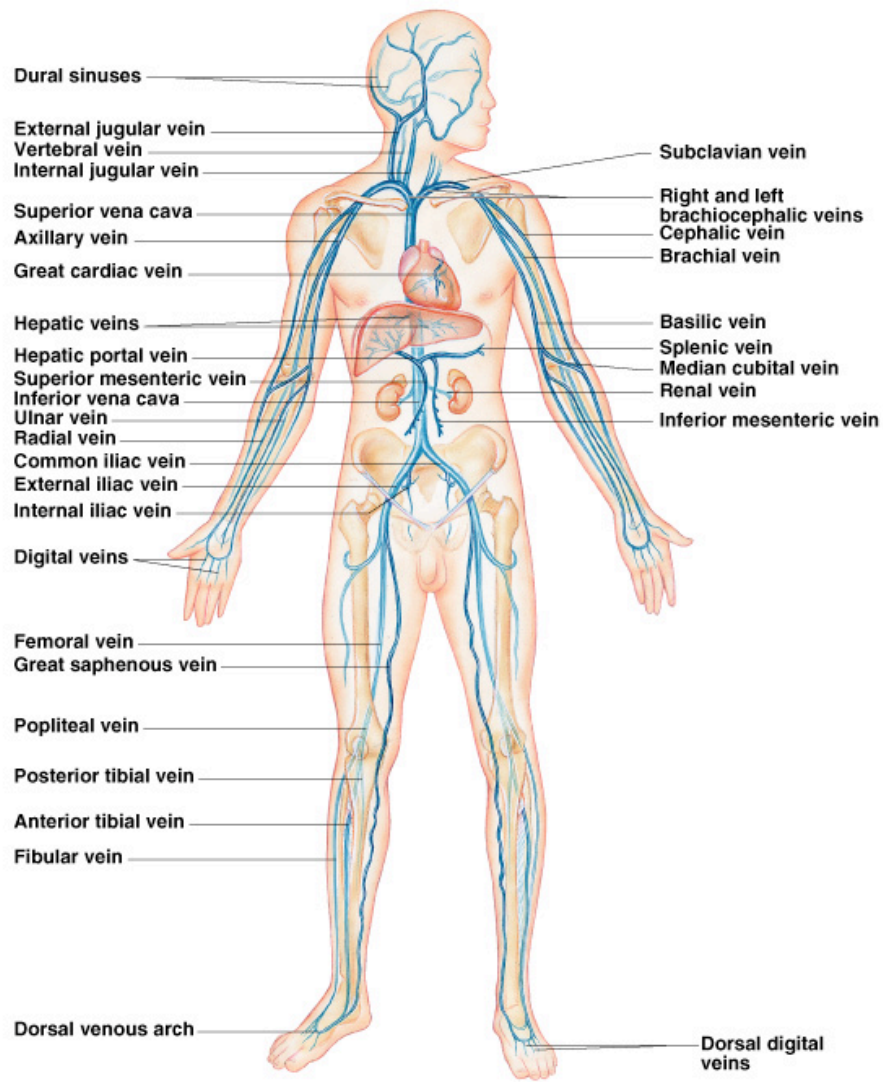


(a) Sphincters open



(b) Sphincters closed

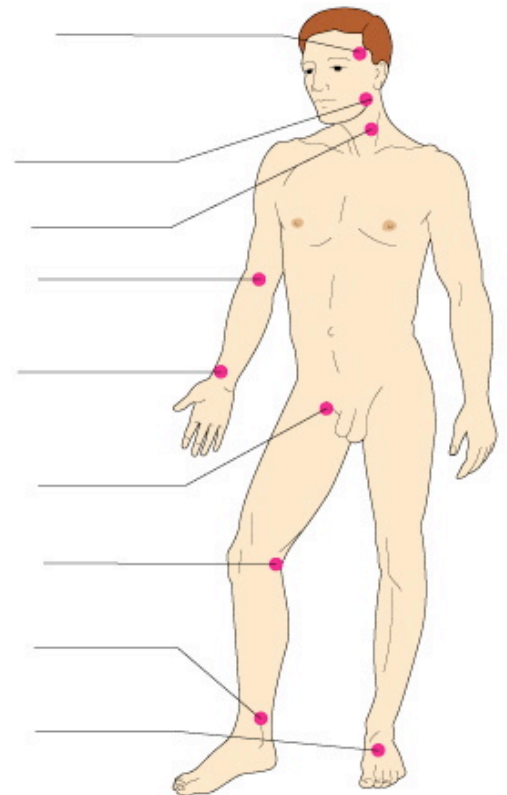




Pulse is the pressure wave of the

Measure at “_____”

where pulse is easily palpated. The average number of heartbeats per minute is

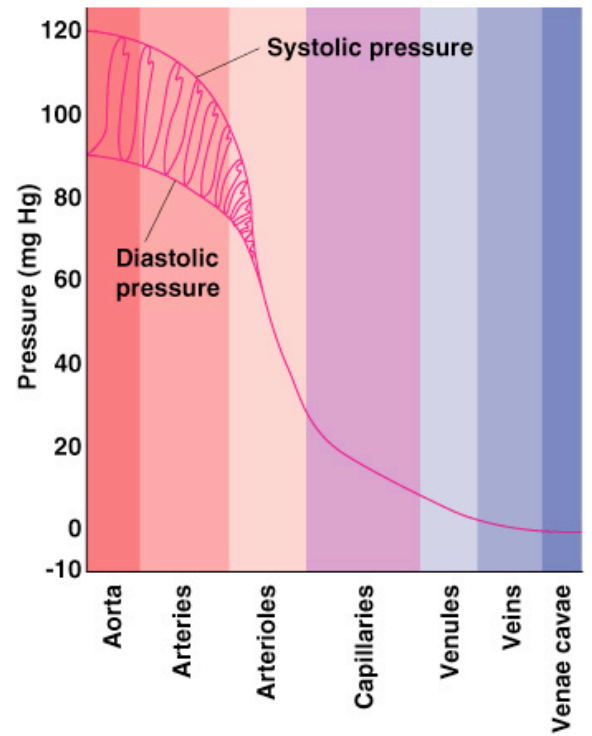
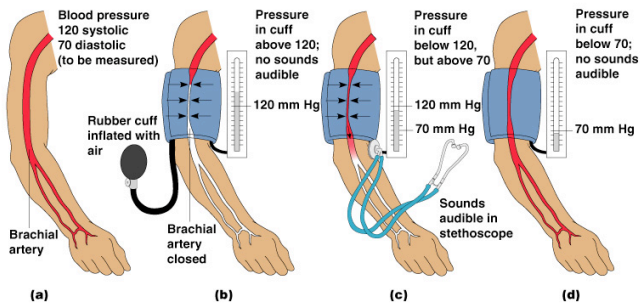


Blood Pressure is a measurement made by health professionals on the large _____

Systolic

Diastolic

What happens to the pressure as the distance from the heart increases?



FACTORS AFFECTING BLOOD PRESSURE

Neural Factors

-

Renal Factors

-
-

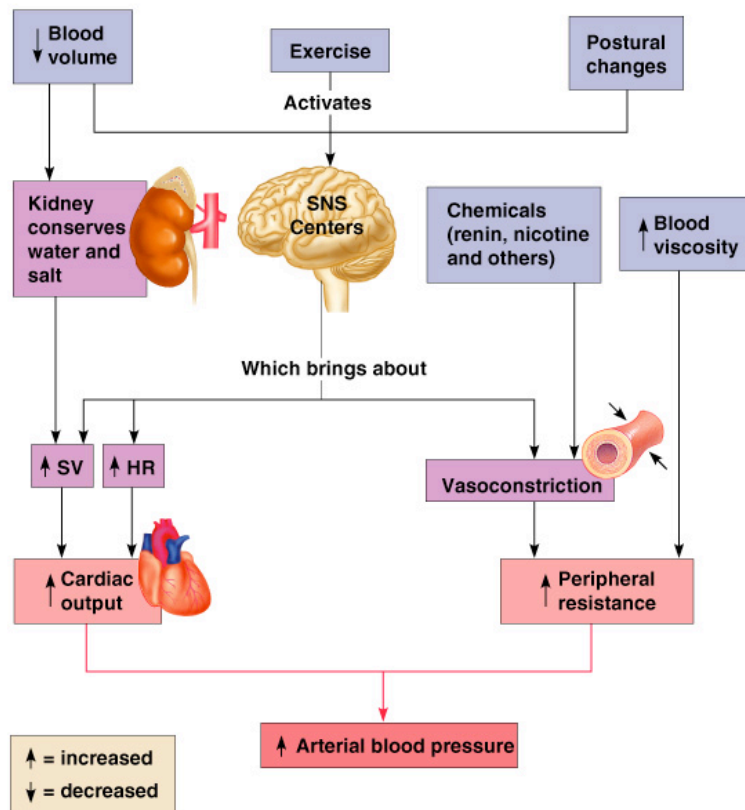
Temperature

-
-

Chemicals

-

Diet



VARIATIONS IN BLOOD PRESSURE

Normal

-
-

Hypotension

-
-

Hypertension

-
-

DEVELOPMENTAL ASPECTS

A simple tube forms and is ready to pump by the ____ week.

The heart becomes a four-chambered organ by the end of the ____ week.

There are very few structural differences after the ____ week.

