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
  o
  o

• Hormones
  o
  o

Decrease the heart rate

•
  •
  •

BLOOD VESSELS

•
  •
  •
THREE LAYERS (TUNICS)

- Tunica intima
  - 

- Tunica media
  - 
  - 

- Tunic 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 ____________.
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.