Notes: Blood Vessels & Blood Pressure

# Blood Vessels

The various blood vessels in the body are divided into 3 main categories:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Arteries**

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood vessels in the body
* Carry blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They have very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to withstand the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the blood flowing in them
* Small arteries are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Veins**

* Veins carry blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to keep the blood moving forward to the heart
  + Veins have \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to prevent blood from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Ex: blood in the legs would have tendency to flow down because of gravity but it needs to be pushed back up towards the heart
* Small veins are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Capillaries**

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood vessels
  + They are so \_\_\_\_\_\_\_\_\_\_\_\_\_\_that red blood cells can only pass through them in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!
* They have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (only 1 layer of cells)
  + This allows for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of substances between the blood and other cells (remember \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
    - Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Blood Pressure

* To circulate throughout your body, the heart \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the blood
  + For the blood to be able to make it all the way to the tips of your toes and fingers it needs to be pumped with a lot of \_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Which blood vessel has the highest pressure?**

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + It’s the blood vessel that leads from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, so it makes sense that the pressure is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ there

**Which blood vessel has the lowest pressure?**

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + It’s the blood vessel that is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the blood flows through from the body before making it back to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_, so it makes sense that it has the \_\_\_\_\_\_\_\_\_\_\_\_\_\_pressure

## Measuring Blood Pressure

* When you get a blood pressure reading there’s always two numbers
  + It’s a ratio between the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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* We measure blood pressure using a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + It’s an inflatable cuff that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the circulation in your arm
  + When the pressure drops, you can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood forcing through the artery with a stethoscope (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
  + When you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, it means blood is flowing easily with no resistance in the arteries (\_\_\_\_\_\_\_\_\_\_\_\_\_)

**What can affect your blood pressure?**

**Volume of blood**

* More blood = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Heart Rate** (a bit)

**Diameter of arteries**

* Smaller diameter = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Loss of elasticity of arteries**

* Loss of elasticity = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Viscosity of blood**

* More viscous = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Hypertension

**High Blood Pressure = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

High blood pressure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They can become \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and prevent proper blood flow or even \_\_\_\_\_\_\_\_\_\_\_\_! This can increase risk of:

* + - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Smoking causes high blood pressure**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood
* \_\_\_\_\_\_\_\_\_\_\_\_\_up the heart
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the blood vessels
* Over time, causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of arteries

**Stress causes high blood pressure**

* Stimulates adrenal gland which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood vessels