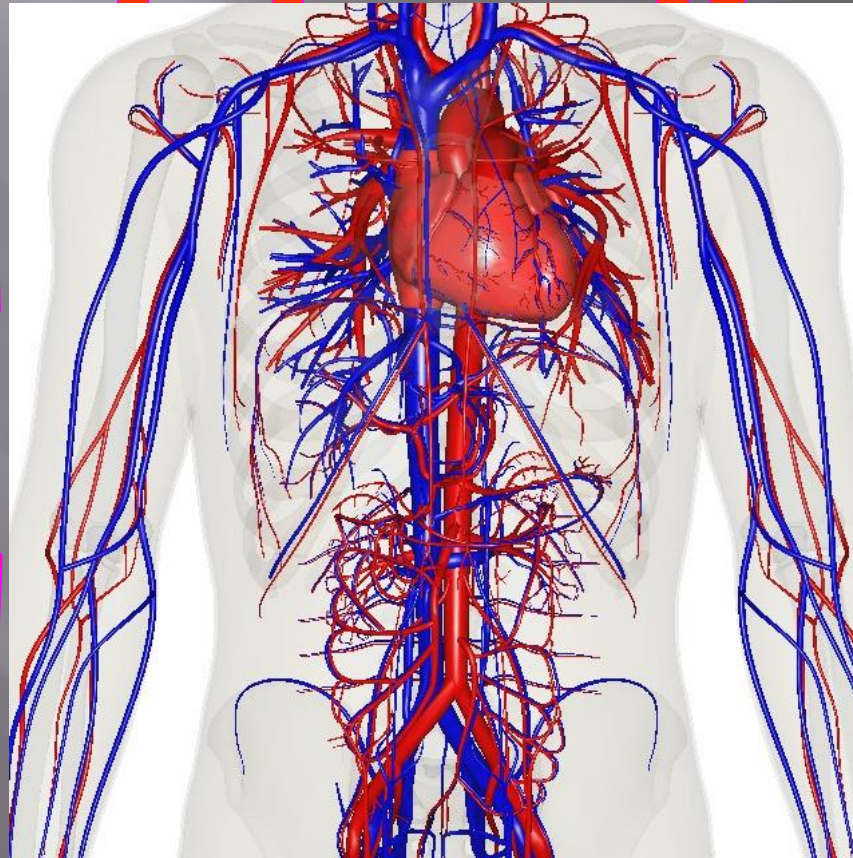


CIRC



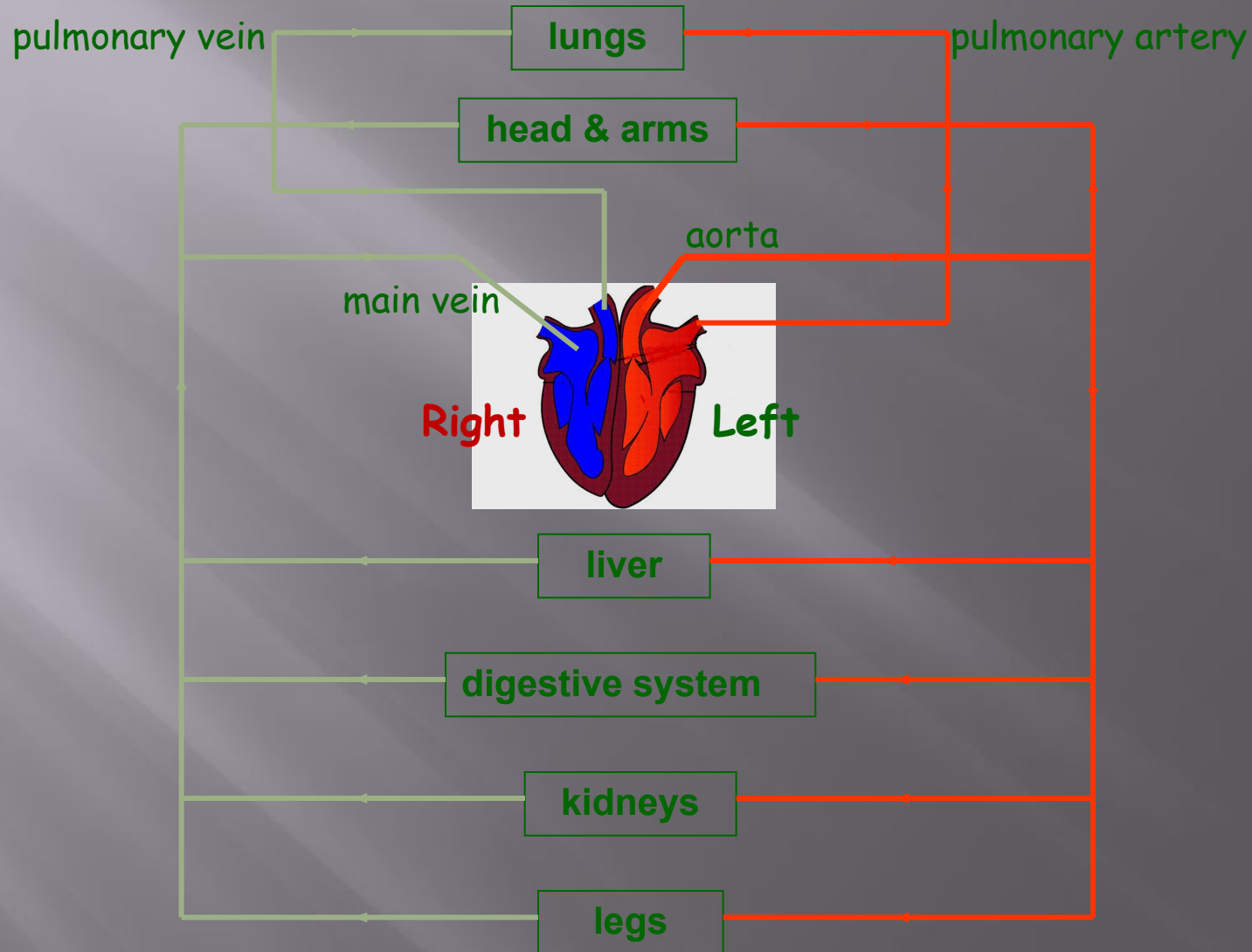
SYSTEM

By Shevchenko Taras  
m.II-25

# What is the circulatory system?

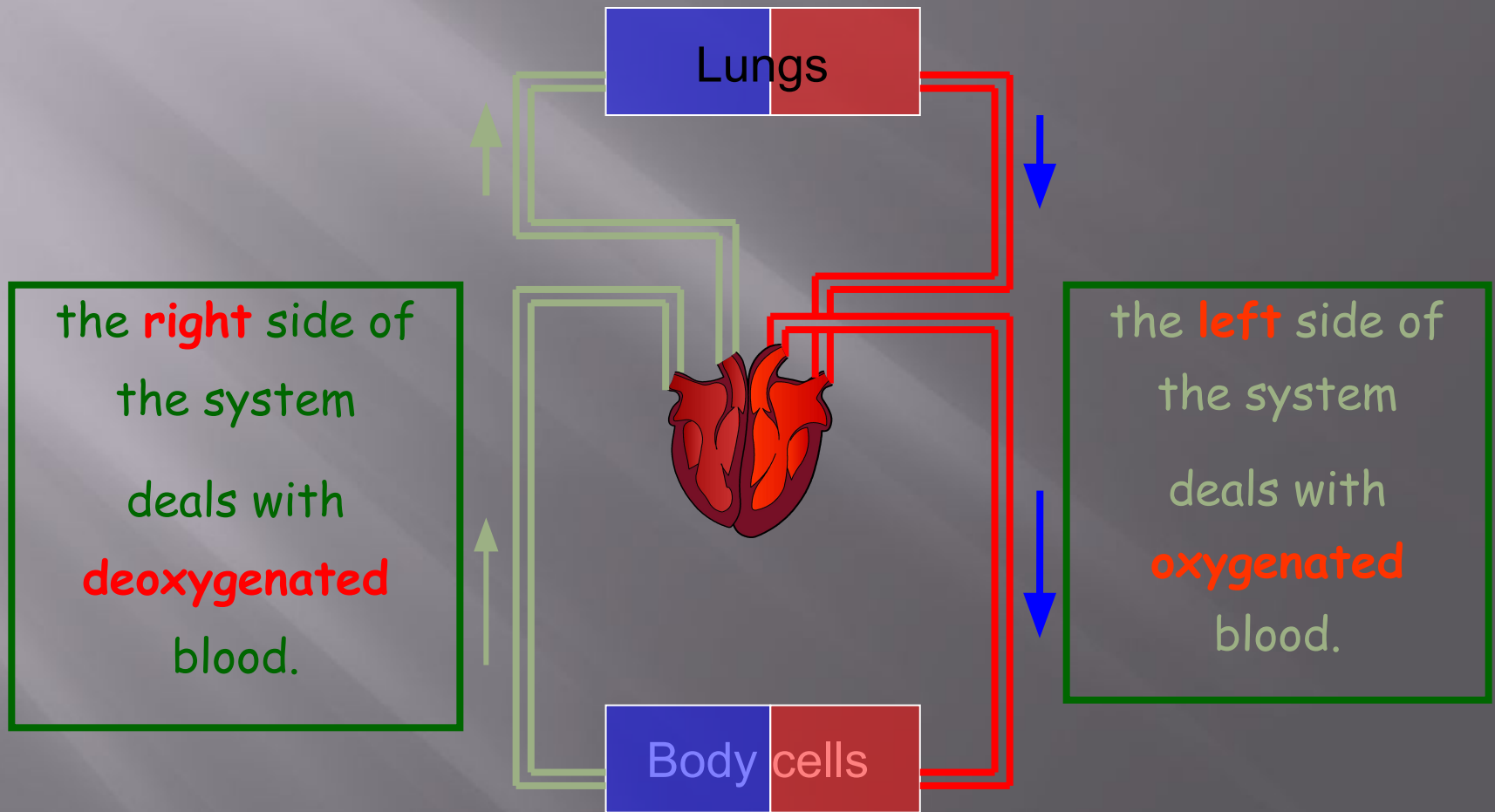
- The circulatory system carries blood and dissolved substances to and from different places in the body.
- The Heart has the job of pumping these things around the body.
- The Heart pumps blood and substances around the body in tubes called blood vessels.
- The Heart and blood vessels together make up the **Circulatory System**.

# How does this system work?



**Circulatory System**

Our circulatory system is a double circulatory system.  
This means it has two parts.



# The Heart

This is a **vein**. It brings blood from the body, except the lungs.

These are **arteries**. They carry blood away from the heart.

2 atria

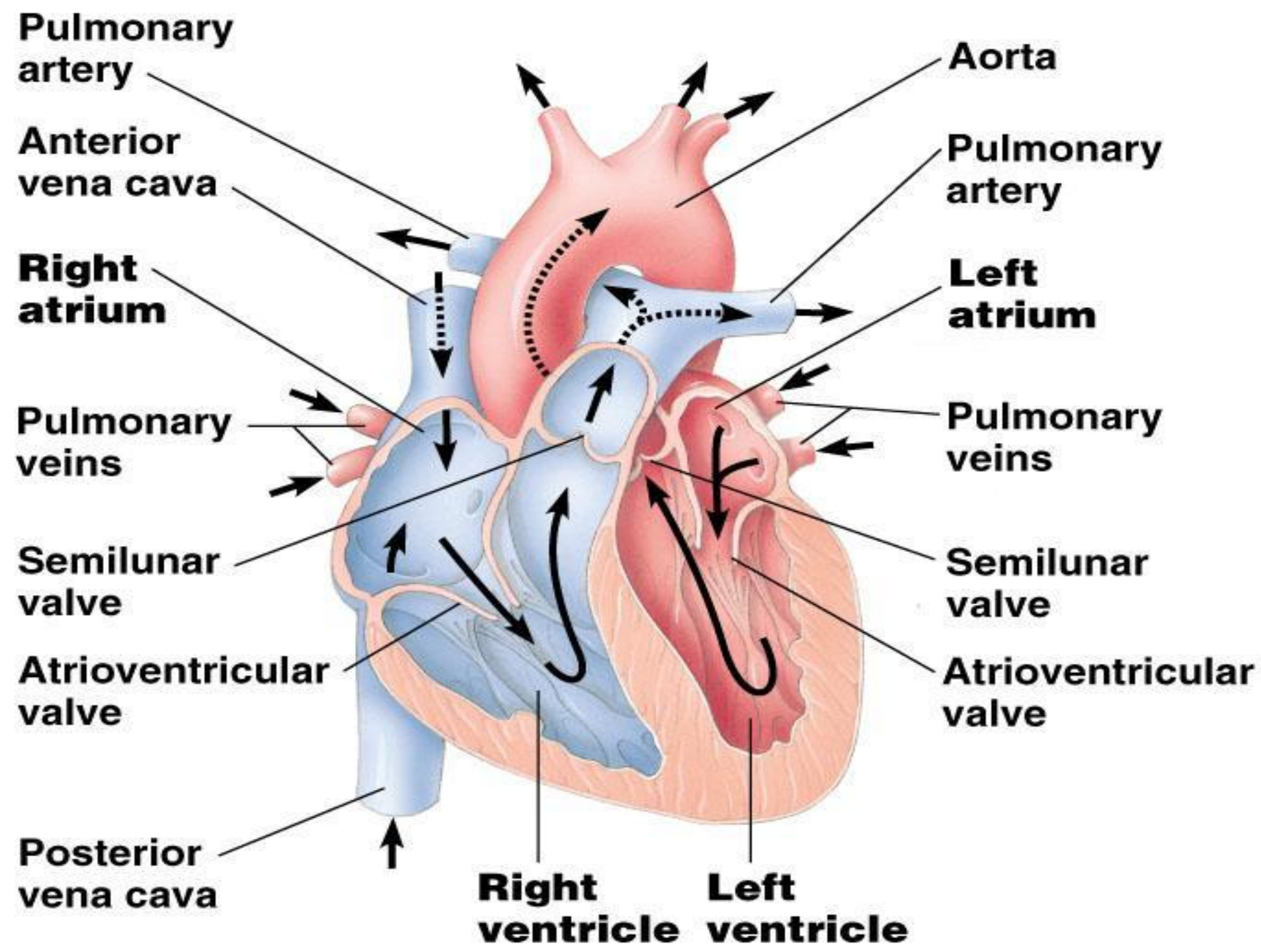
2 ventricles

Coronary arteries, the hearts own blood supply

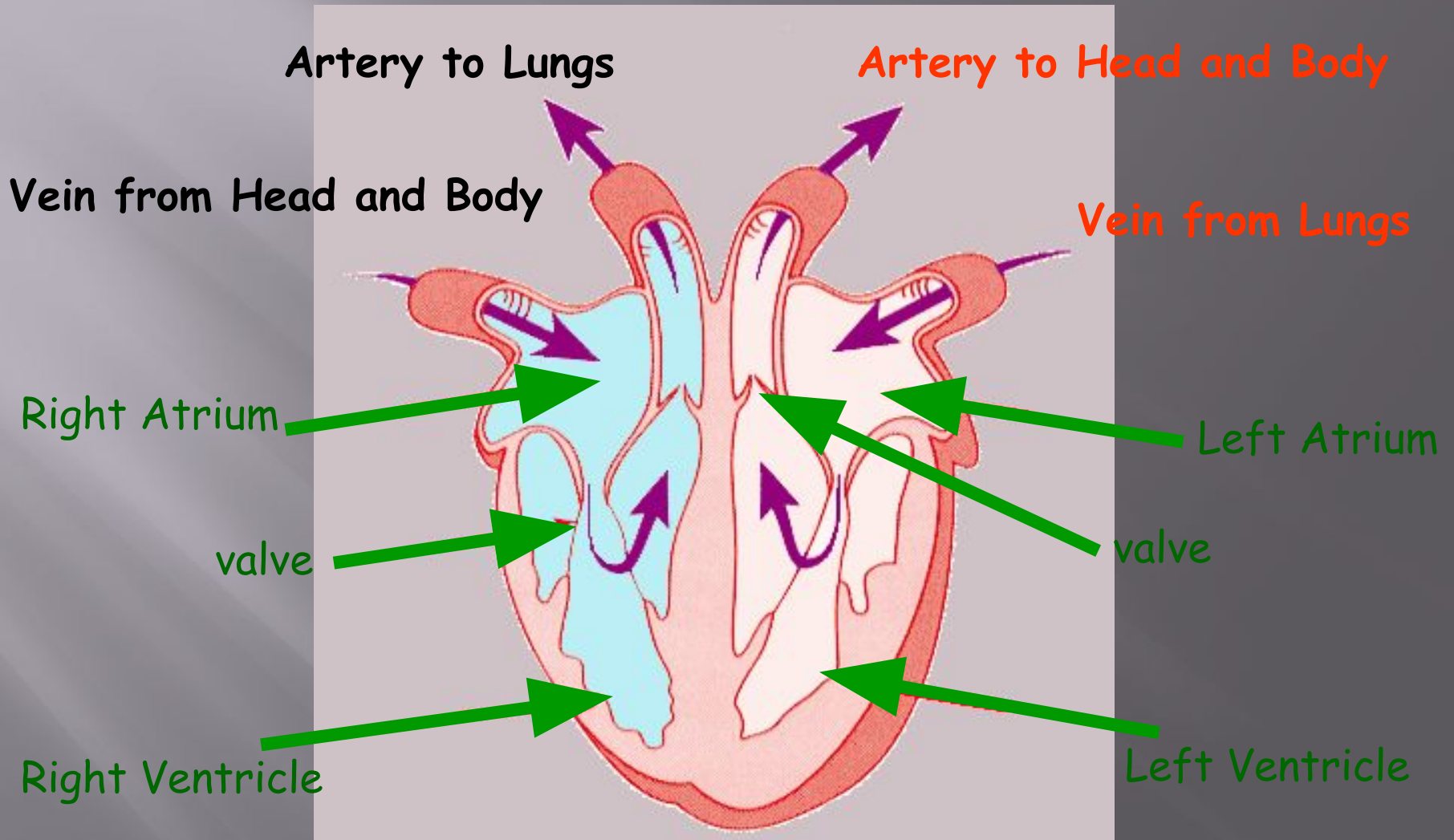


The heart has four chambers

now lets look inside the heart



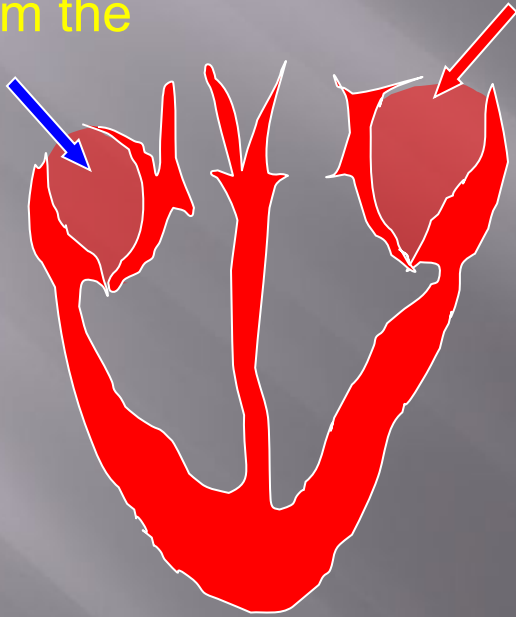
# The Heart



# How does the Heart work?

## STEP ONE

blood from the  
body



blood from  
the lungs

The heart beat begins when the heart muscles relax and blood flows into the atria.



# How does the Heart work?

## STEP TWO

The atria then **contract** and the valves **open** to allow blood into the ventricles.



# How does the Heart work?

## STEP THREE



The valves **close** to stop blood flowing backwards.

The ventricles **contract** forcing the blood to leave the heart.

At the same time, the atria are **relaxing** and once again filling with blood.

The cycle then repeats itself.

blood from the heart gets around  
the body through blood vessels

There are 3 types of blood vessels

- a. **ARTERY**
- b. **VEIN**
- c. **CAPILLARY**

what's in

digested food

red blood cells

white blood cells

oxygen

waste (urea)

**BLOOD**

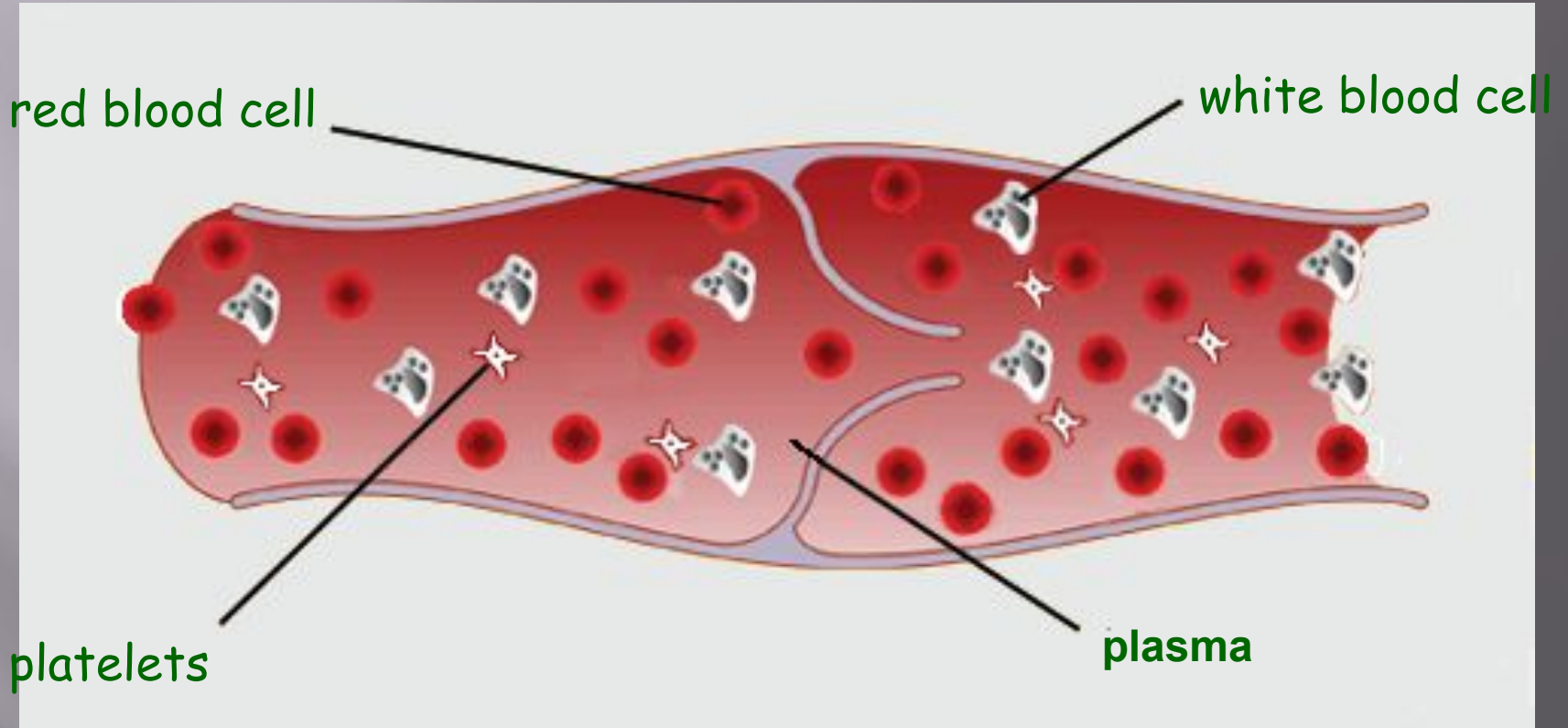
carbon dioxide

platelets

plasma

hormones

# The Blood



# Red Blood Cells

a biconcave disc that is round and flat **without a nucleus**

contain **haemoglobin**, a molecule specially designed to hold oxygen and carry it to cells that need it.



can **change shape** to an amazing extent, without breaking.

# White Blood Cells



there are many different types and all contain a **big nucleus**.

the two main ones are the **lymphocytes** and the **macrophages**.

**macrophages** 'eat' and **digest** micro-organisms .

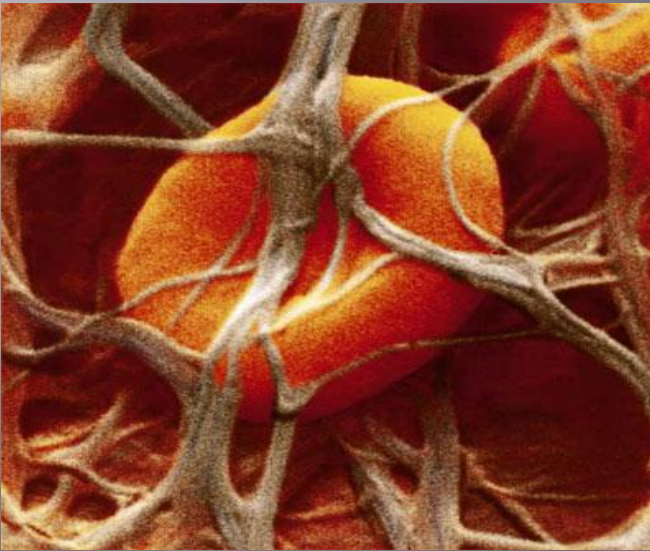
some **lymphocytes** fight disease by making **antibodies**.  
other **lymphocytes** make **antitoxins** to break down poisons.

# Platelets

**Platelets** are bits of cell broken off larger cells.



Platelets produce tiny **fibrinogen fibres** to form a net. This net traps other blood cells to form a **blood clot**.





Thank you for  
attention !