Biology 20

Unit D: Human body systems

The heart and its circuits

Image left is the person’s right

- The blue side of the drawing is labelled person’s right.
- That side sends blood toward the lungs, and the red side sends blood toward the body.

Two pumps in one organ

- The right ventricle feeds the pulmonary circuit to the lungs.
- The left ventricle feeds the systemic circuit to the body.
- Arteries leave the heart, and veins return blood to it.

Key terms

pulmonary circuit

The path that carries blood from the right ventricle to the lungs and back to the left atrium.

systemic circuit

The path that carries blood from the left ventricle through the body and back to the right atrium.

artery

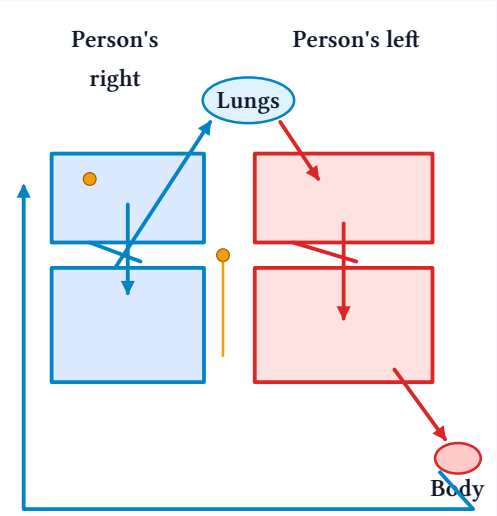
A vessel that carries blood away from the heart, usually under higher pressure.

sinoatrial node

The patch of tissue in the right atrium that starts each heartbeat.

Blood travels two circuits

- Body blood enters the right atrium on the image-left side.
- The right ventricle sends that blood up to the lungs.
- The left ventricle sends high-oxygen blood out to the body.



Blue: low oxygen, toward the lungs

Red: high oxygen, toward the body

Vessel names by direction

- The aorta is an artery leaving the left ventricle.
- The venae cavae are veins entering the right atrium.

Pulse after exercise

- Heart rate rises during the climb.
- The recovery minutes show it settling toward the quiet value.

Two circuits

- Trace the pulmonary circuit from the right ventricle.
- Name the systemic exit and one artery-versus-vein difference.

The fluid in the vessels has parts

- Plasma and cells do the carrying inside these circuits.
- Capillaries are where the exchange with organs happens.