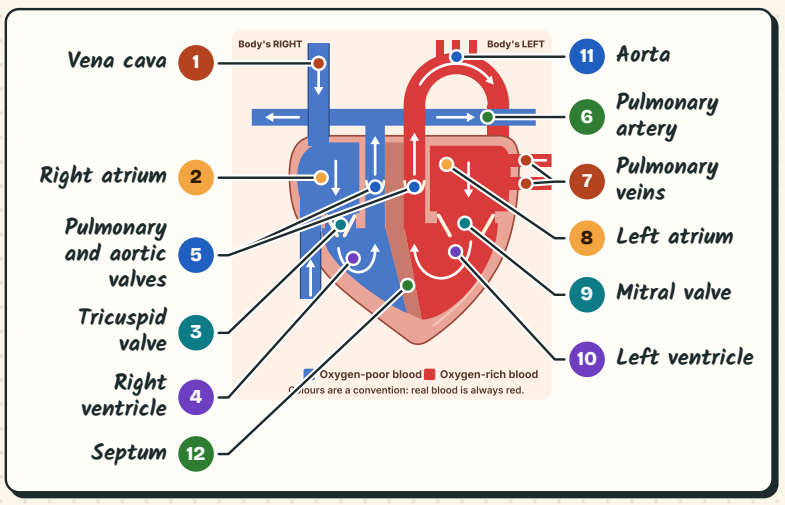
THE HUMAN HEART · PART 1 OF 8 · AGES 11–16

The Human Heart Explained

A muscular pump about the size of your fist, with four chambers, four one-way valves and the big blood vessels that link it to your lungs and body.



1 Vena cava

Two large veins, the superior and inferior vena cava, bring oxygen-poor blood back from the body into the right atrium.

2 Right atrium

Upper right chamber. It collects oxygen-poor blood from the body and passes it down into the right ventricle.

3 Tricuspid valve

One-way valve between the right atrium and right ventricle. Its flaps shut when the ventricle squeezes, so blood cannot flow back.

4 Right ventricle

Lower right chamber. It pumps oxygen-poor blood out through the pulmonary artery to the lungs.

5 Pulmonary and aortic valves

Valves at the exits of the two ventricles. The pulmonary valve opens into the pulmonary artery and the aortic valve into the aorta.

6 Pulmonary artery

Splits in two to carry blood from the right ventricle to both lungs. Unusually for an artery, it carries oxygen-poor blood.

7 Pulmonary veins

Four veins that bring oxygen-rich blood back from the lungs into the left atrium. Unusually for veins, their blood is rich in oxygen.

8 Left atrium

Upper left chamber. It receives oxygen-rich blood from the lungs and passes it down into the left ventricle.

9 Mitral valve

One-way valve between the left atrium and left ventricle. It has two flaps, so it is also called the bicuspid valve.

10 Left ventricle

The largest and strongest chamber. Its thick muscular wall pumps oxygen-rich blood into the aorta and around the whole body.

11 Aorta

The body's main artery. It arches over the top of the heart and carries oxygen-rich blood from the left ventricle to the body.

12 Septum

A wall of muscle dividing the right side of the heart from the left, so oxygen-poor and oxygen-rich blood never mix.

How to read a heart diagram

Heart diagrams are drawn as if you are facing the person, so the heart's right side appears on your left. Blue and red are only a convention for oxygen-poor and oxygen-rich blood: real blood is always red.

NEXT IN THE SERIES
2. How Blood Flows Through the Heart

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