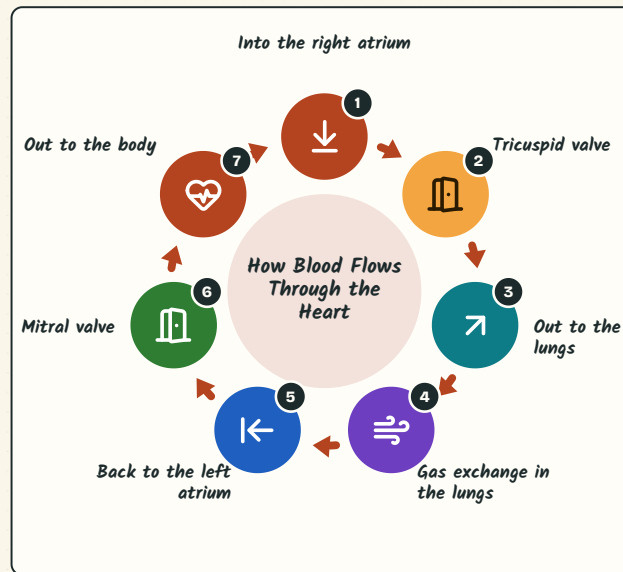


How Blood Flows Through the Heart

Seven steps that take one drop of blood from the body to the lungs, back to the heart and out again.



1 Into the right atrium

Oxygen-poor blood from the body flows in through the superior and inferior vena cava and fills the right atrium.

2 Tricuspid valve

The right atrium squeezes and pushes blood through the open tricuspid valve into the right ventricle.

3 Out to the lungs

The right ventricle contracts. The tricuspid valve shuts and blood is forced through the pulmonary valve into the pulmonary artery.

4 Gas exchange in the lungs

In tiny capillaries around the air sacs, the blood gives up carbon dioxide and picks up oxygen. It is now oxygen-rich.

5 Back to the left atrium

Oxygen-rich blood returns from the lungs through the pulmonary veins and fills the left atrium.

6 Mitral valve

The left atrium squeezes and pushes blood through the open mitral valve into the left ventricle.

7 Out to the body

The thick left ventricle contracts hard. The mitral valve shuts and blood surges through the aortic valve into the aorta, then on round the body and back to the vena cava.

i One beat, two journeys

The two sides work at the same time: both atria contract together, then both ventricles. So every beat sends blood to the lungs (steps 1–3) and to the body (steps 5–7) at once.

NEXT IN THE SERIES

3. The Heart by the Numbers