

The way in which the blood circulates through the human body is basic to any understanding of how we function.

The ancient Greeks thought that the liver produces blood and that the blood was filled with 'natural spirit' when it came into contact with food in the liver. They did recognize, however, that the heart played an important role in pumping the blood around the body.

The great Greek physician, Galen, who worked in the second century CE, tried to explain how the blood is pumped around the body by suggesting that the venous and arterial systems are separate but that blood seeps through invisible pores from the right to the left side of the heart, where it comes in contact with air.

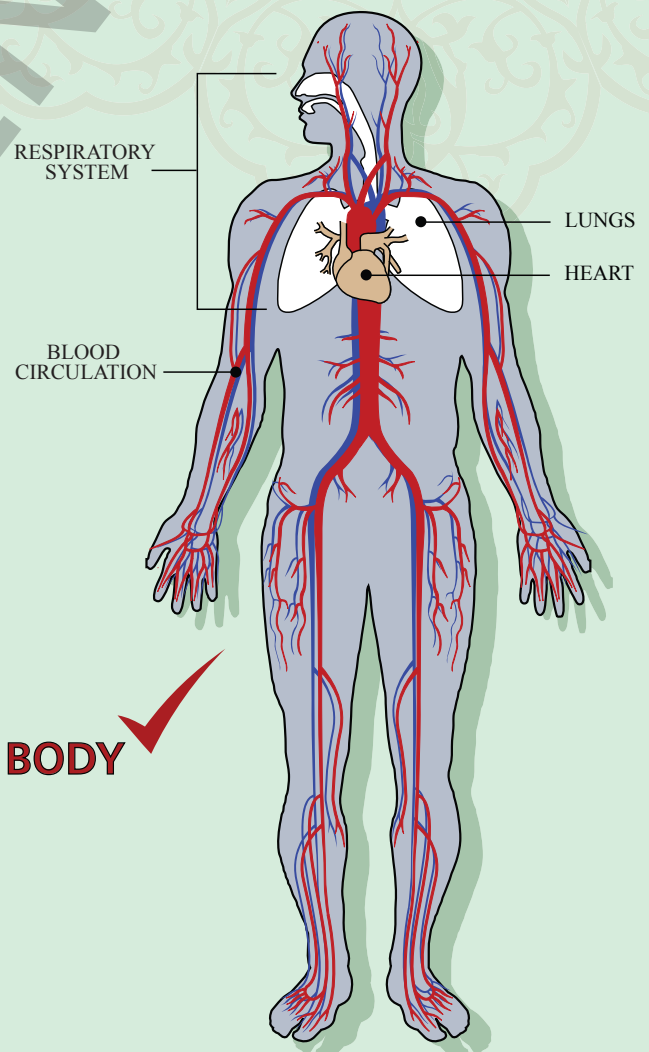
We now know that Galen was wrong and that there is not a single blood circulation system:

**HEART** → **BODY** → **HEART** ✗

but a double circulation system:

**HEART** → **LUNGS** → **HEART** → **BODY** ✓

The heart is the main blood pump, but it first pumps the blood to the lungs, where it is aerated, then back to the heart, and, after that, to the rest of the body. The blood returns to the heart via the venous system.



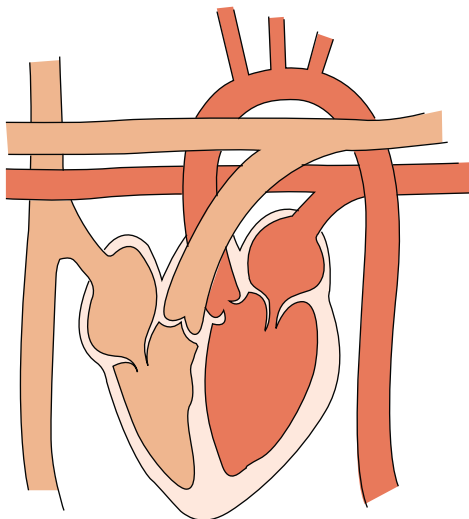


ABLE  
TO  
LABEL

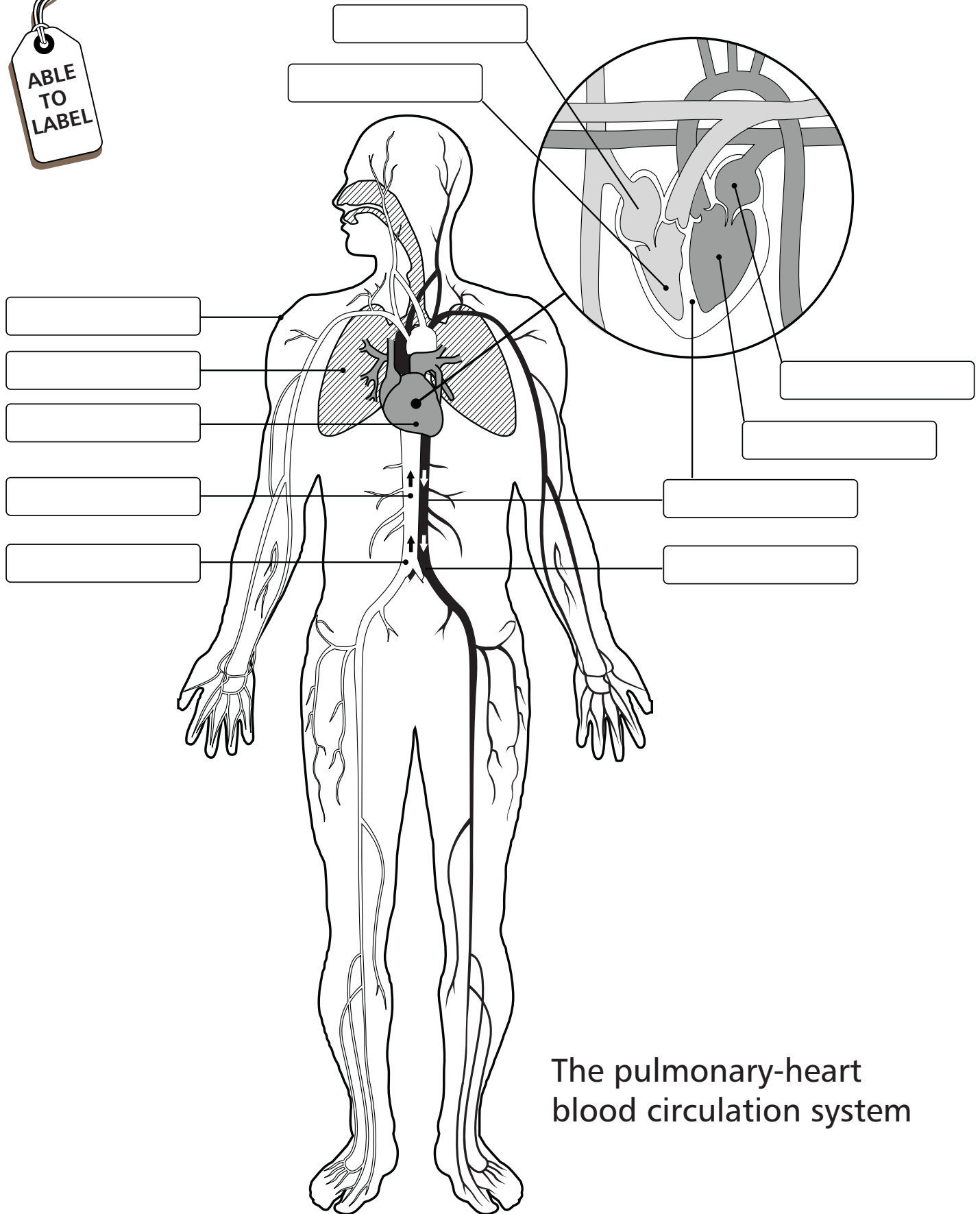
## Understanding the pulmonary-heart blood circulation system

In the attached diagram a simplified scheme of the double blood circulation system is shown. Label the following components of this diagram:

- Heart
- Right ventricle
- Right atrium
- Left ventricle
- Left atrium
- Septum between the left and right ventricles
- Artery
- Vein
- Oxygenated blood
- Deoxygenated blood
- Direction of blood flow
- Body
- Lungs.



Check your labels against the diagram in the 'Human Health Touch Wall' display.



The pulmonary-heart blood circulation system

