



## The Normal Heart and How It Works

The normal heart is a strong, hard-working pump made of muscle tissue. It's about the size of a person's fist.

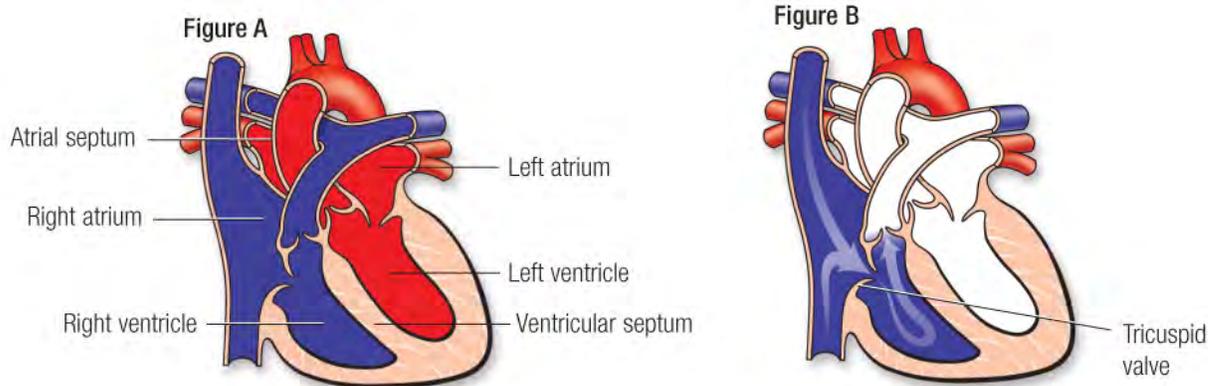
The heart has four chambers. The upper two chambers are the atria, and the lower two are the ventricles (Figure A). Blood is pumped through the chambers, aided by four heart valves. The valves open and close to let the blood flow in only one direction.

The four heart valves are:

- (1) the tricuspid valve, located between the right atrium and the right ventricle;
- (2) the pulmonary (pulmonic) valve, between the right ventricle and the pulmonary artery;
- (3) the mitral valve, between the left atrium and left ventricle; and
- (4) the aortic valve, between the left ventricle and the aorta.

Each valve has a set of “flaps” (also called leaflets or cusps). The mitral valve normally has two flaps; the others have three.

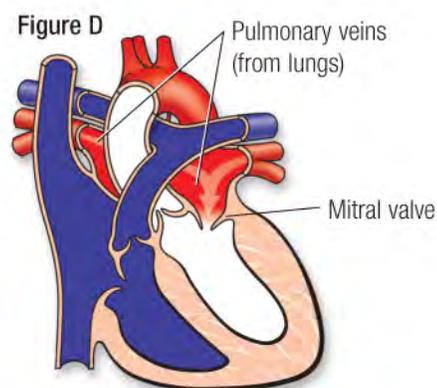
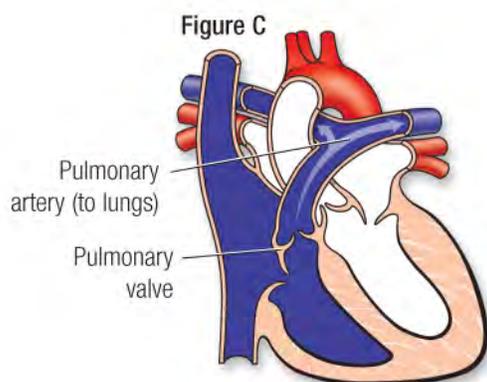
Dark bluish blood, low in oxygen, flows back to the heart after circulating through the body. It returns to the heart through veins and enters the right atrium. This chamber empties blood through the tricuspid valve (Figure B) into the right ventricle.



The right ventricle pumps the blood under low pressure through the pulmonary valve into the pulmonary artery. From there the blood goes to the lungs where it gets fresh oxygen (Figure C). After the blood is refreshed with oxygen, it's bright red. Then it returns by the pulmonary veins to the left atrium. From there it passes through the mitral valve (Figure D) and enters the left ventricle.



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The left ventricle pumps the red oxygen-rich blood out through the aortic valve into the aorta (Figure E). The aorta takes blood to the body's general circulation. The blood pressure in the left ventricle is the same as the pressure measured in the arm.

