

The lymphatic system

This is a series of lymphatic capillaries forming lymphatic vessel, which end in two lymphatic ducts that empty into two veins at the neck.

At intervals, there are lymph nodes/glands (e.g. tonsils, groin, armpits)

The spleen:

- Found below the diaphragm (upper left)
- Blood reservoir at low pressures
- Lymphocytes purify blood from bacteria and damaged RBCs

The thymus gland:

- Found along the trachea (behind sternum)
- Where T lymphocytes mature

Function of lymphatic system:

1. Absorbs and transports fats from intestine through lacteal vessels
2. Absorption of excess tissue fluid (then called lymph)
3. Combat infections. Lymph nodes are sites of lymphatic multiplication and filters that have phagocytic cells.

Circulation

Vertebrates have a closed circulatory system and progressive separation.

Single circulation:

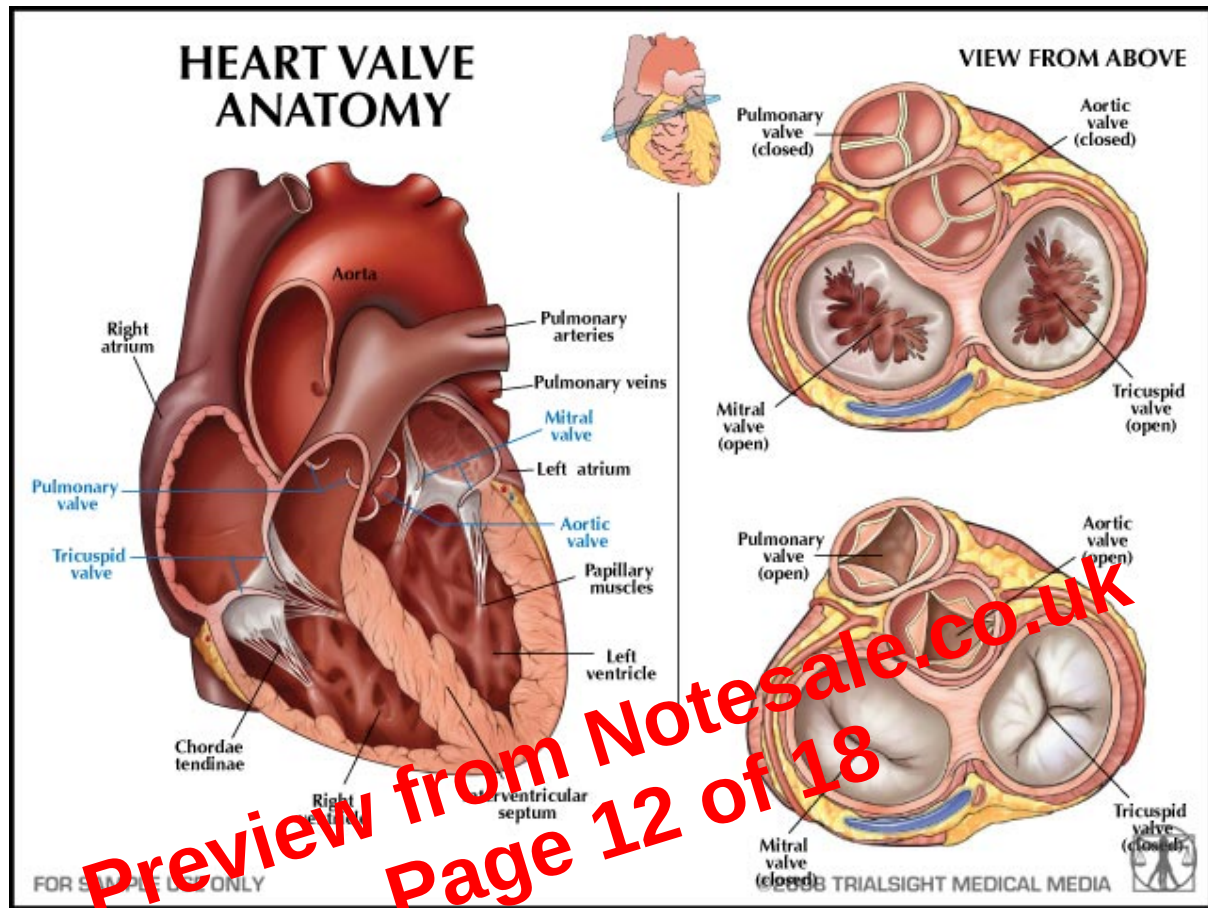
Fish have 2 chambers.

Atrium – receives blood from the body and pumps it into the ventricle. It pumps blood to the gills where gases are exchanged. The aorta sends blood to the body.

Double circulation:

Chordate tendinae are attached to papillary muscles – contract preventing the valves from being turned inside out.

Semilunar valves also prevent backflow of blood.

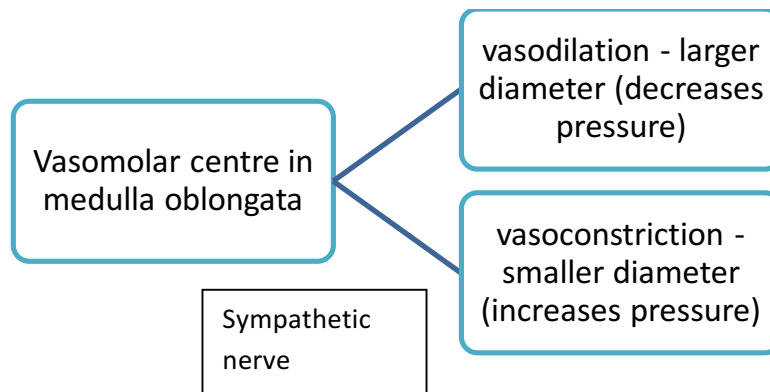


The cardiac cycle

Contractions → systole

Relaxation → diastole

Right side	Left side
<i>Atrial diastole</i>	
Both atria are relaxed (ventricles are also relaxed) Atrioventricular valves are closed	
Deoxygenated blood enters the RA through the superior and inferior vena	Oxygenated blood enters the LA through the pulmonary veins from the lungs at



Chemical control of the vasomotor centre

Blood with a lot of CO_2 arriving at carotid arteries stimulate chemoreceptors to transmit impulses to the vasomotor centre, which sends impulses to the blood vessels to vasoconstrict (increase blood pressure). Therefore blood is transported faster to the lungs where CO_2 and O_2 exchange is quicker.

Preview from Notesale.co.uk
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