

Cardiovascular System. Heart. Aorta. Carotid Artery

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Abstract: Heart (Latin: cor, Greek: cardia) is a hollow muscular organ with an irregular conical shape, the heart is the central organ of the blood-vascular system, and it is the organ that performs the function of pumping blood to all organs and tissues in the body. It is located in the middle of the lower chest area. The heart is divided into the following morphological parts: the base (basis) directed upwards and slightly backwards and the tip (apex) directed forward, downward and to the left are distinguished.

- Cardiac topography
- From the top: 3rd rib with the upper edge
- From the bottom: to the lower edge of the 5th rib
- From the right: 1-2 cm to the right of the edge of the sternum
- From the left: opposite the 5th rib, 1.5-2 cm inside the linea medioclavicularis

The heart has 3 surface areas:

- 1) Facies sterno-costalis front (chest-rib) surface;
- 2) Facies diaphragmatica lower (facing the diaphragm) surface, and
- 3) Facies vertebralis is the back (spine or lung) surface.

Layers of the heart

- 1) Pericardium (Fibrosis, serous-parietal, serous-visceral)
- 2) Myocardium - consists of atrium 2 and ventricle 3 layers of muscle
- 3) Endocardium - covers the inner cavity of the heart

Owners of the heart

1. Sulcus coronalis - between the lobe and the ventricle
2. Sulcus interventricularis anterior - in front of the barrier between the ventricles
3. Sulcus interventricularis posterior - behind the barrier between the ventricles

Cardiac chambers

- 1) Atrium dextra (Right ventricle)
- 2) Atrium sinistra (Left chamber)
- 3) Ventricula dextra (Right ventricle)
- 4) Ventricula sinistra (Left ventricle)

Heart valves

1. Valve tricuspidalis – 3-layer valve
2. Valve mitrale - 2-layer valve
3. Valve aorta semilunatum - aortic semilunar valve
4. Valve trunci pulmonis semilunatum - pulmonary semilunar valve

Valve parts

- 1) Class
- 2) Fibrous ring
- 3) Threads in the chorus
- 4) teat muscle

Physiological functions of the heart

- 1) Automation
- 2) Conductivity
- 3) Excitability
- 4) Shrinkability
- 5) Refractoriness

Heart vein sinus (sinus caronarius)

1. c. cordis magna
2. c. cordis media
3. c. cordis parva
4. c. ventriculi sinistri posterior
5. c. obliqua atrii sinistri

Transmission system

- 1) Sinus node (Kis Flak) 60-80
- 2) Av node (Ashof Tavar) 40-60
- 3) Hiss tufts (right and left) 20-40
- 4) Purkinje fibers

Aorta

- 1) Pars ascendens
- 2) Arcus aorta
- 3) Pars descendens

Networks

- Truncus brachiocephalica
- A. caroticus communis sinistra
- A. subclavius sinistra

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