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Department: Anatomy

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Question: You will be provided with a video, watch it and use it to describe the heart and its functions.

Write on five (5) different congenital anomalies of the heart.

The human body is an organ that pumps blood throughout the body via the circulatory system, supplying oxygen and nutrients to the tissues and removing carbon dioxide and other wastes.

In humans, the heart is roughly the size of a large fist and weighs between 10 to 12 ounces (280 to 340 grams) in men and 8 to 10 ounces (230 to 280 grams) in women. The physiology of the heart basically comes down to structure, electricity and plumbing.

The human heart has four chambers: two upper chambers (the atria) and two lower ones (the ventricles). The right atrium and right ventricle together make up the “right heart”, and the left atrium and left ventricle make up the “left heart”. A wall of muscle called the septum separates the two sides of the heart. A double-walled sac called the pericardium encases the heart, which serves to protect the heart and anchor it inside the chest. Between the outer layer, the parietal pericardium, and the inner layer, the serous pericardium, runs pericardial fluid, which lubricates the heart during contractions and movements of the lungs and diaphragm.

Functions Of The Heart

- i. The right atrium receives blood from the veins and pumps it to the right ventricle
- ii. The left atrium receives oxygenated blood from the lungs and pumps it to the left ventricle
- iii. The right ventricle receives blood from the right atrium and pumps it to the lungs, where it is located with oxygen.
- iv. The left ventricle (the strongest chamber) pumps oxygen-rich blood to the rest of the body. The left ventricle’s vigorous contractors create blood pressure.

Congenital Anomalies

- a. **Stenosis:** when your valves become narrow or stiff, and won’t open or allow blood to pass easily.

- b. Complete Atrioventricular Canal Defect(CAVC):** This is the most serious septal defect. It is when you have a hole in your heart that affects all four chambers.
- c. Ventricular Septal Defect(VSD):** A VSD is a hole in the part of the septum that separates your heart's lower chambers, or ventricles. If you have a VSD, blood gets pumped back to your lungs instead of to your body.
- d. Atrial Septal Defect(ASD):** A ASD is a hole in the wall between the upper chambers, or the right and left atria, of your heart. A hole here lets blood from the left atrium mix with blood in the right atrium. Some ASDs close on their own. Your doctor may need to repair a medium or large ASD with open heart surgery or another procedure.
- e. Tetralogy Of Fallot:** Sometimes, if you have holes in your heart, or septal defects, you might also have other congenital heart problems. One is called tetralogy of Fallot, which is a combination of four defects.