

6th – Life Process Transportation



The cell is the smallest unit of a living organism. It has a structure of its own and performs many functions. Group of cells make a tissue. Tissues collectively form organs. The different organs in turn, working together for a certain major activity, form an organ system. Human, and animal, bodies are made up of many such organ systems which carry out different functions.

The following are the main organ systems of the human body:

- Digestive system
- Respiratory system
- Circulatory system
- Nervous system
- Excretory system
- Skeleton system
- Reproductive system

The Circulatory System: Nourishment, from the digested food, and fresh oxygen from the lungs, is carried to different parts of the body by the blood. The blood, circulating in the body, keeps or carrying fresh nourishment and bringing back waste products. All this gets done by a system of Organs which constitute the circulatory system. The circulatory system consists of the following organs.

Heart: The heart is located, slightly towards the left, in the chest. It is a muscular organ roughly of the size of the closed fist of the person. The heart is divided into two equal halves—left half and right half. Each half is further divided into two chambers which have a common opening between them. There are, thus, four chambers in all. The upper two chambers are called auricles, or atriums and the lower two chambers are called ventricles. The left auricle (atrium), and left ventricle, contain oxygen rich blood. The right auricle (atrium), and the right ventricle, contain blood having carbon dioxide in it. The main function of the heart is to pump blood and keep it moving in the blood vessels.

Blood Vessels: Blood moves around, in the body, through a system of tubes, called the blood vessels. They are of three types—the arteries, the veins and the capillaries. The vessels, which take blood away from the heart, to various parts of the body, are called arteries. The vessels, bringing blood back to the heart, from different parts of the body are called veins. Generally arteries carry oxygen rich blood while the veins carry blood having carbon dioxide in it. Arteries are elastic and thick walled and are deep seated. The veins are thin walled and superficial as they are located just under the skin. The arteries, and veins, are connected to each other by fine vessels, called the capillaries.

Blood: It is a thick red fluid containing Red Blood Cells (RBCs), White Blood Cells (WBCs) and blood platelets. The functions of the blood are to:

- Transport oxygen, food materials and hormones to all parts of the body.
- Take back carbon dioxide, from all parts of the body, to the lungs.
- Protect the body from diseases and other infections.
- Help to maintain the body at a constant temperature.