



# **SUMMARY NOTES**

## **CHAPTER - THE CIRCULATORY SYSTEM**





# INTRODUCTION

The circulatory system is an organ system responsible for transporting oxygen, digested food, and water throughout the body, and for collecting waste from all body parts.



# Components of the Human Circulatory System

Heart: Located between the lungs, slightly to the left side of the chest, and about the size of a fist. It has four chambers: two upper chambers called auricles and two lower chambers called ventricles. Valves between the chambers ensure blood flows in one direction. The heart is a muscular organ that continuously contracts and relaxes to pump blood throughout the body



# Components of the Human Circulatory System

**Blood:** A red liquid flowing through blood vessels. It carries oxygen to all body parts, collects carbon dioxide and other wastes, and transports digested food (nutrients).

**Blood Vessels:** Thin tubes forming a network throughout the body. There are three types:

- **Arteries:** Carry blood from the heart to the rest of the body and have thick walls.
- **Veins:** Carry blood from different parts of the body back to the heart and have thin walls.
- **Capillaries:** The thinnest blood vessels where the exchange of gases, nutrients, and wastes occurs.



# Process of Blood Circulation

- Veins bring carbon dioxide-rich blood from the body to the heart.
- The heart pumps this blood to the lungs, where carbon dioxide is removed and oxygen is absorbed.
- Oxygen-rich blood returns to the heart.
- The heart pumps this oxygen-rich blood through the arteries to all parts of the body.
- As blood moves through the digestive system's blood vessels, it picks up nutrients and transports them throughout the body.
- Blood also collects wastes from organs like the liver to help remove them from the body





# Heartbeat and Pulse

- Heartbeat: The sound produced by the continuous contraction and relaxation of the heart muscle. A healthy person's heart beats about 70 times per minute.
- Pulse: The rhythmic wavy movement of blood in the arteries caused by the heart's pumping action. The pulse rate indicates how fast the heart is beating.



# Maintaining A Healthy Heart

- **Healthy food habits:** Eat a balanced diet and avoid junk food, fatty, and sugary foods.
- **Regular exercise:** Activities like jogging, brisk walking, cycling, swimming, and outdoor games help pump more blood and oxygen throughout the body.
- **Yoga:** Benefits the mind and body by involving relaxation and deep breathing, which aids the respiratory system and heart function. Certain yoga poses can also improve blood circulation.



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