

Introduction

Physiology is the most fascinating and ancient branch of science. It is fascinating because, it unfolds the mystery of complicated functional aspects of individual organs in the body. It is ancient because, it exists ever since the origin of life. Even before knowing the language, culture and society, man knew about the hunger, thirst, pain and fear which are the basics of physiology.

Physiology is defined as the study of functions of various systems and different organs of the body. Physiology is of different types namely, Human Physiology, Animal Physiology and Plant Physiology. Human Physiology and Animal Physiology are very much inter-related. Knowledge of Human Physiology is essential to understand the other allied subjects like Biochemistry, Pharmacology, Pathology, Medicine, etc. However, it is worthwhile to have a brief knowledge of anatomy of different systems and various organs to understand the principles of Human Physiology.

The basic physiological functions include, provision of oxygen and nutrients, removal of metabolites and other waste products, maintenance of blood pressure and body temperature, hunger and thirst, locomotor functions, special sensory functions, reproduction and the higher intellectual functions like learning and memory.

In the unicellular organisms, all the physiological functions are carried out by simple diffusion through the cell membrane. Because of the evolutionary and ecological changes over the years, individual system is developed for each function such as digestive system, cardiovascular system, respiratory system, excretory system, etc. Every system in the body is independent structurally and functionally yet, all the systems are interdependent.

Human Physiology is usually studied under the following headings:

1. General Physiology
2. Blood and Body Fluids
3. Muscle Physiology
4. Digestive System
5. Renal Physiology and Excretion
6. Endocrinology
7. Reproductive System
8. Cardiovascular System
9. Respiratory System and Environmental Physiology
10. Nervous System
11. Special Senses