A Brief Note on Human Physiology and its Systems

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Description

Physiology is the study of how living things work normally. It is a branch of biology that deals with organs, anatomy, cells, and biological molecules, as well as how they interact to make life possible. The study of how living beings work is known as physiology. Thus, human physiology is concerned with the physiological characteristics of the human body at various levels of organisation, ranging from cellular to tissue to biological system physiology.

The science of how the human body operates in health and sickness is known as human physiology. A degree in human physiology is a great foundation for jobs in biomedical research, the health professions, or allied fields, as well as graduate studies. Human physiology is significant because it provides a thorough grasp of the body’s crucial activities in order to achieve the ultimate objective of preserving homeostasis. From molecular and cellular levels to the entire human body, human physiological systems are studied. Basic science is used to assess human reactions to internal and external stimuli (such as changes in activity levels, variable environmental conditions, and disease processes), and this information is then used to the enhancement of human health.

The major systems of human physiology:

Circulatory system

The circulatory system (cardiovascular system) transports oxygen-rich blood from the heart to the lungs. The heart then pumps oxygenated blood throughout the body via arteries. The veins return oxygen-depleted blood to the heart, where it is recirculated. The heart, blood arteries, blood characteristics, and how circulation works in disease and health are all covered.

Endocrine system

Endocrine hormones are hormones that transport messages throughout the body and help it respond in unison. The pituitary, thyroid, adrenals, pancreas, parathyroids, and gonads are the main endocrine glands studied, however endocrine hormones are released by practically all organs.

Immune system

White blood cells, the thymus, and the lymphatic system make up the body’s natural defensive mechanism. To protect the host from pathogen assaults, a vast array of receptors and chemicals work together. Antibodies and cytokines are prominently featured molecules.

Nervous system

The senses, memory, emotion, movement, and thinking are all investigated in the neurological system. Your nervous system is the control centre of your body. It originates in your brain and regulates your motions, thoughts, and instinctive responses to the environment. Other biological functions and activities, including as digestion, respiration, and sexual development, are also under its control (puberty).

Digestive system

The studies of the spleen, liver, and pancreas, as well as the conversion of food into fuel and its eventual exit from the body, are all part of charting the passage of solids from the mouth to the anus.

Respiratory system

The nose, nasopharynx, trachea, and lungs make up the respiratory system. This mechanism allows oxygen to enter while releasing carbon dioxide and water. The respiratory system is a collection of organs and tissues that assist in breathing. Your airways, lungs, and blood arteries are all part of it. The respiratory system includes the muscles that power your lungs. These components collaborate to transport oxygen throughout the body and remove waste gases such as carbon dioxide.