

Homeostasis

Homeostasis is defined as a dynamic state of equilibrium or balance in the internal environment of the body i.e., the balance between water, electrolytes and acid-base contents.

The term "homeostasis" is derived from the Greek word 'homeo' meaning similar and 'stasis' meaning steadiness.

The body's equilibrium continuously shifts for maintaining different factors that are responsible for constantly changing the internal environment.

The various factors are enlisted below:

1. Amount of water and electrolyte concentration in the body.
2. pH of body fluids.
3. Levels of glucose in blood.
4. Levels of oxygen and carbon dioxide in blood and tissues.
5. Normal temperature of the body.
6. Blood pressure.

One of the main functions of homeostasis is to maintain balance between the

Volume and Composition of the body fluids which are present inside and around the cells.

Intracellular Fluid (ICF): Fluid present inside the cells.

Extracellular Fluid (ECF): Fluid present outside the cells or surrounding them.

Interstitial Fluid: Fluid present in the spaces between the cells of tissues.

Extracellular fluid differs based on the location in which it is present in the body.

(a) Cerebrospinal fluid: ECF present in and around the brain and spinal cord.

(b) Blood plasma: ECF present inside the blood vessels.

(c) Lymph: ECF present inside the lymphatic vessels.

(d) Aqueous humour (vitreous body): ECF present in the eyes.

(e) Synovial fluid: ECF present in the joints.

Interstitial fluid is often referred as the internal environment of the body, as accurate and exact regulation of the composition of interstitial fluid governs the proper functioning of body cells.