

Homeostasis

Receptor

component in a homeostasis-maintaining system responsible for monitoring conditions in the body and detecting any abnormalities

Control Center

component in a homeostasis-maintaining system responsible for processing negative feedback and sending out the appropriate hormones to communicate between the receptor and the effector

Effector

component in a homeostasis-maintaining system responsible for producing the corrective mechanism to restore normal conditions in the body

Negative Feedback

abnormalities or changes to the internal conditions which stimulate corrective mechanisms

Positive Feedback

abnormalities or changes to the internal conditions which stimulate an increase in abnormal conditions

Hypothalamus

small section of the forebrain responsible for many metabolic functions

Thermoregulation

temperature homeostasis

Endotherms

animals requiring a constant body temperature

Ectotherm

animals having variable body temperatures

Epinephrine

hormone, also called adrenaline, responsible for increasing blood circulation, breathing and metabolic rates

Vasodilation

widening of blood vessels

Acetylcholine

neurotransmitter responsible for regulating sweat

Homeostasis

Norepinephrine

hormone responsible for increasing heart rate, releasing glucose in the body, and increasing blood flow to skeletal muscle

Vasoconstriction

shrinking of blood vessels

Arrector Pili Muscles

muscles attached to the hair follicles on the skin

Extracellular Fluid

all body fluid not in cells, includes plasma and tissue fluid

Hypercalcemia

too much calcium in the blood

Renal Failure

condition where the kidneys are no longer able to filter waste products from the blood

Hypocalcemia

too little calcium in the blood

Parathyroid Glands

small glands embedded in the thyroid responsible for raising the calcium level in blood

Osteoclasts

large cells which release enzymes to break down the outer layer of bone

Osteoblasts

large cells which synthesize or rebuild bone

Calcitonin

hormone produced by the thyroid responsible for reducing blood calcium levels

Insulin

hormone created by the pancreas which stimulates cells to collect and use more glucose

Glycogen

substance created to store glucose

Homeostasis

Osmoregulation

water homeostasis

Osmosis

process of water going through a water-permeable membrane to make the ratio of solvent to solute even

Solutes

substances which have dissolved

Hypertonic

state of osmotic pressure when blood cells have more water than the surrounding fluid

Hypotonic

state of osmotic pressure when blood cells have less water than the surrounding fluid

Isotonic

state of osmotic pressure when the ratio of water to solute is the same in both the blood cell and the surrounding fluid

Osmolality

concentration of solutes in a solution (such as blood)

Nephron

series of tubules (small tubes) which act as the filtration system in the kidney

Pathogens

organisms which cause disease, such as viruses and bacteria

Helper-T Cells

cells responsible for regulating immune responses in the body

Neoplasms

abnormal tissue growth, such as tumors

Platelets

particles in blood which help to clot blood

White Blood Cells

blood cells used by the immune system to fight diseases

Homeostasis

Red Blood Cells

cells which act as the main vehicle to get oxygen to the body tissue

Hyperpyrexia

abnormally high body temperature, also called fever