



Definitions and Concepts for AQA Biology GCSE

Topic 5: Homeostasis

*Definitions in **bold** are for higher tier only*

Definitions marked by '' are for separate sciences only*

Abstinence: Deliberately refraining from having sexual intercourse.

***Accommodation:** The process of changing the shape of the lens to focus on near or distant objects.

Adrenaline: A hormone that is produced by the adrenal glands in response to fear or stress which increases the heart rate and boosts the delivery of blood to the brain and muscles as a part of the 'fight or flight' response.

***Antidiuretic hormone (ADH):** A hormone that increases the reabsorption of water in the kidney tubules.

Contraception: Methods used to prevent pregnancy.

Coordination centres: Areas of the body like the brain, spinal cord and pancreas that receive and process information from receptors.

***Deamination:** A process occurring in the liver that removes the amino group from an amino acid to produce ammonia.

***Dialysis:** A method of treating kidney failure or disease where the blood is artificially filtered to remove waste and toxins.

Effectors: Muscles or glands which bring about responses which restore optimum levels. †

***Ethene:** A type of plant hormone which controls cell division and the ripening of fruits.

Follicle stimulating hormone (FSH): A female reproductive hormone that causes the maturation of an egg in the ovary.

***Geotropism/Gravitropism:** A plant's directional growth response to gravity.



***Gibberellins:** A type of plant hormone which initiates seed germination.

Gland: A group of cells that secrete chemicals called hormones directly into the bloodstream.

Glucagon: A hormone produced by the pancreas that causes glycogen to be converted into glucose and released into the blood.

Homeostasis: The regulation of the internal conditions of a cell or organism to maintain optimum conditions for function in response to internal and external changes. \pm

***Hyperopia:** A defect of the eye where nearby objects appear out of focus (also called long sightedness).

In Vitro Fertilisation (IVF): Fertilising a woman's egg using sperm outside of the body.

Luteinising hormone (LH): A female reproductive hormone that stimulates the release of an egg.

***Myopia:** A defect of the eye where distant objects appear out of focus (also called short sightedness).

Negative feedback cycle: A regulatory mechanism that reverses a change.

Oestrogen: The main female reproductive hormone which causes the uterus lining to grow and repair.

***Phototropism:** A plant's directional growth response to light.

Receptors: Organs or cells that detect stimuli.

Reflex action: A rapid and automatic response to a stimulus.

Selective reabsorption: Reabsorbing certain useful molecules (like glucose, some ions and water) back into the blood after they have been filtered out.

Stimuli: Changes in the environment.

Target organ: The organ which a hormone acts on to produce an effect.

Testosterone: The main male reproductive hormone produced by the testes and it stimulates sperm production.

***The brain:** An organ made of billions of interconnected neurones which controls complex behaviour and has different regions that carry out different functions.



The central nervous system (CNS): The brain and spinal cord which coordinate the response of effectors.

***The eye:** A sense organ containing receptors sensitive to light intensity and colour.

***Thermoregulatory centre:** An area of the hypothalamus in the brain which contains blood temperature receptors and regulates body temperature.

Thyroxine: A hormone produced by the thyroid gland that increases the metabolic rate in the body.

Type 1 diabetes: A disorder in which the pancreas fails to produce sufficient insulin which is characterised by uncontrolled high blood glucose levels.

Type 2 diabetes: A disorder where the body cells no longer respond to insulin produced by the pancreas.

***Vasoconstriction:** The constriction of blood vessels.

***Vasodilation:** The dilation of blood vessels.

Definitions denoted with a '+' taken from: [AQA GCSE Biology Specification, 8461, Version 1.0 2.1, April 2016](#)