

Pearson Level 3 AAQ BTEC National in Health & Social Care (Extended Certificate)

Unit 2: Human Biology and Health

GLOSSARY OF KEY TERMS

Term	Definition
A	
Absorption	The process of nutrients being taken up into the bloodstream from the digestive system.
Adipose tissue	A type of connective tissue that stores fat, providing insulation and energy reserves.
Adrenal gland	Small glands located on top of both kidneys which produce hormones that help regulate metabolism, immune system, blood pressure, response to stress and other essential functions.
Adrenaline	A hormone your adrenal glands make to help you prepare for stressful or dangerous situations.
Aerobic respiration	A process where glucose and oxygen are used to produce energy (ATP), carbon dioxide, and water.
Aldosterone	A hormone produced by the adrenal glands that helps regulate blood pressure by controlling sodium and water levels.
Alimentary canal	The digestive tract, including organs such as the oesophagus, stomach, and intestines.
Anaemia	A condition where the blood has a reduced ability to carry oxygen, often due to low red blood cells or haemoglobin.
Anaerobic respiration	A process of producing energy without oxygen, resulting in the production of lactic acid.
Angina	Chest pain caused by reduced blood flow to the heart muscle, often a symptom of CHD.
Antagonistic muscles	A pair of muscles that work opposite each other, such as the biceps and triceps, to allow movement.
Antibodies	Proteins produced by white blood cells that help fight infections by recognising and neutralising harmful substances.
Antidiuretic hormone (ADH)	A hormone that reduces water loss by increasing water reabsorption in the kidneys.
Antigens	Substances that trigger an immune response, often found on the surface of pathogens.
Aorta	The largest artery in the body that carries oxygenated blood from the heart to the rest of the body.
Arteries	Blood vessels that carry oxygenated blood away from the heart to the body (except the pulmonary artery).
ATP	Adenosine triphosphate, a molecule that stores and transfers energy within cells.
Atria	The two upper chambers of the heart that receive blood returning to the heart.
Autonomic (nervous system)	Division of the peripheral nervous system (PNS) that controls involuntary functions such as heart rate, digestion, and breathing, without conscious effort.

B	
Basal metabolic rate	The amount of energy the body requires at rest to maintain basic life functions such as breathing and circulation.
Bile	A fluid produced by the liver that helps digest fats in the small intestine.
Blood	A bodily fluid that carries oxygen, nutrients, hormones, and waste products throughout the body.
Blood flow	The movement of blood through the circulatory system, driven by the heart.
Blood pressure	The force exerted by circulating blood on the walls of blood vessels.
Bone	A rigid connective tissue that forms the skeleton, providing structure and support.
Brainstem	The part of the brain that controls vital functions such as breathing, heart rate, and digestion.
Breast tissue	The tissue in the chest area that contains glands, ducts, and fat, responsible for milk production in females.
Bronchi	The main airways that branch off from the trachea into the lungs.
Bronchioles	Smaller branches of the bronchi that lead to the alveoli, where gas exchange occurs.
Bronchoconstriction	Narrowing of the airways, often caused by asthma or allergic reactions, leading to difficulty breathing.
C	
Cancer	A disease caused by uncontrolled cell growth, which may spread to other parts of the body.
Capillaries	Tiny blood vessels where gas, nutrient, and waste exchange occurs between blood and tissues.
Cardiac cycle	The sequence of events in one complete heartbeat, including contraction and relaxation of the heart chambers.
Cardiac muscle	A specialised type of muscle found only in the heart, responsible for pumping blood.
Cartilage	A flexible connective tissue that provides support and cushioning in joints and other structures.
Catabolism	The process of breaking down large molecules into smaller ones to release energy.
Chest infection	An infection in the lungs or airways, often causing coughing, mucus production, and fever.
Chest pain	Discomfort or pain in the chest, often associated with heart or respiratory disorders.
Chronic bronchitis	A long-term inflammation of the airways, often causing persistent cough and mucus production.
Cilia	Tiny hair-like structures in the respiratory tract that help move mucus and trapped particles out of the airways.
Clot	A mass of coagulated blood that can block blood vessels, causing conditions like stroke or heart attack.

Clotting	The process by which blood forms clots to prevent bleeding.
Cognitive function	Mental abilities such as memory, reasoning, and problem-solving.
Connective tissue	A type of tissue that supports, connects, or separates different parts of the body, such as bone, cartilage, and blood.
Concussion	A mild traumatic brain injury caused by a blow to the head, leading to temporary cognitive or physical impairment.
Coordination loss	Difficulty in controlling movements, often due to nervous system damage or brain injury.
Cyanosis	A bluish colouration of the skin, lips, or nails caused by low oxygen levels in the blood.
Cytoplasm	The jelly-like substance inside a cell where chemical reactions occur, excluding the nucleus.
D	
Dementia	A condition characterised by progressive memory loss, cognitive decline, and personality changes.
Diabetes	A condition where blood sugar levels are too high due to insufficient insulin or insulin resistance.
Diaphragm	A dome-shaped muscle beneath the lungs that plays a key role in breathing by controlling airflow into and out of the lungs.
Diffusion	The movement of particles from an area of higher concentration to an area of lower concentration.
Digestion	The process of breaking down food into smaller molecules that can be absorbed into the bloodstream.
Dysphasia	Difficulty in speaking or understanding speech, often caused by brain damage such as a stroke.
E	
Emphysema	A condition where the alveoli in the lungs are damaged, reducing the ability to exchange oxygen and carbon dioxide.
Endocrine system	A system of glands that secrete hormones to regulate bodily functions such as growth and metabolism.
Energy metabolism	The process of generating energy from nutrients which is used to build and maintain cells.
Epilepsy	A neurological disorder characterised by recurrent seizures due to abnormal brain activity.
Epithelium	A type of tissue that lines the surfaces and cavities of organs, providing protection and absorption functions.
F	
Fight or flight	The body's response to stress, involving adrenaline release to prepare for action or danger.
G	
Gaseous exchange	The process of oxygen entering the blood and carbon dioxide leaving the blood in the lungs.

Glucose	A type of sugar that serves as the primary energy source for the body.
Growth hormone	A hormone produced by the pituitary gland that stimulates growth in bones and tissues.
H	
Haemoglobin	A protein in red blood cells that carries oxygen throughout the body.
Heart failure	A condition where the heart cannot pump blood effectively, leading to symptoms like fatigue and breathlessness.
Homeostasis	The process by which the body maintains a stable internal environment, such as temperature and blood pressure.
Hormones	Chemical messengers produced by glands that regulate processes such as growth, metabolism, and mood.
Hyperglycaemia	High blood sugar levels, often seen in individuals with diabetes.
Hypoglycaemia	Low blood sugar levels, which can cause symptoms like dizziness, confusion, and fainting.
Hypothalamus	A part of the brain that regulates homeostasis by controlling hunger, temperature, and the endocrine system.
I	
Immunity	The body's ability to resist infection or toxins by producing antibodies and other defence mechanisms.
Insulin	A hormone produced by the pancreas that helps regulate blood sugar levels by allowing glucose to enter cells.
Insulin resistance	A condition where the body's cells don't respond properly to insulin, leading to high blood sugar levels.
Ischaemia	A condition where there is reduced blood flow to a part of the body, often leading to tissue damage.
K	
Kidney tubules	Small structures in the kidneys where filtration, reabsorption, and secretion occur during urine formation.
L	
Lactic acid	A by-product of anaerobic respiration that can build up in muscles and cause fatigue.
Ligaments	Strong connective tissues that connect bones to other bones in a joint.
Liver	A large organ that processes nutrients, detoxifies harmful substances, and produces bile.
Lymph	A clear fluid that circulates through the lymphatic system, helping to remove waste and fight infection.
Lymph nodes	Small structures in the lymphatic system that filter lymph and house immune cells like white blood cells.
M	

Memory loss	A reduction in the ability to recall information, often a symptom of conditions like dementia or brain injury.
Metabolism	The chemical processes in the body that convert food into energy and maintain basic functions.
Mitochondria	Organelles in cells that generate energy through the process of respiration.
Motor neurones	Nerve cells that transmit signals from the central nervous system to muscles, causing movement.
Mucus	A sticky fluid secreted by membranes in the respiratory and digestive systems, helping to trap particles and protect tissues.
N	
Negative feedback	A mechanism in which the body responds to a change by reversing it to maintain homeostasis.
Neurones	Nerve cells that transmit electrical signals throughout the body.
Neuroglia	Supportive cells in the nervous system that provide nutrients and protection to neurones.
Neuropathy	Nerve damage that can cause pain, tingling, or numbness, often associated with diabetes.
O	
Oxygen	A gas essential for cellular respiration and energy production in the body.
P	
Pancreas	A glandular organ located in the abdomen which makes pancreatic juices, which contain enzymes that aid in digestion, and it produces several hormones, including insulin
Parasympathetic (nervous system)	The branch of the autonomic nervous system responsible for "rest and digest" functions, such as slowing heart rate.
Pathogen	A microorganism that can cause disease, such as bacteria, viruses, or fungi.
Permeability	The ability of a substance or structure to allow liquids or gases to pass through.
Peripheral (nervous system)	Consists of nerves and ganglia that lie outside the brain and spinal cord. It acts as a communication network, relaying information to and from the Central Nervous System (CNS).
Peristalsis	A series of wave-like muscle contractions that move food through the digestive tract.
Persistent cough	A long-lasting cough that may indicate an underlying condition such as asthma or lung cancer.
Pituitary gland	A small gland in the brain that produces hormones regulating growth, metabolism, and reproduction.
Platelets	Small blood cells that help form clots to stop bleeding.
Plasma	The liquid part of blood that carries cells, nutrients, hormones, and waste products.

Plaque	A fatty deposit in blood vessels that can restrict blood flow, or a protein build-up in the brain linked to dementia.
Pulmonary circulation	The movement of blood between the heart and lungs, where oxygen is added to the blood and carbon dioxide is removed.
R	
Rapid breathing	A condition where the rate of breathing increases, often due to stress, asthma, or low oxygen levels.
Receptors	Structures in the body that detect changes in the environment and send signals to the nervous system.
Rectal bleeding	The passage of blood through the rectum, which may indicate digestive system issues like bowel cancer.
Red blood cells	Blood cells that carry oxygen to the body's tissues using the protein haemoglobin.
Respiratory system	The system of organs responsible for breathing, including the lungs, trachea, and diaphragm.
Ribosomes	Small structures in cells that synthesise proteins from amino acids.
S	
Secondary sexual characteristics	Features that develop during puberty, such as breast development or facial hair growth, influenced by hormones.
Secretion	The process of producing and releasing a useful substance by a gland or cell.
Sensory input	Information gathered by sensory receptors, such as touch or sound, and sent to the brain for processing.
Sensory neurones	Nerve cells that carry signals from sensory receptors to the central nervous system.
Striated muscle	Muscle tissue that appears striped under a microscope, such as skeletal muscle used for movement.
Stroke	A medical emergency caused by a blocked or burst blood vessel in the brain, leading to oxygen deprivation and tissue damage.
Sympathetic (nervous system)	The branch of the autonomic nervous system that activates the "fight or flight" response, increasing heart rate and energy production.
Synovial joints	Movable joints, such as the knee or shoulder, that are lubricated by synovial fluid for smooth movement.
T	
Tendons	Strong connective tissues that attach muscles to bones.
Testosterone	A hormone produced in the testes that regulates male reproductive development and secondary sexual characteristics.
Thyroid gland	A gland in the neck that produces hormones regulating metabolism, growth, and development.
TIA (Transient ischaemic attack)	A temporary blockage of blood flow to the brain, often called a "mini-stroke," that resolves within a few hours.
Trachea	The windpipe that carries air from the throat to the lungs.

Triggers	Factors such as allergens or stress that initiate a condition like an asthma attack.
Tumour	An abnormal growth of cells, which can be benign (non-cancerous) or malignant (cancerous).
V	
Vagina	A muscular canal in females that serves as the birth canal and part of the reproductive system.
Valves	Structures in the heart and veins that prevent the backflow of blood.
Ventilation	The process of moving air in and out of the lungs to enable gas exchange.
Veins	Blood vessels that carry deoxygenated blood back to the heart (except the pulmonary vein).
Ventricle	One of the lower chambers of the heart that pumps blood to the lungs or the rest of the body.
W	
White blood cells	Blood cells that are part of the immune system, helping to fight infections and other diseases.
Wheezing	A high-pitched whistling sound during breathing, often caused by narrowed airways in asthma or COPD.