



Definitions and Concepts for AQA Psychology A-level

Topic 6: Biopsychology

Action potential: A brief electrical impulse that travels along the axon of a neuron.

Adrenaline: A hormone released by the adrenal medulla that prepares the body for the fight-or-flight response.

Auditory area: A region in the temporal lobe responsible for analysing acoustic/sound information.

Autonomic nervous system: The part of the peripheral nervous system that controls automatic bodily functions, including the activity of internal organs and glands.

Axon: The part of a neuron that carries electrical impulses away from the cell body.

Axon terminal: The end of an axon where neurotransmitters are released into the synapse.

Broca's area: An area in the frontal lobe of the left hemisphere involved in speech production.

Central nervous system (CNS): The part of the nervous system consisting of the brain and spinal cord.

Corpus callosum: A bundle of nerve fibres connecting the left and right hemispheres of the brain, allowing them to communicate.

Contralateral: Relating to the control or processing of information on the opposite side of the body or brain.

Dendrites: Branch-like structures on a neuron that receive signals from other neurons.

EEG (electroencephalogram): A technique that records electrical activity in the brain using electrodes placed on the scalp.





ERP (event-related potential): A technique that records changes in electrical brain activity in response to a specific stimulus or event.

Excitation: A process that makes the next neuron more likely to fire.

Fight-or-flight response: A physiological response to a threatening situation that prepares the body to fight or escape.

fMRI (functional magnetic resonance imaging): A brain imaging technique that uses a magnetic field and radio signals to monitor blood flow and identify areas of the brain involved in particular activities.

Functional recovery: The process by which the brain adapts and reorganises after damage, allowing lost functions to be partially or fully recovered.

Glands: Organs that produce and release substances such as hormones into the body.

Hemispheric lateralisation: The idea that the left and right hemispheres of the brain have specialised functions.

Hormones: Chemical messengers released by glands that travel through the bloodstream to affect processes in the body.

Inhibition: A process that makes the next neuron less likely to fire.

Ipsilateral: Relating to the same side of the body or brain.

Lateralisation of function: The idea that different functions are specialised in different hemispheres of the brain.

Localisation of function: The idea that specific functions are controlled by specific areas of the brain.

Motor area: A region in the frontal lobe responsible for controlling voluntary movement.

Motor neurones: Neurons that carry electrical impulses from the central nervous system to effectors such as muscles and glands.

Myelin sheath: A fatty layer surrounding the axon that insulates it and increases the speed of electrical impulses.

Neurotransmitter: A chemical messenger released by a neuron that carries a signal across a synapse to another neuron.





Nucleus: The part of a neuron that contains its genetic material and controls the activities of the cell.

Peripheral nervous system (PNS): The part of the nervous system outside the brain and spinal cord, consisting of nerves that connect the central nervous system to the rest of the body.

Plasticity: The brain's ability to change, reorganise and adapt both physically and functionally as a result of experience by changing its synaptic connections.

Post-mortem examinations: The analysis of a person's brain following their death to establish potential biological causes for behaviors or deficits displayed during their lifetime.

Relay neurones: Neurons found in the central nervous system that connect sensory neurons to motor neurons.

Sensory neurones: Neurons that carry electrical impulses from sensory receptors towards the central nervous system.

Somatic nervous system: The part of the peripheral nervous system responsible for voluntary movement and carrying sensory information to the central nervous system.

Somatosensory area: A region in the parietal lobe that processes sensory information from the skin (e.g., touch, heat, pressure).

Spatial resolution: The ability of a brain-imaging technique to identify precisely where activity is occurring in the brain.

Summation: The process by which the effects of multiple excitatory and inhibitory signals are combined to determine whether a neuron fires.

Synaptic cleft: The small gap between two neurons across which neurotransmitters travel.

Synaptic transmission: The process by which information is carried across the synapse between neurons through neurotransmitters.

Temporal resolution: The ability of a brain-imaging technique to detect changes in brain activity over time.

Visual area: A region in the occipital lobe that receives and processes visual information from the eyes.

Wernicke's area: An area in the temporal lobe of the left hemisphere involved in understanding spoken language.

