

Reflexes Key Information

Reflexes are rapid, automatic responses to specific stimuli that do not require conscious thought. They are designed to protect the body from harm by producing quick reactions, such as pulling your hand away from a hot object. Reflexes follow a simple pathway called a reflex arc, which typically involves a sensory neurone detecting the stimulus, a relay neurone in the spinal cord processing the information, and a motor neurone triggering a response in an effector, like a muscle. Because the brain is bypassed in this pathway, reflexes are extremely fast and help maintain survival.

Key words & definitions

Key word	Key information
Reflex	A rapid, automatic response to a stimulus that does not involve conscious thought.
Stimulus	A change in the environment that is detected by sensory receptors and triggers a response.
Reflex Arc	The simple nerve pathway followed during a reflex action, typically involving a sensory neurone, a relay neurone, and a motor neurone.
Sensory Neurone	A nerve cell that carries impulses from sensory receptors to the central nervous system.
Relay Neurone	A nerve cell in the spinal cord that connects sensory neurones to motor neurones and processes the incoming information.
Motor Neurone	A nerve cell that carries impulses from the central nervous system to an effector (e.g., muscle or gland).
Effector	A muscle or gland that carries out a response to a nerve impulse.