

## Sensory Neurones Key Information

A generator potential is a small, temporary change in the electrical potential of a sensory receptor cell in response to a stimulus. When a stimulus (such as pressure, light, or temperature) is detected, it causes ion channels in the sensory receptor membrane to open, leading to a movement of ions and a change in membrane potential. If the generator potential is large enough to reach a certain threshold, it will trigger an action potential in the sensory neurone. The size of the generator potential is proportional to the strength of the stimulus, but it is a graded response—unlike action potentials, which are all-or-nothing.

## Key words & definitions

Key word	Key information
Generator Potential	A small, temporary change in the membrane potential of a sensory receptor in response to a stimulus.
Sensory Receptor	A specialised cell that detects a specific type of stimulus, such as pressure, light, or temperature.
Stimulus	A detectable change in the internal or external environment that can provoke a response in a sensory receptor.
Ion Channels	Protein channels in cell membranes that allow specific ions to pass through, often in response to a stimulus.
Membrane Potential	The electrical difference across a cell membrane, resulting from the distribution of ions.
Threshold	The minimum generator potential required to trigger an action potential in a neurone.
Action Potential	A response that varies in size depending on the strength of the stimulus, unlike the fixed size of an action potential.