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Subject Biology

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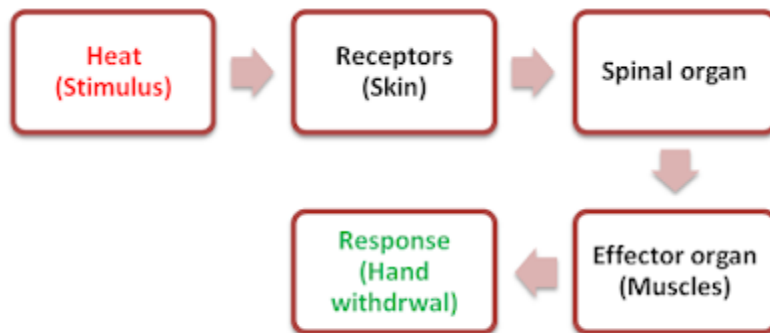
Reflex Action

→ Reflex action is quick, sudden and immediate response of the body to a stimulus.

Example: Knee jerk, withdrawal of hand on touching hot object.

→ Stimulus: It is observable or detectable change in the external or internal environment to which an organism reacts.

→ Reflex arc: The pathway through which nerve impulses pass during reflex action is called reflex arc.



Reflex action Pathways

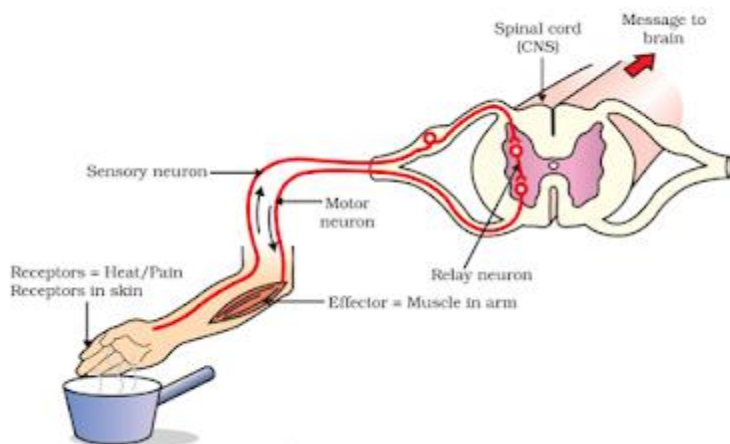


Figure 7.2 Reflex arc

→ Response: It is the final reaction after the reflex action.

Three types of responses:

(i) Voluntary: Controlled by fore brain. Example: talking, writing.

(ii) Involuntary: Controlled by mid and hind brain. Example: heart beat, vomiting, respiration.

(iii) Reflex action: Controlled by spinal cord. Example: withdrawal of hand on touching a hot object.

Need for Reflex Actions

→ In some situations such as touching a hot object, pinching etc. we need to act quickly, otherwise our body would be harmed. Here response is generated from spinal cord instead of brain. In this way, time for taking action is reduced which save us from injury.

Human Nervous System

→ Human nervous system consists of two parts, **Central nervous system (CNS)** and **Peripheral nervous system (PNS)**.

→ Central nervous system consists of **Brain** and **Spinal Cord**.

→ Peripheral nervous system consists of **Cranial Nerves** which arise from the brain and **Spinal Nerves** which arise from the Spinal cord.

