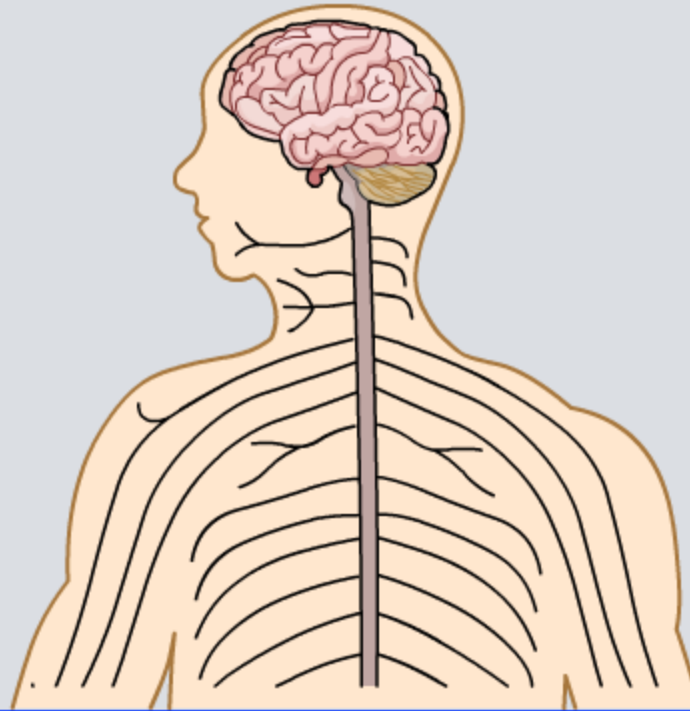
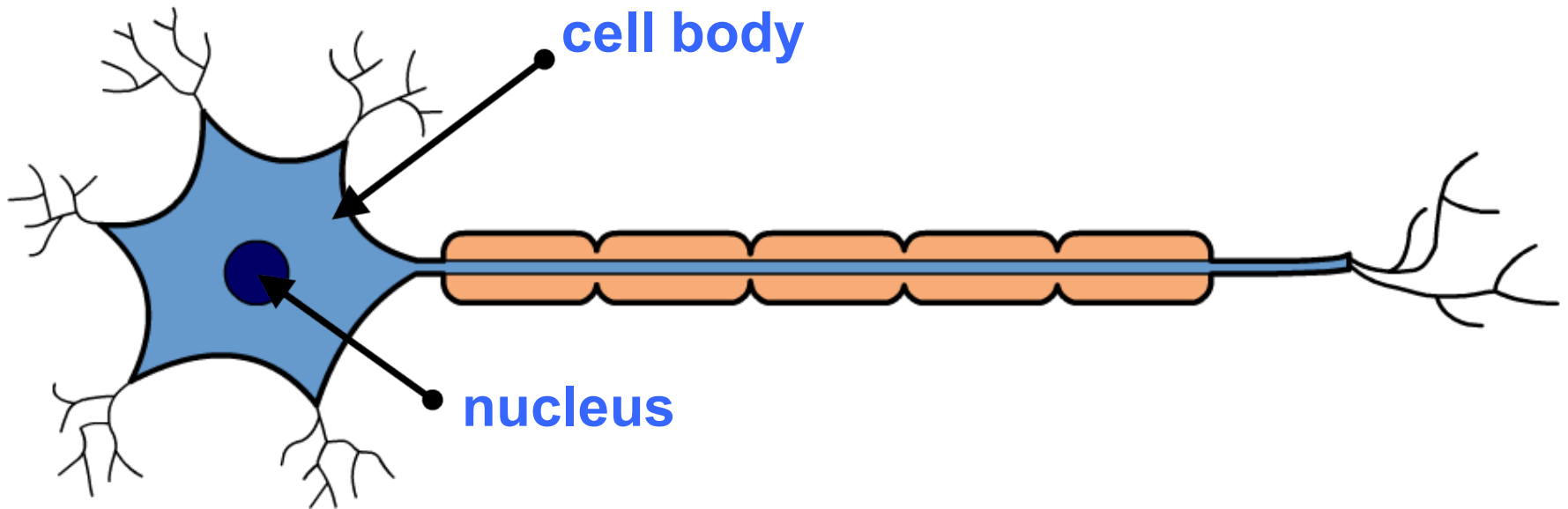


The Nervous System



The nervous system can coordinate a response to a stimulus, using nerve cells.

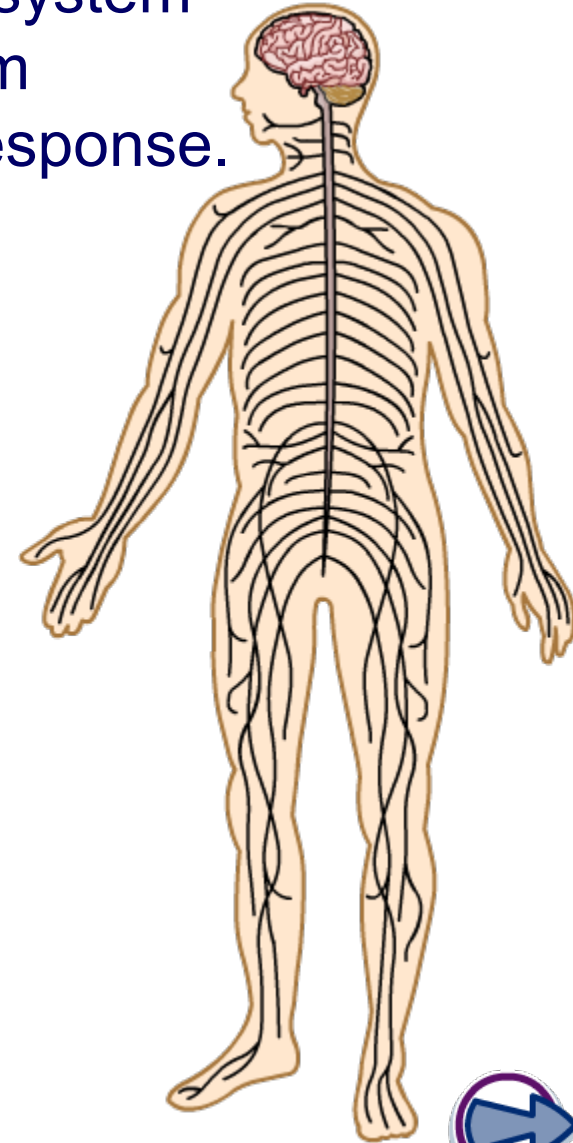
Nerve cells, or **neurons**, are specialized cells that transmit **electrical impulses** around the body.



How are responses coordinated?

When a stimulus is detected, your nervous system sends an impulse along neurons to and from different parts of the body to coordinate a response.

1. Specific **receptors** in a **sense organ** detect a stimulus.
2. An electrical impulse is sent to the **brain**.
3. The brain processes the information.
4. An electrical impulse is sent to an **effector** (e.g. a muscle or gland).
5. The effector produces a **response**.



Match each sense organ with the receptors it contains.

eyes

sound receptors

ears

taste receptors

skin

pressure receptors

tongue

light receptors

nose

smell receptors

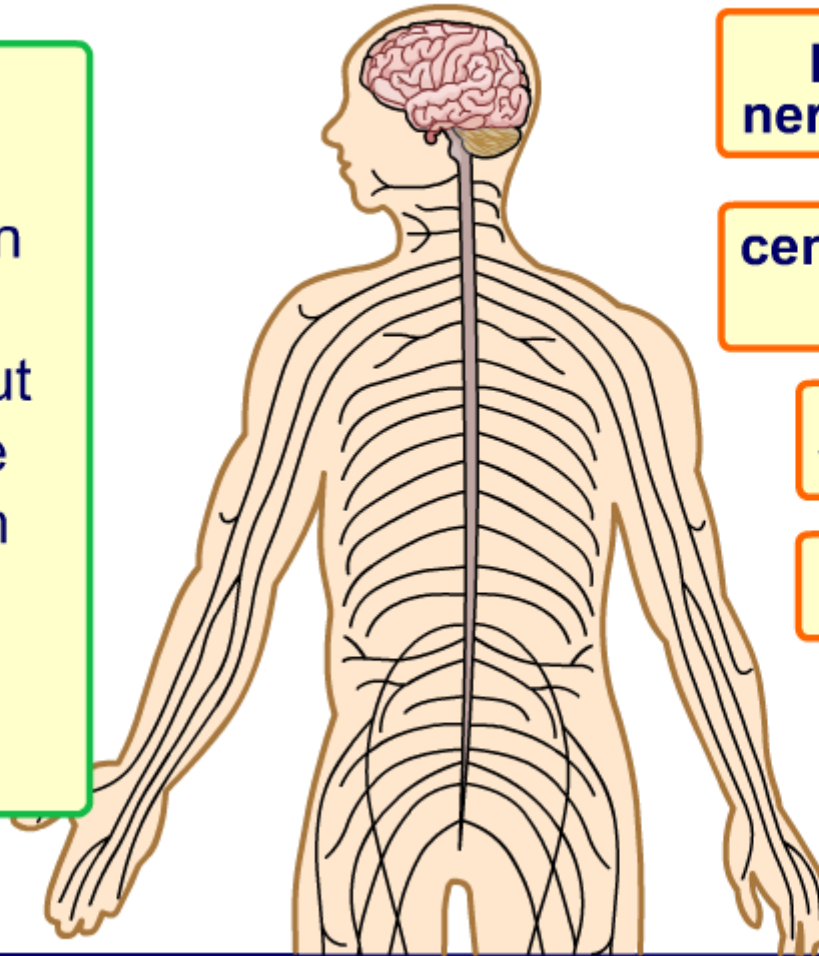


solve



The nervous system

Click on a button
for more
information about
each part of the
nervous system



peripheral
nervous system

central nervous
system

spinal cord

brain



What is a reflex?

Reflex reactions happen without you having to think about them – they are **involuntary**. This is because the central nervous system sends electrical signals to the muscles before the brain can pick up the message.



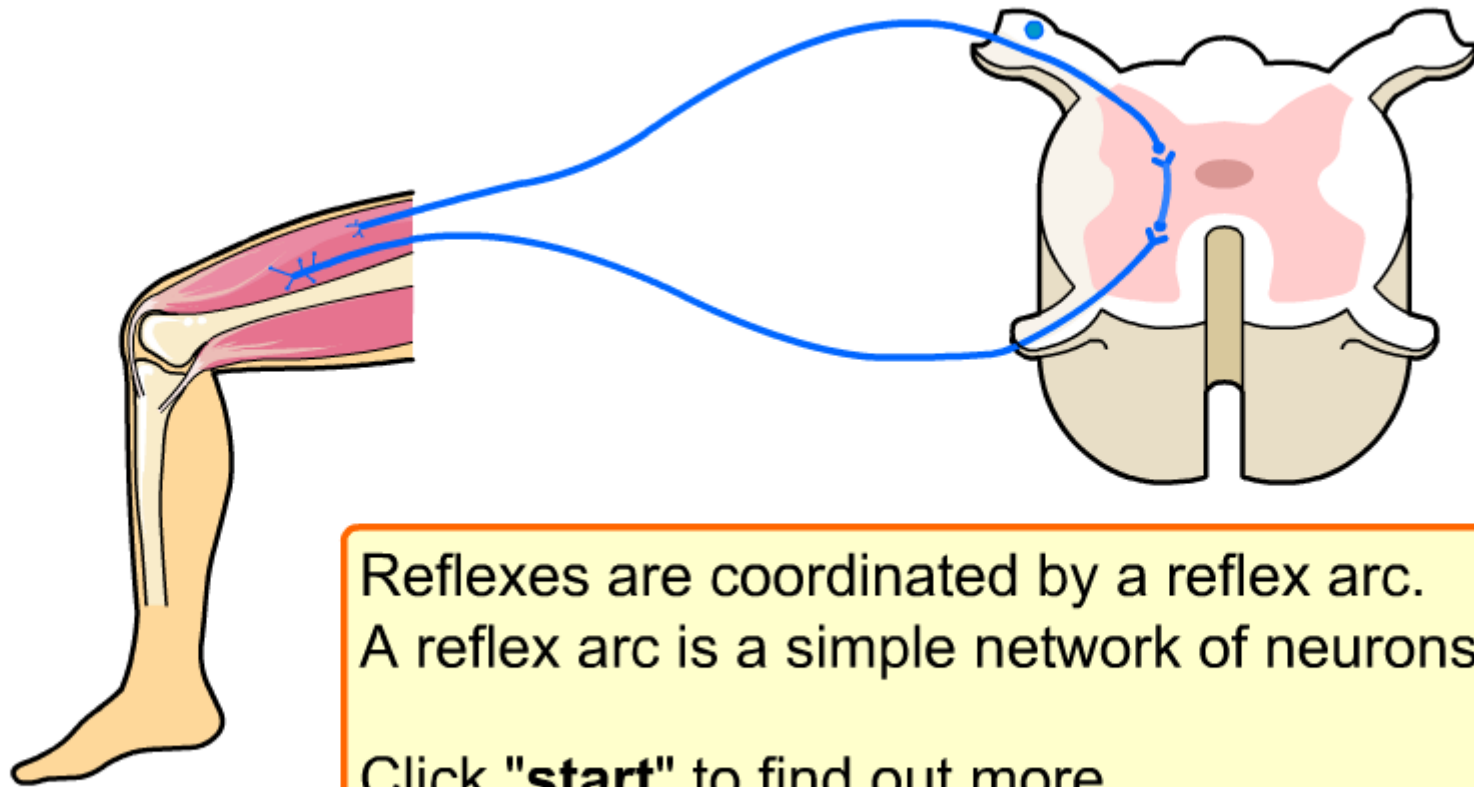
Reflexes can stop you from getting hurt. For example if you touch a hot surface, your body automatically moves your hand away from the heat, preventing you from being burned.



Knee-jerk reaction



How does the knee-jerk reflex happen?



start



How do drugs affect behavior?



Drugs can be divided into different categories depending on what type of effects they have on the body.

Click on each category to learn more about how each type of drug affects the nervous system.



depressants

stimulants

hallucinogens

painkillers



What is the order of stages in a nervous response?

- 1 An electrical impulse is sent to an effector
- 2 The brain processes the information
- 3 The effector produces a response
- 4 A stimulus is detected by receptors
- 5 An electrical impulse is sent to the brain



solve

