

Nervous & Endocrine system Notes

1. Define:
 - a. Stimulus

 - b. Homeostasis

2. Draw and label two neurons. (Use the 5 terms below to label the neuron)

DENDRITE – transmits the nerve impulse to the cell body.

CELL BODY – Major cell structure of the neuron.

AXON – Transmits the nerve impulse from the cell body.

SYNAPSE – A gap between neurons that is bridged by chemicals called neurotransmitters.

NEUROTRANSMITTERS – Chemicals that transmit a nerve signal from one neuron to another neuron.

3. Parts of the brain:
 - a. Cerebrum
 - i. Location
 - ii. Function

 - b. Cerebellum
 - i. Location
 - ii. Function

 - c. Medulla Oblongata
 - i. Location
 - ii. Function

 - d. Diencephalon
 - i. Location
 - ii. Function

Nervous & Endocrine system Notes

4. Label the following pathway for someone being poked by a pin. (PAIN, PAIN RECEPTOR, SPINAL CORD, MOTOR NEURON)

STIMULUS

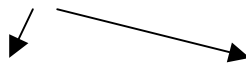


_____ (SKIN)

SENSORY NEURON (CARRIES MESSAGE TO SPINAL CORD)



_____ (CARRIES MESSAGE TO BRAIN AND BODY)



BRAIN _____ (STIMULATE THE MUSCLE) → RESPONSE



_____ (OUCH THAT HURT!)

5. **Negative Feedback Mechanism:** The negative feedback mechanism is a very important process in the human body that enables the body to regulate within a narrow range. For instance your body temperature typically will remain very close to 98.6 degrees. This is how we maintain homeostasis.

a. Describe the negative feedback mechanism of sweating

b. Describe how eating is controlled by a negative feedback mechanism.

Nervous & Endocrine system Notes

The Role of the Nervous System:

Stimulus & Response: A stimulus is something that happens around you. A response is how you react to the stimulus.

Name the Stimulus and Response in each example:

1. A person walked by and the dog barked.
2. The bell rang and the students left the class
3. The boy touched a sharp object and said “ouch”.

The nervous system of animals is what allows them to respond to various stimuli. The more complex the animal is the more complex the nervous system. Hydra's have a very simple nervous system whereas humans have a very complex nervous system.

Human Nervous System:

*What is another name for a nerve cell?

*A nerve cell is often compared to what?

*What are three differences of a nerve cell compared to other cells?

How do nerves carry messages from one part of your body to another?

1. The pathway to and from the brain is not on the same nerve (sensory neurons to the brain and motor neurons away from the brain).
2. Neurons in the long pathway do not touch they are bridged by a gap called a synapse.
3. The dendrites of one neuron are next to the axon of the next neuron.

*Messages along the neuron are CHEMICAL OR ELECTRICAL?

*Messages across the synapse are CHEMICAL OR ELECTRICAL?

Only the axon of a neuron give off the chemical to the next neuron therefore a nerve signal can only travel in one direction.

*Name THREE major parts of the nervous system (Refer to other notes for the details of each of these 3 parts)

- 1.
- 2.
- 3.

Nervous & Endocrine system Notes

Reflexes: These are nerve reactions that do not go all the way to the brain. A reflex allows you to react so quickly as a protection to your body against injury.

How does a reflex work when stepping on a tack?

1. The skin in your foot receives a message.
2. The message goes up your leg.
3. The message reaches your spinal cord.
4. The message leaves the spinal cord by way of another pathway
5. The message goes to your leg muscles
6. You pull your foot away from the tack

***Name four things true of all reflexes:**

- 1.
- 2.
- 3.
- 4.

The Role of the Endocrine System

GLAND	LOCATION	HORMONE
PITUITARY	BRAIN	
THYROID	NECK	
PARATHYROID	NECK	
ADRENAL	KIDNEY	
PANCREAS	ABDOMINAL	
OVARIES	PELVIC	
TESTES	PELVIC	

***What is a stroke?**

***What is diabetes?**