3.02 Understand the functions and disorders of the nervous system
3.02 Essential Questions

- What are the functions of the nervous system?
- What are some disorders of the nervous system?
- How are nervous system disorders treated?
- How does the nervous system relate to the body’s communication systems?
Functions of the nervous system: Neurons

What do they do?

How do these functions impact health?

- Sensory - from skin or sense organ
- Motor
- Associative

3.02 Understand the functions and disorders of the nervous system
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Functions of the central nervous system: **Brain**

**THINK ABOUT IT...**

**HOW DO YOU USE YOUR BRAIN?**
Functions of the central nervous system: Brain

How do you use your cerebrum?

- Frontal lobe
- Parietal lobe
- Occipital lobe
- Temporal lobe
Functions of the central nervous system: **Brain**

**How do you use your Limbic System?**

- What is the limbic system? Is this a new term for you?
  - What structures are involved?
  - What are the functions of the limbic system?
  - How does this effect you?
  - Can you control it?
Functions of the central nervous system:

**Brain**

**YOUR LIMBIC SYSTEM AT WORK!**

What’s happening in these pictures?

Can you control it?

3.02 Understand the functions and disorders of the nervous system
Functions of the central nervous system:

**Brain**

**HOW DO YOU USE YOUR CEREBELLUM?**

Discuss the functions of the cerebellum illustrated in this gymnast’s picture.
Functions of the central nervous system: BRAIN

- **Diencephalon**
  - Located between the cerebrum and the midbrain
  - Structures
    - Thalamus
    - Hypothalamus
    - Pineal body
    - Pituitary gland

3.01 Remember the structures of the nervous system
Functions of the central nervous system: **BRAIN**

- **Diencephalon**
  - Thalamus – spherical mass of gray matter
  - Hypothalamus
  - Pineal body
  - Pituitary gland
Functions of the central nervous system:

**Brain**

**How do you use your brain stem?**

- Midbrain
- Pons
- Medulla oblongata
3.02 Understand the functions and disorders of the nervous system

Functions of the central nervous system:

Brain

Discuss the relevance of the brain stem for these functions?
Functions of the central nervous system: Spinal Cord

Discuss the functions of the spinal cord. What is the relevance to health?
Functions of the
Peripheral nervous system

- Cranial
- Spinal

What do the peripheral nerves do?
What is their relevance to health?
Functions of the peripheral nervous system:

Autonomic nervous system

Discuss the functions of the autonomic nervous system.
Functions of the nervous system

Discuss the relevance of the nervous system to the body’s communication systems.
Disorders of the nervous system and their treatments

- Alzheimer’s disease

Who is at the greatest risk of developing Alzheimer’s disease?

What are the symptoms?

How is it treated?

How is it prevented?
Disorders of the nervous system and their treatments

- **Cerebral palsy**

  What is cerebral palsy?
  How is it treated?
  Which healthcare team members will take care of the patient with cerebral palsy?
Disorders of the nervous system and their treatments

- **Epilepsy**

What is epilepsy?
What are the symptoms?
How is it treated?

Should a person with epilepsy be allowed to drive?
Disorders of the nervous system and their treatments

- **Hydrocephalus**

_Hydro-_ cephal _-us_

Define the terms. Do the meanings of the parts represent the whole?

Who is most likely to develop hydrocephalus?

How is it treated?
Disorders of the nervous system and their treatments

- **Meningitis**

What causes of meningitis?
What are the symptoms?
How is it treated?
Disorders of the nervous system and their treatments

- **Multiple sclerosis**

What are the symptoms?
Who is most likely to develop it?
How is it treated?
What is the prognosis?
Disorders of the nervous system and their treatments

- **Neuritis**

neur- -itis

Discuss the terms.

Discuss the pattern of symptoms presented and why.

How is neuritis prevented?
Disorders of the nervous system and their treatments

■ **Paralysis**

“disabling of a nerve”

How does this quote relate to paralysis?
What are the symptoms?
What is the prognosis?
Disorders of the nervous system and their treatments

- Parkinson’s disease

What are the symptoms of Parkinson’s disease?
Who is most likely to have this disorder?
How is it treated?
Disorders of the nervous system and their treatments

- **Poliomyelitis**

What is the impact of this disorder?
How can it be prevented?
How is it treated?
What is the prognosis?
Disorders of the nervous system and their treatments

- Spinal cord injury

What are the symptoms?
What determines a patient’s symptoms?
How is it treated?
What are the risk factors for teens?
Disorders of the nervous system and their treatments

- West Nile Virus

Where is the greatest incidence of West Nile virus?

What are the risk factors?

How is it prevented?

How is it treated?
Disorders of the nervous system and their treatments

- What are some common symptoms of neurological disorders?
- What are some common prognoses?
- Why do these commonalities exist?
3.02 Essential Questions

- What are the functions of the nervous system?
- What are some disorders of the nervous system?
- How are nervous system disorders treated?
- How does the nervous system relate to the body’s communication systems?
3.02 Understand the functions and disorders of the nervous system

The end