

Alcohol & Nervous System:

Chapter 9

Lesson 2

The Nervous System

The Command Center of the Body

The nervous system:

- Is your body's **control center**
- Carries **messages** to and from your brain
- Controls **breathing**
- Controls the **flow of blood** throughout the body
- Can be harmed or **permanently** damaged by alcohol

The Nervous System

The Command Center of the Body

Neurons are also called **nerve cells**.



neurons Cells that make up the nervous system

Neurons send and receive messages to and from the brain in the form of tiny **electrical charges**.

The Nervous System

The Parts of the Nervous System

The two parts of the nervous system are:

- The central nervous system (CNS)
- The peripheral nervous system (PNS)



central nervous system Made up of the brain and the spinal cord



peripheral nervous system Made up of the nerves that connect the central nervous system to all parts of the body

The Nervous System

The Parts of the Nervous System

The brain **works** with the spinal cord.

Your brain is the **most important** part of the nervous system.



brain The command center, or coordinator, of the nervous system



spinal cord A long bundle of neurons that sends messages to and from the brain and all parts of the body

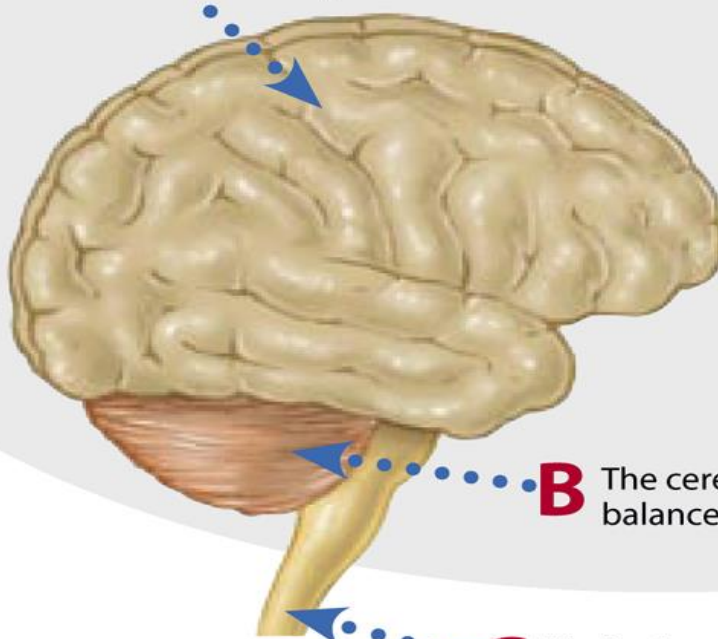
The Nervous System

Problems of the Nervous System

The nervous system can become injured, or it may be **affected** by **diseases** and **disorders**.

Your Nervous System

A The cerebrum is the largest part of the brain. It processes thoughts, interprets information from the sense organs, and controls voluntary muscle movement.

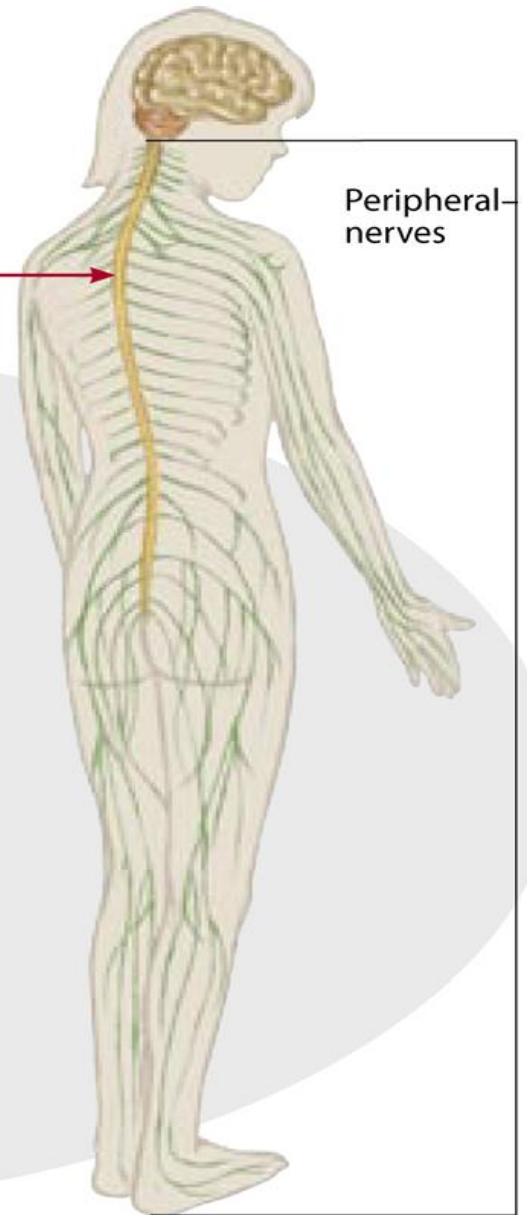


B The cerebellum maintains balance and coordination.

C The brain stem connects the brain to the spinal cord. It controls involuntary muscle movement such as breathing.

Spinal Cord

Peripheral nerves



The Nervous System

Injuries

A brain injury can cause brain **damage**, loss of **memory**, and the loss of some **physical** abilities.

Physical injuries are the **most common** causes of damage to the nervous system. If you injure your **head**, **neck**, or **back**, it can be very harmful to your nervous system and overall health.

The Nervous System

Some Nervous System Disorders

Multiple Sclerosis (MS)

MS attacks the central nervous system and damages the outer part of some nerves.

Alzheimer's Disease

Alzheimer's causes a loss of memory, mental deterioration, and death.

Parkinson's Disease

People with Parkinson's disease often have shaking and stiffness of the arms and legs.

Epilepsy

Epilepsy occurs when the signals in the brain aren't sent in the normal way, sometimes causing seizures.

The Nervous System

Infections

Some viruses that can harm the nervous system include:

- **Polio** (*While now rare in the Western world, polio is still endemic to South Asia and Nigeria. Vaccines.*)
- **Rabies** (*Causes acute inflammation of the brain. No Vaccine.*)
- **Meningitis** (*Inflammation of the protective membranes covering the brain and spinal cord. Vaccines.*)

The Nervous System

Alcohol and Drug Abuse

Alcohol can destroy **millions** of brain cells, which can **never** be **replaced**.

Other drugs harm the brain by affecting **heart rate**, **breathing**, **sleeping**, and the way your nervous system **sends** and **receives** messages.

Some drugs harm the nervous system so much that people using them may **imagine objects** or **lights** that aren't really there. This is called **hallucinating**.

The Nervous System

Taking Care of Your Nervous System

Follow positive health practices.

Eat nutritious foods and get enough rest.

Protect yourself from disease.

Get vaccinated and avoid risky situations.

Protect yourself from physical injury when playing sports.

Wear protective gear. Never dive into shallow water. Have someone spot you when weight lifting.

Follow traffic rules.

Obey all signs and wear a safety belt when in a car.

Practice positive health behaviors.

Decide never to use alcohol or other drugs.