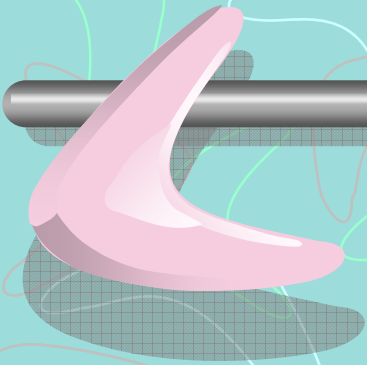


Care and Problems of the Nervous System

Chapter 16 Lesson 2





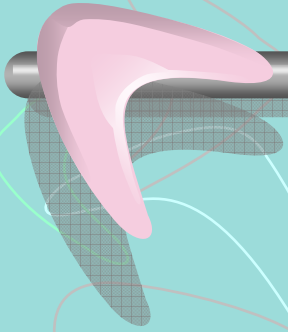
Care of the Nervous System

- To keep your nervous system functioning well, you need regular exercise, adequate rest and sleep, and proper nutrition.
- Avoid using alcohol and other drugs, which can cause permanent damage to the nervous system.
- By following basic safety rules such as wearing a helmet when cycling, and wearing a seatbelt when driving you can avoid many head and spinal cord injuries.



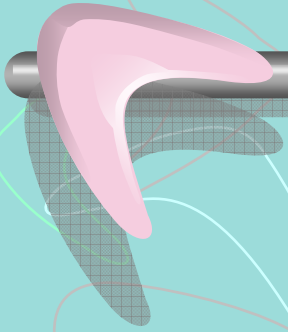
Problems of the Nervous System

- Accidents can damage or destroy nerve tissue.
- Degenerative diseases, such as Parkinson's disease, can destroy nerve tissue in the brain and spinal column.
- Illegal drug use and alcohol abuse can destroy brain tissue and lead to nervous system disorders.



Head Injuries

- Concussion, a temporary disturbance of the brain's ability to function, is the most common and mildest kind of brain injury.
- A more serious injury to the brain is a contusion. A contusion is a brain bruise, which may cause swelling of the brain.
- A severe contusion can result in a coma, a state of unconsciousness.



Spinal Cord Injuries

- The spinal cord is surrounded by protective membranes, shock absorbing fluid, and vertebrae of the spine. These defenses protect it from bumps and falls common in everyday life.
- Injury anywhere on the spinal cord can cause paralysis.
- Injury to the upper part of the spinal cord causes more extensive damage. An injury to the neck area may result in *Quadraplegia*-paralysis in both arms and legs.
- An injury at the chest level or lower may result in *Paraplegia*-paralysis of the lower body.



Degenerative Diseases

- Degenerative means causing a breakdown or function of a structure. The three most common are:
- **Parkinsons Disease-** a progressive disorder caused by degeneration of nerve cells within the brain that modify nerve impulses transmitted from motor areas of the brain. The result is uncontrolled muscular movement.
- **Multiple Sclerosis-** a progressive disease of the CNS involves destruction of the myelin sheath that surrounds nerve fibers in the brain and spinal cord. MS is thought to be autoimmune. Scar tissue replaces the damaged myelin and voluntary control of muscles gradually decreases.



Degenerative Diseases cont.

- **Alzheimers Disease-** causes general mental deterioration. Patients gradually lose their memory and powers of judgment. Speech and body coordination may be affected. This is the fourth leading cause of death in adults.



Other Disorders and Problems

- **Epilepsy-** *a disorder of the nervous system that is characterized by recurrent seizures-sudden episodes of uncontrolled electrical activity in the brain.* Seizures may result from a chemical imbalance in the brain, a stroke, a tumor, a head injury, a contusion, or an infection.
- **Cerebral Palsy-** *a group of non-progressive neurological disorders that are a result of damage to the brain before birth, during birth, in the newborn period, or in early childhood.* Accidental injury, radiation, certain drugs and diseases are among the causes although in the majority of cases the cause is unknown.