

Chapter 10

The Nervous System Part 2

## Head and Meninges

• Cephalgia: Headache

• Encephalocele:

• Hydrocephalus: Incr. CSF

• Meningocele:

• Meningitis: Inflammation of the meninges





### Disorders of the Brain

Loss of brain function due to changes in • Alzheimer's disease: brain structure; affects memory, thinking and behavior

• Encephalitis: Inflammation of the brain

Chronic, degenerative disease of the • Parkinson's disease: CNS; involves dopamine; symptoms are movement related

 Tetanus: "Lock jaw"; deadly bacterial infection; preventable through vaccination

• Cognition: Thinking

# Brain Injuries

Pia

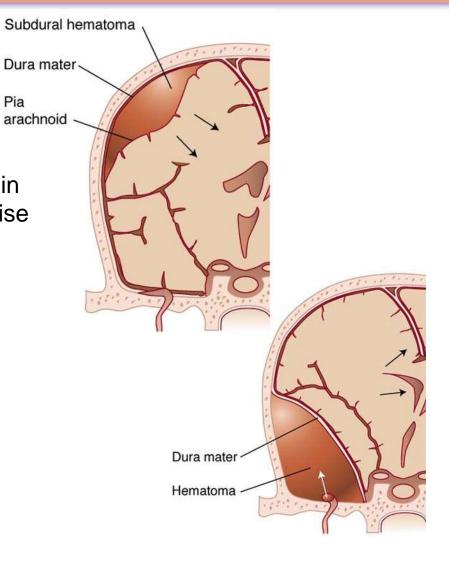
• Amnesia: Memory loss

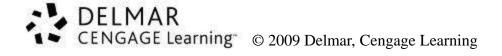
• Concussion: Shaking

• Cerebral Contusion: Brain bruise

• Cranial Hematoma:

- Epidural hematoma:
- Subdural hematoma:
- Intracerebral hematoma:





### Levels of Consciousness

• Conscious: alert

• Delirium: Reversible confused, disoriented state

• Syncope: fainting

• Dementia: Decreased mental status

• Lethargy: listlessness

• Stupor: Impaired consciousness; lack of response

• Coma: unconscious

#### Strokes

- Ischemic Attacks: Restriction in blood flow
  - TIA: Temporary interruption
  - Ischemic stroke: Blood flow is blocked
- Hemorrhagic Stroke: Brain bleed; when vessels leak or rupture
- Aphasia: Inability to communicate either through speaking or writing

## The Spinal Cord

- Myelitis: Inflammation of the spinal cord
- Myelosis: Tumor in the spinal cord
- Multiple Sclerosis: Autoimmune disorder caused by the demyelination of the nerves
- Poliomyelitis: Viral disease affecting nerves that can cause paralysis; can be prevented through vaccination
- Postpolio syndrome: Recurrence years after initial infection
- Radiculitis: Pinched nerve
- Spinal cord injuries: Often results in paralysis

#### Nerves

- Amyotrophic lateral sclerosis (Lou Gehrig's):
  - Damages neuromuscular system causing muscle weakness
- Bell's Palsy:
  - Facial paralysis due to damage to a cranial nerve
- Guillain-Barre syndrome:
  - Immune system attacks PNS causing weakness
- Sciatica:
  - Nerve pain that runs down thigh
- Peripheral neuropathy:
  - Pain, loss of sensation or motor control





## Cerebral Palsy

- Characterized by poor muscle control, spasticity and other neurological deficiencies caused by an injury to the part of the brain that controls muscle movement.
- Usually occurs during pregnancy, birth or soon after birth

#### Seizures

- Generalized seizure: "Tonic-clonic"; convulsions followed by a loss of consciousness
- Tonic convulsion: Prolonged, generalized contraction
- Clonic convulsion: Convulsion where muscles alternately contract and relax
- Partial seizure: Only affect a part of the brain; can be a cue of an oncoming seizure

## Epilepsy

- Grand mal epilepsy: Tonic clonic seizures
- Petit mal epilepsy: Brief loss of awareness
- Epileptic aura: A premonition. May consist of flashing lights, a gleam of light, blurred vision, an odor, the feeling of a breeze, numbness, weakness, or difficulty speaking

#### Treatment Procedures

#### Anesthesia

- Topical:
- Local:
- Regional:
- Epidural:
- Spinal:
- General:

#### **Treatments**

- Analgesics:
- Sedative:
- Barbiturate:
- Phenobarbital:
- Anticonvulsant:
- Hypnotic:

## Diagnostic Procedures

- Computed tomography (CT):
- Magnetic resonance imaging (MRI):
- Echoencephalography:
- Electroencephalography:
- Encephalography:
- Myelography: