Blunt Force Injury to the Head

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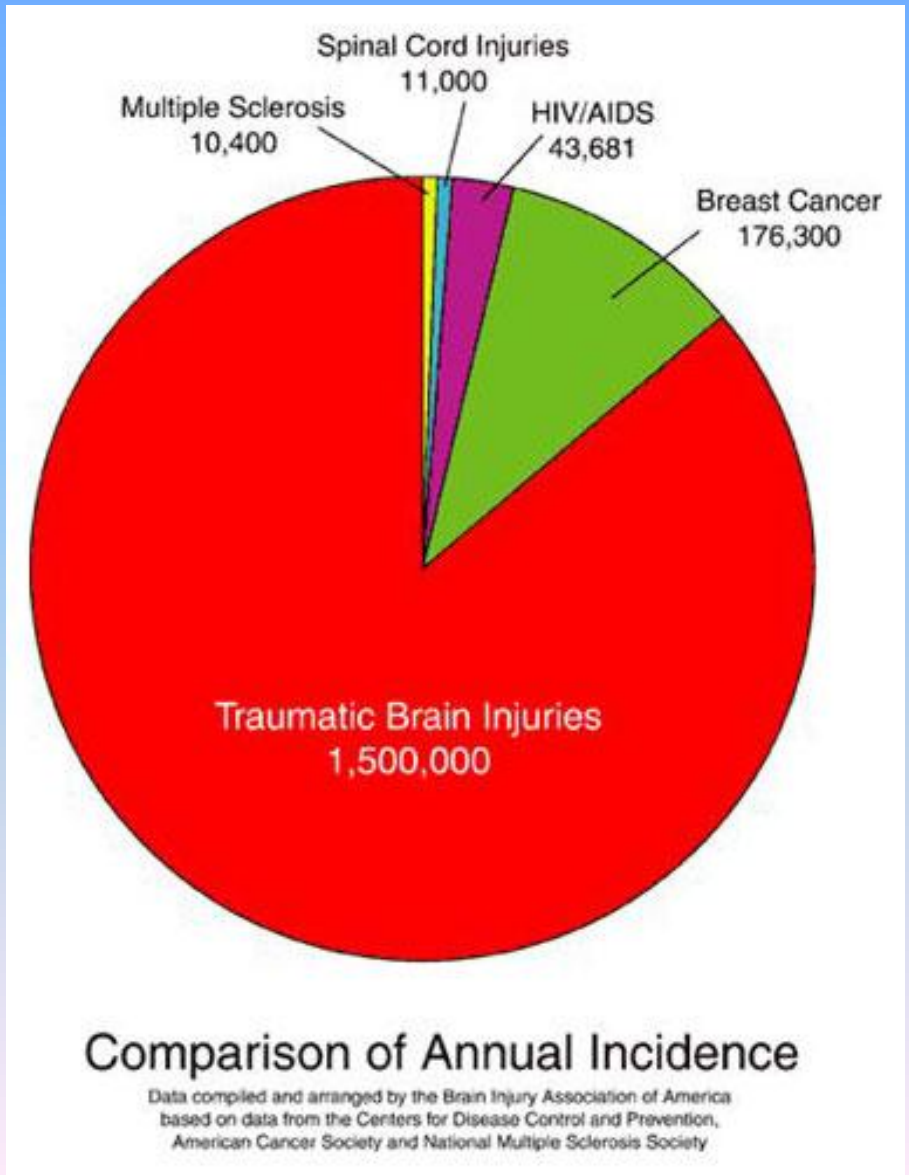
Outline

- Objectives
- Statistic
- Anatomy
- Scalp injury
- Skull fracture
- Meningeal injury
- Brain injury
- 28 slides

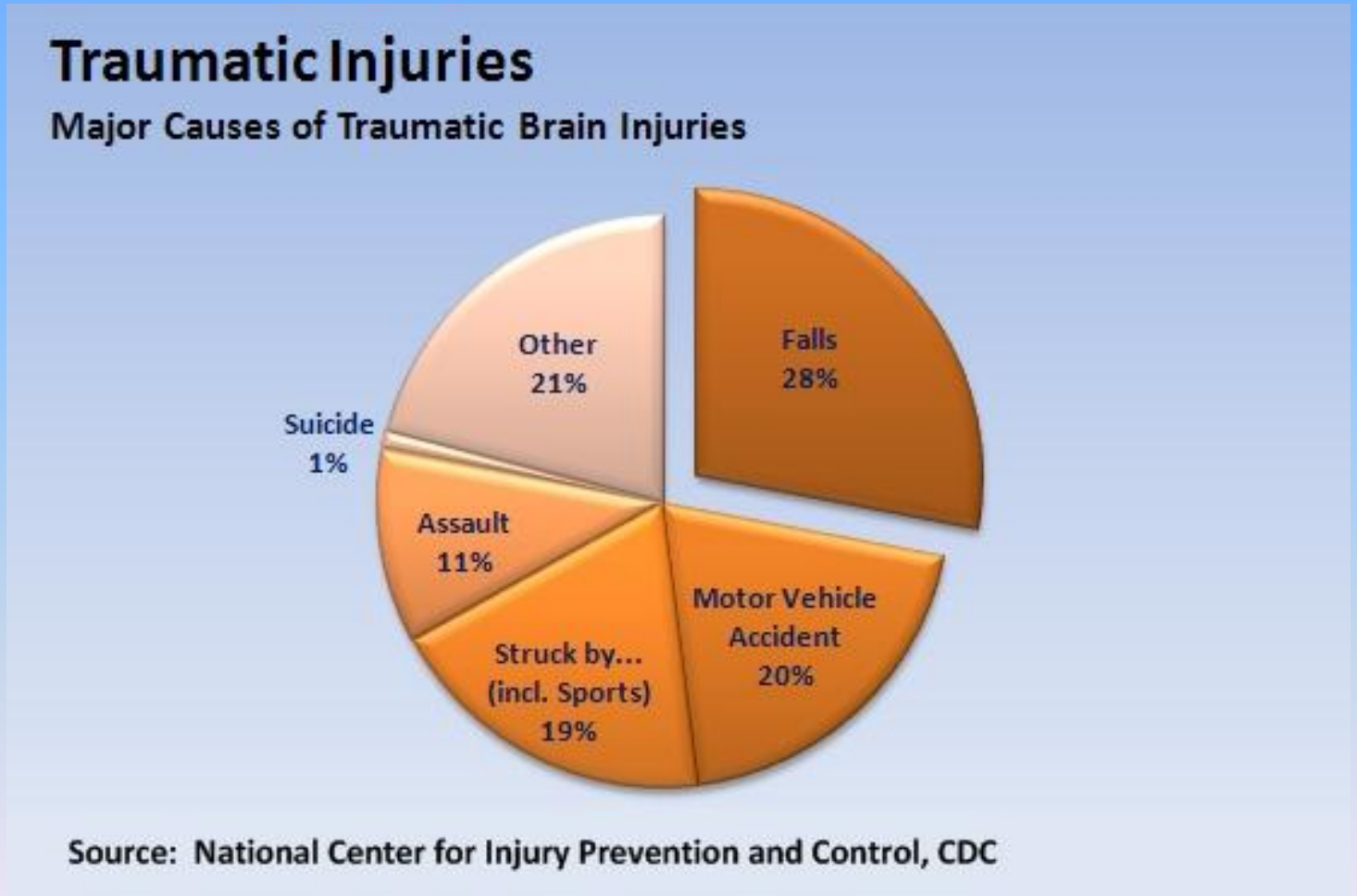
Objectives

- Understand the mechanism of head injury
- Recognize the patterns of different injuries

Statistic


Spinal Cord Injuries
11,000
Multiple Sclerosis
10,400
HIV/AIDS
43,681
Breast Cancer
176,300
Traumatic Brain Injuries
1,500,000
Comparison of Annual Incidence
Data compiled and arranged by the Brain Injury Association of America
based on data from the Centers for Disease Control and Prevention,
American Cancer Society and National Multiple Sclerosis Society

Statistic


Traumatic Injuries
Major Causes of Traumatic Brain Injuries
Other
21%
Falls
28%
Suicide
1%
Assault
11%
Motor Vehicle
Accident
20%
Struck by...
(incl. Sports)
19%
Source: National Center for Injury Prevention and Control, CDC

Anatomy

- Scalp
- Skull
- Meninges
- Brain

Classification

- Direct impact
- Acceleration and deceleration

- Closed or penetrating

- Primary or secondary

Direct impact

- Head static

Acceleration and deceleration

Acceleration and deceleration

- Inertia

Coup and contrecoup

Scalp Injury

- Contusion
- Laceration
- Incision

Skull Fracture

- Linear
- Depressed
- Comminuted

Skull fracture

- Hinge fracture

Skull fracture

- Ring fracture

Skull fracture

- Diastatic suture

Skull fracture

- Spider web

Skull fracture

- Puppe’s rule

Meningeal Injury

- Dura
- Arachnoid and pia

Epidural / extradural hemorrhage

- Meningeal artery or vein

Subdural hemorrhage

- Bridging vein

Subarachnoid hemorrhage

Brain Injury

- Concussion
- Contusion
- Laceration

Concussion

- Loss of function without gross damage
- Diffuse axonal injury

Contusion

- Surface
- Deep structure

Consequence

- Swelling

Consequence

- Herniation

Hemorrhage

- Duret hemorrhages