

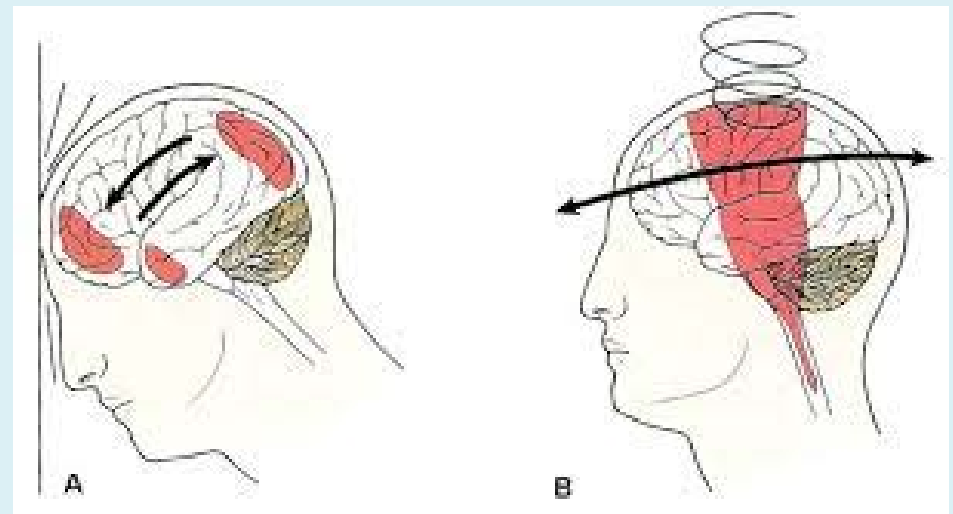
Rehabilitation Following Traumatic Brain Injury



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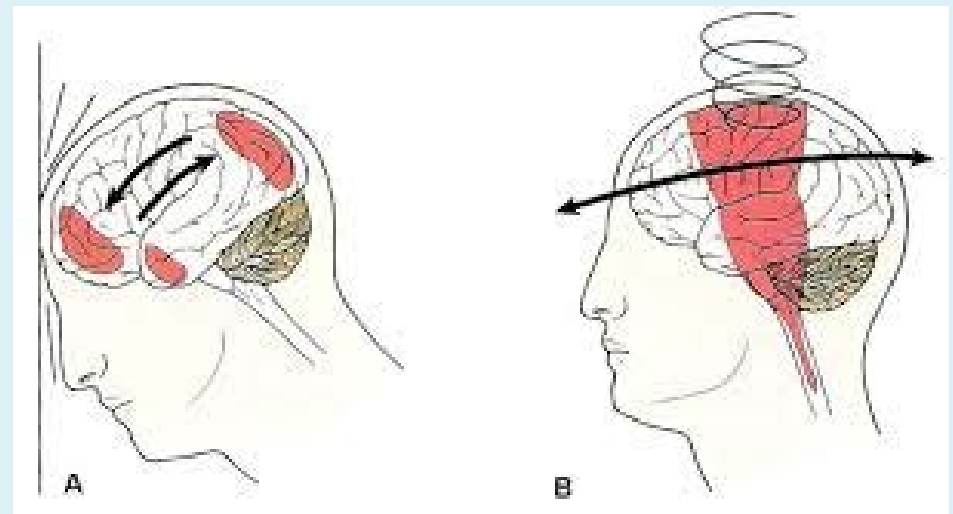
Definition of Traumatic Brain Injury

- Traumatic brain injury (TBI) is defined as injury to the brain caused by external forces.
- These types of injuries result from a jolt or blow to the head, or are caused by an object penetrating the skull and injuring the brain.
- Examples of sources of TBI include motor vehicle accidents, falls, assaults, and gunshot wounds.



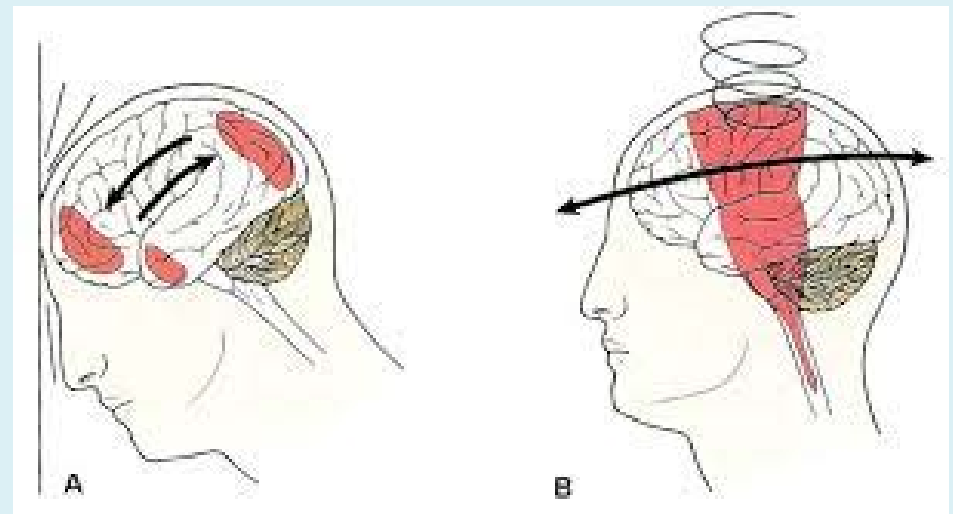
Diferential diagnosis

- TBI should be differentiated from other types of acquired injuries to the brain, such as those caused by tumor or stroke, because of the significant differences in mechanisms, treatments, and outcomes between traumatic and non traumatic injury.
- TBI should also be differentiated from the term *head injury*, which is defined as a blow to the head or laceration and may occur without causing injury to the brain.
- A diagnosis of TBI is often established through an evaluation of clinical symptoms, as well as positive neurologic signs and neuroimaging findings.



Types of traumatic brain injury

- A TBI can further be defined as either open or closed.
- An open, or penetrating, TBI occurs when the head is hit by an object that breaks the skull and enters the brain.
- A closed TBI occurs when the brain is injured but the skull remains intact.



Defining Severity of Injury

- TBI is often categorized as mild, moderate, or severe.
- TBI is suspected or indicated if there has been a significant blow to the head and/or there is an alteration of or loss of consciousness at the time of injury.
- The Glasgow Coma Scale (GCS) has become the most widely used primary initial assessment tool for determining the severity of injury

Defining Severity of Injury

Glasgow Coma Scale

Eyes

- Open spontaneously 4
- Open to verbal command 3
- Open to painful stimuli 2
- No response 1

Verbal response

- Oriented and converses 5
- Disoriented and converses 4
- Inappropriate words 3
- Incomprehensible sounds 2
- No response 1

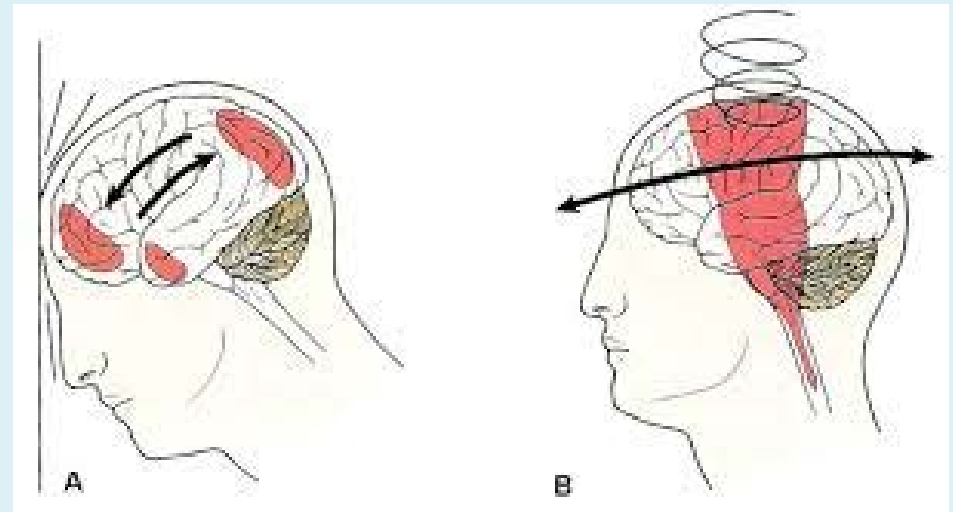
Motor Response

- Obeys verbal commands 6
- Responds to painful stimuli by:
 - Purposeful localization 5
 - Withdrawal 4
 - Flexor posturing 3
 - Extensor posturing 2
 - No response 1

GCS Score 3-15

Severity determination

- Generally accepted guidelines identify three levels of severity based on GCS scores:
- Mild (GCS = 13 to 15)
- Moderate (GCS = 9 to 12)
- Severe (GCS = 3 to 8)



Epidemiology

- TBI is often categorized as mild, moderate, or severe.
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Thank you for your attention!