

Traumatic Brain Injuries in Older Adults: Challenges, Care, and Recovery

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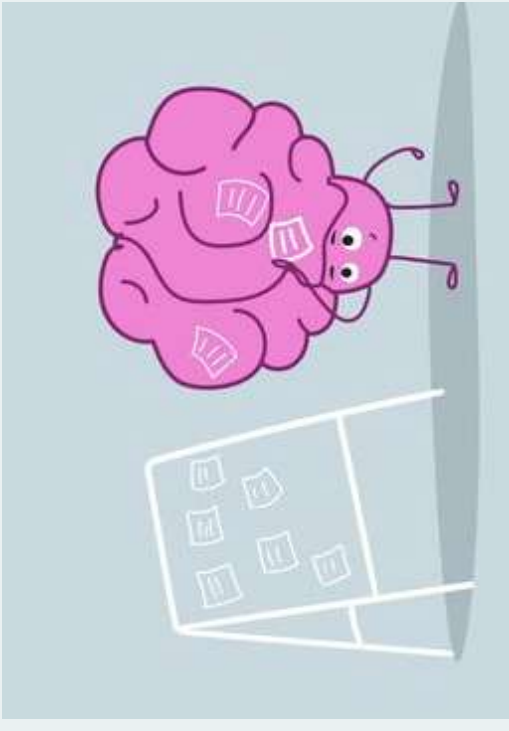
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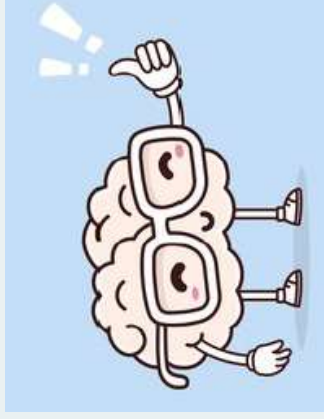
Outline

- Definition
- Signs & Symptoms
- Incidence/Prevalence
- Leading Causes
- Risk Factors
- Consequences of TBI in Older Adults
- Post Injury Options
- Prevention & Mental Health Awareness



TBI Quiz

1. If there is no loss of consciousness there is not a TBI.
2. The effects of a TBI are not always visible right away.
3. You must hit your head in order to sustain a TBI.
4. Traumatic brain injuries are not always visible on CT or MRI.



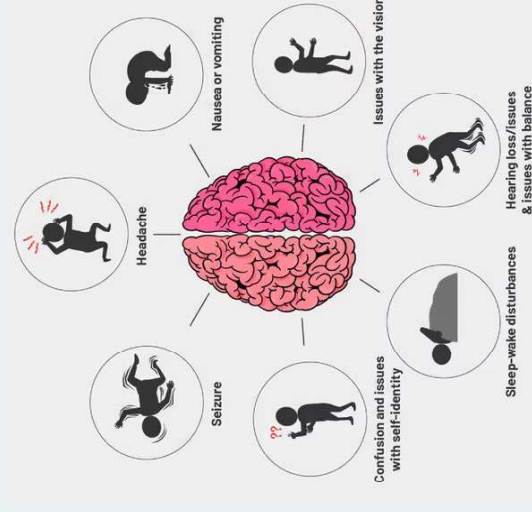
Definition



- Traumatic Brain Injury (TBI): is a **disruption in normal brain function** caused by an **external force**, such as a blow or jolt to the head.
- This can result from accidents, falls, sports injuries, or violent events.
- The severity of TBI can range from mild (like a concussion) to severe, leading to long-term cognitive, physical, emotional, or behavioral impairments.

Signs and Symptoms

- **Physical**: headaches, dizziness, fatigue, balance problems
- **Sensory**: vision/hearing changes, light/noise sensitivity, changes in taste/smell
- **Cognitive & Communication**: memory lapses, trouble focusing, changes in conversation, slower problem-solving
- **Speech & Swallowing**: slurred or weak speech, voice changes, swallowing difficulties (risk of aspiration)
- **Neurobehavioral**: mood swings, depression, irritability, impulsivity, emotional changes
- **Everyday impact**: difficulty with routine tasks or noticeable changes in behavior



POP QUIZ

What % of TBI hospitalizations are in people 75+?

#1- 50%

#2- 23%

#3- 32%

#4- 10%

Incidence/Prevalence

- New Cases Annually: 2.8 million in the U.S., 10 million world-wide
 - 2.5 million emergency visits
 - 288,000 hospitalizations
 - 57,000 deaths
- Prevalence:
 - 5.3 million living with TBI-related disabilities (2% of U.S. population)
 - 775,000 older adults with long-term disability

People aged 75 years and older had the highest numbers and rates of TBI-related hospitalizations and deaths. This age group accounts for about 32% of TBI-related hospitalizations and 28% of TBI-related deaths.

Leading Causes/Risk Factors in Older Adults

- Falls
- Motor vehicle crashes



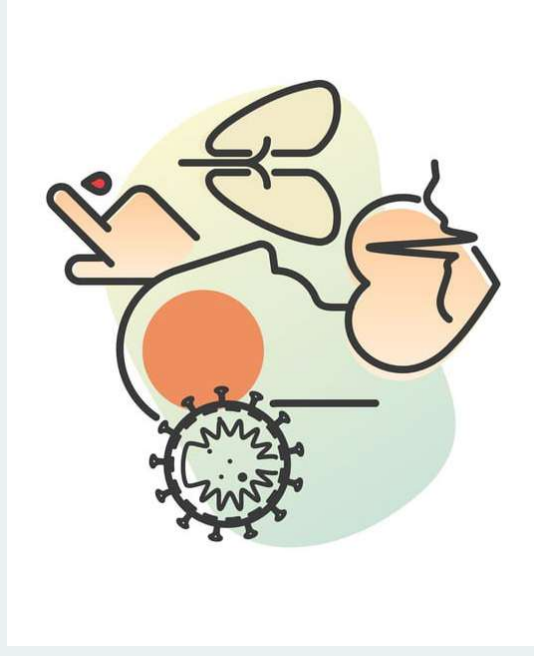
Normal Aging Risk Factors

- Decreased attention
- Memory changes
- Decreased executive functioning
- Vision changes contribute to decreased balance control
- Hearing loss can increase risk of accidents



Comorbidities- Risk Factors

- The most common chronic health conditions:
 - 55.7% hypertension
 - 31.9% heart disease
 - 18.6% diabetes
 - 8% stroke



TBI May be Missed in Older Adults

- **Why?** Symptoms of TBI overlap with other medical conditions such as dementia
- Older adults should be examined by a healthcare provider if:
 - **Fallen** or has a fall-related injury, such as a hip fracture.
 - Been in a **car crash**.
 - This is especially important among older adults who are taking blood thinners which could cause bleeding in the brain

Consequences of TBI

Acute Consequences (short-term)

- Bleeding in the brain
- Bruising of brain tissue
- Damage to nerve connections
- Swelling and body changes (blood pressure, electrolytes, anemia)

Chronic Consequences (long-term)

- Higher risk of epilepsy, stroke, Parkinson's, dementia
- Depression and mood swings
- Ongoing thinking and communication problems (memory, attention, conversation, social interaction)

Treatment Options

- **SEEK CARE IMMEDIATELY**
 - Get CT scan to check for bleeding
- **Graduated return to activities after 48 hours**
- **Medical and Rehab**
 - Acute care, inpatient rehab, outpatient care



- **Therapeutic Interventions**
 - Speech-language therapy
 - Physical therapy
 - Occupational therapy
 - Neuropsychological therapy
- **Assistive Technology**
- **Support and Counseling**
- **Long-Term Management**

Mental Health Post TBI

Possible Changes:

- Mood swings or irritability
- Anxiety or increased worry
- Depression or loss of interest
- Emotional lability (rapid mood shifts)
- Strain in relationships or social withdrawal

Research Shows:

- ~1 in 3 older adults develop depression within a year of TBI (TRACK-TBI, 2022)
- Women are **50% more likely** to develop depression post-TBI (ASA, 2023)
- Risk of anxiety, PTSD, and long-term psychiatric conditions also increases (CDC, 2023)



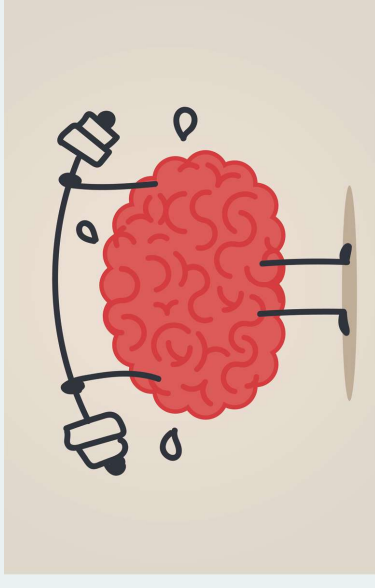
Prevention

- Speak up
- Keep moving
- Make the home safe
- Wear proper supportive footwear
- Get an annual eye exam
- Avoid ladders- get help
- Chair Rise Exercise - <https://www.cdc.gov/steady/pdf/steady-brochure-chairriseex-508.pdf>
- <https://www.cdc.gov/steady/patient-resources/index.html>



Brain Health

- Just like your body needs physical exercise, your brain needs mental exercise. After a brain injury, it is important to engage your brain to help with cognitive fatigue.
- Limit screen time
- Get plenty of sleep
- Activities you can do at home to promote brain health include:
 - sudoku, crosswords, Scrabble, or deduction puzzles
 - Card games and puzzles
 - Creativity outlets (drawing, playing piano, painting, etc.)
 - Listening to music
 - Eating a balanced diet and drinking plenty of water



Exercises for Fall Prevention

- <https://www.hopkinsmedicine.org/health/wellness-and-prevention/fall-prevention-exercises>

Resources

- https://www.asha.org/practice-portal/clinical-topics/traumatic-brain-injury-in-adults/#collapse_6
- <https://www.hopkinsmedicine.org/health/wellness-and-prevention/fall-prevention-exercises>
- <https://www.cdc.gov/traumatic-brain-injury/data-research/facts-stats/index.html>
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Any Questions/something you found
interesting/what did you learn today?



Thank you!

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