



Face/Neck/Head Injuries: Concussions & Older Adults

Presenter:



"Always There, Always Ready"



Concussions or Traumatic Brain Injury (TBI) - What are they?



A concussion is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth... causing the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells. ³



Concussion Severity



There is evidence of the reduction of impact forces to the brain due to the use of specific headgear or helmets. ⁵

MILD BRAIN INJURY

- Brief, if any, loss of consciousness
- Vomiting and Dizziness
- Lethargy
- Memory Loss

MODERATE BRAIN INJURY

- Unconsciousness up to 24 hours
- Signs of brain trauma
- Contusions or bleeding
- Signs of injury on neuroimaging

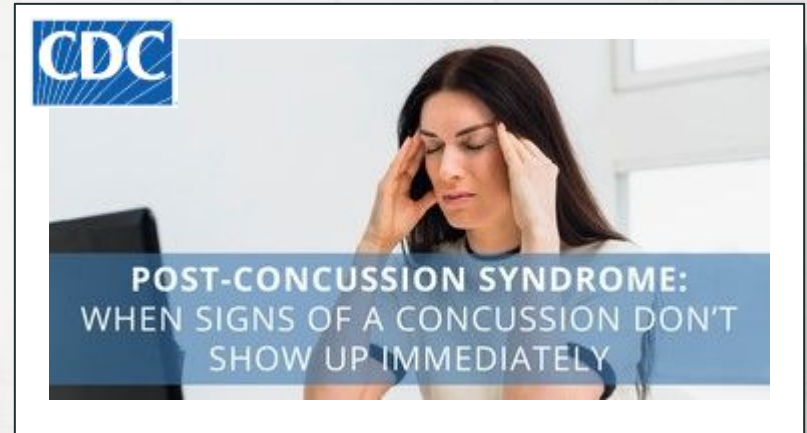
SEVERE BRAIN INJURY

- Unconsciousness exceeding 24 hours (coma)
- No sleep/wake cycle during loss of consciousness (LOC)
- Signs of injury appear on neuroimaging tests

Concussion Sign & Symptoms



- Rapid onset of short-lived neurological impairments
- Some cases, symptoms can evolve over a number of minutes to hours
- May or may not involve loss of consciousness



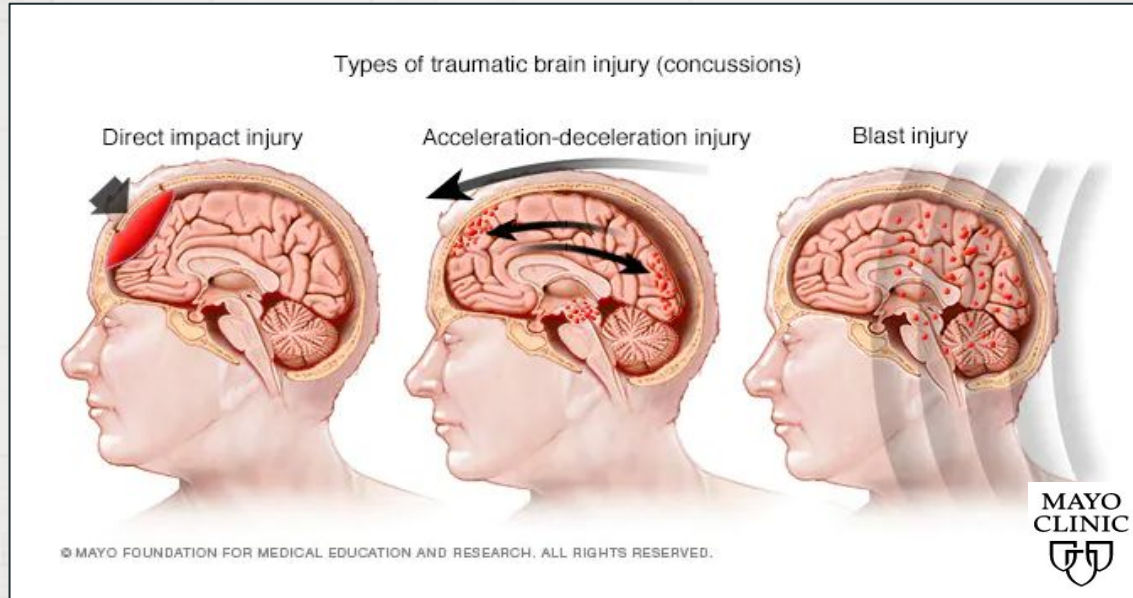
Concussion Signs & Symptoms



- Somatic (physical) - Cognitive - Emotional - Sleep patterns ¹

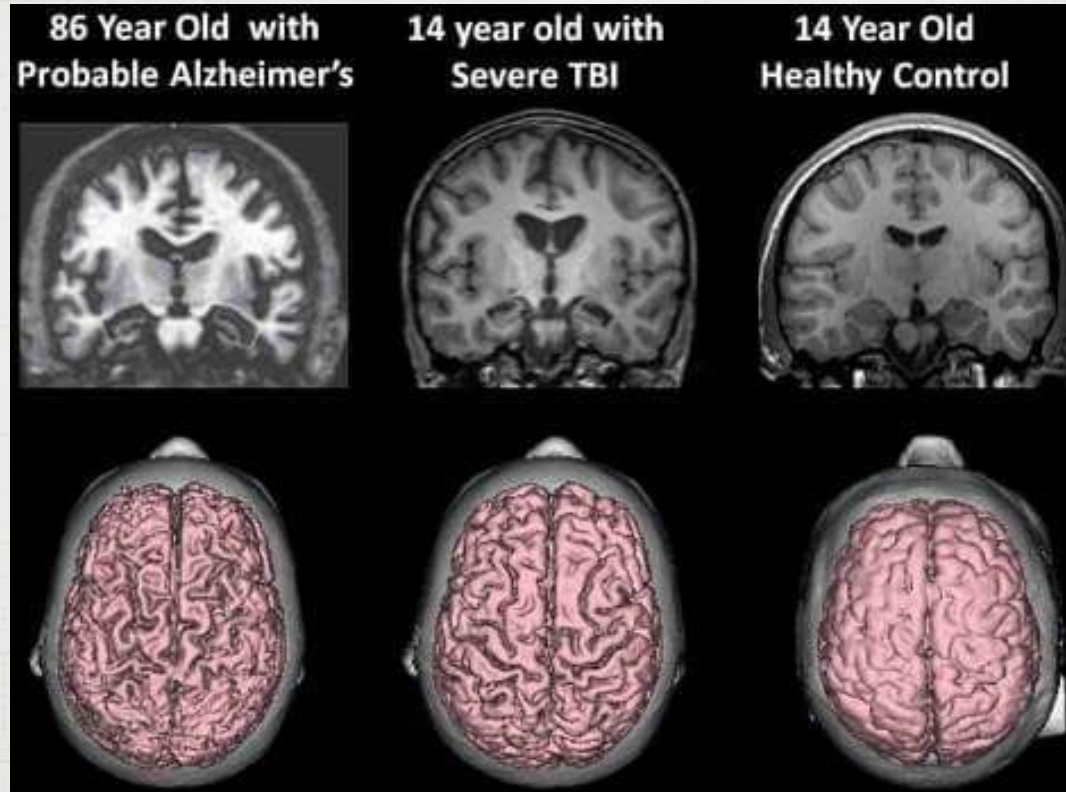
<i>Physical</i>	<i>Behavioral/Emotional</i>	<i>Cognitive/Thinking</i>	<i>Sleep</i>
Headache	Irritability	Feeling "In a Fog"	Drowsiness
Nausea/Vomiting	Depression	Attention Problems	Excessive Sleep
Tinnitus (Ringing in Ears)	Anxiety	Trouble Remembering	Difficulty Falling Asleep
Blurred Vision	Impulsivity	Trouble Finding Words	Altered Sleep Patterns
Sensitivity to Light/Noise	Lack of Initiation/Drive	Difficulty Filtering Noise & Keeping Up With Conversations	Awaking from Sleep Feeling Drained vs. Refreshed
Dizziness/Balance	Impaired Awareness		

Why be concerned?

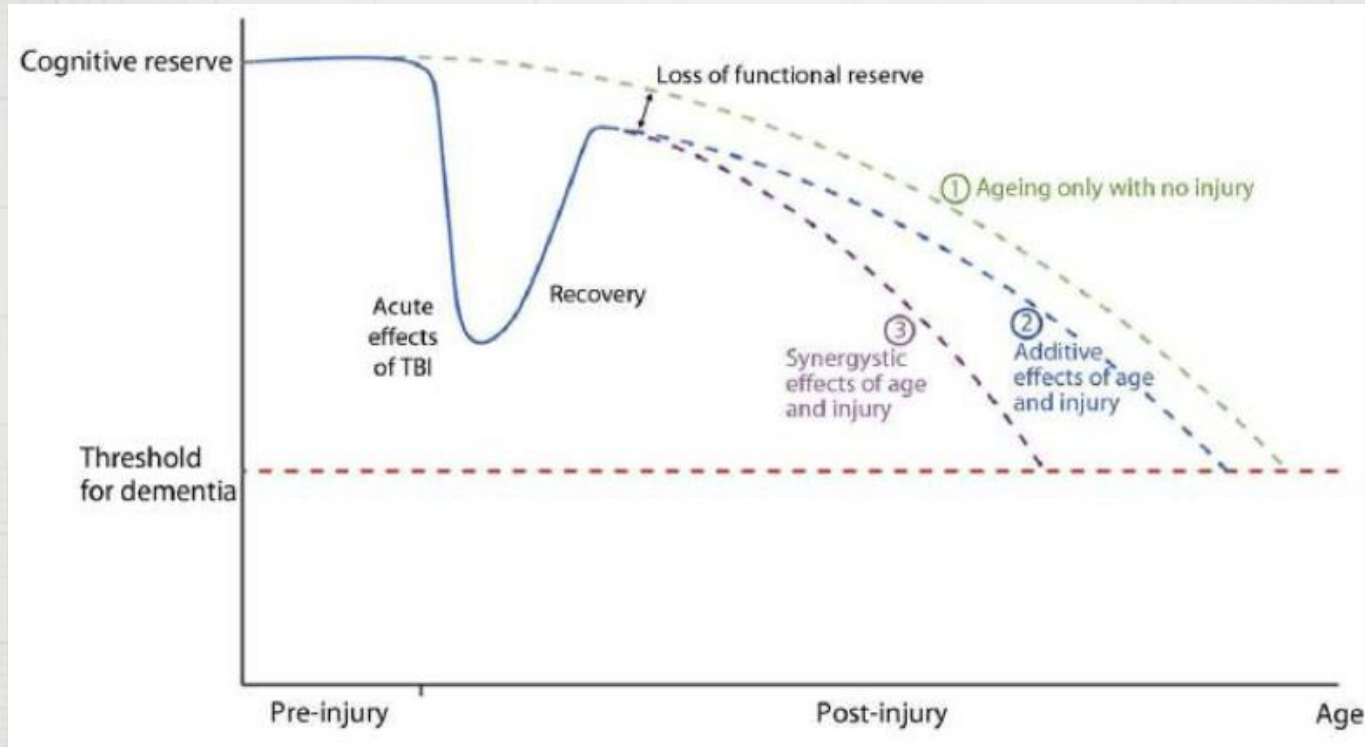


TBI resulting from fall in the older adults is associated with declines in physical activity and cognitive function, as well as increasing healthcare cost with increasing hospital usage. ²

Why be concerned?



Why be concerned?



Why be concerned?



- Head trauma is a leading cause of morbidity and mortality among older patients. ⁴
- The brain and spinal cord are *INCAPABLE* of regeneration. ⁸
- Compared to younger patients, elderly patients with TBI were much more likely to die or require long term care. ⁹

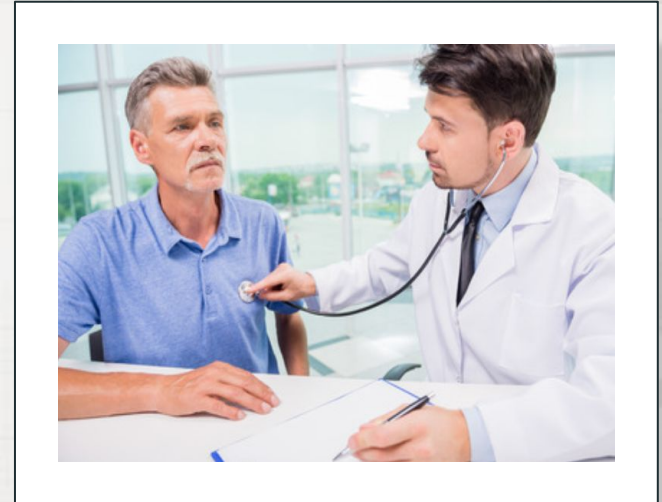


Why be concerned?



As an older adult:

- Body systems are more fragile and slow to respond/recover ⁹
- Concussion symptoms reflect those of pre-existing conditions or medication side effects ¹
- Medications like blood thinners increase risk for bleeding in the brain ¹⁰



Prevention ⁵



- **Helmets reduce forces**
 - fully intact w/ proper fit, wear, regular usage
- **Facemasks**
 - facial impact injuries
 - Indirect head trauma
- **Pitchers net**
- **Softer/ reduced-impact balls**



Preventive Care ¹



Eyesight and Hearing Checks

Going for regular eye and hearing checks. Especially if you experience any changes.



Footcare

Wearing appropriate and nicely fitting shoes. Taking care of your feet.



Strength and Balance

Doing strength and balance exercises 2-3 times per week. Follow the super 6 exercises in the up and about booklet



Nutrition

Having a well balanced diet and reducing alcohol intake.



Medication Reviews

Getting regular reviews. Especially if you take several different medications or if you experience any changes in symptoms.



Home Safety

Checking for hazards e.g poor lighting, moping up spills, loose rugs and cables.



Concussion Management ³⁷



- Education and baseline cognitive testing
- Removal from activity
- Sideline assessment
- Clinical evaluation
- Cognitive and physical rest, while monitoring symptoms
- Graduale activity integration
- Medical clearance before full return



Concussion Management ⁷



Sideline Evaluations

- not perfect selection
- best to remove from distractions for thorough evaluation
- follow up with healthcare providers
- recommend serial monitoring
- re-eval after initial rest period (24-72 hrs)



Concussion Management 7



Return to play - after significant rest, rehab, and clinical re-evaluation

➤ Rest

- sleep, no stimulus (reading, TV, music)

➤ Rehab

- pregressive integration of activity
- first mental, then physical
- stay below point of symptom onset or increase

1
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REST RIGHT AFTER THE INJURY

Take it easy the first few days after the injury when symptoms are more severe.

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WITHIN A FEW DAYS

As your child starts to feel better (and within a few days after the injury), he or she can gradually return to regular (non-strenuous) activities.

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WHEN SYMPTOMS ARE NEARLY GONE

When symptoms are mild and nearly gone, return to most regular activities.

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BACK TO REGULAR NON-SPORTS ACTIVITIES

Recovery from a concussion is when your child is able to do all of their regular activities without experiencing any concussion symptoms.

Additional Resources:



- **How Concussions Work**

“What Happens When You Have a Concussion? - Clifford Robbins.” TED, TED-Ed, <https://ed.ted.com/lessons/what-happens-when-you-have-a-concussion-clifford-robbins>

- **Concussions Education**

CrashCourse. Brain Injury Association of America, 2021; <https://youtu.be/is7NipiW4NY>

- **CDC Return to Play Experiences**

Return to Play: Learning from the Experiences of Early Implementers. CDC, https://www.cdc.gov/headsup/pdfs/policy/RTP_Implementation-a.pdf

- **GCU Sports Medicine Policies & Procedures**

“Clearance and Concussion Policies,” sections 6 & 7 (Dec. 2017)
https://s3.amazonaws.com/sidearm.sites/gculopes.com/documents/2017/10/31/GCU_Sports_Medicine_PP_2017_Sep_t_26_2017.pdf

Additional Resources:



- **SCAT5**

On-field neuropsychological SRC testing tool; <https://scat5.cattonline.com/#/assessment/assessment-choice>

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2. "Concussion." *Mayo Clinic*, Mayo Foundation for Medical Education and Research, 22 Feb. 2020, <https://www.mayoclinic.org/diseases-conditions/concussion/symptoms-causes/syc-20355594>
3. "Concussion Protocol 101 Guide." *Concussion Care Management - ImPACT Applications Inc.*, 30 June 2021, <https://impacttest.com/concussion-protocol-101-guide/#alert-anchor>
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References – Medical Journals



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<https://bjsm.bmj.com/content/51/11/838>
8. Robert C. C., *Return to Play Guidelines After a Head Injury*, Clinics in Sports Medicine, Volume 17, Issue 1, 1998, Pages 45-60, ISSN 0278-5919.
<https://www.sciencedirect.com/science/article/abs/pii/S0278591905700600?via%3Dihub>
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10. Yee, G., & Jain, A. (2021). Geriatric Head Injury. In *StatPearls*. StatPearls Publishing.
<https://www.ncbi.nlm.nih.gov/books/NBK553101/>





Comments & Questions

Thank you!

