

Traumatic Brain Injury (TBI)



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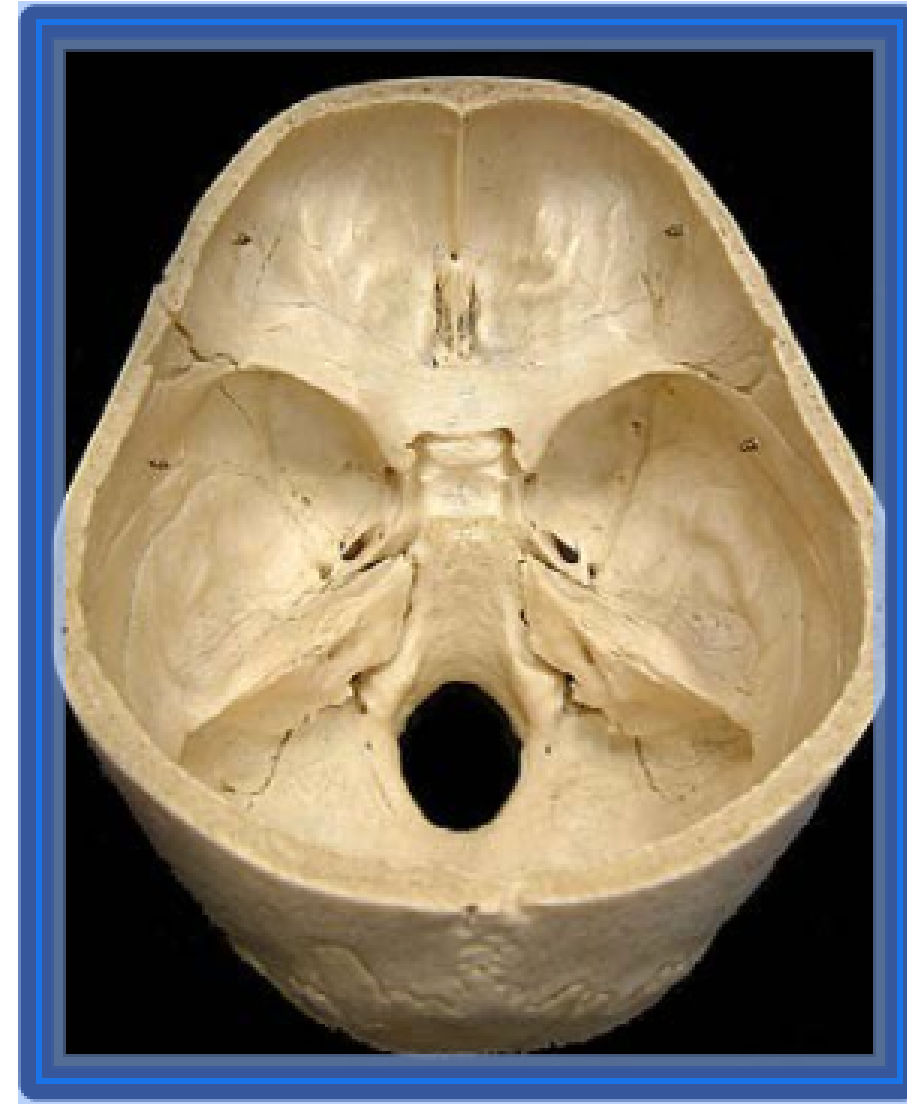
The Brain



3 POUNDS



FIRM JELLY



INSIDE THE SKULL

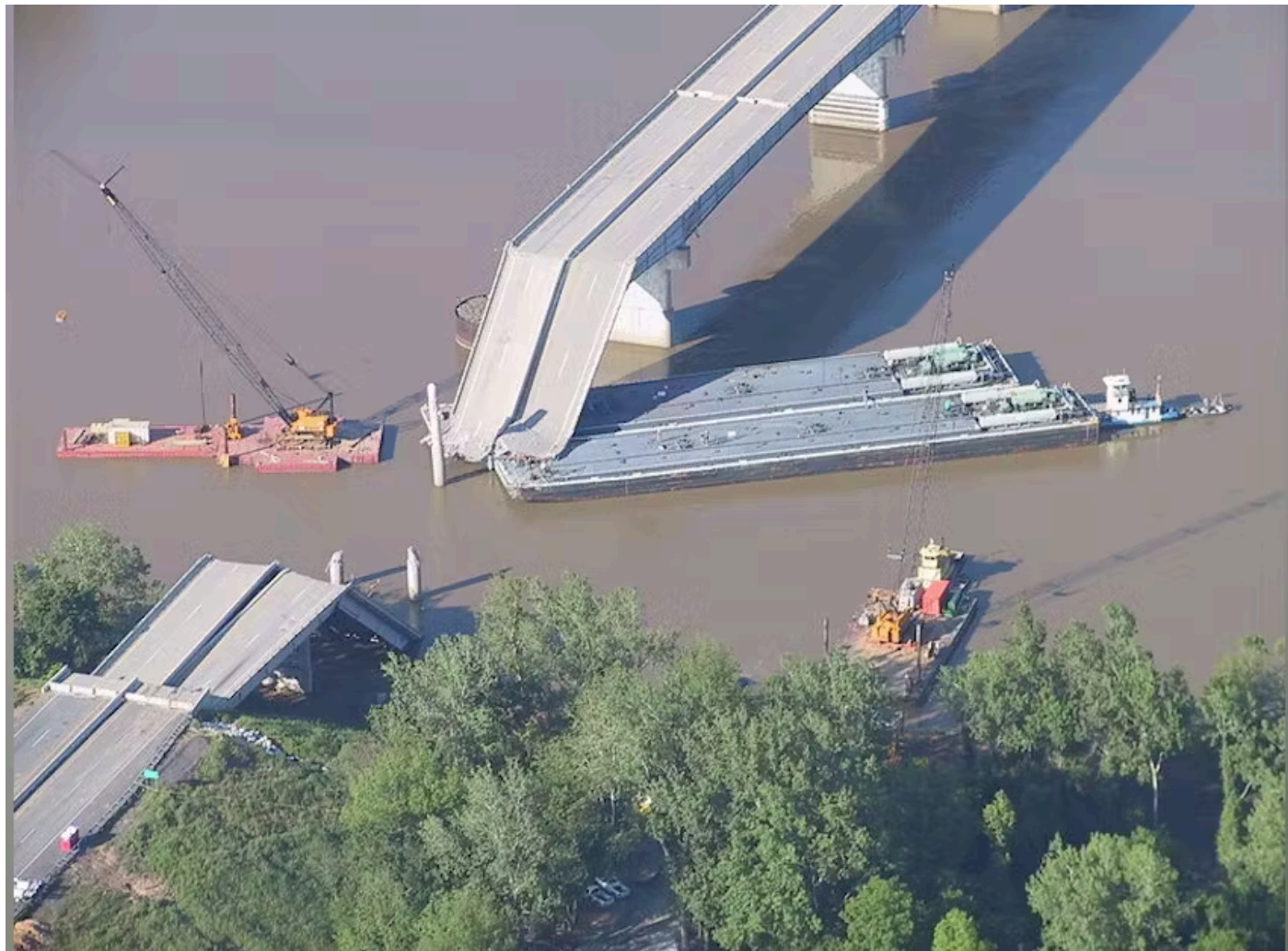


EGG IN 5.4 OUNCES
OF WATER

Unique Brain Cells Make YOU One-of-A-Kind

The brain's way of recovering from injury is unique too.
It's called neuroplasticity.

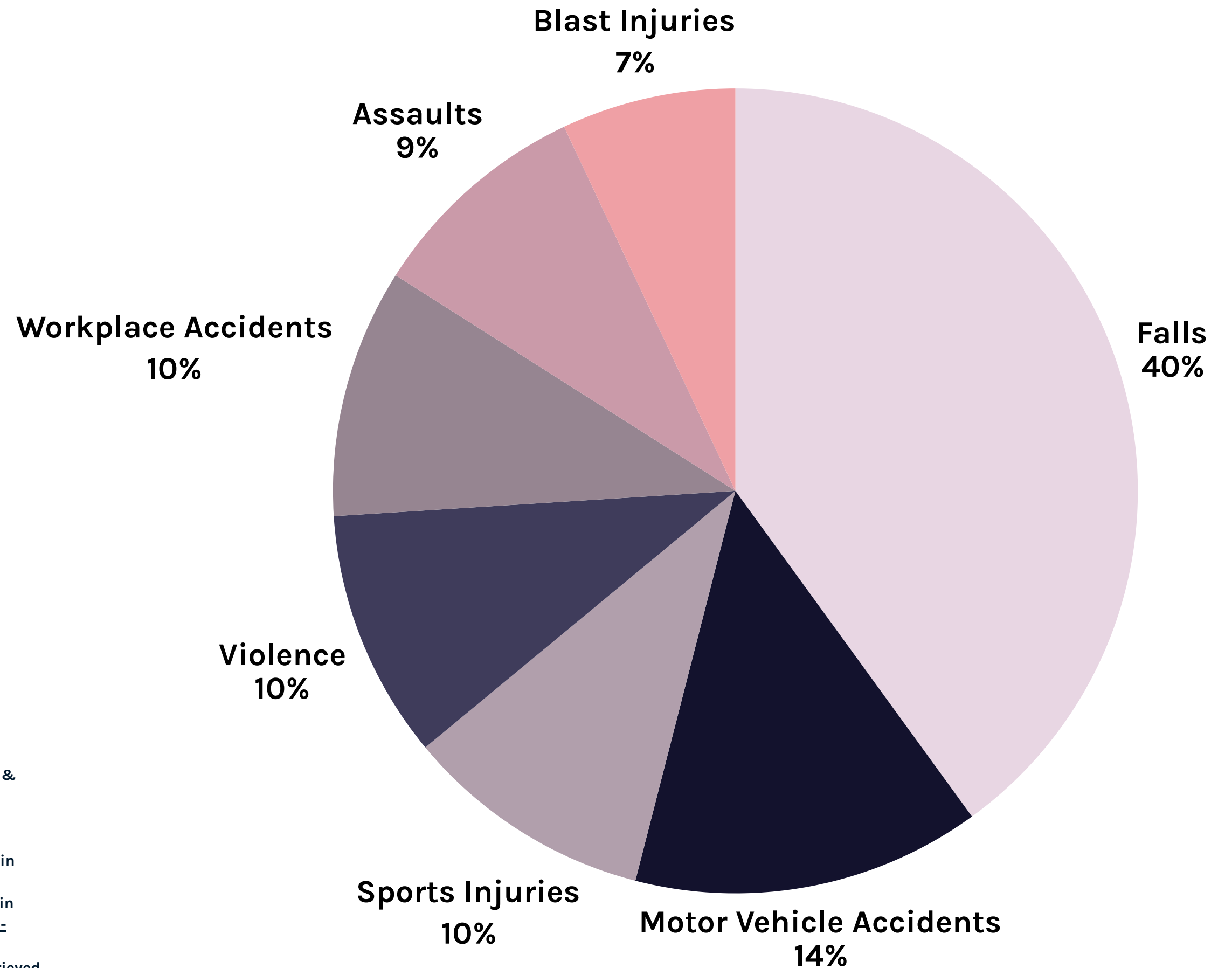
Dead neurons cannot be replaced: NEURAL PATHWAYS ARE SEVERED. BRAIN RE-ROUTES, WHICH TAKES TIME.



OR



Most Common Causes of Traumatic Brain Injury (TBI)



Centers for Disease Control and Prevention. (n.d.). Traumatic brain injury & concussion: Data & statistics. Retrieved from <https://www.cdc.gov/traumaticbraininjury/data/index.html>

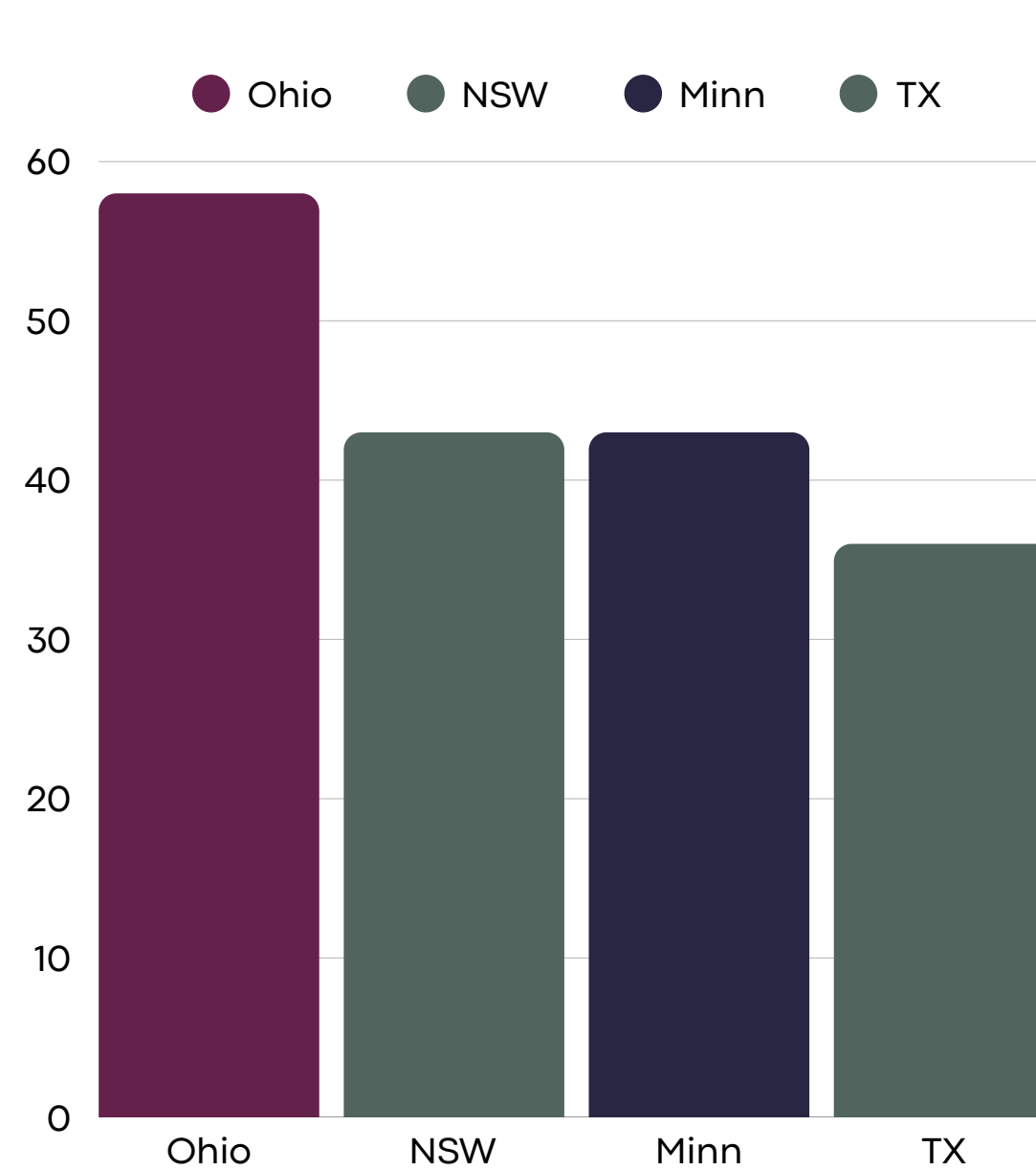
National Institutes of Health. (n.d.). Traumatic brain injury fact sheet. Retrieved from <https://www.ninds.nih.gov/health-information/disorders/traumatic-brain-injury>

Occupational Safety and Health Administration. (n.d.). Protecting workers from traumatic brain injury hazards. Retrieved from <https://www.osha.gov>

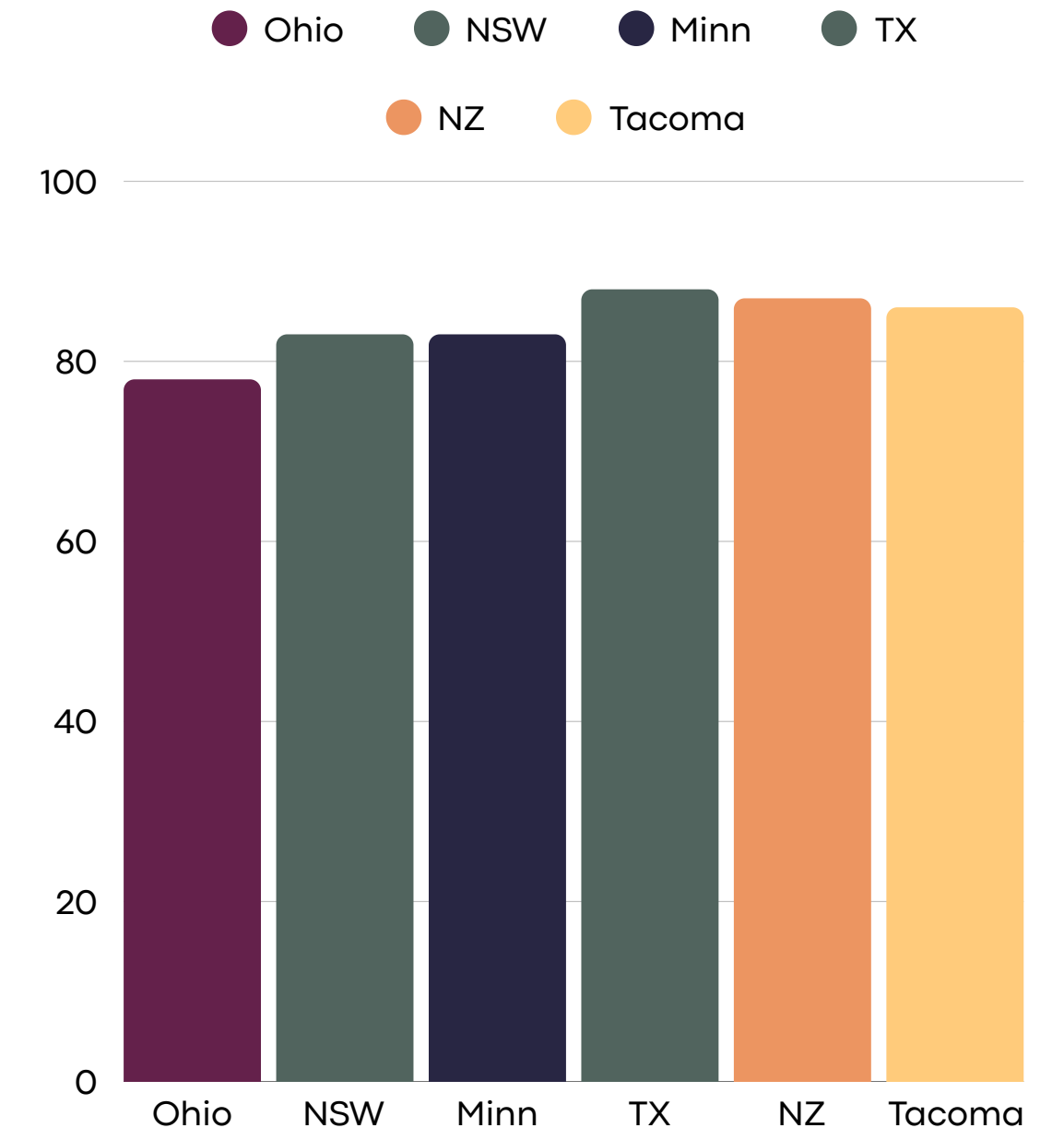
The Guardian. (2024, August 29). High school football deaths highlight risks of traumatic brain injury. Retrieved from <https://www.theguardian.com/sport/article/2024/aug/29/high-school-football-deaths-public-health-crisis>

U.S. Department of Veterans Affairs. (n.d.). Traumatic brain injury and military personnel. Retrieved from <https://www.research.va.gov/topics/tbi.cfm>

Rates of TBI in Prison Studies



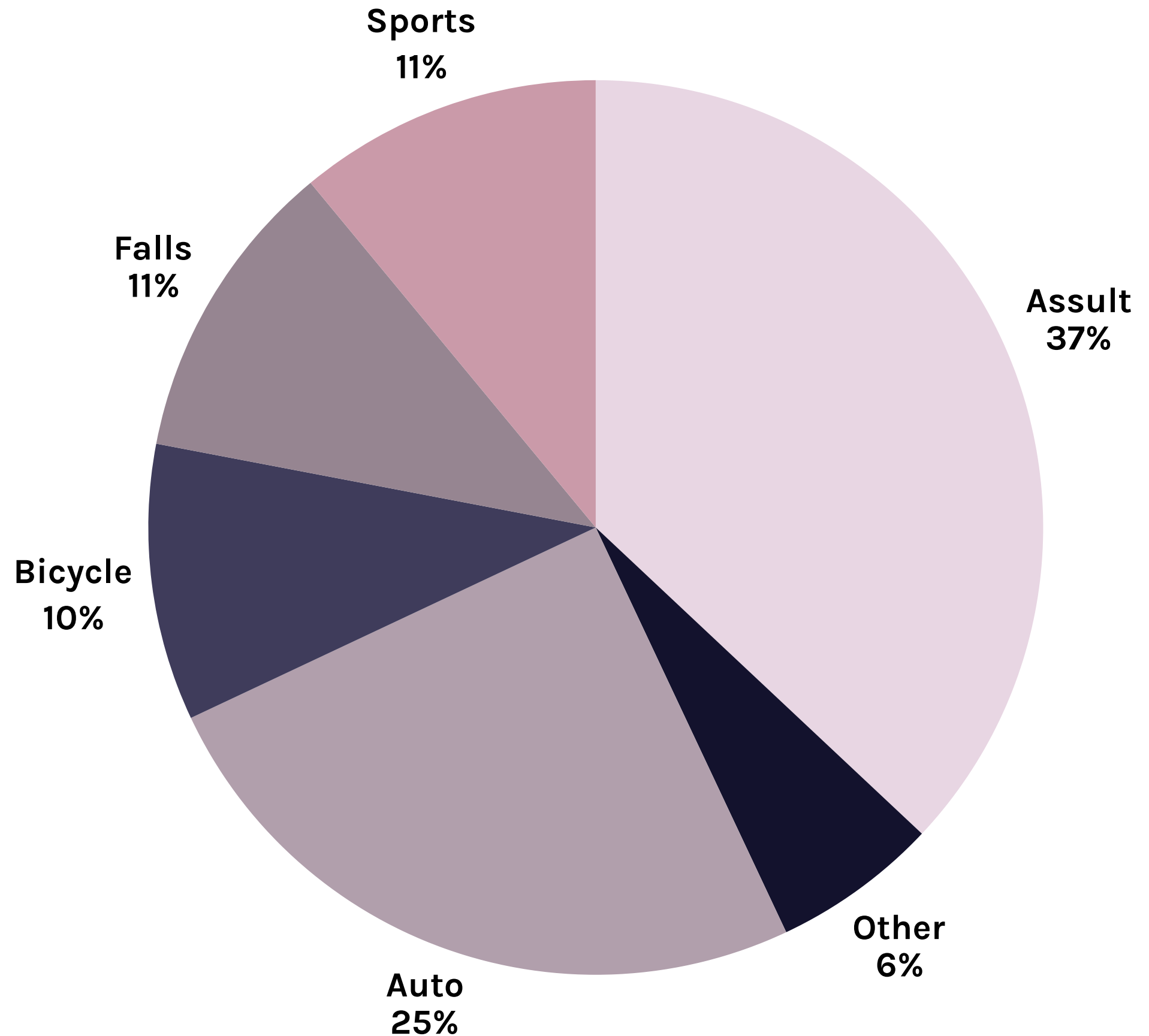
TBI with Loss of Consciousness



TBI

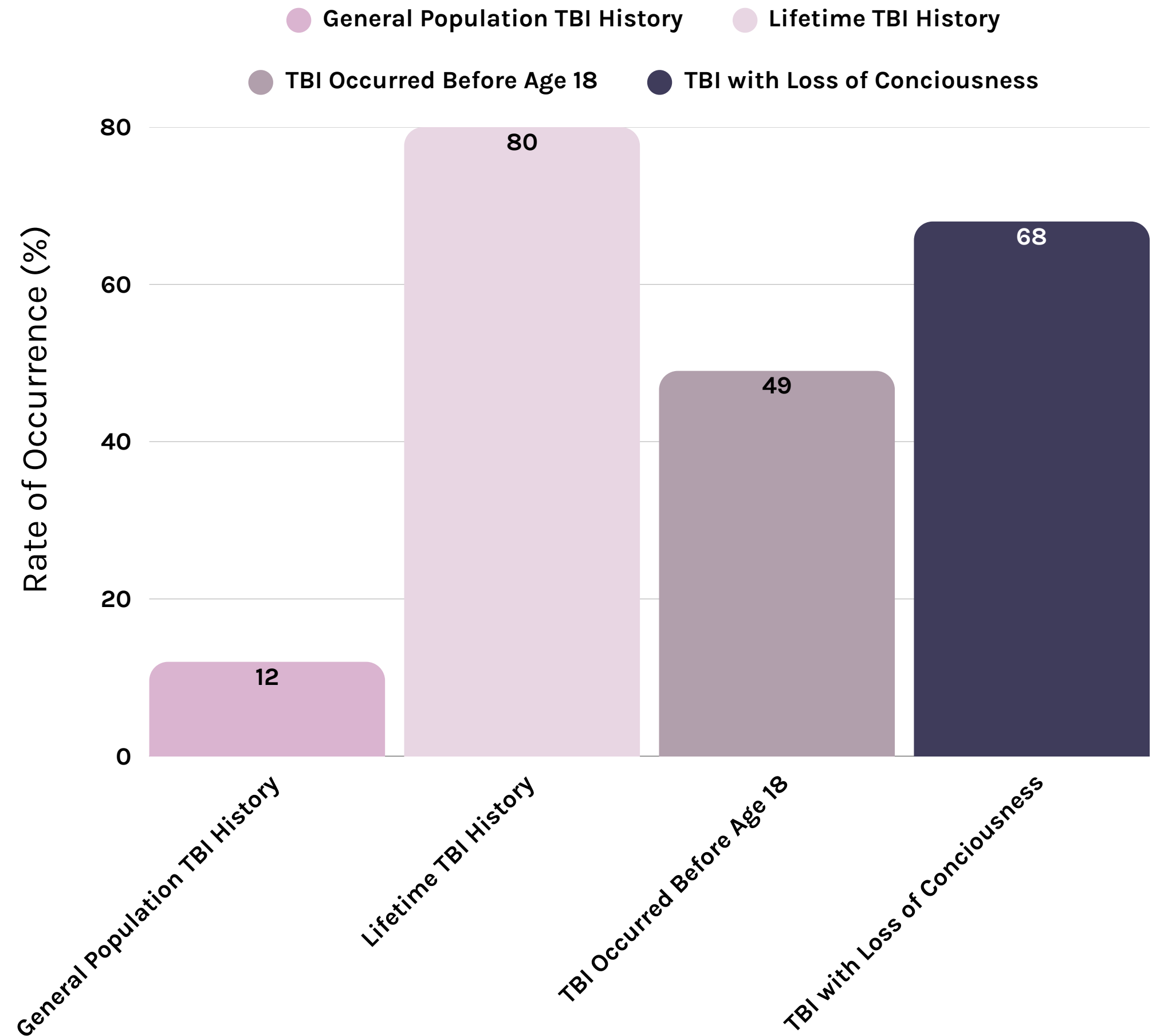
Causes of TBI in Prison Studies Among Male Prisoners

Ages ≥ 18 Years,
Minnesota, 2006-2007
N=998



Traumatic Brain Injury (TBI) in Homeless vs. General Populations

Bennett, N., et al. (2024). Traumatic brain injury and its risk factors in a homeless population. Archives of Physical Medicine and Rehabilitation, 105(12), 2286-2293. <https://doi.org/10.1016/j.apmr.2024.07.017>



Mental Health vs. Traumatic Brain Injury (TBI) Symptoms

Symptom	Mental Health Disorders	Traumatic Brain Injury (TBI)
Impulsivity	ADHD, Borderline Personality Disorder (BPD), Schizophrenia	Frontal lobe damage, impaired self-control
Emotional Dysregulation	Depression, Bipolar, Anxiety Disorders	Mood swings, irritability from brain injury
Aggression/Outbursts	Conduct Disorder, Intermittent Explosive Disorder	Orbitofrontal cortex damage, increased anger
Hyperactivity	ADHD, Mania	TBI-related disinhibition, restless behavior
Risk-Taking Behavior	Substance Use Disorder, Bipolar Disorder, Schizophrenia	Impaired judgment, poor decision-making

Key Concepts from Neuroscience

The following insights align with the “Upstairs/Downstairs Brain” or “Fist Model” approach outlined in *The Whole-Brain Child*, helping us visualize how the brain shifts under stress and how we can support regulation.



The Brain’s Stress Response: Trauma and Traumatic Brain Injury (TBI) can alter how the brain processes threat and safety.



Executive Functioning: Planning, memory, self-monitoring, and flexibility may be impaired.



Flipped Lid Moments: Individuals may escalate faster and struggle to return to calm.

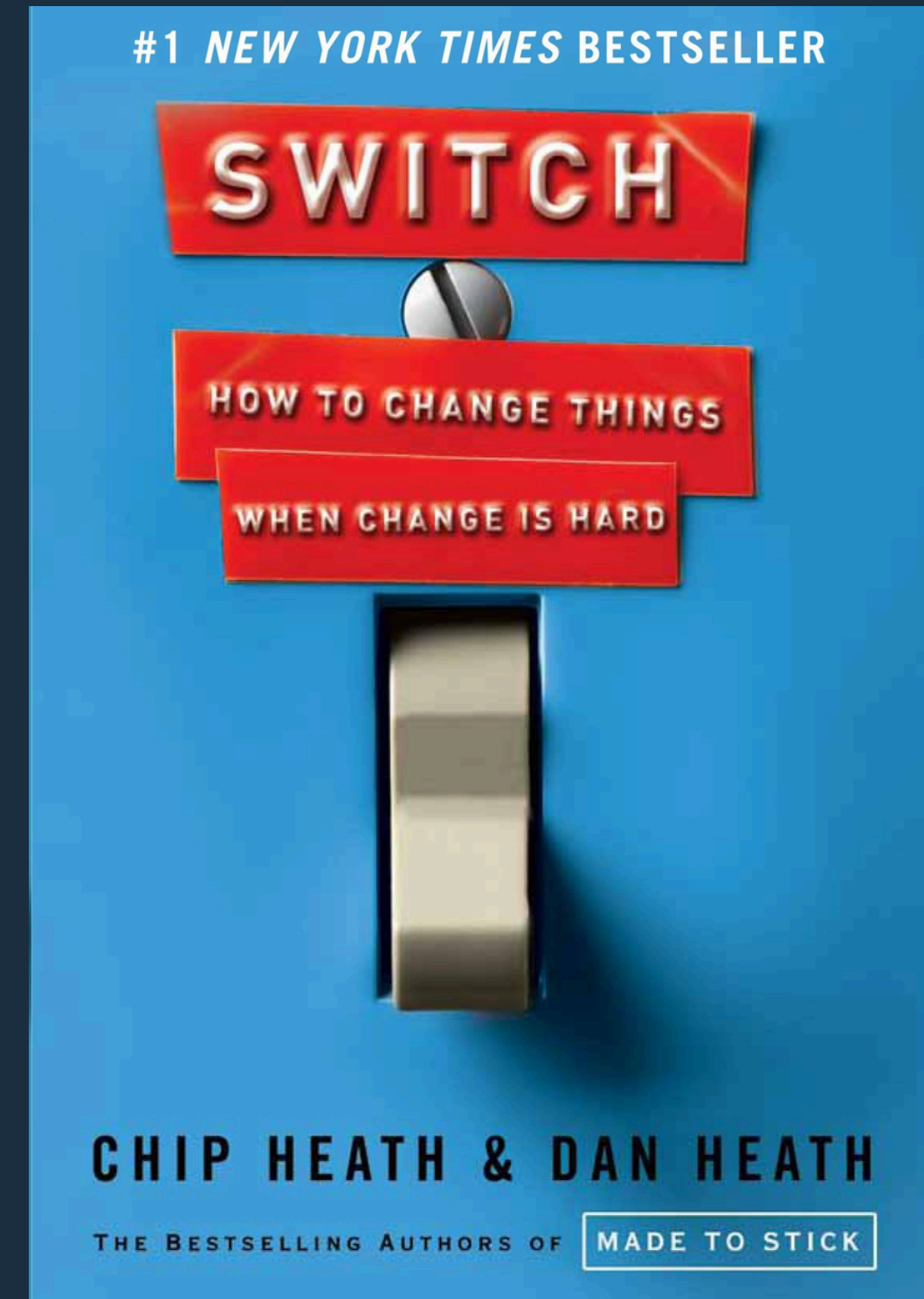


Neuroplasticity: Healing is possible—relationships, routines, and repeated experiences can reshape the brain.

Neuroplasticity Guides Rehabilitation

- **RELEARN LOST SKILLS**
- **COMPENSATE FOR ONGOING IMPAIRMENTS**
- **REHABILITATION CAN TAKE YEARS**

“What looks like a people problem is often a situation problem.”



-Chip Heath & Dan Heath, SWITCH: HOW TO CHANGE THINGS WHEN CHANGE IS HARD (2010)

Thank you!
Questions?

