



Opioids and Brain Injury Facts

For Public Health & Substance Use Professionals

Definitions

Traumatic Brain Injury (TBI) is an injury to the brain caused by external force, like a fall, assault or abuse, vehicle accident, or sports related injury.

Acquired Brain Injury (ABI) can result from stroke, brain tumor, or a lack of oxygen to the brain from not breathing, like what happens with an overdose(s). If the brain is without oxygen for more than a few minutes, a person may sustain an acquired brain injury.

What's the relationship between brain injury and opioids?

- People with brain injuries are more likely to be prescribed opioids
- 70-80% of people with brain injuries are prescribed an opioid during inpatient rehabilitation
- People who have moderate to severe injuries are **11 times more likely** to die from an overdose than those who don't
- People with traumatic brain injuries are at much higher risk for opioid misuse and overdose

What does this mean for public health and addiction professionals?

- TBI is common for people with substance use disorders
- People living with substance use disorders are more likely to have a history of TBI than people without a substance use disorder
- It is common for individuals served in substance use treatment programs to have a history of multiple, undiagnosed mild TBIs
- The defining feature of TBI is damage to the frontal lobes of the brain which can reduce concentration, memory, planning, problem-solving, or communication, as well as skills like impulse control, emotional inhibition, and self-awareness; all of which are the building blocks for recovery from substance use disorders

What are challenges people living with brain injuries may experience?

- Paying attention
- Memory, especially for new information
- Impulsivity – speaking or acting without thinking
- Isolation
- Lack of awareness of injury-imposed functional barriers
- Processing and understanding information
- Getting started and/or finishing tasks
- Difficulty seeing another’s point of view
- Depression, anxiety and increased risk of suicide attempt and completion

What are the possible consequences of these challenges?

Difficulty staying in treatment for brain injury, addiction, or mental health services because of attention and memory issues. As a result individuals may miss appointments or have trouble learning and following treatment program routines and rules. Engaging in and benefiting from treatment can also be damaged because others’ may misinterpret these consequences as lack of motivation for treatment. Injury related unawareness regarding these consequences can increase frustration and lead to early termination from services. For example, difficulty observing social norms such as maintaining comfortable eye contact, refraining from personal comments to strangers or acquaintances, and not observing personal physical boundaries.

Remember

- Individuals are affected differently by brain injury – one strategy will not necessarily work for everyone. For example some prefer using the calendar on their phone. For others, a wall calendar best supports their memory for tasks and appointments
- Individuals with TBI in treatment settings may require post discharge supports longer than their peers without a history of brain injury, such as reminder calls/texts for upcoming appointments
- Behavior is not intent: someone with an injury might struggle to engage in traditional forms of treatment, but that does not mean they are unmotivated
- You are less likely to lose an individual’s trust if you FIRST consider whether a disruptive behavior is due to a neurologic problem
- People with a history of brain injury often have risk factors for opioid use disorder such as chronic pain due to brain injury related headaches and orthopedic injuries

What can you do to help people living with brain injury?

- **Ask what works/doesn’t work:** people may already have strategies that work for them try to build upon what already exists, if they use their phone for notes, show them other apps available that can help support brain injury related challenges

- **Write it:** offer written summaries of sessions, provide an outline of group or individual session either electronically or on paper
- **Break it down:** present information in smaller chunks, give simple instructions, break large tasks into smaller steps
- **Model it:** Demonstrate for the individual how they can use compensatory strategies
- **Practice tips and tools with the individual:** Try out different strategies in individual and/or group sessions, such as restating the main points of the conversation periodically
- **Follow up:** determine what is working, what isn't and refine your interventions
- **Remember:** if someone isn't ready to make behavioral changes, encourage them to use harm reduction strategies

Resources:

Brandeis University, Intersecting Research on Opioid Misuse Addiction, Intersection between TBI and Opioid Use Disorder and Disability Services – Inroads Project <https://heller.brandeis.edu/ibh/research/inroads/publications-products.html> Specific tips for support <https://heller.brandeis.edu/ibh/pdfs/accommodating-tbi-booklet-1-14.pdf>

Brain Injury Association of America. <https://www.biausa.org>

Life-Changing Apps for People with Brain Injury, <https://www.brainline.org/article/life-changing-apps-people-brain-injury>

Sources:

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Hammond, F. M., Barrett, R. S., Shea, T., et. al. (2015). Psychotropic medication use during inpatient rehabilitation for traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 96 (8Suppl 3): S256-73

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