

# Brain Injury and Opioid Overdose: *fast facts*

**Acquired Brain Injury** is damage to the brain occurring after birth and is not related to congenital or degenerative disease. This includes anoxia and hypoxia, impairment (lack of oxygen), a condition consistent with drug overdose.

**Opioid Use Disorder**, as defined in DSM 5, is a problematic pattern of opioid use leading to clinically significant impairment, manifested by meaningful risk factors occurring within a 12-month period.

**Overdose** is injury to the body (poisoning) that happens when a drug is taken in excessive amounts and can be fatal. Opioid overdose induces respiratory depression that can lead to anoxic or hypoxic brain injury.

2.8 million brain injury related hospital stays/deaths in 2013

70-80% of hospitalized patients are discharged with an opioid Rx

63,000+ drug overdose-related deaths in 2016

*"As the number of drug overdoses continues to rise, doctors are struggling to cope with the increasing number of patients facing irreversible brain damage and other long term health issues."*  
www.recovery.org

## brain injury and overdose

### Substance Use and Misuse is:

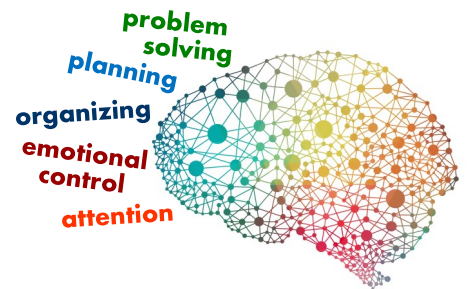
- Often a contributing factor to brain injury. History of abuse/misuse is common among individuals who have sustained a brain injury.
- Likely to increase for individuals who have misused substances prior to and post-injury.

### Acute or chronic pain is a common result after brain injury due to:

- Headaches, back or neck pain and other musculo-skeletal conditions commonly reported by veterans with a history of brain injury.
- Moderate to severe brain injury, highly correlated with increased risk for chronic pain.
- Risk of chronic pain for individuals with co-occurring brain injury, post-traumatic stress disorder and depression.

Individuals treated for non-cancer chronic pain with opiate therapy are at risk for developing an opiate use disorder and are at risk of overdose.

The frontal lobe is highly susceptible to brain oxygen loss, and damage leads to potential loss of executive function.



Sources: Stojanovic et al 2016; Melton, C. Nov. 15, 2017; Devi E. Nampiaparampil, M.D., 2008; Seal K.H., Bertenthal D., Barnes D.E., et al 2017; [www.cdc.gov/traumaticbraininjury/get\\_the\\_facts.htm](http://www.cdc.gov/traumaticbraininjury/get_the_facts.htm); [www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm](http://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm) Hammond et al, 2015.

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## recommendations

**Prevention:** Overdose prevention and education initiatives must target individuals living with brain injury, caregivers and providers. State behavioral health and brain injury programs should collaborate to ensure that efforts for prevention target this population. Federal prevention resources/tools should highlight the importance of this issue and recommend strategies for states.

**Substance Use Disorders (SUD) Treatment:** Services designed to address SUD must be accessible to individuals with brain injury. Providers should routinely screen for a history of brain injury among consumers served and ensure treatment services are accessible for individuals with cognitive, behavioral and physical disabilities resulting from a brain injury.

**Brain Injury Services Programs:** Individuals who have sustained a brain injury resulting from an overdose may require specialized services. State programs need to develop capacity and expertise to support a growing number of individuals living with an acquired brain injury from overdose. Understanding best practices in SUD screening, recovery and treatment are critical.