



**Opioids and Brain Injury**

**Basic Facts on Opioids**

Opioids, from prescription painkillers to illegal drugs like heroin, are drugs that are commonly used to relieve pain. They are often prescribed by doctors after surgery or to help patients with severe acute or chronic pain.

Opioids cause a person to feel relaxed and euphoric by affecting of the pleasure centers of the brain.



Studies have shown that if taken exactly as prescribed by a medical professional, opioids are safe, can manage pain effectively, and rarely cause addiction. The problem occurs when they are abused.

Opioids usually come in pill form, and people who abuse them crush the pills into powder and snort or inject the drug, causing it to enter the bloodstream and brain very quickly; this method increases the risk of addiction and/or overdose. People who become dependent on pain pills may switch to heroin because it is less expensive than prescription drugs.

**Opioid Use Disorder Is a Huge Problem**

Overdose deaths nationwide more than **quadrupled** from 2001 to 2016.



- An average of 115 Americans die each day from an opioid overdose<sup>1</sup>.
- The number of overdose deaths related to heroin increased 533% between 2002 and 2016, from 2,089 to 13,219.<sup>2</sup>
- In Virginia, there were more than 1,200 reported opioid overdose deaths in 2016<sup>3</sup>.
- In 2017, more than 8,500 Virginians were seen in emergency rooms for an opioid overdose<sup>4</sup>.

## Opioid Overdoses Can Cause Brain Injury

Permanent brain damage is a very real, life-altering consequence of an opioid overdose. Opioids (or opiates) are depressants, meaning the drugs slow down your breathing and heart rate; in other words, an overdose causes the body to forget to breathe on its own. When that happens, an individual can sustain either a *hypoxic brain injury* (not enough oxygen) or an *anoxic* (no oxygen) brain injury.

Hypoxic and anoxic brain injuries can cause:

- Short-term memory loss
- Problems with concentration
- Vision and /or hearing loss
- Loss of coordination and balance
- Difficulty doing things that were once familiar routines (e.g., brushing teeth)
- Confusion, irritability and depression
- Impairments in reading, writing and communicating

The longer the brain is deprived of an adequate amount of oxygen, the higher the risk for more serious brain damage. Permanent brain injury happens with approximately 3-5 minutes of oxygen deprivation. These types of injuries can cause serious impairments. They are unique from traumatic brain injuries because the whole brain is injured instead of localized from trauma.

## The Connection between Brain Injury and Substance Use

Substance use increases the risk of brain injury and is linked to worse outcomes<sup>1</sup>; users are at greater risk of falls, seizures and certainly damage from use of the drug itself.



Survivors of traumatic brain injury are more susceptible to developing a substance use disorder:

They are often prescribed opioids after their injury to manage pain  
25% of people entering brain injury rehabilitation are there as a result of drugs or alcohol<sup>2</sup>

Approximately half of people receiving substance abuse treatment have at least one brain injury<sup>3</sup>

### Know the Signs



#### Not Responding

Doesn't move and can't be woken.



#### Slow or Not Breathing

A breath every 5 seconds is normal.



#### Making Sounds

Choking, gurgling sounds or snoring



#### Blue Lips & Nails



#### Cold or Clammy Skin



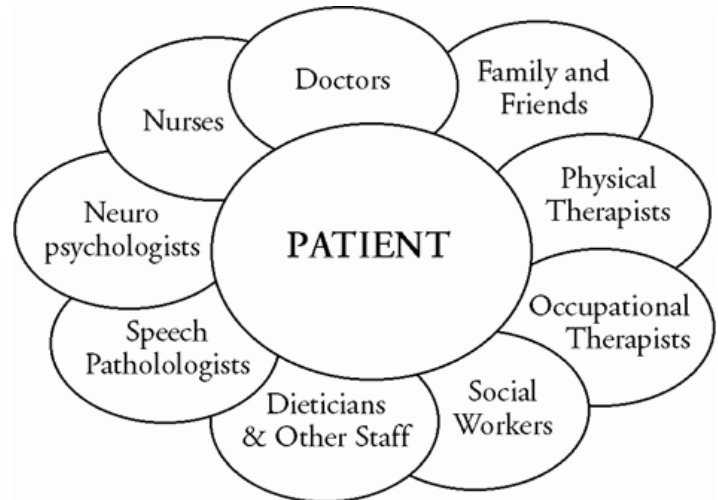
#### Tiny Pupils

## Recommended Treatment Strategies

While many factors can contribute to opioid overdose, it is almost always an accident; the first focus should be on stabilization, followed by brain injury rehabilitation by qualified specialists.

Many survivors of brain injury with substance use disorders are treated for only one condition, as some of the manifestations of each overlap. Although recovery is possible, it often depends on what part of the brain is impacted; treatment is often costly and complicated, and persons treated for hypoxic/anoxic brain injuries may take months or years to recover.

- Treatment plans should involve a collaborative team and care models that ensure survivors receive treatment for their brain injury that is separate, but parallel, to treatment for a substance use disorder.
- If the survivor's underlying problem is pain, referral to a pain specialist may be in order.
- If underlying problem is addiction, the patient should be referred to an addiction specialist for assessment and treatment.
- Persons being treated for brain injury should be screened for substance use disorders, and vice versa
- Persons being treated for brain injury should be educated on the risks of substance use and advised to remain abstinent to prevent further injuries.
- Motivational interviewing is a powerful prevention modality for survivors of brain injury to consider why abstaining from substances is important to them.



***More Americans have died in the past two years from opioid addiction than in the Vietnam War***

German Lopez; Jun 8, 2017

### **Where can I get help?**

**Brain Injury Association of Virginia** 1.800.444.6443 - Connect to information and resources via telephone or Chat [www.biav.net](http://www.biav.net)



1506 Willow Lawn Drive, Suite 212 Richmond, VA 23230 [www.biav.net](http://www.biav.net) 800-444-6443

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