



# Substance Use Disorder and the Brain

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Substance Use Disorder, or SUD, is a treatable, chronic medical disease that involves the limbic system - or our emotional brain - that produces serotonin and dopamine

Dopamine is vital to our brain and motivates us to keep doing the activities we do every day. The use of drugs causes dopamine receptor damage and ultimately, loss of dopamine in the brain

For people with SUD, dopamine levels are critically low due to a lack of receptors. The only way to get their dopamine back up to a normal level is to use a drug that creates that dopamine, which causes our brain to think "this is how we survive"

## Overview

In order to get people with Opioid Use Disorder (OUD) back up to a safe dopamine level, we use MOUD (medication for opioid use disorder).

### Methadone

- What it does: eliminates withdrawal symptoms and relieves cravings
- How to access it: must be dispensed through specialized opioid treatment programs (OTPs)

### Buprenorphine

- What it does: reduces cravings and withdrawal symptoms without producing euphoria.
- How to access it: can be prescribed by certified healthcare providers distributed at pharmacies

### Naltrexone

- What it does: prevents any opioid drug from producing rewarding effects such as euphoria
- How to access it: can be prescribed by any medical professional who can prescribe medication

# Stigma

Medication for Opioid Use Disorder and other prevention efforts such as Syringe Service Programs have been proven to decrease rates of OUD, hepatitis C, and HIV/AIDS. Treatment approaches for OUD, such as MOUD are generally as successful as those for chronic diseases. And yet, in 2019 only 1 in 5 people in the United States and only 1 in 10 Tennesseans received treatment for their SUD.<sup>1,2</sup>

## What can we do?

Substance Use Disorder is one of the most stigmatized medical conditions.<sup>3</sup> There are three types of stigma: social, self, and systemic stigma that can challenge - or obstruct - treatment and recovery



### References

1. Substance Abuse and Mental Health Services Administration (2019). "Results from the 2019 National Survey on Drug Use and Health."
2. SMART Policy Network (2021). "The Cost of Stigma."
3. Yang LH, Wong LY, Grivel MM, Hasin DS. Stigma and substance use disorders: an international phenomenon. *Curr Opin Psychiatry*. 2017;30(5):378-388. doi:10.1097/YCO.0000000000000351

Remember that SUD is chronic disease that physically and chemically changes the brain

Use person-first language

- Say person with Substance Use Disorder not an addict or other derogatory terms

Beware of unintentional personal biases

Meet people where they are

- Practice Harm Reduction Tools
  - Not everyone is ready, or able, to stop drug use and it is important that we use practices such as, syringe service programs and naloxone to meet people where they are

Recognize that SUD is HARD

- Similar to other chronic diseases, return to use is common - NOT a moral failure

### For more information:

**Opioid Crisis Training:** <https://tnopioid.utk.edu/opioid-crisis-training/#>

**Digital Stories of OUD:** <https://tnopioid.utk.edu/digital-stories-of-oud/>