

Addiction

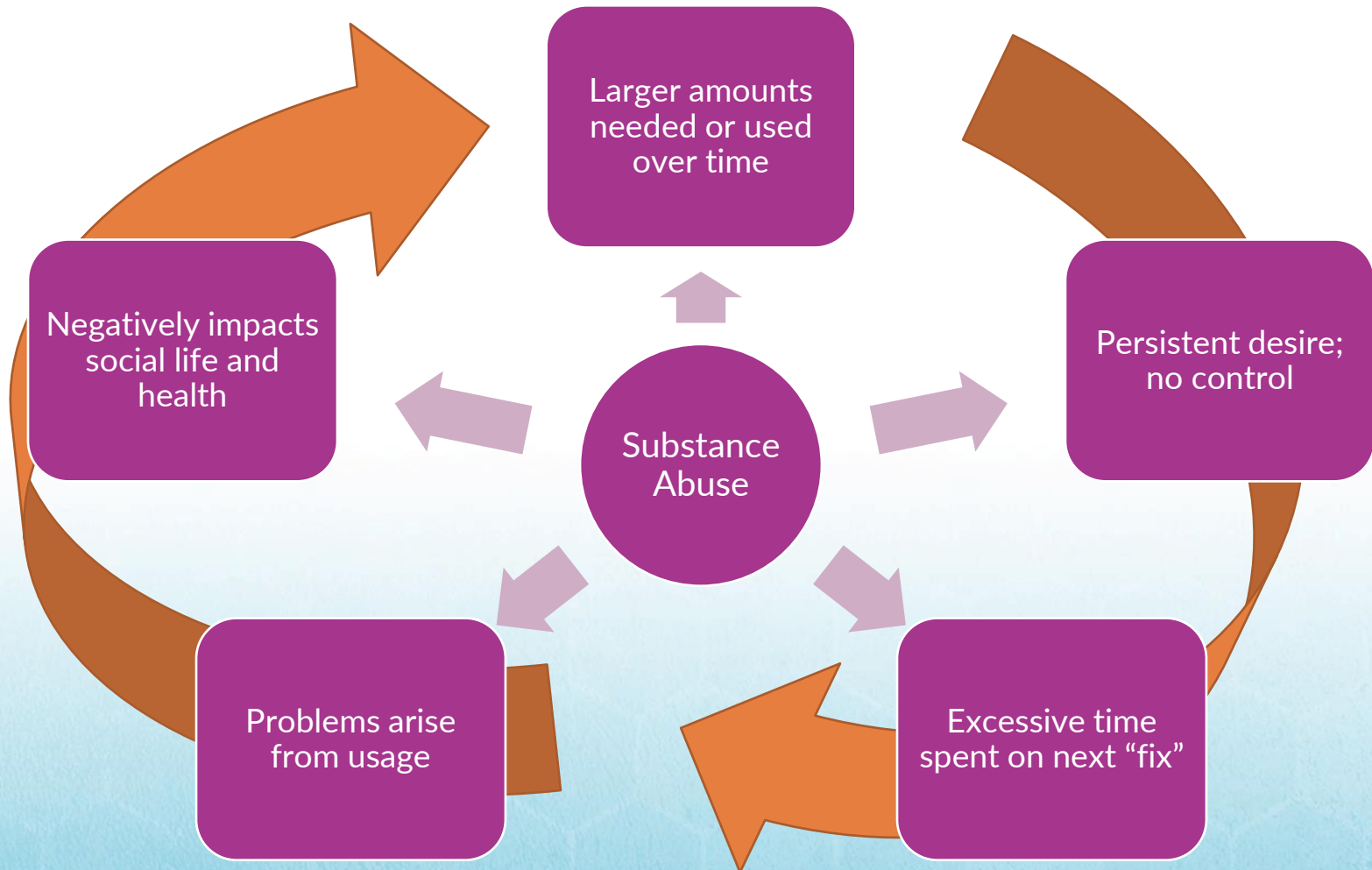


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Higginbotham, Wellness & Health Risk Management

What is Substance Abuse?



Addiction is Not Just Drugs, Alcohol and Tobacco

It also includes gaming, gambling, internet, shopping, eating, sex, etc.



Signs of Alcohol Addiction

Are You...

- ▶ Often drunk, hungover, ill, have full/empty containers around you
- ▶ Drinking more to get high (tolerant)
- ▶ Stealing to get alcohol
- ▶ Lying about your habits

Do You...

- ▶ Have problems at work or school (i.e., late, absent, poor performance)
- ▶ Spend lots of money on alcohol
- ▶ Think about/ensure you have your next dose/supply ready
- ▶ Get defensive when asked about your intake

Have You...

- ▶ Lost energy/motivation
- ▶ Neglected your appearance
- ▶ Performed risky behaviors while intoxicated
- ▶ Been unable to stop
- ▶ Had withdrawal symptoms

Ongoing Use

More tolerance equals:

- ▶ using higher doses
- ▶ dosing more frequently
- ▶ changing method of drug intake

Addiction can:

- ▶ lead to foregoing food and sleep in order to binge
- ▶ cause changes in judgement, impulsivity, aggression, paranoia
- ▶ make you delusional and hallucinate
- ▶ cause dishonesty, denial, rationalization, guilt and shame, loss of control, a hijacked brain



Risk Factors for Addiction



Addiction Statistics

#1	Drug overdose is the #1 cause of injury-related death in the US (44k+ deaths/year)
114	People die every day due to drugs (nearly 7,000 will go to the hospital or Emergency Room)
90%	Of people who need drug rehab do not receive it
30%	Success rate for those who complete rehab program (70-80% drop out in 3-6 months)

Full recovery is challenging but possible. The leading cause for relapse is failure to follow the prescribed plan after discharge.

Why Can't You Just Stop?

Because:

- ▶ Brain parts that reflect, assess, plan and listen to feedback are the most damaged by addiction.
- ▶ Drug use impairs the brain parts that create solutions, so just quitting is very difficult to do.
- ▶ Addiction is a disease.

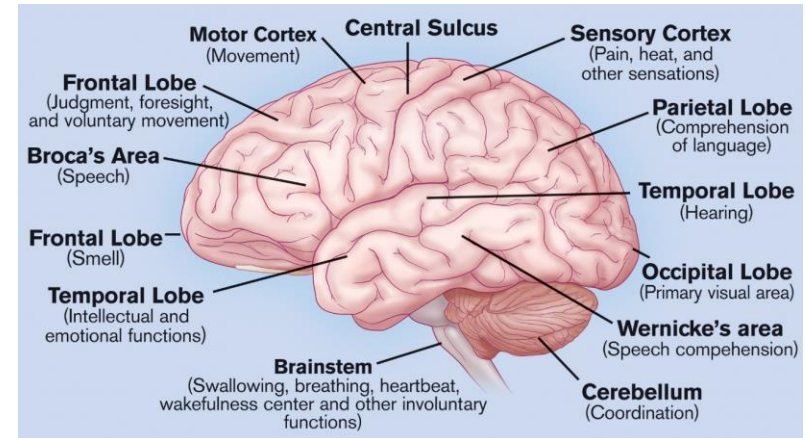


— ” —
Addiction is not
a disease of
willpower. It is a
disease of
instinct. It lives
in the part of the
brain that tells
you to breathe.

— ” —

Why Can't Addicts Stop Using?

Because DRUGS WORK!
Addiction changes the brain circuits, so treatment is essential.



Neurotransmitter	Functions Affected	Drugs that Affect It
Dopamine	Pleasure and reward, movement, attention, memory	Cocaine, methamphetamine, amphetamine (all drugs directly or indirectly augment dopamine)
Serotonin	Mood, sleep, sexual desire, appetite	MDMA (ecstasy), LSD, cocaine
Norepinephrine	Sensory processing, movement, sleep, mood, memory, anxiety	Cocaine, methamphetamine, amphetamine
Opioids (Endorphin and Enphalin)	Analgesia, sedation, rate of bodily functions (e.g., breathing), mood	Heroin, morphine, prescription pain relievers (e.g., oxycodone)
Acetylcholine	Memory, arousal, attention, mood	Nicotine
Cannabinoids (anandamide)	Movement, cognition and memory	Marijuana
Glutamate	Increased rate of neuron activity, learning, cognition, memory	Ketamine, alcohol
GABA (gamma-aminobutyric acid)	Slowed rate of neuron activity, anxiety, memory, anesthesia	Sedatives, tranquilizers, alcohol

The Brain and Addiction

Brain Reward Center

What do the colors mean?

RED

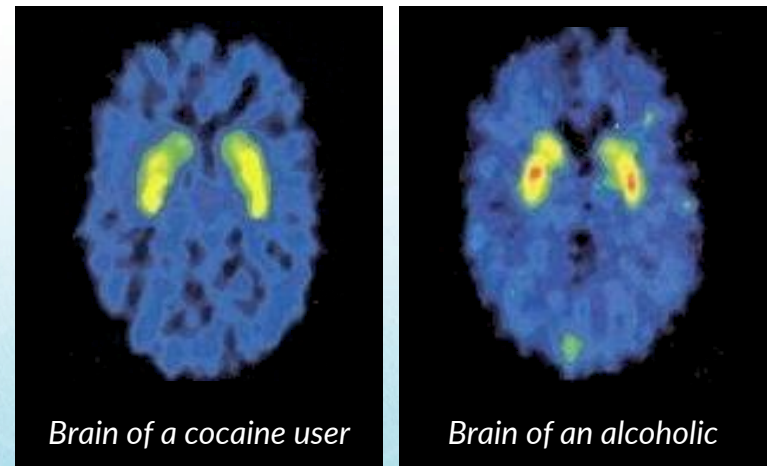
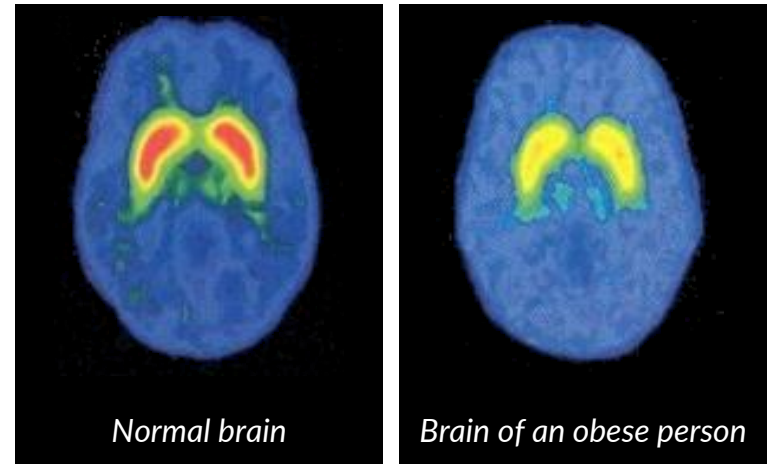
- High dopamine
- *Normal pleasure and interest*

YELLOW

- Medium dopamine
- *Difficulty feeling joy or pleasure*

GREEN

- Low dopamine
- *Lack of pleasure*



Understanding Dopamine

Healthy brains identify/reinforce beneficial behaviors by feeling pleasure

Brains are wired to want to repeat pleasurable activities. Dopamine is key to this.

Dopamine tells the brain to remember healthy, pleasurable experiences. This relay changes neural connectivity to make it easier to repeat the activity (forming habits).

Drugs create intense euphoria and larger surges of dopamine. This reinforces connection between taking the drug, feeling pleasure, and having an experience.

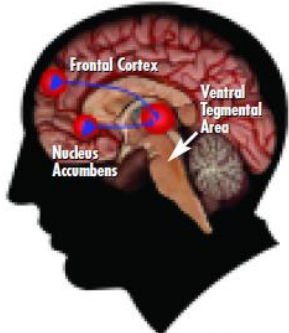
Large surges of dopamine “teach” the brain to seek drugs at the expense of other healthier goals and activities.

Understanding Dopamine

Stimulants boost normal brain levels of dopamine to create feelings of pleasure and increase energy

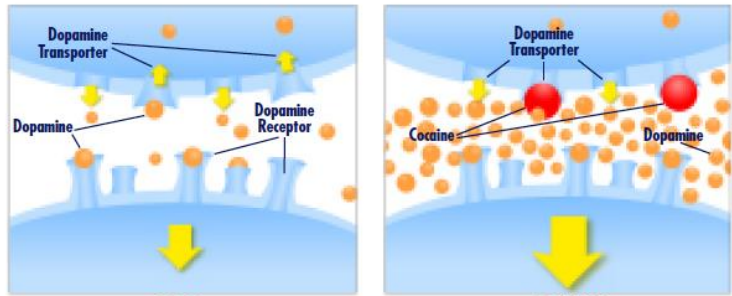
DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER

Brain reward (dopamine) pathways



These brain circuits are important for natural rewards such as food, music, and sex.

Drugs of abuse increase dopamine



Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.

Play Video

Addiction Causes Incentive Salience

Incentive saliency is motivation created in the brain which connects a certain stimuli (drug/alcohol/food) to reward (pleasure/relief)

- ▶ Incentive saliency is greater than merely liking something
- ▶ Neutral stimuli are assigned incentive saliency to create cravings like:
 - Smelling cigarette smoke triggers a craving for nicotine
 - Seeing drug paraphernalia can trigger a drug craving
 - Driving in or near a neighborhood where drugs were purchased can trigger a craving
- ▶ These secondary reinforcers make you crave/potentially use a drug again






























Recap: Long-Term Drug Exposure Impairs Brain Functioning

Drugs release 2 to 10 times more dopamine than natural rewards (i.e., eating, sex, social activities)

This release/reward strongly motivates you to take drugs again and again

The brain then adjusts to produce less dopamine and reduces number of receptors that can receive signals

Short Term and Long Term Effects: Marijuana and Cocaine




MARIJUANA	COCAINE	MARIJUANA	COCAINE
 Sleepiness	 Hallucinations	 Lung, throat, mouth, and tongue cancer	 Hepatitis or AIDS when sharing needles
 Impaired memory	 Reduced pain perception	 Schizophrenia	 Heart attacks, strokes, or respiratory failure
 Increased heart rate	 Paranoia or erratic behavior	 Asthma, chronic bronchitis	 Brain seizures
 Dry mouth	 If injected, can cause vein collapse	 Decreased testosterone levels for men	 Weakened ability to combat infection
 Decreased inhibitions	 Increased heart rate, blood pressure, breathing rate, and body temperature	 Increased testosterone levels for women	 Losing touch with reality
 Paranoia	 Overstimulation of the nervous system, causing a seizure, brain hemorrhage, stroke, or heart attack	 Increased risk of infertility/Difficulty having children	 Miscarriages when pregnant
 Hallucinations		 Decreased sexual pleasure	 Damage to nasal passage and nose when snorted
 Difficulty keeping track of time			
 Impaired concentration and coordination			

Short Term and Long Term Effects: Methamphetamine and Ecstasy







METHAMPHETAMINE

-  Insomnia
-  Irritability and confusion
-  Anxiety and paranoia
-  Violent behavior
-  Respiratory issues
-  Increased heart rate and blood pressure
-  Extreme decreased appetite
-  Hypothermia, tremors, and convulsions

ECSTASY

-  Sounds and colors seem intense
-  Confusion
-  Anxiety, paranoia, and psychosis
-  Overheating and dehydration
-  Fluid retention in the body

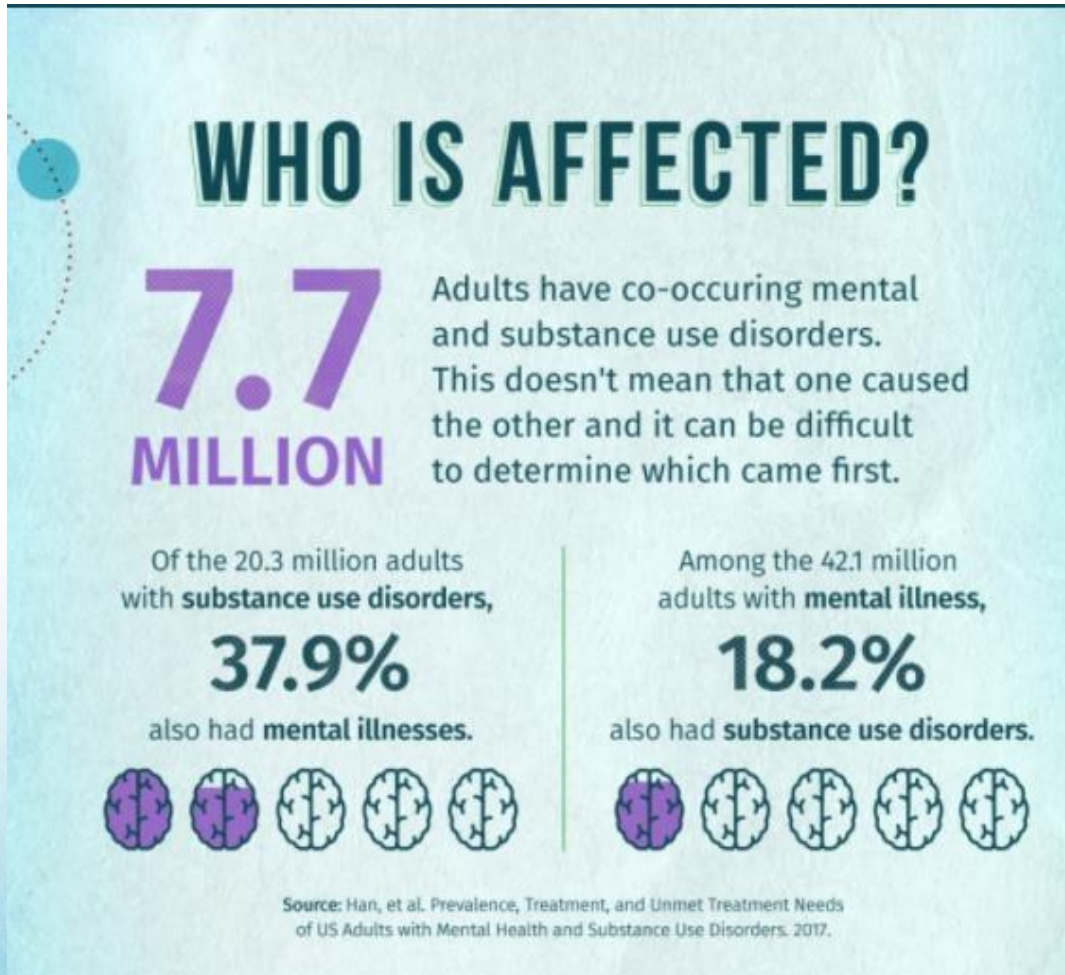
METHAMPHETAMINE

-  Respiratory problems
-  Extreme anorexia
-  Cardiovascular problems
-  Damage to blood vessels in the brain
-  Strokes
-  HIV or AIDS from needles

ECSTASY

-  Memory loss, depression, and anxiety
-  Brain damage
-  Damage to nerve endings
-  Kidney failure
-  Hemorrhaging
-  Psychosis

Does Addiction Cause Mental Illness?



It doesn't help!

Addiction and mental illness often co-exist

Mental illness may precede addiction

Or, addiction may trigger/worsen mental disorders

Addiction: It Can Look Like Anything

Mood
Disorders

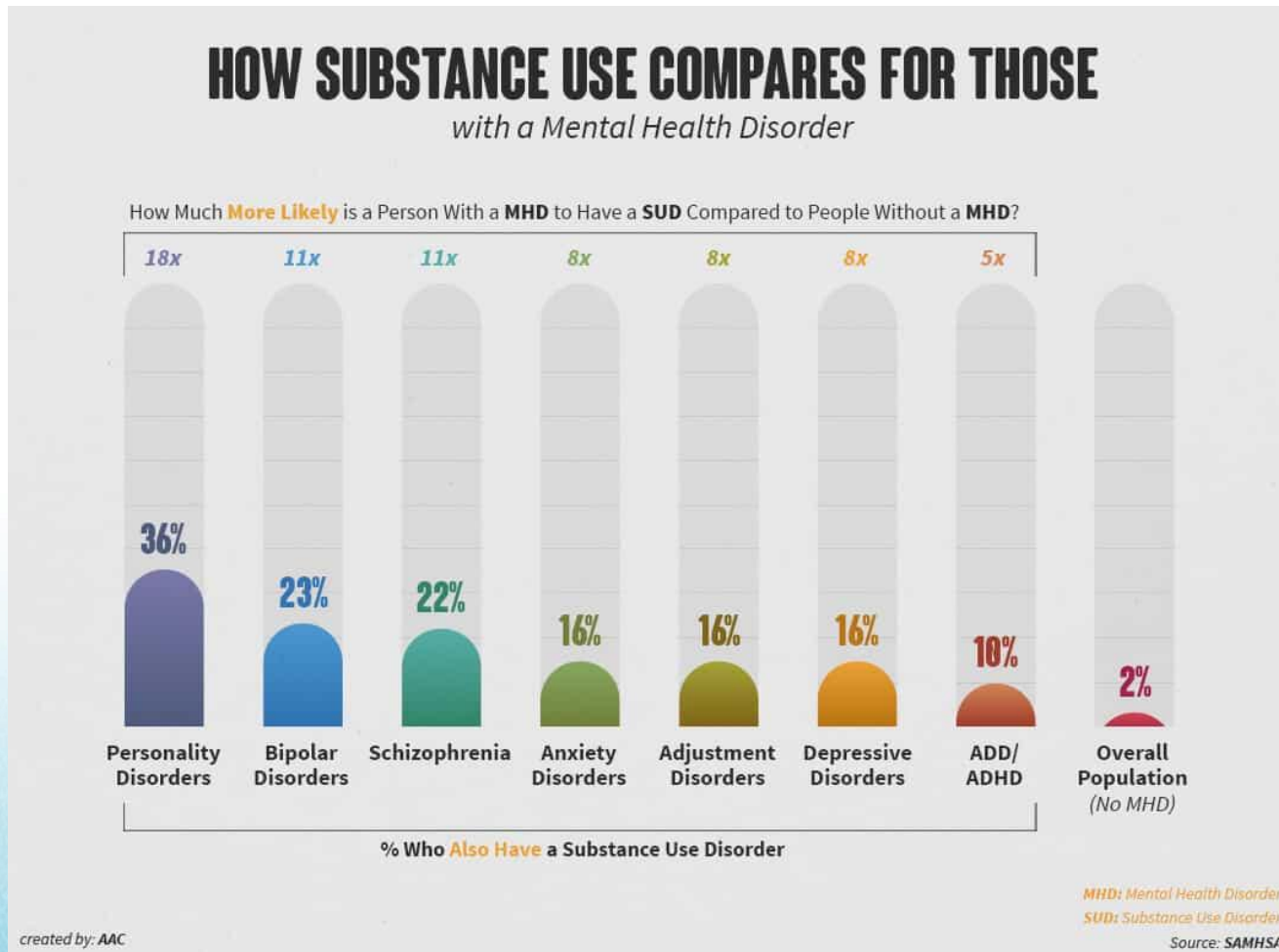
Anxiety
Disorders

Personality
Disorders

Psychotic
Disorders

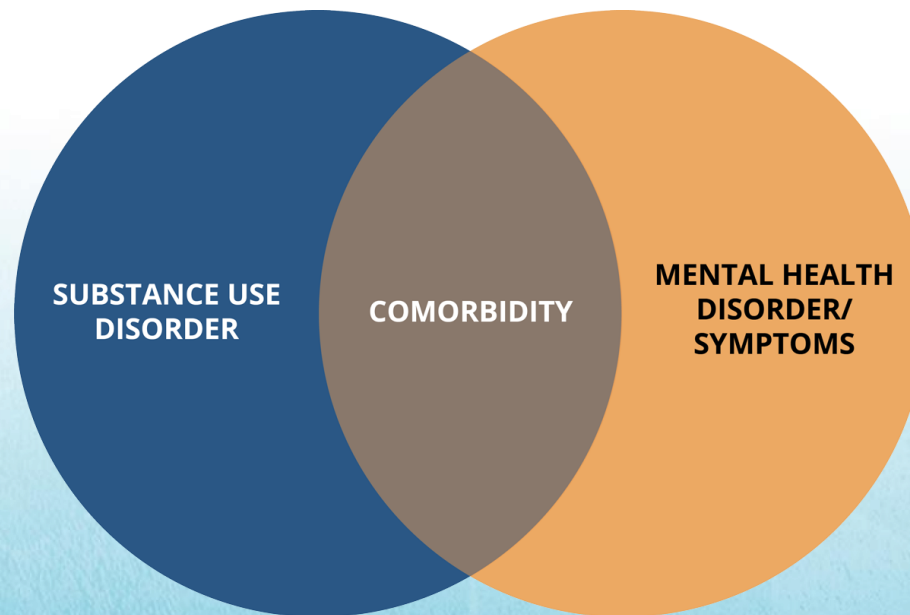
Organic and
Neurological
Disorders

Comparison of Mental Health Disorder with Substance Abuse Disorder



Why is there Comorbidity?

- ▶ Comorbidity means two conditions often co-exist (e.g., a mental health disorder and a substance use disorder)
- ▶ Substance abuse increases vulnerability to mental illness and vice versa
- ▶ Risk factors that give rise to mental illness and substance abuse may overlap
- ▶ Substance abuse is a way to self-medicate away from feelings (pain, trauma, etc.)



The Cycle of Addiction



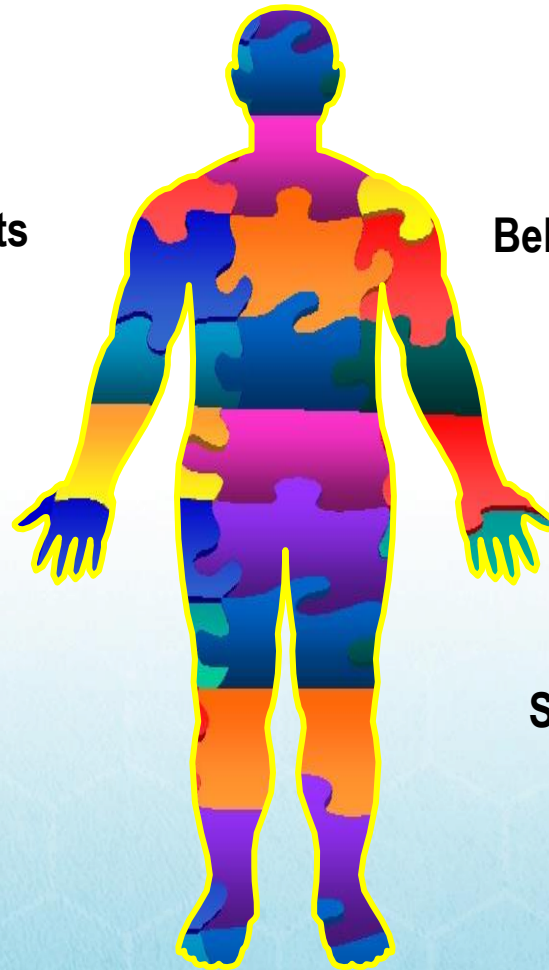
How do we Break the Cycle? Start by Treating the Whole Person

Pharmacological Treatments

Behavioral Therapies

Medical Services

Social Services



Treatment Options

Inpatient Rehab

- Structured addiction programs that require patients to live in a drug-free facility for around-the-clock medical care and therapeutic support

Outpatient Rehab

- Similar to inpatient rehab, but patients live at home and have greater risk for triggers and relapse

Talk Therapy

- Psychiatrists, psychologists, licensed social workers and counselors

Support Groups

- 12-Step, Alcohol or Narcotics Anonymous, etc.

Treatment Can Work, But....

No single treatment is right for everyone

It needs to be readily available

It must address multiple needs of the individual, not just drug use

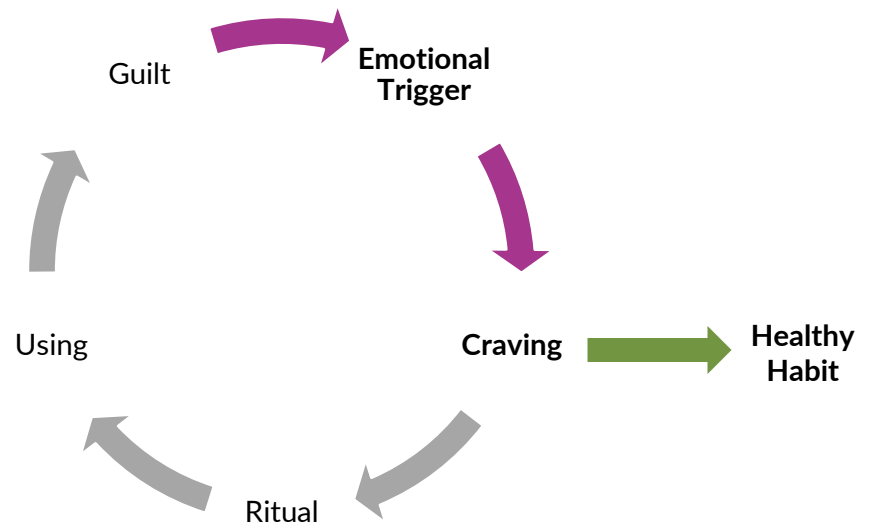
Multiple courses of treatment may be required for success

A person must stay with it long enough for it to be effective

Recovery Requirements

Do:

- ▶ Use treatment professionals
- ▶ Actively use available resources and recovery supports
- ▶ Respect personal autonomy; meet the person where he/she is emotionally and intellectually, not where you are
- ▶ Listen to relapse concerns/reasons, but hold person accountable for their actions



Know:

- ▶ If comorbid disorders exist (depression, anxiety, trauma)
- ▶ Addiction is a chronic health condition
- ▶ How difficult recovery is; if one coping skill is taken away, another solution must be in place

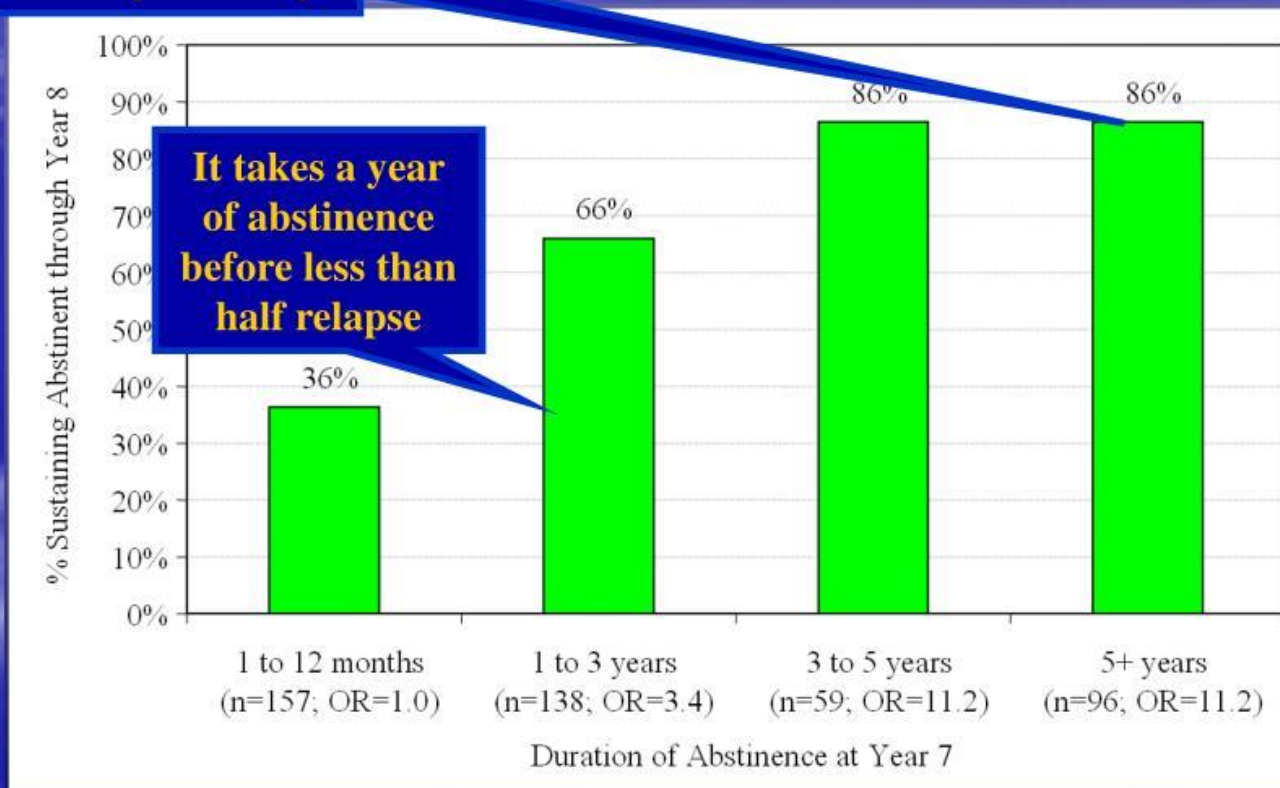
Is Recovery Possible?

Yes, IF the person is:

- ▶ willing to stay in formal treatment services
- ▶ cooperating and complying with the treatment plan

Extended Abstinence is Predictive of Sustained Recovery

**After 5 years – if you are sober,
you probably will stay that way.**



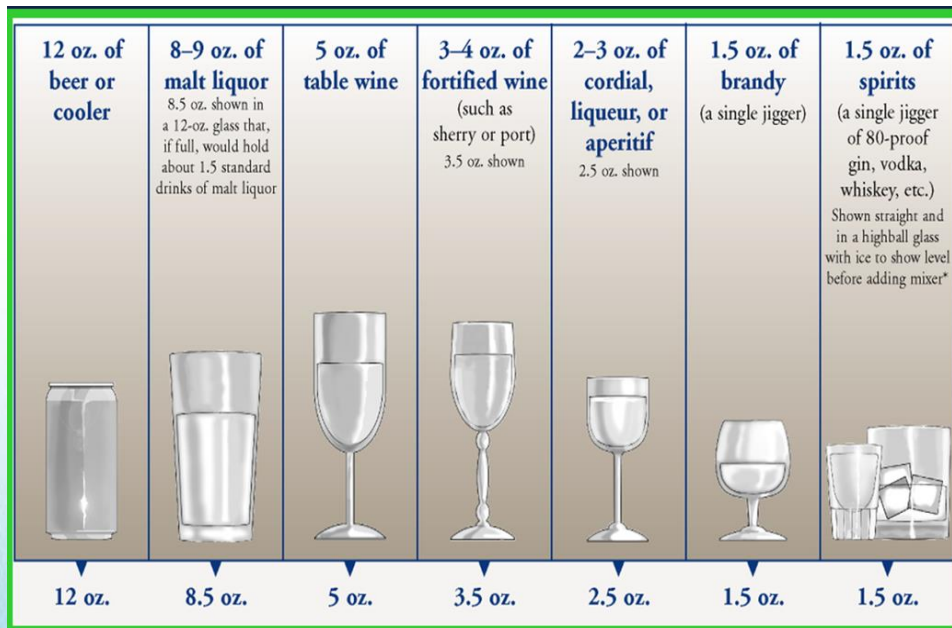
Dennis et al, Eval Rev, 2007

Are there any Safe Limits to Use?

YES



Alcohol: two a day
(over age 65, one a day)



NO



All Tobacco products



Illicit Drugs



Prescription Drug misuse/abuse

In Conclusion

Addiction is:

- ▶ A treatable, chronic medical disease
- ▶ Compulsive and often continues despite harmful consequences
- ▶ Possible to overcome, with treatments as successful as those for other chronic diseases

National Resources

National Alliance on Mentally Illness (NAMI)

National and local resources, <https://www.nami.org/Home>

National Suicide Prevention Lifeline

1-800-273-8255, <https://suicidepreventionlifeline.org/>

Substance Abuse and Mental Health Services Administration (SAMHSA)

<https://www.samhsa.gov/find-help/national-helpline>

National Institute of Mental Health (NIMH)

<https://www.nimh.nih.gov/health/find-help/index.shtml>

Mental Health America (MHA)

<https://www.mhanational.org/>

United Way

Community Resources

Lewisville ISD Resources



Help, when you need it most

With your Employee Assistance Program and Work/Life Balance services, confidential assistance is as close as your phone or computer.



EMPLOYEE ASSISTANCE PROGRAM (EAP)

Your EAP is designed to help you lead a happier and more productive life at home and at work. Call for confidential access to a Licensed Professional Counselor* who can help you.

A Licensed Professional Counselor can help you with:

- Stress, depression, anxiety
- Relationship issues, divorce
- Anger, grief and loss
- Job stress, work conflicts
- Family and parenting problems
- And more



WORK/LIFE BALANCE

You can also reach out to a specialist for help with balancing work and life issues. Just call and one of our Work/Life Specialists can answer your questions and help you find resources in your community.

Ask our Work/Life Specialists about:

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- Elder care
- Financial services, debt management, credit report issues
- Identity theft
- Legal questions
- Even reducing your medical/dental bills!
- And more

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Who is covered?

Unum's EAP services are available to all eligible partners and employees, their spouses or domestic partners, dependent children, parents and parents-in-law.

Always by your side

- Expert support 24/7
- Convenient website
- Short-term help
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Help is easy to access:

Phone support: 1-800-854-1446

Online support: unum.com/lifebalance

In-person: You can get up to three visits, available at no additional cost to you with a Licensed Professional Counselor. Your counselor may refer you to resources in your community for ongoing support.

Please access the URL below to receive trade credit for participating in this evening's session.

<https://forms.gle/oPmXbec2CVC3yFW16>



References

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<https://www.nimh.nih.gov/>

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<https://www.asam.org/asam-home-page>

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American Psychiatric Association

Diagnostic and statistical manual of mental disorders (2013) (5th ed.)

American Psychological Association

<https://www.apa.org/>