Substance and non substance addiction

Name: Aqsa Fayyaz

Learning outcomes

In this lecture, the students will be able to understand:

1. The difference between chemical and non chemical addiction
2. Impact of chemical/drug addiction on a person

What is addiction?

- **Addiction** is a complex condition characterized by the repeated use of a substance or engagement in a behavior despite negative consequences. It is often accompanied by a craving or compulsion to continue the behavior, even in the face of harm to oneself or others.

- Common types of addiction include:

Substance use disorders (e.g., alcohol, drugs, nicotine)
Behavioral addictions (e.g., gambling, internet, video games)

Addiction can affect anyone, regardless of age, gender, or background. It is not a moral failing, but rather a treatable condition that requires professional help and support.

Types of Addiction

Addiction can take many forms, affecting various aspects of a person's life.

1. Chemical Addiction

- This refers to addiction that involves the use of substances.

E.g. **Alcohol Use Disorder** (AUD), drug use disorder (e.g., prescription drugs, illicit drugs, Nicotine Use Disorder (tobacco, vaping) etc.

2. Non Chemical Addiction.

- This refers to addiction that involves compulsive behaviors. Non-chemical addiction includes behaviors such as gambling, risky sex, food, the internet, mobile devices, and shopping. These are sometimes called behavioral addictions.

- When a person engages in these behaviors in excess and can't stop, it becomes an addiction.

Common symptoms of drug addiction

1. Tolerance: Needing more of the substance to get the same effect.

2. Withdrawal: If you go too long without drugs, you experience symptoms such as nausea, restlessness, insomnia, depression, sweating, shaking, and anxiety.

3. Poor Impulse control/ Loss of control over your drug use. You often do drugs or use more than you planned, even though you told yourself you wouldn't. You may want to stop using, but you feel powerless.

4. Your life revolves around drug use. You spend a lot of time using and thinking about drugs, figuring out how to get them, or recovering from the drug's effects.

5. You abandoned activities you used to enjoy, such as hobbies, sports, and socializing, because of your drug use.

6. You continue to use drugs, despite knowing it's hurting you. It's causing major problems in your life–blackouts, financial issues, infections, mood swings, depression, paranoia–but you use anyway.

7. Neglecting responsibilities : Giving up important social, occupational, or recreational activities because of substance use

Substance/drug addiction

Repeated exposure Leading to Addiction.

- ***Substance addiction (or drug addiction)*** is a neuropsychiatric disorder characterized by a recurring desire to continue taking the drug despite **harmful consequences**.

- Addiction is caused by the actions of drug abuse and generally requires repeated drug exposure. This process is strongly influenced both by the genetic makeup of the person and by the psychological and social context in which drug use occurs

Neurobiological changes: (How the brain responds to drugs)

- Dopamine is a neurotransmitter that plays a crucial role in reward processing, motivation, and pleasure. During healthy activities, such as exercise, social interactions, or hobbies, the brain releases dopamine in a controlled and regulated manner, which helps to reinforce and motivate us to repeat these behaviors.

- However, drugs like cocaine or heroin, as well as compulsive behaviors like gambling, shopping, or overeating, can hijack this system by causing an intense and rapid release of dopamine. This can lead to an overwhelming feeling of pleasure and reward, which can be highly addictive.

- These substances and behaviors can also prevent the brain from reabsorbing dopamine, leading to an unnatural prolongation of the pleasurable experience. This can disrupt the brain's natural dopamine regulation and lead to long-term changes in the brain's reward system, contributing to the development of addiction.

- In many cases of chronic or severe substance use, this actually changes the brain's chemistry to the point where normal activities (e.g., one's favorite food, sex, etc.) don't produce the same amounts of dopamine that they used to.

Stages of drug addiction

1

Trying the drug

2

Regular use

Regular use lead to risky use

3

Dependence

4

Substance abuse disorder

The Stages of Drug Addiction

Stage 1: Experimentation

Experimentation is defined as the voluntary use of drugs without experiencing any negative social or legal consequences. For many, experimenting may occur once or several times as a way to “have fun” or even to help the individual cope with a problem. For many, experimentation can occur without any desire to continue using the drug.

Stage 2: Regular Use

Some people will be able to enter the stage of regular use without developing a dependence or addiction. These people will be able to stop the drug use on their own. The problem with regular use is that the risk for substance abuse greatly increases during this stage.

Stage 3: Risky Use/Abuse

This stage is defined as continued use of drugs in spite of severe social and legal consequences. This is the stage where the warning signs of addiction will begin to appear: craving, preoccupation with the drug, and symptoms of depression, irritability and fatigue if the drug is not used.

Stage 4: Drug Addiction and Dependency

Characteristics of dependence and drug addiction at this stage includes withdrawal symptoms and compulsive use of the drug despite severe negative consequences to his or her relationships, physical and mental health, personal finances, job security and criminal record.

Causes of addiction

1. Biological factors

Studies show that genetic factors are responsible for 40% to 60% of the vulnerability to any substance use disorder. If you have a first-degree relative (biological sibling or parent) with SUD, you're more likely to develop it. (Family history)

2. **Psychological Factors**

a. **Personality factors**. Both impulsivity and sensation seeking have been linked to substance use and gambling disorders.
b. **Trauma and abuse**. Early exposure to significant adverse experience can contribute to the development of substance use disorders.
c. **Mental health factors**. Underlying mental health conditions like depression, anxiety, or trauma can contribute to addiction.

3. Environmental Factors

a) **Family factors**. Having a parent or sibling with an addictive disorder raises the risk, as does a lack of parental supervision or support. Poor-quality or troubled parent-child relations and family disruptions such as divorce also add to one's risk, as does sexual, physical, or emotional abuse.
b) **Accessibility:** Easy access to substances or addictive behaviors can contribute to addiction.
c) **Social and Cultural Factors:** Peer pressure, social norms, and cultural influences can play a role in the development of addiction.
d) **Lack of Coping Skills:** Poor coping mechanisms and stress management skills can increase the risk of addiction.

Categories of Drugs

Stimulants

Stimulants are group of substances that increase the activity of the central nervous system, resulting in increased blood pressure and heart rate, more alertness, and speed-up behavior and thinking.

What is their effect on the mind?

Produce a sense of exhilaration, enhance self esteem, improve mental and physical performance, increase activity, reduce appetite, extend wakefulness

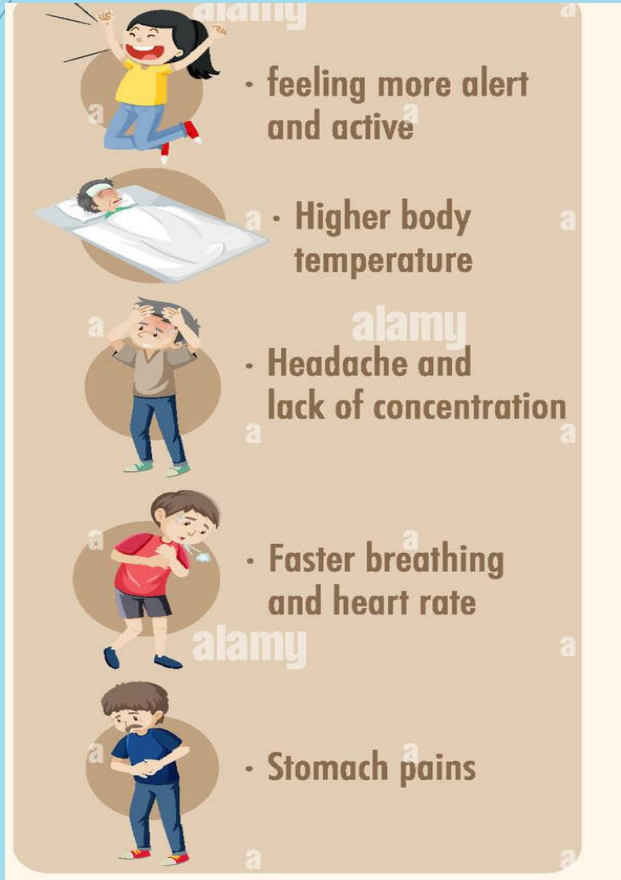
Stimulants (Uppers)

What do they do? Speed up the brain and central nervous system.

Examples:

- **Caffeine** (coffee, energy drinks, tea)
- Nicotine (cigarettes)
- **Amphetamines** (meth, ecstasy)
- “Bath salts”
- Cocaine and Crack

SOME SIDE EFFECTS OF STIMULANTS



- Meth Mouth— rapid decay of a person’s teeth
- Weight loss
- Drug related psychosis
- Organ failure
- Headaches
- Dizziness and lightheadedness
- Sleep disturbances
- Death due to stroke, cardiac arrest

Depressant

Depressants slow the activity of the central nervous system. They reduce tension and inhibitions and may interfere with a person's judgment, motor activity, and concentration.

The three most widely used groups of depressants are alcohol, sedative hypnotic drugs.

Depressants (Downers)

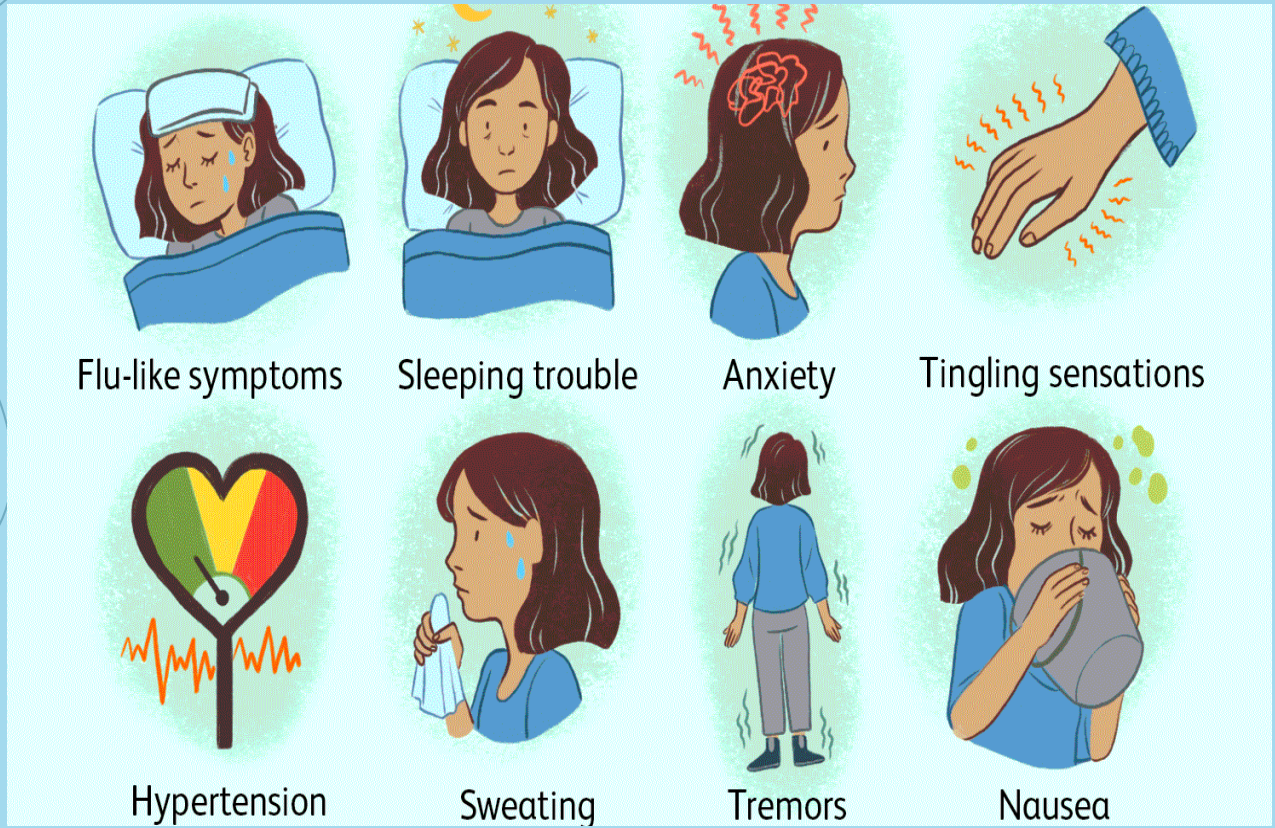
What do they do?

Slow down the brain and central nervous system.

Examples:

- Alcohol (beer, wine, vodka, tequila, etc.)
- Heroin
- Tranquilizers
- Sleeping Pills
- Marijuana

SOME SIDE EFFECTS OF DEPRESSANTS



1. Slurred speech and poor coordination
2. COMA
3. Respiratory issues
4. Lung cancer
5. Headaches and fatigue
6. Memory problems and confusion
7. Death

Hallucinogin

Hallucinogens are a group of drugs that can alter perception, thoughts, and feelings. Hallucinogens can be taken in a variety of ways: ingested, smoked and inhaled.

These produce powerful changes in sensory perception from strengthening a person's normal perceptions to inducing illusions and hallucinations

They produce sensations so out of the ordinary that they are sometimes called "trips."

The trips may be exciting or frightening, depending on how a person's mind interacts with the drugs. Also called psychedelic drugs

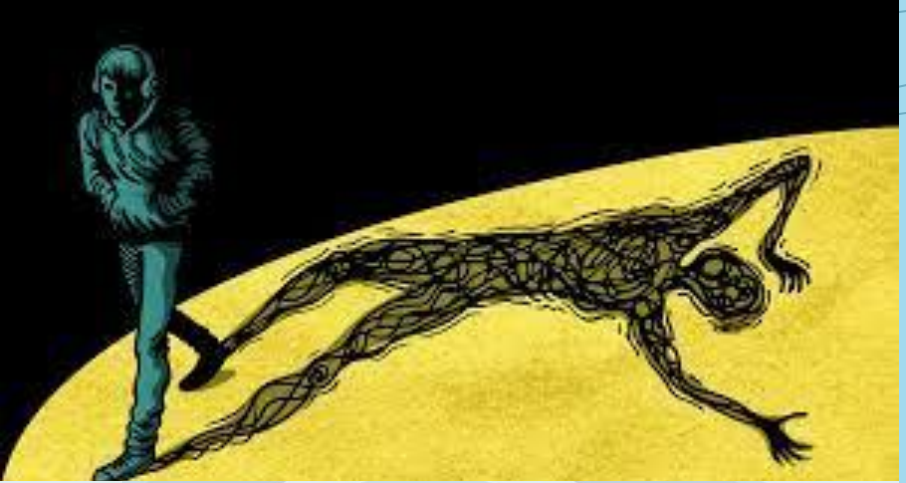
Hallucinogens

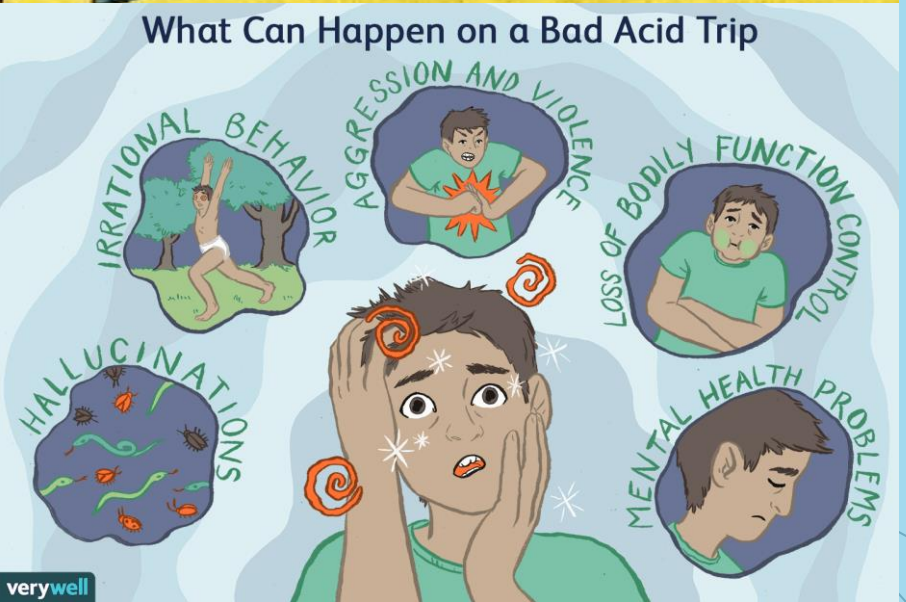
What do they do?

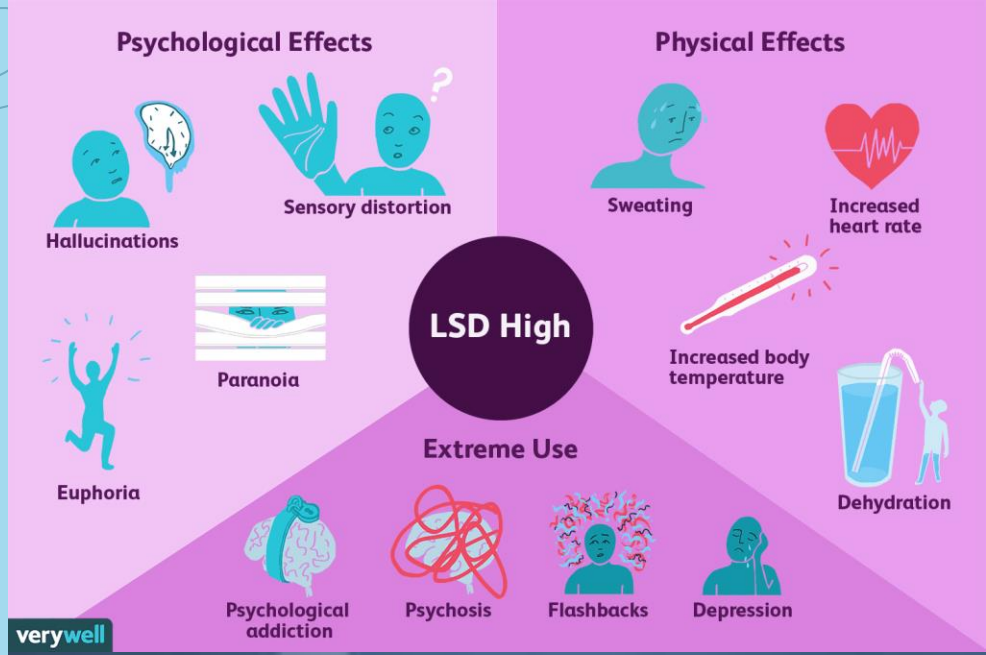
These drugs alter the user's state of consciousness. (Distort auditory and visual sensations)

Examples:

- LSD
- Ecstasy
- Magic mushrooms
- Cannabis

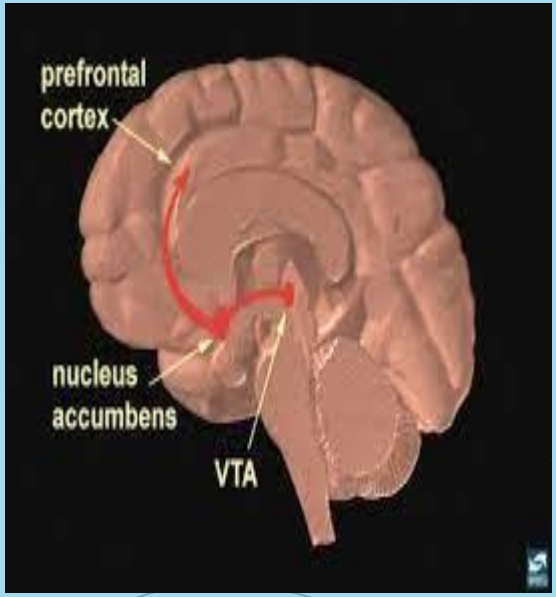



What Can Happen on a Bad Acid Trip
IRRATIONAL BEHAVIOR
AGGRESSION AND VIOLENCE
LOSS OF BODILY FUNCTION CONTROL
HALLUCINATIONS
MENTAL HEALTH PROBLEMS
verywell


Psychological Effects
Physical Effects
Hallucinations
Sensory distortion
Sweating
Increased heart rate
Paranoia
LSD High
Increased body temperature
Euphoria
Extreme Use
Dehydration
Psychological addiction
Psychosis
Flashbacks
Depression
verywell

Theory

WHY PEOPLE WHO REGULARLY TAKE SUBSTANCES HAVE TOLERANCE AND WITHDRAWAL REACTIONS????



Reward system

- A number of brain-imaging studies suggest that many, perhaps all, drugs eventually activate a reward center, or “pleasure pathway,” in the brain (Uroševic´ et al., 2014; de Wit & Phan, 2010). This reward center apparently extends from the brain area called the ventral tegmental area (in the midbrain) to an area known as the nucleus accumbens and on to the frontal cortex (see Figure on left)
- A key neurotransmitter in this pleasure pathway appears to be dopamine

Addiction Cycle

1. **Initial use:** Drug or behavior activates reward system, releasing dopamine.
2. **Tolerance:** Repeated use leads to tolerance, requiring more to achieve the same effect.
3. **Withdrawal:** Stopping or reducing use triggers withdrawal symptoms, discomfort, and anxiety.
4. **Craving:** Dopamine-driven cravings intensify, driving continued use despite negative consequences.
5. **Relapse:** Cycle repeats, perpetuating addiction.

DRUG ABUSE IS PREVENTABLE & DRUG ADDICTION IS A TREATABLE PROBLEM

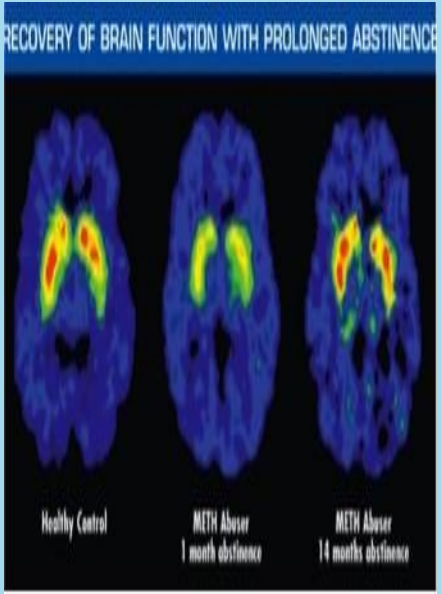
CONSEQUENCES OF DRUG USE- SOCIETY

- Crime & violence leading to massive legal fines
- Becoming unemployed/family and relationship problems
- Workplace and educational problems
- Death

DRUG ABUSE IS PREVENTABLE & DRUG ADDICTION IS A TREATABLE DISEASE

Brains from addicts are different from the brains of people who are not addicted. It is difficult, in some cases impossible, to return the brain to normal. Because drug abuse and addiction have so many dimensions and disrupt so many aspects of an individual's life, treatment is not simple. Effective treatment programs typically incorporate many components, each directed to a particular aspect of the illness and its consequences.

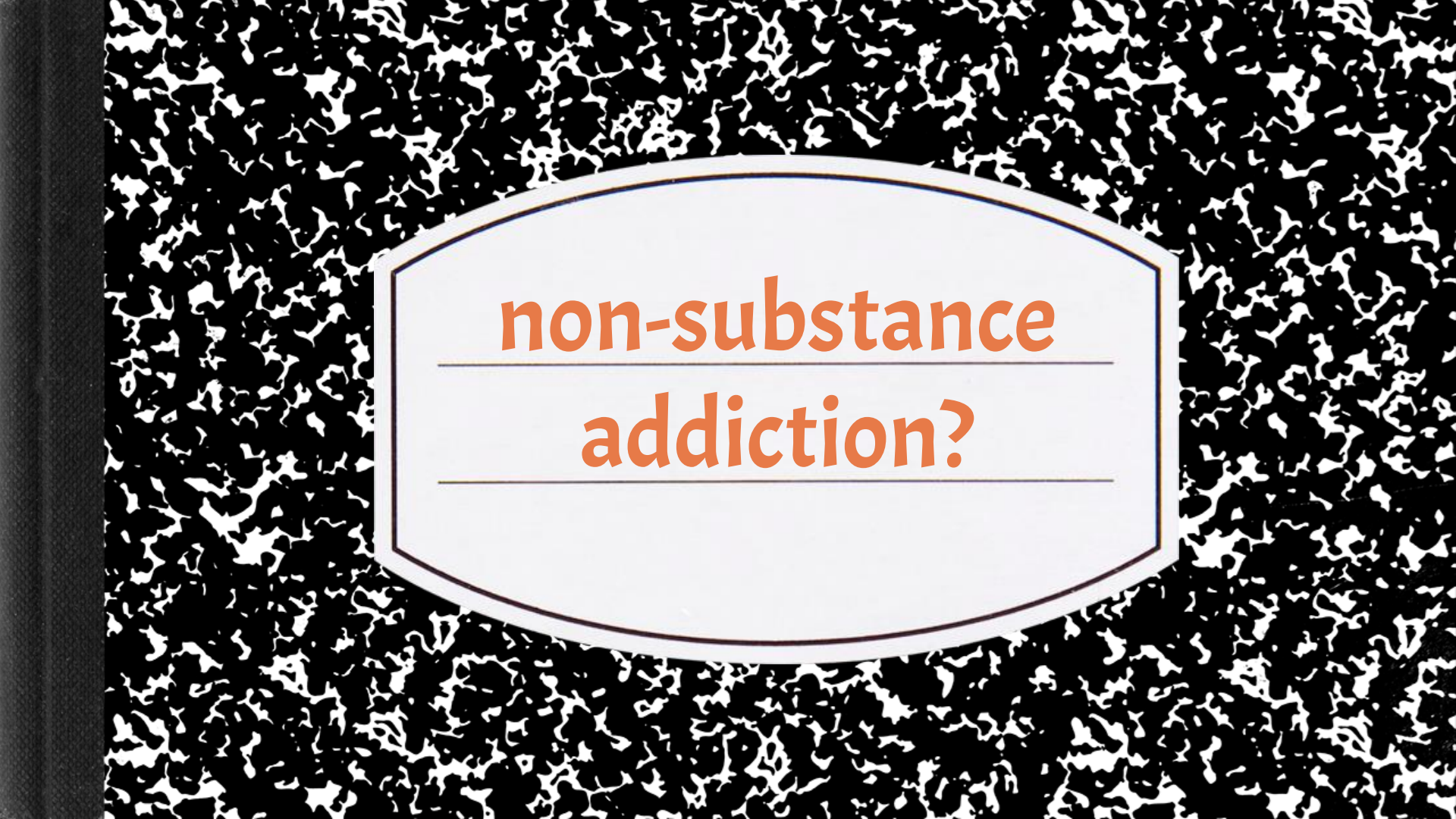
Addiction treatment must help the individual stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society. Because addiction is typically a chronic disease, people cannot simply stop using drugs for a few days and be cured. Most patients require long-term or repeated episodes of care to achieve the ultimate goal of sustained abstinence and recovery of their lives.



Drug abuse and addiction affect every segment of society.

Prevent drug abuse by :

- **Being informed of the risks associated with substance abuse**
- **Involvement in alternative activities**
- **Build self-confidence**
- **Make positive future plans**
- **Be brave enough to say “NO!”**
- **Surround yourself with friends who disapprove of drug use**
- **Solve underlying issues that might lead to problems in future**
- **Seek help from a professional such as a school counselor/psychologist.**


non-substance
addiction?

Non-substance addiction?

1. A non-substance addiction includes things such as gambling, risky sex, food, the internet and shopping. These are sometimes called behavioral addictions.

2. When a person engages in these behaviors in excess and can't stop, it becomes an addiction.

3. Non-substance addictions can result in physical, emotional, and financial harm.

EXAMPLES OF NON SUBSTANCDE ADDCITION

1. Plastic Surgery
2. Food addiction
3. Gaming addiction
4. Plastic Surgery
5. Sex addiction
6. Social Media addiction
7. Gambling addiction
8. Internet addiction
9. Taking or doing risky acts
10. Shopping addiction
11. Pornography addiction

Symptoms of a non-substance addiction

1. A person with a non-substance addiction is unable to stop doing the troublesome activity or behavior.

For example: a person addicted to gambling may spend all his or her savings.

Non-substance addiction symptoms can include:

- Compulsive, excessive, and repetitive engagement in a risky behavior or activity.
- Being unable to stop the activity.
- Impaired judgment.
- Being unable to control the behavior.
- Craving the activity or behavior.
- Strained work and personal relationships.
- Inappropriate emotional response.
- Being unable to recognize the consequences of the behavior (safety, financial, emotional, physical, death).

What causes a non-substance addiction?

Studies have shown that gambling activates similar parts of the brain as other drugs, like alcohol.

These parts of the brain are responsible for our “reward” functions.

This is what gives our bodies’ dopamine after we do some healthy behavior, like exercise or eating a good meal.

How are non-substance addictions diagnosed?

Some people with a non-substance addiction recognize the problem and seek help themselves.

Some people are told by family and friends.

A mental health professional can diagnose the addiction too via **Clinical Assessment.**

Thank you

Does anyone have any question?