

# Beyond coincidence

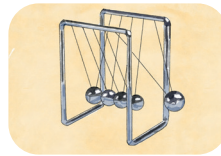
When schizophrenia coexists with substance use disorders

## Explore Chapter 1

*This chapter explores the connection between schizophrenia and substance use disorders (SUD), and the key factors behind their overlap. While challenges exist, understanding their complex relationship opens the door to better support and improved outcomes for individuals and their families.*



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**How are schizophrenia and substance use disorders connected?**



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## Fast Facts

### High prevalence of comorbidity

Nearly **50%** of individuals with schizophrenia also experience substance use disorders, significantly complicating recovery and emphasizing the need for integrated treatment.

### Complex connection

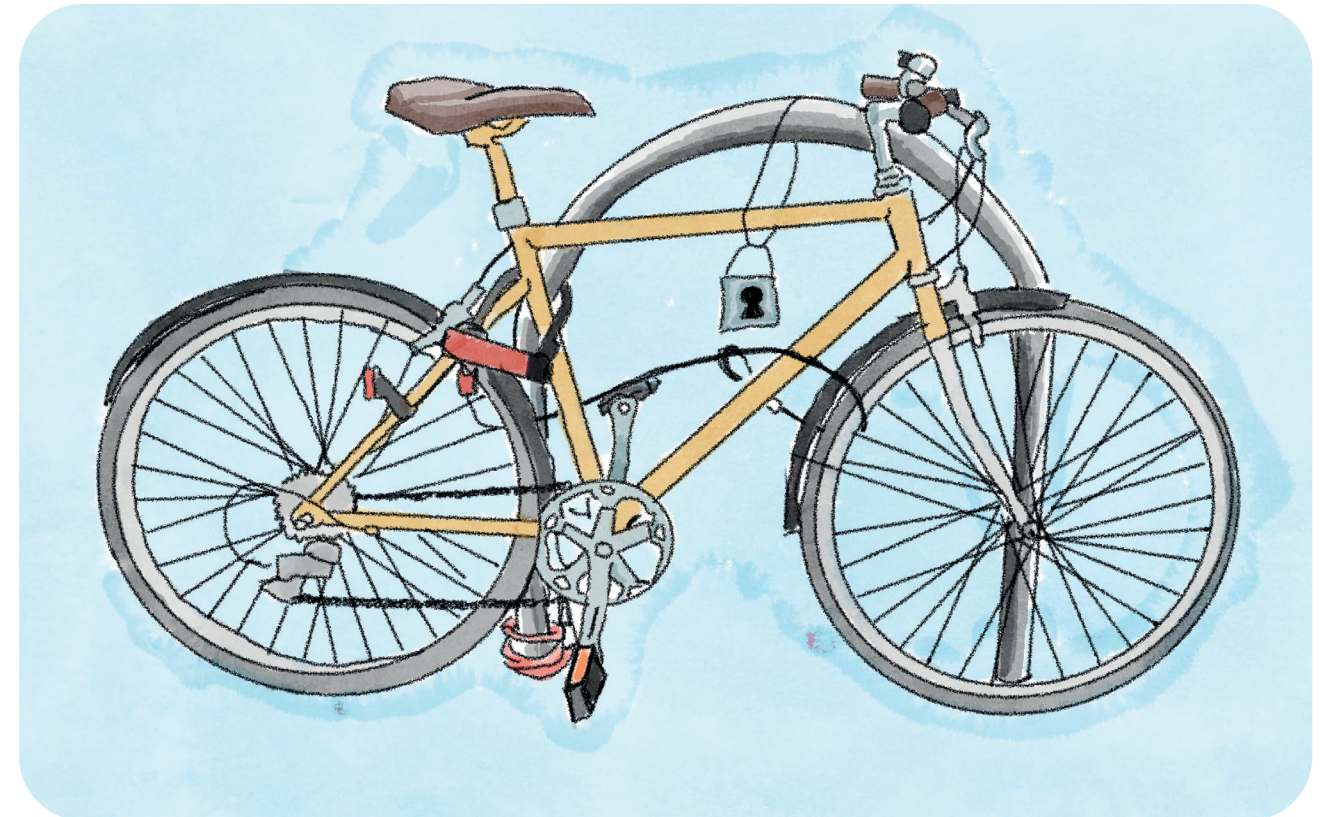
The **co-occurrence** of schizophrenia and substance use disorders results from a complex interaction of brain dysfunctions, biological risks, self-medication, and social and environmental factors.

### Protective strategies can promote recovery

Adherence to treatment, strong support networks, and integrated care are essential in managing these coexisting disorders and **improving outcomes** for individuals and their families.

## 1.1

## How are schizophrenia and substance use disorders connected?



**It is widely recognized that people living with mental illnesses often face substance use disorders, and the reverse relationship is equally true.**

## “Dual Disorder”, the acknowledged medical term

Understanding the interrelation between schizophrenia and substance use disorders has long been a challenge for the medical community. The complexity of the comorbidity often leads to different opinions among experts.

using different and sometimes confusing terms makes things more complicated, especially when trying to diagnose and treat these disorders together.

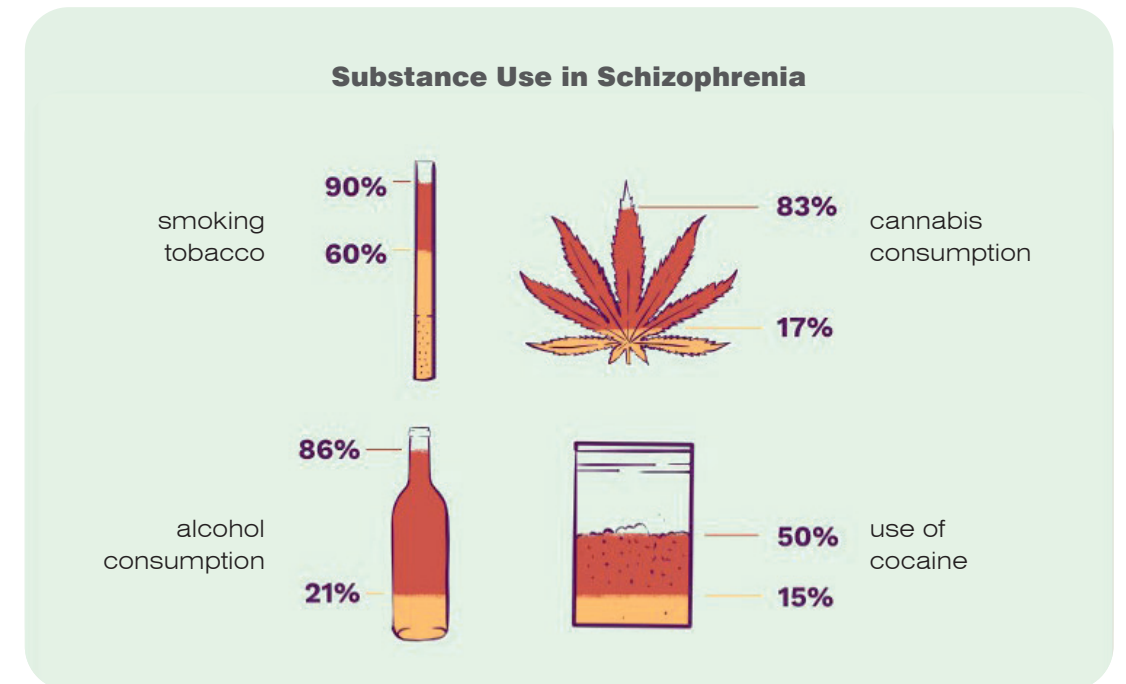
The lack of a unified term contributes to more confusion and increased. This also leads to what’s called “wrong door syndrome”, where people struggle to find appropriate care for both their mental health and addiction issues.

To address this, the World Association on Dual Disorders (WADD) recommends using the term “Dual Disorder”. This term could make it easier for everyone to understand and talk about these conditions in a more consistent and less stigmatizing way.

## Substance Use in Schizophrenia

Concerning certain substance use disorders, individuals suffering from schizophrenia often struggle with using tobacco, cannabis, alcohol, and cocaine.

The lifetime prevalence rates for these substances range between 60 and 90% for smoking tobacco, 17 to 83% for cannabis consumption, 21 to 86% for alcohol consumption, and 15 to 50% for the use of cocaine. These are more than triple compared to the rates of those in the general population.



## Could a psychotic episode trigger the start of substance use?

Experiencing a psychotic episode, particularly the first one, and the manifestation of symptoms (for example, auditory/visual hallucinations, disorganised speech/thinking) can be without a doubt perceived by individuals as **STRESSFUL AND UNSETTLING STATE**.

Especially when services like emergency or police arrive, the situation may bring about shock.

Being devastating both emotionally and psychologically, such events may lead to compulsive decisions to try or use substances.



## Are people with SUD more vulnerable to developing psychotic disorders?

People with psychotic disorders, including those experiencing their first psychotic episode, **are more likely to have substance use disorders** compared to the general population.

Research shows that substance use is common among individuals with first-episode psychosis, with rates between **30%** and **70%**.

Compared to healthy individuals, they are more likely to use cannabis daily and to have been smoking it for over five years. Additionally, people with schizophrenia are more often found to have smoked tobacco before the onset of the condition than those without the disorder.

Many researchers also suggest that cannabis use may contribute to an increased risk of developing schizophrenia.

## At what point in life are these two disorders most likely to intersect?

Despite drug use and addiction being able to occur at any point during one's life, it is **common for drug use to start in adolescence**, the period in which the initial signs of mental illness are most likely to appear.

Co-occurrence of schizophrenia and substance use disorders is also observed in young individuals. About **64 to 88%** of adolescents have at least one co-existing mental disorder on top of a substance use disorder.

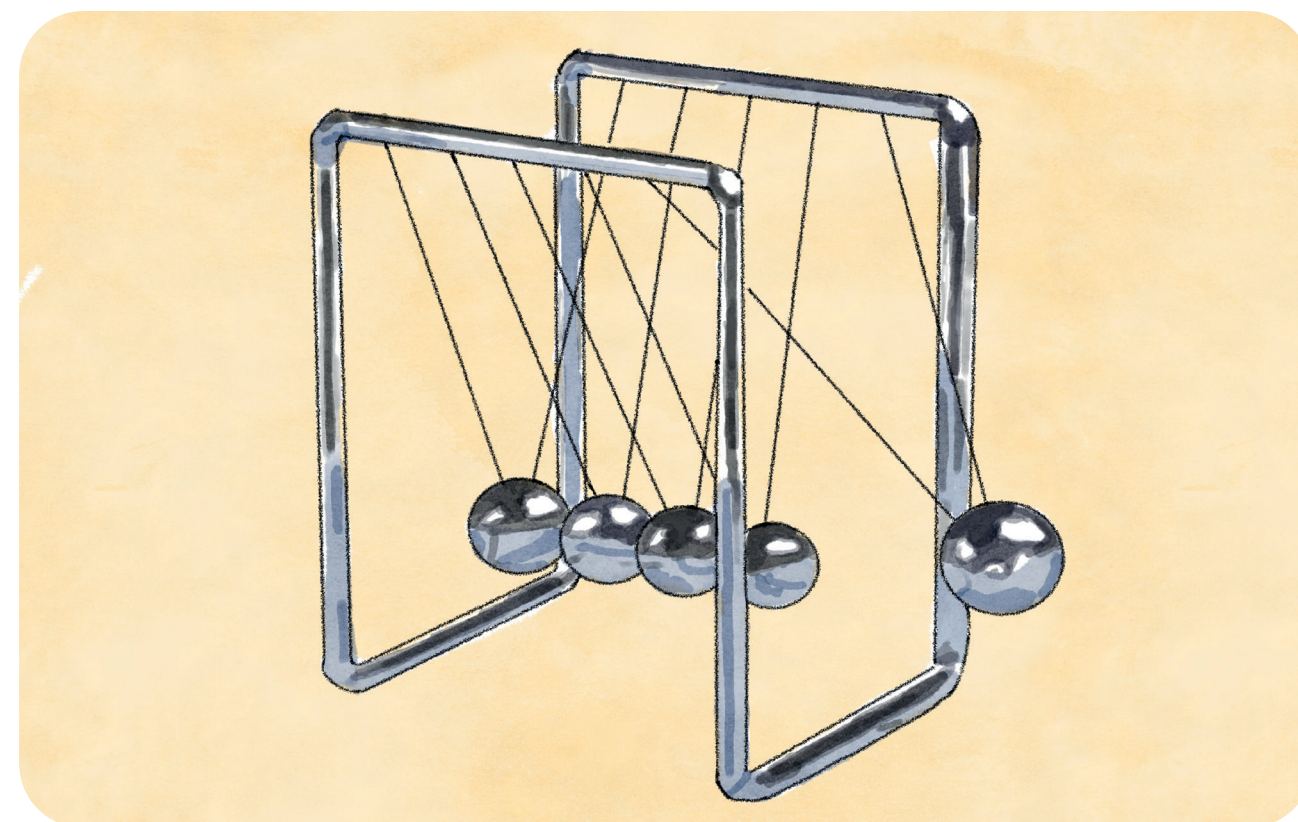
Young men may be particularly sensitive to how cannabis influences schizophrenia. It is suggested that by preventing cannabis use disorder (CUD), about **1 in 5 cases** of schizophrenia among young men **COULD POTENTIALLY BE AVOIDED**. This highlights the importance

of spotting and addressing CUD early on, as well as making informed decisions about cannabis policies and access, especially for individuals aged 16 to 25.

While transitioning to young adulthood, (18-25 years), those with dual disorder require support in navigating situations likely to induce changes in different areas that can bring stress, such as interpersonal relationships, work and/or education.

# 1.2

## Why do schizophrenia and substance use disorders overlap?



**Addiction and mental disorders like schizophrenia often occur together, and this overlap is unlikely due to random factors or measurement errors. This suggests a strong connection between the two conditions.**

Discoveries in neuroscience and precision psychiatry are helping us understand how these two disorders develop together.

The **factors** that make people more likely to develop psychiatric disorders **are usually present from a young age, even if the symptoms don't show** up until later in childhood, teenage years, or adulthood.

No single cause: a look at key theories

While no single cause fully explains the comorbidity, several theories aim to explore why people with schizophrenia are more likely to develop substance use disorders.



1. One idea is the **cumulative factors model**, which suggests that challenges like poor cognitive, social, educational, and vocational functioning, combined with poverty, victimization, and troubled social environments, increase the risk of substance use disorder among those with schizophrenia.



2. Another theory, known as the **self-medication hypothesis**, proposes that individuals with schizophrenia may turn to substances like tobacco, cannabis, alcohol, or opiates to reduce certain symptoms or minimize the undesirable effects of treatment. This behavior might be driven by the intense emotional states often experienced, such as fear, despair, and agitation.



3. The diathesis-stress model, or **"two-hit" theory**, explains that schizophrenia can develop when someone with a **biological vulnerability** faces **environmental stress, including substance use**.



4. The **reward deficiency syndrome theory** points to a possible dysfunction in the brain's reward system, which could lead people with schizophrenia to seek out substances for a sense of pleasure or relief.

These theories offer **different perspectives, but aren't mutually exclusive**, and might all help understanding the complex relationship between schizophrenia and substance use disorders.

**DETRIMENTAL FACTORS** are characteristics or conditions that increase the risk of developing substance use problems in a person with schizophrenia.

Factors	Description
 Genetic Susceptibility	There's evidence indicating a <b>genetic predisposition</b> for both schizophrenia and substance use disorders, that may increase vulnerability to developing either or both conditions.
 Neurobiological Imbalances	<b>Alterations in brain pathways and chemicals</b> , like dopamine, glutamate, serotonin, and others, play a role in both schizophrenia and substance use disorders. These changes might explain why these conditions often occur together.
 Early Substance Exposure	<b>Substance use during adolescence or early adulthood</b> , even preceding schizophrenia symptoms, can worsen the illness and elevate the risk of substance use disorder.
 Self-Medication	Some individuals with schizophrenia may turn to <b>substances to alleviate distressing symptoms</b> like cognitive, negative, and positive symptoms (hallucinations or delusions), potentially leading to substance use disorder as a form of self-medication.
 Socioeconomic Challenges	Poverty, unemployment, homelessness, and social isolation, prevalent among individuals with schizophrenia, can increase <b>substance use as a coping mechanism or for socialization</b> .
 Stigma and Exclusion	Schizophrenia-associated stigma may result in social exclusion and discrimination, driving individuals towards <b>substance use as a means of coping or rebellion</b> .
 Substance Accessibility	Individuals with schizophrenia may have <b>easier access to substances</b> due to factors like homelessness, involvement in street culture, or lack of supervision, heightening the likelihood of substance use initiation and escalation.

Understanding the factors that influence substance use problems in people living with schizophrenia is crucial for helping prevent and address these issues.



## 1.3

Decoding addiction:  
key terms and their significance

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**Addiction, whether related to substances or behaviors, affects millions of people and communities around the globe.**

**It's important to understand that addiction is a serious mental health disorder, officially recognized in medical classifications worldwide. It's not just about making bad choices or having a lack of willpower.**



**Like with other mental health issues, no one chooses to be addicted.**

The term “addiction” commonly refers to behavioral patterns that are **not within control** in one way or another. Individuals tend to describe themselves as addicted to something, such as watching TV or going shopping. Addiction can also refer to **experiencing withdrawals** when the behavior, such as gambling, or substance, such as cocaine, is stopped.

Before delving into the nuances of addiction, it's essential to establish an understanding of key terms associated with **addictive behaviors and substances**.

### Essential terms to know about substance use

**SUBSTANCE USE.** This refers to consuming alcohol, tobacco, or drugs for their psychoactive effects. (example: drinking alcohol socially at a party).

**SUBSTANCE MISUSE.** This happens when someone uses a substance in a way that's harmful to their health or well-being, even if it doesn't qualify as addiction. An example would be taking more of a prescribed medication than directed. (example: taking a higher dose of **prescription medication than prescribed**).

#### SUBSTANCE USE DISORDER

It is a mental disorder, a condition where a person repeatedly uses psychoactive substances despite negative consequences, such as health problems, legal issues, and impaired functioning. This can involve tolerance, withdrawal symptoms, and compulsive drug-seeking behavior.

**TOLERANCE.** A condition where increasingly larger amounts of a substance are needed to achieve the

desired effect (*for example: a person needing to take more painkillers over time to relieve chronic pain*).

**WITHDRAWAL.** Symptoms that occur when a person reduces or stops substance use after prolonged use; (*example: experiencing headaches, nausea, and irritability after quitting caffeine*).

**DRUG-SEEKING BEHAVIOR** refers to the actions people take when they are looking for drugs. This persistent craving for drugs and the tendency to relapse is what sets drug addiction apart from simply using or misusing drugs.

**CRAVING.** A strong desire or urge to use a substance; (*example: a person with nicotine addiction feeling an intense urge to smoke a cigarette*).

**ABSTINENCE.** The complete absence of substance use; (*for example: A person in recovery refrains from using alcohol, drugs, or other addictive substances*).

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# Key terms in understanding behavioral addictions

**Behavioral addictions** focus on specific activities or behaviors and are characterized by an *inability to resist engaging in a particular activity, despite negative consequences*. Here are some of the most frequent behavioral addictions:



**Gambling addiction:** Compulsive gambling behavior despite significant negative impacts on finances, relationships, and personal well-being; *(example: someone who consistently bets money, experiences financial losses, and continues despite negative consequences)*.



**Gaming addiction:** A persistent and repetitive gaming behavior, whether online or offline, that can negatively impact the person's ability to have functional relationships with others, keep up with work or social commitments because of gaming; *(examples: someone who spends most of their time playing games)*.



**Internet addiction:** Excessive and uncontrollable use of the internet, including social media, online gaming, and browsing, leading to impairment in daily functioning; *(example: spending hours online, neglecting responsibilities, relationships, or sleep)*.



**Social media addiction:** Similar to internet addiction, some people are compulsive in their use of social media, which can affect their personal and professional lives; *(example: spending hours taking pictures, editing videos to post on social platforms, and responding to others on social media forums)*.



**Sex addiction:** An overwhelming need to engage in sexual activities, including excessive use of pornography, leading to significant distress or impairment in social, occupational, or other areas of functioning; *(example: engaging in sexual activities that put relationships and personal safety at risk)*.



**Shopping addiction:** Compulsive shopping or spending, often driven by emotional needs rather than practical necessity, leading to financial problems and emotional distress; *(example: uncontrollable urge to shop and buy items, accumulating debt, and straining personal relationships)*.

Understanding these terms equips us with the knowledge needed to navigate the complexities of substance-related and behavioral addictions with empathy, helping to recognize symptoms and seek the right support and treatment.

# Spotting addiction: what to watch out for?

Given the broad use of the term "addiction", efforts have focused on defining it more precisely. The following definition gives an instance of the problematic use of alcohol as an example substance.

According to the "Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition" (DSM-5), there are **9 specific criteria** used to diagnose substance use disorder:

## 1. USING MORE THAN PLANNED:

People often end up taking the substance in **bigger amounts** or for a longer time than they are meant to.

## 2. TRYING TO CUT DOWN:

They make **several attempts to reduce** or control their substance use but find it very difficult or impossible.

## 3. TIME-CONSUMING:

A lot of **time is spent** getting the substance, using it, or recovering from its effects.

## 4. STRONG CRAVINGS:

They feel a powerful **urge or craving** to use the substance.

## 5. NEGLECTING RESPONSIBILITIES:

Substance use leads to **not meeting important responsibilities** at work, school, or home.

## 6. RELATIONSHIP PROBLEMS:

Despite **ongoing issues with friends or family** caused by the substance, they continue to use it.

## 7. GIVING UP ACTIVITIES:

They **stop participating** in important social, work, or recreational activities because of substance use.

## 8. RISKY SITUATIONS:

They use the substance in **dangerous situations**, like driving.

## 9. IGNORING HEALTH ISSUES:

Even when they know that the substance is causing physical or psychological problems, they **continue to use it**.





## 1.4

From habit to disorder:  
substance use and its spectrum

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**People can be affected by substance use in various ways. Young adults commonly engage in experimentation with substances for recreational purposes. Although not favorable, moderate, and infrequent alcohol consumption and substance use are widely practiced and may not necessarily lead to problems for the average person.**

On the contrary, **excessive substance use denotes the pattern of alcohol consumption and/or drug use that predisposes the individual to negative consequences.**

**Binge drinking** can be defined as the consumption of 4 units of alcohol for women and 5 for men within the span of a 2-hour time frame. An example of substance misuse associated with binge drinking is reaching a blood alcohol concentration of 0.08 g/dL, which can heighten the risk associated with health issues, and cognitive and interpersonal problems for a short term, as well as for a longitudinal period.

The **regular consumption of marijuana** (cannabis) is a further example of substance misuse which can cause the user an increased risk of cognitive impairment and health problems.

### Substance use: consequences that can't be ignored

The harmful consequences of using substances can vary from mild to severe.

Even though it can appear that little impact is experienced each time a substance is used, there will likely be a **build-up of the harmful consequences over time.**

A substance use problem can develop when someone continues to use

substances despite the experience of harmful consequences.

Harmful consequences of substance use can affect every aspect of one's life, including:

- **causing injuries** while under the influence
- experiencing anxiety, **depression**, or irritability
- having **trouble** with clear **thinking**
- experiencing blackouts
- having **relationship problems**
- choosing to **spend money** on substances rather than life essentials
- having **legal problems** due to substance use
- experiencing **loss of hope** and feelings of emptiness

Despite their awareness of having a substance use problem, some people may continue to use and may not be able to stop even if they so desire.

This can manifest in them using over their intended quantity in situations where they had no intention to use.

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## Why is it hard to break free from substance use?

One reason it's tough to change behaviors around **problematic substance use** is because the immediate effects often feel good. The user might experience a **boost in mood, increased confidence, and a temporary escape** from their problems. The negative consequences, on the other hand, might not show up for a long time. *Using substances to escape feelings or change mood can lead to addiction, which is both harmful and difficult to break.*

If substance use continues, especially in heavy amounts, it can cause changes in the body and brain. This can lead to withdrawal symptoms when trying to quit after developing a physical dependence. These changes help explain why people may experience craving for substances even after long periods without using, and why they might return to harmful patterns of use.

### From use to disorder: understanding the risks

Substance misuse carries the risk of developing into a substance use disorder

The burden of a Substance Use Disorder can include:

- using an increasing quantity of the substances over time;
- failed attempts to decrease or stop using;
- dedicating lengthy amounts of time being engaged with, and/or recovering from the effects of the substance;
- sacrificing important occupational, social, or recreational events and activities in favor of using the substance.

Substance use disorders can cause a decline in one's ability to function, the negative results of which might become evident to individuals only over time.

## Why do individuals with schizophrenia use substances despite the negative impact on their health?

### Double trouble: the detrimental impacts of SUD on schizophrenia

If substance use disorders and mental illness, such as schizophrenia, coexist, they can have a detrimental effect on the clinical course of the illness.

**INCREASED SEVERITY OF SYMPTOMS:** Schizophrenia with SUDs is associated with more severe positive symptoms (e.g., hallucinations, delusions).

**HIGHER RISK FOR SUICIDAL IDEATION:** Individuals with both schizophrenia and SUDs are at increased risk for suicidal thoughts.

**AGGRESSION AND ADHERENCE ISSUES:** Higher levels of aggression and decreased likelihood of medication adherence are linked to dual disorders.

**INCREASED RELAPSE AND HOSPITALIZATION RATES:** Individuals with both schizophrenia and SUDs experience higher rates of relapse and hospitalization.

**INTERPERSONAL CONFLICT:** There is a greater risk of interpersonal conflict with family members, providers, and others.

**RISK OF HOMELESSNESS:** Those with schizophrenia and SUDs face higher rates of housing instability and homelessness.

In theory, patients with schizophrenia are most probably **attempting**, on a brain level, **to counterbalance a neurotransmitter imbalance**, which is the primary cause of the disease's symptoms and manifestation.

They might try to achieve this **via substances that can deliver pseudo-beneficial effects** (the perception of improvement of some symptoms in the immediate period after the use of substances, burdened with the possibility of addiction, sequelae and subsequent health complications).



1.5

Healing together: protective strategies for dual disorder








Managing co-occurring schizophrenia and substance use disorder can be challenging, but effective strategies offer hope for improvement. They aim to reduce risks, promote recovery, and support individuals in achieving greater stability and well-being.

What strategies help in Dual Schizophrenia care?

Addressing dual disorder requires an integrated approach, combining psychiatric care, addiction treatment, and support services to meet the wide range of needs that these patients face.

There are several **PROTECTIVE FACTORS** that can help mitigate the risk of substance use problems and promote improvement in schizophrenia symptoms.

Factors		Description
	Treatment adherence	Strict adherence to antipsychotic medication regimens and engagement in psychotherapy or psychosocial interventions can stabilize schizophrenia symptoms and decrease the risk of substance use disorder development.
	Strong social support	Supportive relationships with family, friends, peers, or mental health professionals can act as a protective buffer against substance use, providing encouragement, problem-solving assistance, and emotional support.
	Structured routine	Establishing and maintaining a structured daily routine, including employment, education, hobbies, and leisure activities, can occupy individuals with schizophrenia, reducing unproductive time that may lead to substance use.
	Access to specialized services	Integrated treatment programs addressing both schizophrenia and substance use disorder simultaneously, incorporating cognitive-behavioral therapy, motivational interviewing, and medication management, can enhance outcomes and minimize relapse rates.
	Psycho-education	Educating individuals with schizophrenia and their families about substance use risks, relapse prevention strategies, and coping skills can raise awareness and empower informed decision-making.
	Healthy lifestyle	Engaging in physical health-promoting activities like exercise, nutrition, sleep, and stress management can support overall well-being and decrease the likelihood of substance use.
	Peer support groups	Participation in peer-led support groups or recovery-oriented programs tailored to individuals with co-occurring schizophrenia and substance use disorder can offer validation, understanding, and practical guidance. It should be noted that individuals with dual schizophrenia may struggle more to join support groups like Alcoholics Anonymous (AA) due to suspiciousness and distrust.



# Why is timely mental health care critical for reducing dual schizophrenia risk?

It's important to note that **brain changes in people vulnerable to schizophrenia start early**, long before the first symptoms appear. **Substance use disorders can sometimes act as a trigger** for the first episode of psychosis, especially during **adolescence - a critical period** when the brain is still developing key areas responsible for decision-making and impulse control.

Using drugs at an early age increases the risk of substance use problems and other mental health issues later in life. For example, regular marijuana use during adolescence can raise the risk of psychosis in adulthood, especially for those with certain genetic predispositions. Likewise, mental health disorders such as schizophrenia, bipolar disorder, or depression in young people often lead to higher rates of substance use later on.

***Treating mental health issues early can help prevent the cycle where one condition worsens the other.*** Timely care not only reduces the risk of dual schizophrenia but also helps teens make healthier choices during critical developmental years, setting them on a path to better long-term mental health.

***Caregivers and family support play a critical role in the recovery journey of people with dual disorders, offering understanding, encouragement, and stability.***

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