

Quick Guide

For Clinicians

Based on TIP 33
Treatment for Stimulant
Use Disorders



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Contents

Why a Quick Guide?	2
What Is a TIP?	3
Introduction	4
Effects of Stimulants	4
Forms and Routes of Administration	5
Stimulant Intoxication	7
Stimulant Overdose	9
Stimulant Withdrawal	10
Chronic Stimulant Abuse/Dependence ...	13
Associated Medical Complications	14
Psychological/Psychiatric Complications ...	16
Treatment Strategies	18
Treatment Issues for Special Groups	26
Glossary	28

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*Treatment for Stimulant
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This Quick Guide is based entirely on information contained in TIP 33, published in 1999. No additional research has been conducted to update this topic since publication of the original TIP.

WHY A QUICK GUIDE?

The purpose of a *Quick Guide* is to provide busy clinicians with succinct, easily accessible information.

This *Quick Guide* is based on *Treatment for Stimulant Use Disorders*, number 33 in the Treatment Improvement Protocol (TIP) Series, published by the Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration. It will help substance abuse treatment providers assess clients and patients with problems related to stimulant abuse.

The *Quick Guide* has been formatted for ease of use. A glossary of terms is located on page 28. Please refer to TIP 33 for more in-depth information on the topics in this *Quick Guide*.

WHAT IS A TIP?

The TIP Series was launched in 1991. TIPs are aimed at disseminating consensus-based, field-tested guidelines on current topics to substance abuse treatment providers.

TIP 33, *Treatment for Stimulant Use Disorders*

- Addresses stimulant use, its effect on the brain, abuse and dependence, and the general effects of stimulants
- Presents research about effective approaches to treatment and their practical applications
- Explains medical aspects of stimulant use disorders, overdose, and treatment of psychological and medical complications
- Discusses treatment issues for special groups and settings
- Includes worksheets for use by clients.

To order a copy of TIP 33 and other related products, see the inside back cover of this Quick Guide.

INTRODUCTION

Stimulant use and its consequences have contributed significantly to the decay of communities throughout the United States. The problems of cocaine use in the 1960s and 1970s grew to become major medical, legislative, and law enforcement issues in the 1990s. More recently, methamphetamine (MA) abuse has risen dramatically and resulted in policymakers, legal officials, and service providers focusing on the personal and societal effects of this drug.

This *Quick Guide*, based on TIP 33, provides basic information about the nature and treatment of stimulant use disorders. It reviews current knowledge about treating the medical, psychiatric, and substance abuse/dependence problems associated with the use of two high-profile stimulants: cocaine and MA.

EFFECTS OF STIMULANTS

Stimulants cause increased release of the neurotransmitter dopamine in the brain. Dopamine affects control of movement and feelings of

- Pleasure
- Euphoria
- Satisfaction
- Cognition
- Motivation
- Reward.

The higher the dose of the stimulant, the more dopamine released (and the greater the euphoria). This “rush” quickly fades to dejection (the “crash”) as dopamine levels decrease.

The user may then begin a cycle of taking more of the stimulant, producing another rush and subsequent crash. The pattern of repeated dosing, known as bingeing, can continue for days; the user may not eat or sleep and may lapse into severe depression, followed by worsening paranoia, belligerence, and aggression, a period known as tweaking. The user stops bingeing when stimulants are unavailable or when collapse occurs.

FORMS AND ROUTES OF ADMINISTRATION

Cocaine

Cocaine powder is

- Known as coke or flake
- A white, shiny powder; sometimes small lumps are carried in small envelopes
- Inhaled (snorted) using a straw, spoon, or rolled up currency.

Smokable cocaine is

- Known as crack, rock, or freebase

- A yellowish-white, clear or waxy chunk, pea-sized or larger, carried in small containers
- Smoked in a glass or marijuana pipe or burned on aluminum foil (turns to vapor when heated) and inhaled.

Methamphetamine

Methamphetamine powder is

- Known as meth, speed, crystal, or crank
- A dull whitish-yellow powder or small chunks carried in small envelopes
- Snorted, burned on aluminum foil and inhaled, smoked in marijuana or tobacco cigarettes, or diluted with water and injected intravenously.

Smokable methamphetamine is

- Known as ice
- A yellowish-white crystallized chunk
- Smoked in a glass or marijuana pipe, burned on aluminum foil and inhaled, or smoked in marijuana or tobacco cigarettes.

Routes of Administration

- **Snorting**—Causes stimulants to reach the brain within 3 to 5 minutes and the high is not immediately perceived

- **Intravenous injection**—Produces a rush in 15 to 30 seconds
- **Smoking**—Produces an almost immediate effect and is the most intense high, which may lead to equally intense lows during withdrawal, when cravings for the drug may be extreme.

(For more information, see TIP 33, pages 13–26.)

STIMULANT INTOXICATION

Physiological Signs/Symptoms of Intoxication

- Dilated pupils
- Profuse sweating, chills
- High blood pressure (hypertension)
- Increased heart rate (tachycardia), palpitations (arrhythmia), chest pain, or slow heart rate (bradycardia)
- Elevated temperature (hyperthermia)
- Suppressed appetite
- Teeth grinding
- Insomnia or little need for sleep
- Tremors
- Seizures (mostly in cocaine users)
- Confusion
- Respiratory depression.

Psychological/Behavioral Signs and Symptoms of Intoxication

- Euphoria, heightened sense of well-being
- Increased energy, giddiness, sense of enhanced mental acuity and performance
- Agitation, restlessness, irritability
- Heightened need to talk, flight of ideas, rapid shifts in thinking
- Poor concentration
- Grandiosity, exaggerated self-esteem, egocentricity
- Hypervigilance
- Enhanced sensory awareness
- Fearlessness, suspiciousness
- Impaired judgment, poor impulse control
- Oriented to place and time
- Aggression and emotional lability with a potential for violence.

Individuals with these symptoms should

- Be observed and monitored for rising pulse rate, temperature, or blood pressure
- Be kept in a subdued environment to diminish overreaction to external stimuli

- Be given fast-acting benzodiazepines (lorazepam or diazepam) to calm them (if anxious or agitated).

(For more information, see TIP 33, pages 79–88.)

STIMULANT OVERDOSE

Stimulant overdoses are seldom fatal to chronic, high-dose users.

Fatal overdoses mostly occur in new users or persons who accidentally ingest large amounts, such as children or bodypackers (smugglers) whose swallowed packets of cocaine accidentally break.

The amount needed to produce a toxic dose varies widely and is not related to body weight. Toxic doses cause high fevers, cardiac arrhythmias and arrests, irregular breathing, seizures, and strokes.

Lethal doses cause a rapid rise in heart rate, blood pressure, cardiac output, and body temperature followed by delirium, then generalized, terminal seizures. No antidotes or antagonists are available.

Very high fever, severe hypertension, convulsions, and cardiovascular collapse signal a life-threatening situation. Lifesaving measures should be used immediately.

STIMULANT WITHDRAWAL

Stimulant withdrawal is not medically life threatening and does not require pharmaceutical intervention. However, users may become suicidal or violent.

Withdrawal symptoms develop hours to days after heavy use stops. Stimulant users with withdrawal symptoms may self-medicate with alcohol, benzodiazepines, or opioids and may have symptoms of withdrawal from these drugs.

Withdrawal-related depression can be severe, and sensitive management is essential. Cocaine-induced depression usually dissipates in a few hours. Depression after high-dose MA use lasts longer.

Users with preexisting clinical depression become more depressed during withdrawal, and treatment with selective serotonin reuptake inhibitors may help. Persistent agitation and insomnia may be treated symptomatically with the antidepressant trazodone.

Physiological Signs/Symptoms of Stimulant Withdrawal

- Rocky, jittery reactions with agitated paranoia and extreme frustration

- Intense drug cravings
- Weight loss, gaunt appearance, anorexia
- Dehydration
- Fatigue, lethargy, lack of energy
- Dulled senses
- Psychomotor lethargy and retardation—may be preceded by agitation
- Hunger
- Chills
- Insomnia followed by hypersomnia.

Common Psychological/Behavioral Signs/Symptoms of Withdrawal

- Dysphoric mood, which may become clinical depression, suicidal thoughts
- Persistent and intense drug cravings
- Anxiety, irritability
- Impaired memory
- Loss of interest in pleasurable activities (anhedonia)
- Withdrawal from social interactions
- Intense and vivid drug-related dreams.

(For more information, see TIP 33, pages 91–93.)

Reducing the Risk for Violence

Individuals withdrawing from stimulants often are paranoid, aggressive, and violent. A staff member should

- Identify himself or herself, call the client by name, and anticipate the client's concerns.
- Place the client in a quiet, subdued, and spacious environment with little stimuli. Make the door accessible, but do not let the client get between the interviewer and the door.
- Ask simple questions, tolerate repetitive replies, and remain nonconfrontational.
- Acknowledge agitation and the potential for violence by reassuring the client that you are aware of his or her distress.
- Foster confidence by listening, remaining non-judgmental, and reinforcing progress.
- Remove items that could be used as weapons from the room.
- Have a backup plan for help, such as easy access to chemical and physical restraints.
- Train all staff members to work as a team when managing volatile clients.

CHRONIC STIMULANT ABUSE/ DEPENDENCE

Physiological Signs/Symptoms

- Extreme fatigue, physical and mental exhaustion, disrupted sleep patterns
- Nutritional disorders (extreme weight loss, anemia)
- Poor hygiene
- Skin disorders/infections (itching, lesions, hives)
- Hair loss
- Muscle pain/tenderness
- Cardiovascular damage
- Hypertension
- Difficulty breathing
- Involuntary movement disorders
- Impaired sexual performance and reproductive functioning
- Cerebrovascular damage
- Gastrointestinal complaints.

Psychological/Behavioral Signs/Symptoms

- Paranoia with misinterpretation of environmental cues, psychosis with delusions, hallucinations
- Acute anxiety, apprehension, fears of impending doom
- Depression that may include suicidal thinking and behavior
- Eating disorders.

(For more information, see TIP 33, pages 93 and 94.)

ASSOCIATED MEDICAL COMPLICATIONS

- **Cardiovascular system effects**—Every form of heart disease; fatal reactions occur at all dose levels in otherwise healthy young adults
- **Respiratory/pulmonary effects**—Hemorrhage, pneumonia, pulmonary edema, bronchospasm, asthma, or pneumothorax; death from respiratory failure or “crack” lung syndrome (symptoms of pneumonia without evidence of it on lung x-rays)
- **Neurological complications**—Seizures, strokes, and hemorrhages; cerebral atrophy and brain lesions; neurological deficiencies similar to those found in persons with neurological/psychiatric disorders; cognitive deficits (problems with attention, concentration,

problemsolving, abstract thinking, math, new learning, and short-term memory)

- **Muscular and renal toxicity**—Consider rhabdomyolysis, a condition that destroys skeletal muscle and may cause kidney failure, when clients complain of muscle tenderness
- **Gastrointestinal complaints**—Abdominal pain, nausea, and vomiting; severe bowel infarction; “cocaine colitis” (abdominal pain and bloody diarrhea)
- **Infections**—With intravenous (IV) injection: human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS); hepatitis B; hepatitis C; infectious endocarditis
- **Reproductive function and fetal/neonatal effects**—Low birth weight relative to gestational age, poor feeding and sleep patterns, tremor, and hypertonia; jitteriness leading to difficulties with mothers and babies bonding. Preeclampsia; spontaneous abortion; abruptio placentae. Males may develop breasts, lose sexual interest, and become impotent. Women may have irregular menstrual cycles or amenorrhea leading to an erroneous belief that they cannot become pregnant, although many are infertile.

(For more information, see TIP 33, pages 94–99.)

PSYCHOLOGICAL/PSYCHIATRIC COMPLICATIONS

Toxic Psychosis

MA users sometimes have brief psychotic episodes before a full-blown psychosis emerges. Abnormal behaviors can progress into psychotic symptoms of paranoia, delusions, and hallucinations. If a client is exhausted after a prolonged binge, hyperreactivity to stimuli and confusion may lead to panic, violence, and in extreme cases homicide.

A common early sign of paranoia is the performance of repetitive acts that seem to relieve the user's agitation and anxiety. As high-dose stimulant use continues, most users withdraw from all social interactions and initiate other bizarre behaviors before the intensive drug use culminates in paranoid reactions or psychosis.

Symptoms of psychosis usually abate spontaneously within a few weeks of abstinence. Hallucinations stop within 24 to 48 hours, and paranoia and delusions decrease over the next week to 15 days. Clients may sleep for as long as 3 days, dreaming extensively. Psychosis may dissipate more rapidly in cocaine users—in 1 to 3 days—than in MA users—up to 3 weeks. Ice users

reportedly have the most intense and persistent psychoses.

Urine testing is recommended to confirm diagnosis because drug-induced psychosis can mimic other psychiatric disorders.

Treatment of toxic psychosis—Rapid, systematic visual assessment and continued observation, monitoring, and symptom management in a hospital psychiatric department or similar facility are recommended.

Minor psychotic episodes that respond to neuroleptic medications may be managed in a free-standing chemical dependence unit as long as it is well staffed by appropriately trained personnel.

MA users ending a binge are prone to violence. Their paranoia makes them suspicious of medication. Staff should not release these individuals until their medical crisis is resolved or until they have been psychologically stable for 24 hours and are able to calm down without using neuroleptics.

Coexisting Disorders

Most stimulant users have concurrent psychiatric disorders. As many as half of surveyed cocaine users in treatment have lifetime diagnoses of depression; 20 to 25 percent have cyclical mood

disorders; and sizable percentages have borderline or antisocial personality, posttraumatic stress, or attention deficit/hyperactivity disorders. These disorders are more common among stimulant users than the general population.

A month of abstinence from all stimulant use is required to differentiate psychiatric disorders from stimulant-related disorders.

The prognosis for people with substance disorders is worse if they have untreated psychiatric or other substance use disorders. Treatment is needed for all conditions. Only antidepressant and neuroleptic medications with low addictive properties are recommended. To avoid causing another addiction, use sedative-hypnotics and benzodiazepines with caution.

(For more information, see TIP 33, pages 99–105.)

TREATMENT STRATEGIES

Assessment and Orientation

Keep assessments brief, focused, and nonrepetitive—Stimulant-dependent individuals are irritated by lengthy and repetitive assessments.

Identify clients' expectations—Discover clients' concerns and anxieties about treatment and the program.

Provide clear orientations—Clients need to understand the treatment process, program rules, and the expectations for their participation in the program to dispel their fears and anxieties. The orientation may need to be repeated for cognitively impaired stimulant-dependent clients.

Offer clients options—Provide clients with options. Negotiate treatment approaches and strategies.

Involve significant others—During initial assessment and intake processes, assess the potential for family members and significant others either to help or to hinder treatment goals and provide information about treatment and self-help/support groups.

Staff Behaviors Necessary To Enhance Treatment

- **Treat clients respectfully**—Clinical and nonclinical staff members should have a professional demeanor.
- **Convey empathic concern**—Many clients with stimulant use disorders respond poorly to confrontation, so advice and recommendations should be provided in a caring and helpful way.

- **Do not fight resistance**—Confrontational strategies designed to break through the denial process are counterproductive and may be dangerous with stimulant users. Rather, counselors should cultivate clients' motivation and readiness for change and growth.

Treatment Planning

Treatment addresses clinical issues in a fairly predictable sequence:

- Treatment initiation
- Abstinence attainment period
- Abstinence maintenance phase
- Long-term abstinence support plan.

A treatment plan provides a clear structure and framework, sets up specific expectations, and provides clients with benchmarks to measure their progress. A treatment duration of 12 to 24 weeks, followed by aftercare, is common. Most programs use multiple counseling sessions lasting from 30 minutes to 2 hours per week for at least the first several months, with a gradual reduction in the number of weekly sessions.

Base the choice of group or individual therapy for a client on practical considerations; individual sessions generally are more flexible for scheduling, whereas group sessions are typically less

expensive. One format or combination of formats has not proved better than others.

Clients and family members who are involved in treatment should be given a written schedule of the expected dates and times of their sessions. It is not appropriate to deliver these treatment services on an as-needed basis. The structure of the treatment regimen is part of the treatment.

Initiating Treatment

Priorities in the first weeks of treatment:

- **Establish treatment attendance**—During the first 2 or 3 weeks, clients should be scheduled for several weekly visits (these may be only 30 minutes or less).
- **Stop use of psychoactive substances and initiate a urinalysis schedule**—Clients should be placed on a mandatory and frequent urine testing schedule that continues throughout the treatment process. Urine samples should be taken every 3 or 4 days. The frequency can be tapered as treatment progresses. Participation in self-help groups should be strongly encouraged.
- **Assess psychiatric comorbidity**—Assess for other psychiatric conditions in the first 2 weeks and initiate appropriate treatment. Medication may be necessary.

- **Assess stimulant-associated compulsive sexual behaviors**—Stimulant use and compulsive sexual behaviors often are linked. Effective treatment addresses these issues openly and nonjudgmentally.
- **Remediate “withdrawal” symptoms**—Remind clients that proper sleep and nutrition are necessary to help the brain recover. Giving them “permission” to sleep, eat, and gradually begin to exercise can help them establish useful behaviors.

Initiating Abstinence

By the second week, a clear focus on achieving abstinence is needed. The primary goals are to

- Break the cycle of compulsive stimulant use
- Initiate abstinence
- Establish behaviors that support abstinence
- Initiate changes in attitude, behavior, and lifestyle.

Treatment providers should

- **Establish structure and support**—Set short-term, reasonably achievable goals (i.e., complete abstinence from all substances for 1 week). Brief, frequent counseling sessions reinforce short-term goals and establish a

therapeutic alliance. During the sessions, review the previous 24 hours and set goals for the next 24 hours.

- **Address secondary drug use**—Clients need help identifying the connections between their stimulant addiction and the use of other substances. Encourage clients to discard all substance-related items. Family members, sober friends, or 12-Step sponsors can help.
- **Initiate avoidance strategies**—Help clients develop specific action plans to break contacts with dealers and other stimulant users and to avoid places they associate with stimulant use.
- **Provide client education**—Educate clients about the learning and conditioning factors associated with stimulant use and the impact of substances, such as cognitive impairments and forgetfulness, on the brain and behavior.
- **Respond to early slips**—Treat early slips as mistakes, not as failures. Make a verbal or behavioral contract with clients regarding short-term goals.

Other steps to help clients initiate abstinence include

- Identify cues and triggers, and develop an action plan for dealing with them

- Enlist participation of family members and supportive others
- Establish social support systems.

Maintaining Abstinence

Teach functional analysis of stimulant use—The core components are

- Teaching clients to examine the circumstances, situations, thoughts, and feelings that increase the likelihood that they will use stimulants
- Counseling clients to examine the short-term consequences of their stimulant use, which may be pleasurable but brief
- Encouraging clients to review the negative and often delayed consequences of their stimulant use.

Preventing Relapse

Common patterns of relapse episodes include

- Using alcohol or a secondary substance
- Returning to spending time with substance-using friends
- Engaging in sexual behavior previously associated with substance use
- Craving elicited by external and internal stimuli
- Being in a negative emotional state.

To prevent relapse, clients need to safely respond to slips and avoid having them escalate into full-blown relapses. Treatment should include

- Education about the relapse process and how to interpret it
- Identification of high-risk situations and relapse warning signs
- Developing coping and stress management skills
- Enhancing self-efficacy in dealing with potential relapse situations
- Counteracting euphoric recall and the desire to test one's control over one's stimulant use
- Developing a balanced lifestyle that includes healthy leisure and recreation activities.

Psychoeducation groups use education, peer support, and recovery-oriented therapy. The group leader provides information. The group members then discuss the topic's relevance to them, and the problems, challenges, and successes they are currently experiencing.

(TIP 33 presents additional information on treatment and more than 40 worksheets for clients' use; see appendix B, pages 153–203.)

Pharmacological Treatments

Research into effective pharmacotherapy for cocaine or MA addiction has not produced an effective pharmacological treatment. Antidepressant medications have been tested with varying results and alleviate some of the medical/psychiatric symptoms of intoxication and withdrawal. Disulfiram therapy may help clients addicted to both alcohol and cocaine. Buprenorphine may help clients addicted to both cocaine and opioids.

Other useful strategies are providing or promoting

- Relationship counseling
- Training in social skills
- Vocational counseling
- A balanced lifestyle
- Attendance at self-help groups (12-Step groups of Narcotics Anonymous, Cocaine Anonymous, and Alcoholics Anonymous).

TREATMENT ISSUES FOR SPECIAL GROUPS

Some special consideration for client groups follow:

- **Intravenous drug users** need access to multicomponent HIV-prevention programs that include counseling and HIV testing.

- **Gay men** need risk assessments that include a substance use analysis focusing on how their sexual behavior fits into their substance use patterns.
- **Cocaine use** can be a problem for clients in methadone treatment programs. A contingency management approach is an effective strategy for this group.
- **Rural clients** need counselors to link them with social service agencies providing flexible treatment services at outreach sites such as mobile or satellite offices.
- **Women** need assistance with the possibility of losing custody of their children, dealing with partners who are using or dealing drugs, child care, or domestic violence issues.
- **Adolescents** need a different approach than that used with adult clients. In addition to focusing on cessation of use, treatment should help teens develop life and educational skills and use a developmentally based approach involving their family and peers.

(For more information, see TIP 33, pages 113–128.)

GLOSSARY

Anhedonia: Loss of interest in pleasurable activities; the inability to feel pleasure.

Anorexia: Loss of appetite, accompanied by weight loss and thin, gaunt appearance.

Arrhythmia: Irregular heartbeat.

Benzodiazepines: Drugs that relieve anxiety or are prescribed as sedatives; they are among the most widely prescribed medications and include Valium and Librium.

Bradycardia: Slowed heartbeat.

Convulsion: An abnormal, involuntary contraction or series of contractions of muscles; spasm or series of jerkings of the face, trunk, or limbs.

Dopamine: A neurotransmitter present in several brain regions involved in movement, emotion, motivation, reinforcement, and feelings of pleasure.

Hypertension: Elevated blood pressure.

Hyperthermia: Elevated body temperature.

Paranoia: A psychotic disorder characterized by the presence of delusions, often persecutory,

involving being followed, poisoned, or harmed by other means.

Psychosis: A mental disorder characterized by mental delusions or hallucinations that indicate an impaired conception of reality.

Rhabdomyolysis: An acute, potentially fatal disease of the skeletal muscle characterized by muscle pain, weakness, and the production of red-brown urine.

Rush: A surge of euphoric pleasure that rapidly follows administration of a drug.

Seizure: The manifestation of a sudden onset of abnormal brain activity; may be accompanied by complex behaviors, impaired consciousness, and convulsions.

Tachycardia: Rapid heartbeat with or without arrhythmia and chest pain.

Toxic: Temporary or permanent drug effects that are detrimental to the function or structure of a cell, organ, or organ system.

Withdrawal: A psychological and/or physical syndrome caused by the abrupt cessation of the use of a drug in an habituated individual.

Ordering Information

TIP 33 *Treatment for Stimulant Use Disorders*

TIP 33-Related Products

KAP Keys for Clinicians Based on TIP 33



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Easy Ways to Obtain Free Copies of All TIP Products

1. Call SAMHSA's National Clearinghouse for Alcohol and Drug Information (NCADI) at **800-729-6686**, TDD (hearing impaired) **800-487-4889**
2. Visit CSAT's Web site at **[http:// www.csat.samhsa.gov](http://www.csat.samhsa.gov)**



Other Treatment Improvement Protocols (TIPs) that are relevant to this Quick Guide:

TIP 9, *Assessment and Treatment of Patients With Coexisting Mental Illness and Alcohol and Other Drug Abuse (1994, Reprinted 1999)*

BKD134

TIP 10, *Assessment and Treatment of Cocaine-Abusing Methadone-Maintained Patients (1994)*

BKD157

TIP 27, *Comprehensive Case Management for Substance Abuse Treatment (1998)* **BKD251**

TIP 29, *Substance Use Disorder Treatment for People With Physical and Cognitive Disabilities (1998)* **BKD288**

See the inside back cover for ordering information for all TIPs and related products.