

10 Facts About Methamphetamines

March 2021



1. What is meth?

Methamphetamine, also known as *meth*, *crystal meth*, *crystal*, *tina*, or *crank*, is a stimulant that affects the central nervous system, producing feelings of euphoria and increased energy. It is normally in the form of a white powder that has no smell and tastes bitter. Methamphetamine can also appear in a semi-transparent crystallized form, or in pill form made from compressed powder.ⁱ

Methamphetamine's parent drug, amphetamine, was first synthesized in 1887 at the University of Berlin. However, amphetamines were not used clinically until they were re-synthesized in the U.S. in the 1920s to treat asthma, allergies, and colds as a decongestant.ⁱⁱ Methamphetamine was first manufactured in Japan in 1919.ⁱⁱⁱ It was not widely used until World War II, when soldiers used amphetamine-type stimulants (ATS) to reduce fatigue and suppress appetite.^{iv}

The major difference between methamphetamine and amphetamines is that methamphetamine has longer lasting and more potent effects. This occurs because methamphetamine passes through the blood-brain barrier more quickly than amphetamines.^v

Methamphetamine is classified by the Drug Enforcement Agency as a Schedule II drug. This means that the government has determined it has potential for misuse and dependence, but that it also has accepted medical use and can be prescribed for some health conditions with restrictions.

2. Why do people use meth?

People who use methamphetamine report feelings of euphoria, arousal, reduced fatigue and appetite, loss of inhibition, and increased sociability.^{vi} People may use methamphetamine to reduce their inhibitions and feel more confident, while others may use it to manage mental health issues like depression or the effects of trauma.^{vii} Some people use methamphetamine to enhance pleasure and physical sensations during

sex.^{viii} The use of drugs to enhance sex is called "chemsex".^{ix}

Methamphetamine can be used in medical settings to treat attention deficit hyperactivity disorder (ADHD) and narcolepsy. It can also be used as a short-term component of weight loss treatments in the form of the drug Desoxyx.^x However, medical uses of methamphetamine are limited so they are rarely prescribed.

Amphetamines are also legally prescribed by doctors. The most commonly known is the drug Adderall, which is used to treat ADHD. Amphetamines are also sometimes used to treat narcolepsy.^{xi}

People may use methamphetamine or amphetamines for any number of reasons, and most people will not develop an addiction. However, some people can develop compulsive use or dependence over time, others may become addicted.^{xii}

People use methamphetamine despite being subject to incredibly harsh stigma. In order to convince people not to use methamphetamine, enforcement entities and some other groups use public outreach campaigns that perpetuate stigma against people who use methamphetamine. These campaigns employ pictures of people who have used methamphetamine for long periods of time and who often struggle with other issues. These "Faces of Methamphetamine" campaigns are deeply dehumanizing and frame methamphetamine use as a personal failing, rather than the nuanced and numerous factors that cause people to use methamphetamine.^{xiii} It is also a common and widespread tactic to post drug charges and arrests in local newspapers, further perpetuating stigma against people who use drugs. Scare tactics like these do not work—studies have shown that these tactics are ineffective and may even have a counterproductive effect on the target audience.^{xiv} In response to ineffective and stigmatizing drug education, DPA has developed [Safety First: Real Drug Education for Teens](#). It is the nation's first harm reduction-based drug education for high schoolers.

Rather than a criminal approach which results in people in jails and prisons, or scare tactics that provide more misinformation than education, a more effective and compassionate approach to addressing methamphetamine use would center health, harm reduction and treatment. This includes [syringe exchange programs](#) and [supervised consumption sites](#). [Treatment](#) for people with problematic methamphetamine use, or problematic use of any substance, should be available on demand. Not everyone who uses substances needs or wants treatment. However, treatment must be immediately available to all who seek it, when they are most motivated for change. Changing existing methamphetamine laws to compassionate, harm-reduction focused approaches to problematic methamphetamine use present a path to safety and healing for people who use methamphetamine and their loved ones.

3. How long does meth stay in the system?

The way someone consumes methamphetamine is directly related to how quickly the effects of the drug will be felt. Methamphetamine can be consumed in various ways and it will typically take several days for the drug to completely exit the system. The drug can be smoked, snorted, injected, swallowed, or inserted rectally (known as “boofing” or “booty bumping”).^{xv}

When methamphetamine is swallowed, the peak concentration is seen within 2-4 hours. When snorted, smoked, or injected, peak concentration will occur within minutes.^{xvi} Smoking, injecting, or inserting methamphetamine rectally allows the drug to reach the brain faster, which causes an immediate and intense “rush”. This is why smoking or injecting methamphetamine has a higher likelihood for addiction. Snorting or swallowing produces feelings of euphoria, but not the same “rush” that smoking or injecting does.

The effects of methamphetamine can last for many hours and it may take up to 4 days for the drug to completely leave the body. Methamphetamine has an average half-life of 10 hours, meaning it takes 10 hours for half the drug to exit the system.^{xvii} Metabolites may show up in drug tests for days after use.^{xviii} Different drug tests have varying detection times. For example, one can receive a positive urine test after a single use for up to 4 days after use, whereas a hair test can be positive up to 3 months later.^{xix}

Methamphetamine can be used in a “binge and crash” pattern.^{xx} This means that the pleasurable effects of methamphetamine start to wear off even before the drug has been fully metabolized, so people might try and maintain their high by taking more. A “run” refers to taking the drug over several days and staying

awake the whole time, leading some people to neglect the need to eat, hydrate, rest, or maintain hygiene during that time.

People often use methamphetamine with other substances and combining substances can alter the effects of methamphetamine on the body and how someone may feel. People may drink alcohol and take methamphetamine together to “take the edge off” the jitteriness that methamphetamine causes.^{xxi} However, alcohol inhibits methamphetamine metabolism, meaning that it will take longer for methamphetamine to leave the body if someone consumes alcohol.^{xxii}

People may also combine methamphetamine with other stimulants, like cocaine or MDMA. They may take it with opiates like heroin, known as “goofballing”, or with other drugs such as GHB, poppers, or ketamine when engaging in chemsex. Combining methamphetamine with other substances can have unpredictable (and sometimes harmful) effects on the body, and also lengthens the time it takes for all drugs to leave the system.^{xxiii}

It should be noted that the effects of illicit methamphetamine can be very different than prescribed methamphetamines or amphetamines, such as Adderall. The effects of Adderall are generally felt within 45 to 60 minutes of swallowing the tablet, and effects do not last longer than 4 to 6 hours.^{xxiv} However, effects of illicit methamphetamine can be unpredictable since what is often sold as methamphetamine is of unknown quality and potency and may include other substances or adulterants.

4. Can you become addicted to meth after one use?

No. Addiction cannot develop after only a single use of any drug.

According to the 5th edition of the Diagnostic and Statistical Manual for Mental Disorders, one can only meet criteria for a substance use disorder if they repeatedly use a substance despite harmful negative consequences and being unable to meet responsibilities at work, school or home.^{xxv} This only occurs after a pattern of use over time.

It should be noted that the majority of people who use methamphetamine will not develop an addiction to it. According to the National Survey on Drug Use and Health, approximately 14.9 million people in the US over the age of 12 have used methamphetamine in their lifetime and a minority of them- 1.1 million- met criteria for a methamphetamine use disorder in 2018.^{xxvi} There is no single specific factor or cause for addiction, but we do know that there are some risk factors. For instance, family history of addiction or mental illness, emotional, physical, or sexual trauma

history, untreated depression or other mental disorders, stress, poverty, and other factors can place some people at greater risk of developing an addiction.^{xxvii,xxviii}

The availability of methamphetamine varies across the country, so that rates of use and addiction vary as well. Data from the 2017 Treatment Episode Set (TEDS) show that treatment admissions for methamphetamine as the primary substance of use were less than 1% in areas east of the Mississippi River, but ranged from 12-29% in the sites west of the Mississippi.^{xxix}

All methamphetamine usage, whether casual or in the context of addiction, is highly stigmatized. Stigma of methamphetamine use prevents people from seeking treatment if they would like to change their usage.^{xxx} People who use methamphetamine that are also members of marginalized groups, such as sex workers or queer men, have this stigma compounded with other stigmas.^{xxxi, xxxii} These compounded stigmas can further intersect with issues such as poverty and unemployment, thus preventing treatment access.^{xxxiii} People who are homeless may use methamphetamine as a “survival drug”, especially those who are more at risk for violence (i.e., women, youths, members of the LGBTQ+ community, etc.), in order to stay awake for longer periods of time, or to stay warm when the temperature drops.^{xxxiv, xxxv}

5. What are treatment options for people with a methamphetamine use disorder?

Though most people overcome substance use disorders without accessing formal treatment, some people may seek counseling or therapy for help. There are several forms of psychosocial and behavioral treatment that proven to be helpful for people with methamphetamine use disorder. In addition, there are promising medications that have been studied for methamphetamine use disorder, however, they have not yet been approved by the Food and Drug Administration for this purpose.

Contingency management (CM) is a type of behavioral therapy grounded in the principles of operant conditioning, a method of learning in which desired behaviors are reinforced with prizes, privileges, or cash.^{xxxvi} Attending treatment sessions, adhering to prescribed medications, or producing negative drug test results can be rewarded with vouchers for retail goods or services. CM can be used across different genders, ages, races, and ethnicities. CM has been shown to significantly reduce number of days of methamphetamine use, cravings, new use, and HIV risk behaviors.^{xxxvii,xxxviii}

The Community Reinforcement Approach (CRA) is often used in conjunction with CM. The goal of CRA is to identify behaviors reinforcing methamphetamine use

and make a substance-free lifestyle more rewarding than one that includes drug misuse.^{xxxix} CRA practitioners encourage clients to become progressively involved in alternative non-substance-related pleasant social activities, and to work on enhancing the enjoyment they receive within the “community” of their family and job.^{xl} CRA has been shown to lengthen abstinence, addiction severity, and frequency of use.^{xli}

Motivational interviewing (MI) is a treatment approach that meets people where they are at and helps them to overcome ambivalent feelings about changing their behavior.^{xlii} It helps people explore their own reasons for change and to become motivated to make changes in their drug use. MI is intended for use across different groups, like CM. However, MI can be tailored for different populations, such as men who have sex with men.^{xliii} MI has been demonstrated to reduce number of days of methamphetamine use and amount of methamphetamine used per day.^{xliiv}

Finally, people may undergo treatment with Cognitive Behavioral Therapy (CBT) to help with methamphetamine use disorders. CBT is a short-term, goal-oriented psychotherapy treatment that enables people to understand their current problems, challenges, and experiences in order to change their behaviors and patterns of thinking.^{xliv} CBT is always tailored to fit the needs of the individual. It is widely used and can be employed across genders, ages, races, and ethnicities.^{xlvi} CBT has been associated with reductions in quantity of methamphetamine consumed per week, frequency of use per week, and risky sexual behaviors.^{xlvii}

Stimulant use disorders can have adverse effects on the physical and mental health of individuals. The stigma of methamphetamine use often prevents people from seeking treatment if they would like to change their usage.^{xlviii} Therefore, it is important that the focus of treatment for methamphetamine/stimulant use disorders not center on stigmatizing participants. Methamphetamine use is not same across the board, and some people may misuse methamphetamine while trying to manage mental health issues like depression or the effects of trauma.^{xlix}

6. What is “meth mouth”?

“Meth mouth” is a troubling and stigmatizing way of describing the dental problems that the public and media associate with methamphetamine use. However, there is no clear evidence that the use of methamphetamine directly causes tooth decay and dental problems.

Instead, there is consensus that smoking substances, including methamphetamine, can lead to harmful damage to teeth and enamel, especially if individuals

are not regularly brushing and flossing, rinsing their mouths after eating sugary foods, and staying hydrated to make sure they have enough saliva in their mouth.ⁱ This is true for some people who smoke methamphetamine, but it is true for people who smoke cigarettes and other tobacco products as well.ⁱⁱ

We know that some people who use methamphetamine are low income and may lack access to dental hygiene supplies and regular dental care, which can then result in severe dental problems. We also know that for some people, methamphetamine use can contribute to teeth grinding as well.ⁱⁱⁱ

For those who use methamphetamine overnight or over the course of several days, it can mean that they lose track of time and may forget to brush their teeth. A good harm reduction strategy for people who use drugs in this manner is to set alarms to remember to hydrate frequently and to brush their teeth twice a day.

Methamphetamine use is highly stigmatized, and its physical manifestations can leave people who use methamphetamine feeling isolated or ashamed. People who use methamphetamine often have many unmet medical and mental health needs.ⁱⁱⁱⁱ Dental treatment plans can include extraction, tooth restoration, prosthetics, and home care regimens.^{liv} However, it is important to note that because methamphetamine use can occur at the intersection of, or result in, poverty and social marginalization, some may not be able to seek or afford dental treatment.

7. What are some of the physical risks associated with using methamphetamine?

Short-term and long-term methamphetamine use carry different kinds of risks, including stress or damage to the cardiovascular, nervous, gastrointestinal, and renal, systems.^{lv}

Short-term use of methamphetamine can result in a decreased appetite, weight loss, anxiety, hypothermia, and higher heart rate and blood pressure. Long-term use of methamphetamine can result in damage to the liver and kidneys, heart damage, and in some cases, psychological effects like hallucinations, anxiety, depression, or paranoia.^{lvi} Prolonged methamphetamine use can cause people to believe they have bugs or parasites beneath their skin (parasitosis), which results in the picking of skin. Skin picking can result in infections, including infections with drug-resistant bacteria that can make people very ill.^{lvii} Long-term use can also lead to tooth decay.

The ways people use methamphetamine can also present different physical risks. Methamphetamine comes in several forms, and can be smoked, snorted, injected, or ingested.^{lviii} If people inject

methamphetamine and share needles or equipment, it can result in the spread of blood-borne diseases like HIV or Hepatitis C.^{lix}

Overdose can result from methamphetamine use. Methamphetamine overdose is on the rise in the United States, and in some states, methamphetamine is now at fault for more deaths than all opioids combined.^{lx} Taking opioids with methamphetamine, and the higher potency of today's methamphetamine, are cited as reasons for this rise.^{lxi}

Methamphetamine use can also be associated with sexual risk-taking such as not using protection or having multiple unprotected sexual partners.^{lxii} This can result in an increased risk for HIV and other sexually-transmitted infections (STIs). Inserting methamphetamine rectally can also induce small tears in the rectal tissue, which can lead to hemorrhoids or bleeding.^{lxiii}

Methamphetamine use is highly stigmatized, and people who use methamphetamine may not reveal their use or any associated health problems to their partners or healthcare practitioner out of fear or shame. People who are members of marginalized groups, such as racial or ethnic minorities, sex workers or members of the LGBTQ+ community, may be further discouraged from seeking treatment due to the compounding of stigmas.^{lxiv} Portrayal of people who use methamphetamine in the media as "violent" or "criminal" also further steers people from seeking treatment or healthcare.^{lxv}

8. What are harm reduction strategies for meth use?

There are several ways to practice harm reduction while using methamphetamine.

How to avoid overamping

Sometimes, people take more methamphetamine than they intend or can tolerate. This can lead to what is known as "overamping" - troubling psychological effects like anxiety or paranoia, or physical effects like overheating, increased blood pressure, or rapid heartbeat. This is more likely when the person has not slept, eaten enough food, or is hydrated. Overamping can make someone feel nervous or disoriented, or even feel sick. To avoid overamping, drink plenty of water, get adequate sleep, and eat proper foods. It's also important to follow the "start low, go slow" approach to avoid overamping. This means start with a small dose, and wait to feel the effects before using again, as the methamphetamine might be more potent than thought initially. This is especially important for those who inject, swallow, or booty bump methamphetamine since it is easy to take more than anticipated. Avoiding smoking before injecting can also help prevent overamping.

Being mindful of setting is important to consider when practicing harm reduction for methamphetamine and for all drugs. One should avoid using alone and try to around known and trusted people, so they can help manage any potential feelings of overamping, including anxiety or paranoia. They can also be available to call for help if someone experiences a medical emergency. Other ways to reduce harm are to avoid mixing with other classes of drugs or reduce the number of drugs taken at the same time.

Strategies for safer injecting

It is important to reduce the risks associated with different methods of use and to use sterile equipment. Sharing or reusing syringes when injecting methamphetamine, also known as “slamming,” can put people at higher risk of contracting blood-borne infections (i.e. HIV, Hepatitis C, etc.) or skin and soft tissue infections. Only new syringes should be used to inject methamphetamine, obtained from either pharmacies—in some states—or [syringe exchange programs](#).^{lxvi} If someone is injecting methamphetamine, they should make sure to clean their skin with alcohol first, use a tourniquet, and use a sterile cooker.^{lxvii} Rotating injection sites, drinking lots of water, and not smoking before injecting are other ways to practice harm reduction while injecting methamphetamine. Rotating sites is important because it gives previously used injection sites and veins a chance to heal, thus preventing infections and abscesses.^{lxviii} Injecting into a vein is preferable to injecting into an artery, because injecting an artery causes pain and the substance is pushed right into the tissue.

Strategies for safer snorting

In some cases, it is helpful consider changing the route of use to a less risky method. If one regularly injects methamphetamine, it might be helpful to switch to snorting, boofing, or smoking methamphetamine instead of injecting. These are lower-risk for blood-borne and skin and soft tissue infections.^{lxix} People who snort methamphetamine should avoid sharing bumpers or straws used for snorting and instead use their own supplies.^{lxx} Using bills to snort can spread bacteria, so it is advisable to use post-it notes or other clean paper.^{lxxi} Smoking methamphetamine can dry out the mouth and lips; use lip balm and avoid sharing pipes if possible.^{lxxii}

Strategies for safer “booty-bumping”

People may also take methamphetamine rectally, a practice referred to as “booty-bumping” or “boofing”. Booty-bumping is another good alternative to injecting methamphetamine, if done correctly. To properly administer this way, dissolve the methamphetamine in sterile water and squirt the solution rectally with a needle-less, unshared syringe.^{lxxiii} Avoid sharing syringe barrels or cups used to prepare the solution as well.

Strategies for safer chemsex

Some people use methamphetamine because it enhances sexual experiences; this practice is called chemsex. If a person is engaging in sexual activity while using methamphetamine, one way to practice harm reduction is to carry condoms, or to get tested after a sexual encounter.^{lxxiv} Engaging in sexual activity immediately after booty-bumping methamphetamine particular can put someone at higher risk for acquiring or transmitting an infection because booty bumping can induce small tears in the fragile rectal tissue, leading to hemorrhoids, rectal pain, or bleeding.^{lxxv} Therefore, it’s always important to use condoms, but especially after administering methamphetamine rectally.

Drug Checking

When people purchase illicit drugs, they cannot always be sure that the drug they intended to buy is actually the drug they received. Therefore, an important practice when using drugs is to [check the drugs in order to detect what is present](#), to help identify the substance they intend on taking and prevent harms associated with consuming an unknown substance. To test if a sample of methamphetamine is really methamphetamine, one can use reagent testing, which involves liquid drops that are applied to a small sample of a substance. The presence of certain substances in the sample can be identified by color changes and corresponding codes. These results take about 30 seconds and can identify methamphetamine, among other substances.

[Fentanyl](#), a powerful opioid, has sometimes been detected in illicit stimulant supplies around the country, which puts users at higher risk for opioid overdose. People who use methamphetamine should try to have fentanyl test strips available to test their supply before using. It has been found that methamphetamine residue must be diluted with slightly more water than other drugs when testing for fentanyl. A half cup of water is enough to properly dilute methamphetamine for accurate fentanyl testing.^{lxxvi} Many local harm reduction organizations have test strips for free, and even people who use stimulants should have naloxone on hand just in case.

9. What happens if you mix meth with other drugs, like alcohol or Xanax?

It is common for people to use more than one drug at the same time, also known as polydrug use or co-use. People may drink alcohol and take methamphetamine together to “take the edge off” the jitteriness that methamphetamine causes.^{lxxxvii} Mixing methamphetamine and alcohol can be risky, however, because stimulants can mask the effects of alcohol. This means a person may drink a lot more alcohol than intended and can succumb to alcohol poisoning. The combination of methamphetamine and alcohol also causes increased heart rate and blood pressure, which can lead to cardiovascular damage.

Another drug that is frequently taken in combination with methamphetamine is Xanax. Like with alcohol, people might take methamphetamine and Xanax together to combat the jitteriness that methamphetamine causes, since Xanax is a depressant.^{lxxxviii} Xanax and methamphetamine can be a potentially dangerous combination that can result in heart attack or stroke, as a result of conflicting signals—methamphetamine tells the body to speed up, whereas depressants slow the body down.^{lxxxix}

Combining methamphetamine with other stimulants like [MDMA](#) or [cocaine](#) can also potentially harm the body. Multiple stimulants in combination with each other can increase the risk of overheating, heart attack, or stroke.

Combining methamphetamine with heroin is known as “goofballing”. Mixing an “upper” like methamphetamine and a “downer” like heroin puts strain on the cardiovascular, central nervous, and respiratory systems and can place people at risk of overdose.

Sometimes people take methamphetamine to enhance their experience during sexual encounters, a practice called “chemsex”. People engaging in chemsex may also take erectile drugs like Viagra because methamphetamine can cause erectile dysfunction. This combination can potentially be harmful because methamphetamine raises blood pressure, while erectile drugs lower blood pressure; thus, the combination can put someone at higher risk of stroke.^{lxxx}

10. What are current meth laws?

In the United States, it is illegal to manufacture, possess, transport, or sell illicit methamphetamine. One must have a prescription in their own name if they are found with medical methamphetamine. Methamphetamine use in America is framed as a criminal issue, with people who use methamphetamine subject to incarceration, removal of children and separation of families, and other punitive measures.^{lxxxii} A federal first conviction for simple methamphetamine possession can result in a year in jail and a \$1,000 fine.^{lxxxiii} If a person has 5 grams of less of

methamphetamine, that would count as simple methamphetamine possession under federal laws. To visualize, one gram of methamphetamine is about as big as a quarter.

Drug possession charges can result when someone is found carrying methamphetamine, or it is in their car, or other belongings. It could also mean someone was found using the drug when they were arrested.^{lxxxiiii} Trafficking is the charge given when law enforcement believe there was the intent to distribute the drug to others. If a person has between 5 and 49 grams of pure meth, or 50 to 499 grams of a mixture, it is considered possession with intent to distribute (trafficking), and federal sentencing ranges from 5 to 40 years. The sentencing goes up for larger amounts. State methamphetamine laws vary. Manufacturing methamphetamine carries a federal sentence of up to 10 years imprisonment and a \$250,000 fine for the first offense, and up to 20 years and a \$500,000 fine for the second offense. The sale of over-the-counter (OTC) medications like Sudafed are restricted because they contain pseudoephedrine, a precursor to the manufacture of methamphetamine.^{lxxxv}

One out of every 14 children in this country has a parent who is imprisoned, and a major factor is because of the mass incarceration of people convicted of drug law violations, including methamphetamine.^{lxxxvi} These punitive approaches disproportionately impact low-income families and communities of color. The [ideal way](#) to support the best interests of children is to keep families intact while providing supportive resources to caregiver(s). Drug consumption or exposure alone is not abuse or neglect, and holistic, community-based treatment models for parents with problematic substance use should be the priority for child welfare systems. Draconian sentencing for methamphetamine-related offenses and removal of children from homes, among countless other punitive measures for people who use methamphetamine, do not strengthen communities and families and do more harm than good.

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