

These **side effects** from using meth include³:

- Confusion.
- Violence.
- Anxiety.
- Hallucinations.
- Paranoia.
- Psychosis.
- Delusions.

- Malnutrition.
- “Meth mouth.”
- Skin sores.
- Heart failure.
- Increased risk of Parkinson’s Disease.
- Memory loss.
- Cognitive and motor impairments.

Below are some **signs and symptoms** of a meth addiction⁴:

1. Inability to cut back or quit using meth.
2. Significant cravings for meth.
3. Increasing meth use over longer periods of time.
4. Excessive amounts of time spent obtaining and using meth – as well as recovering from its adverse effects.
5. Failure to meet work, home, or school responsibilities due to meth abuse.
6. Persistent methamphetamine use despite negative ramifications – such as interpersonal or social problems.
7. Choosing meth use over important social or recreational activities.
8. Use of methamphetamine in dangerous situations – such as driving a car.
9. Recurrent meth use despite psychological or physical conditions exacerbated by or caused by meth use.
10. Tolerance.
 - Increasing amounts of meth must be used in order to get high.
 - Less of a high or buzz is experienced when using the same amount of meth as usual.
11. Withdrawal.
 - Withdrawal symptoms from methamphetamine are present.
 - Meth is used to get rid of or avoid withdrawal symptoms.

Meth impairs important areas of the brain, which may be slow to recover even once meth abuse has ceased. Research has demonstrated that, in these cases, a return to baseline functioning is approximated only once meth has actually been re-introduced to the individual.⁵ This same research has also revealed the troubling mechanism behind long-lasting and intense cravings for meth.

Severe cravings often lead to methamphetamine relapse – which is why professional addiction treatment can be of such benefit if you struggle with meth addiction. A quality recovery program can provide you with the tools you need to lead a happy and healthy life free of methamphetamine use.

Why Does Meth Have the Highest Rate of Relapse?

Similar to issues experienced by cocaine addicts, meth addicts face an entourage of obstacles. Oftentimes, meth users are closely connected with a group of friends who also use meth. Buying and using meth is part of the group culture. Daily obligations are altered or ignored to ensure that meth use is the primary priority. Thus, staying abstinent from meth virtually always involves the addict needing to shift his or her entire social circle. Shifts in daily routine can be emotionally taxing, but they must be adhered to in order to preclude a relapse.

Full recovery from meth addiction requires addicts to make substantial changes in their lifestyle. This means cutting ties with current friends, relocating if necessary, and avoiding places in which the meth user is accustomed to using drugs in. Meth addiction is mental, physical and biological in nature. The brain damage caused by meth often serves as an impetus to send a recovering addict back into the throws of active addiction. According to KCI's website:

- The period of acute withdrawal effects for casual meth users lasts six to eight months after the abuser's last usage.
- For addicts in which regular meth use was an integral part of their lifestyle, acute withdrawal effects do not dissipate fully for an estimated two to three years after the last use.
- In some cases, long-term meth addicts never fully recover and suffer from ongoing psychosis, paranoid schizophrenia, and hallucinations.

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Crystal meth is one of the most dangerous illicit drugs that is on the market today because of its addictive qualities. Made from methamphetamine, this drug can cause life to become tunnel-visioned with just one primary focus: to score more meth. Whether those addicted are looking to buy a day or a week of supplies at a time, the central focus of the addict's life orbits around their need for the drug. This makes it very difficult for a path toward recovery to be walked.

Statistics of Crystal Meth Recovery

- 1. 88%. That's the percentage of crystal meth users who will relapse within the first 1-3 years of their recovery efforts.**
2. Going through a professional rehabilitation program designed to deal with crystal meth addiction gives users 2x the chances of staying free of the drug in the first 24 months of a recovery effort.

- 3.** The number of people above the age of 12 who have tried crystal meth at least once in their lives in the US alone: 10.4 million.
- 4.** About 1.3 million people reported crystal meth use within the last 12 months.
- 5.** 512,000 people report that they have used crystal meth within the last 30 days at least one time.
- 6.** The number of ER visits that are directly associated to crystal meth use have risen by 50% since 1995.
- 7.** In 2004, crystal meth accounted for 4% of the total drug-related visits to emergency rooms in the United States.
- 8.** 1%. That's the percentage of high school seniors who have abused crystal meth at some point during the school year. Sophomores have the highest abuse rates at 1.6%.
- 9.** Over 4% of high school students have used crystal meth at least once at some point in their lives.
- 10.** Only 1 out of 2 crystal meth users will stay clean for the first 3 months after they try to give up the habit. Without any formal treatment, however, only 1 in 9 users will make it through the first 3 months.
- 11.** The success rate of crystal meth users to be clean after 3 years without any rehabilitation or treatment: 5%.
- 12.** When all relapse incidents are grouped together, it is estimated that 92% of crystal meth users will fail at least once in their recovery efforts.
- 13.** The average crystal meth recovery includes at least 7 relapse incidents in total.
- 14.** The effects of a single use of crystal meth may last for up to 8-12 hours.
- 15.** Crystal meth has a direct correlation with a higher risk of serious infections diseases, including HIV and Hepatitis. Chronic users who inject methamphetamine also risk scarred or collapsed veins, infections of the heart lining and valves, abscesses, pneumonia, tuberculosis, and liver or kidney disease.
- 16.** 1,200. That's the number of dopamine units that a single use of crystal meth may release in the human brain. That's quadruple the amount of cocaine.
- 17.** The average spot price of gold is 10x cheaper than the average price of crystal meth.
- 18.** Even though crystal meth can be made directly from pseudoephedrine products, only 35 states currently have laws on the books that restrict the sale of it in some way.
- 19.** Desoxyn. Remember that name. That's pharmaceutical grade crystal meth. It's used to treat ADHD and obesity.
- 20.** Only 1 in 10 self-identified drug users say that crystal meth is their primary or secondary drug of choice.
- 21.** The cost of crystal meth use in the United States annually: over \$480 million.
- 22.** It only takes 6 weeks for the human body to stop responding to the beneficial side effects of crystal meth.
- 23.** The going price for crystal meth: \$25 for 0.25g.
- 24.** Individuals who use crystal methamphetamine may have episodes of violent behavior, paranoia, anxiety, confusion, and insomnia that are related to the brain reorganization effects of the drug.
- 25.** Crystal meth may cause psychotic symptoms within users for several months or even years after they have stopped using the drug.
- 26.** The most common names for crystal methamphetamine are ice and glass.
- 27.** Crystal meth was widely used in the 1960's and 1970's before it disappeared in the

1980's. Now it's back bigger than ever before.

28. 50% of first-time crystal meth users report feeling cravings for the drug that are very much like an addiction.

29. 75% of crystal meth users who take a second hit of the drug state that they feel cravings for it after the high wears off.

30. Women tend to take crystal meth more than men because of the early weight loss qualities that it is able to provide.

31. It is not uncommon for the stimulating effects of crystal meth, which are similar to caffeine or Adderall, to last for several days at a time to prevent sleep from occurring.

32. Crystal meth is known to be able to elevate blood sugar to dangerous levels.

33. With long enough use, crystal meth will eventually destroy the brain's dopamine receptors, making it impossible for someone to feel pleasure.

34. The average person finds crystal meth use to be 12x more pleasurable than having sex.

35. After 12 months of sobriety, the dopamine receptors of the brain can heal, but the memory impairment and motor coordination symptoms continue to remain.

Understanding Crystal Meth

Crystal meth is not a new drug. It was first created in 1919 and has even been used by the US military in combat arenas. The root drug of crystal meth was first created in 1887. Up until the first days after World War II, the US held a very liberal policy of drug use. Even cocaine and high level opioids were used regularly and legally, but as the addictive qualities of these drugs became known, policies shifted to making them illegal and more difficult to obtain.

What Are the Effects of a Crystal Meth Addiction?

Once a crystal meth addiction begins, the rational brain shows an equal reduction in its power to operate. This drug will dig into the physical and psychological aspects of life and compromise an individual at the very core of their being. This shift begins from the very first moment that someone tries crystal meth. It will literally rewire the brain so that it functions differently.

<https://www.drugabuse.gov/publications/research-reports/methamphetamine/what-are-long-term-effects-methamphetamine-abuse>

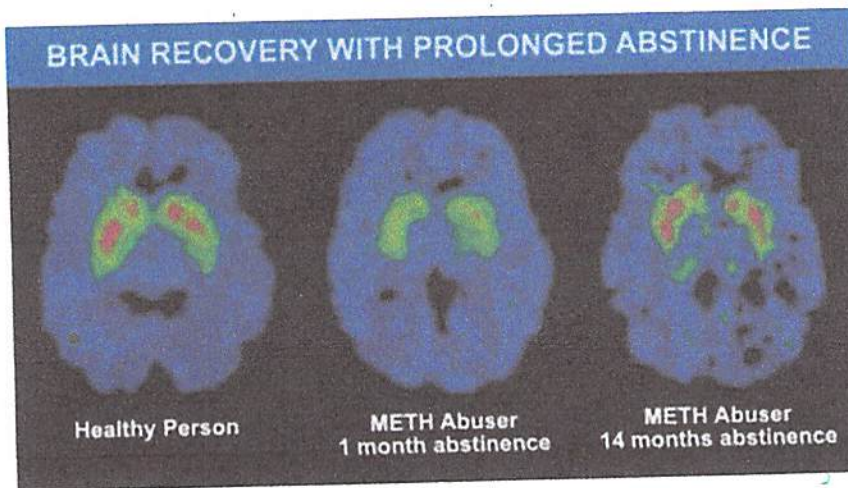
What are the long-term effects of methamphetamine abuse?

Long-term methamphetamine abuse has many negative consequences, including addiction. Addiction is a chronic, relapsing disease, characterized by compulsive drug seeking and use and accompanied by functional and molecular changes in the brain.

As is the case with many drugs, tolerance to methamphetamine's pleasurable effects develops when it is taken repeatedly. Abusers often need to take higher doses of the drug, take it more frequently, or change how they take it in an effort to get the desired effect. Chronic methamphetamine abusers may develop difficulty feeling any pleasure other than that provided by the drug, fueling further abuse. Withdrawal from methamphetamine occurs when a chronic abuser stops taking the drug; symptoms of withdrawal include depression, anxiety, fatigue, and an intense craving for the drug.

In addition to being addicted to methamphetamine, chronic abusers may exhibit symptoms that can include significant anxiety, confusion, insomnia, mood disturbances, and violent behavior. They also may display a number of psychotic features, including paranoia, visual and auditory hallucinations, and delusions (for example, the sensation of insects creeping under the skin). Psychotic symptoms can sometimes last for months or years after a person has quit abusing methamphetamine, and stress has been shown to precipitate spontaneous recurrence of methamphetamine psychosis in formerly psychotic methamphetamine abusers.

These and other problems reflect significant changes in the brain caused by abuse of methamphetamine. Neuroimaging studies have demonstrated alterations in the activity of the dopamine system that are associated with reduced motor speed and impaired verbal learning. Studies in chronic methamphetamine abusers have also revealed severe structural and functional changes in areas of the brain associated with emotion and memory, which may account for many of the emotional and cognitive problems observed in chronic methamphetamine abusers.



Recovery of Brain Dopamine Transporters in Chronic

Methamphetamine (METH) Abusers

Methamphetamine abuse greatly reduces the binding of dopamine to dopamine transporters (highlighted in red and green) in the striatum, a brain area important in memory and movement. With prolonged abstinence, dopamine transporters in this area can be restored.

Methamphetamine abuse also has been shown to have negative effects on non-neural brain cells called microglia. These cells support brain health by defending the brain against infectious agents and removing damaged neurons. Too much activity of the microglial cells, however, can assault healthy neurons. A study using brain imaging found more than double the levels of

microglial cells in former methamphetamine abusers compared to people with no history of methamphetamine abuse, which could explain some of the neurotoxic effects of methamphetamine.

Some of the neurobiological effects of chronic methamphetamine abuse appear to be at least partially reversible. In the aforementioned study, abstinence from methamphetamine resulted in less excess microglial activation over time, and abusers who had remained methamphetamine-free for 2 years exhibited microglial activation levels similar to the study's control subjects. Another neuroimaging study showed neuronal recovery in some brain regions following prolonged abstinence (14 but not 6 months). This recovery was associated with improved performance on motor and verbal memory tests. But function in other brain regions did not recover even after 14 months of abstinence, indicating that some methamphetamine-induced changes are very long lasting. Moreover, methamphetamine use can increase one's risk of stroke, which can cause irreversible damage to the brain. A recent study even showed higher incidence of Parkinson's disease among past users of methamphetamine.

In addition to the neurological and behavioral consequences of methamphetamine abuse, long-term users also suffer physical effects, including weight loss, severe tooth decay and tooth loss ("meth mouth"), and skin sores. The dental problems may be caused by a combination of poor nutrition and dental hygiene as well as dry mouth and teeth grinding caused by the drug. Skin sores are the result of picking and scratching the skin to get rid of insects imagined to be crawling under it.

Long-term effects may include:

- Addiction
- Psychosis, including:
 - paranoia
 - hallucinations
 - repetitive motor activity
- Changes in brain structure and function
- Deficits in thinking and motor skills
- Increased distractibility
- Memory loss
- Aggressive or violent behavior
- Mood disturbances
- Severe dental problems
- Weight loss