

# Crystal Meth

Hi, we are with PATH. Some of you may have taken the survey and are familiar with us. We're the ones with the chocolate bars!! If you've never seen us before, don't worry. I'm .... And this is.... We're from OUC.  
We are NOT here to tell you what to do, but to give you factual information that you may be able to use. Hopefully we'll all have some fun as well.

## Overview

The facts about Crystal Meth

- ◆ Your knowledge/Our knowledge
- ◆ Why people choose to use it
- ◆ Short and Long Term Effects
- ◆ How it works

Here's what we are hoping to cover today. Obviously, we want to give you some facts about Crystal Meth, but we also want to find out what you know and think about Crystal Meth, so we hope that you will share your thoughts and knowledge with us.  
We would also like to discuss with you some of the reasons why people choose to use Crystal Meth. Then we'll take a look at some of the effects of Crystal Meth, both in the short-term and long-term.  
Finally, we're going to show you how this drug works in your brain..

## Tell us what you know about Crystal Meth



Okay, we want you to tell us what you know about Crystal Meth.  
So, someone tell me what you know about Crystal Meth. **Write the answers down on whiteboard or blackboard and refer back to them later. If students are not giving answers, use these prompts.** Can someone tell me how Crystal Meth is taken or why people might start to use it?  
Good....yes.... anything else?

## What is Crystal Meth?

Amphetamine or Methamphetamine?




Synthetic or Natural?



Since we're talking about Crystal Meth, which is just another name for methamphetamine, what are some other names you've heard it called?  
Yes, you're right. It is commonly called "speed", "meth", or "chalk", but in its smoked form, it is known as "jib", "ice", "crystal", "crank", and "glass".  
So, what is Crystal Meth? Well, methamphetamine is the most powerful form of amphetamine, which is a stimulant, like cocaine and caffeine. Crystal Meth is simply another term for methamphetamine, due to its physical appearance. Meth and amphetamine are so similar in their effects that even experienced users have trouble telling the difference between them.  
Crystal Meth is synthetic (man-made) and relatively easy to make from legal, but highly toxic, ingredients in basements and mobile labs. The labs are often extremely dangerous due to the presence of flammable liquids and corrosive chemicals. These labs are so dangerous that cops and firemen will not even enter a building if they suspect a meth lab is there until the hazardous materials team has dealt with it.

## How is it Used?

- Smoke
- Inject
- Snort
- Swallow



**REFER TO SOME OF THE ANSWERS STUDENTS MAY HAVE GIVEN EARLIER.**  
Smoking or inhaling is the most popular way to use because the high is almost instant. When most people hear the term Crystal Meth, this is probably what they think of. In its smokable form, it looks like clear glass slivers or rock salt, that's why the names 'crystal', 'ice', and so on. However, people can also snort, swallow, or inject Crystal Meth. There are even reports of people eating the powder.



**REFER BACK TO SOME OF THEIR ANSWERS FROM THE BEGINNING. (E.g., Remember someone mentioned that people use Crystal Meth to lose weight, go to raves etc).** All of your answers are right. Some people also start because of the initial heightened physical and mental performance they get. Some start to stay alert and work extra shifts. Some use it to lose weight. It has also been used for extra energy at raves so people can dance all night. Lots of people start because they want to feel the really good rush they've heard about.



Another very important factor that contributes to whether or not someone will use drugs, including Crystal Meth, is social influences.

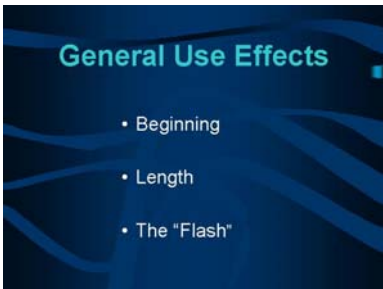
The way certain drugs are portrayed in the media has an impact on us. The internet is full of misinformation about drugs and their effects and news stories are often one-sided and sensational.

Perhaps most importantly, if you are surrounded by friends and/or family who use Crystal Meth, or any other drug, you may think it is normal and that everyone does it, even if true usage rates are very low. Because of this, you could be more likely to use yourself.

Out of curiosity, what percentage of students do you think use Crystal Meth in this district? **GET SOME ANSWERS.** Over the last 2 years, you guys have told us that at most 4% of males and 5% of females in SD #23 use Crystal Meth. We say "at most" because our question asked if students had used stimulants like coke, speed, and amphetamine, and not Crystal Meth specifically. So in reality, this number is probably lower.

Does this surprise you? **(Most students, in our experience, drastically overestimate Crystal Meth usage, probably partly due to news media)** Why?

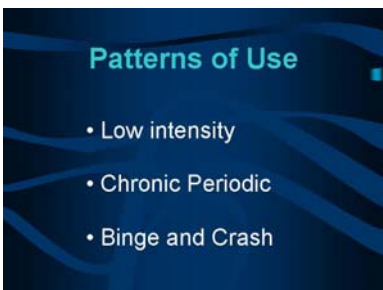
Now we know some of the influences that may lead people to start using Crystal Meth. But when people start to use, what does it look like?



Each method of use takes a different amount of time to affect the user. If it is eaten or swallowed it takes about 15 – 30 minutes to feel the effects, if it is snorted it takes about 3-5 minutes, if it is injected or smoked the effects are felt almost immediately.

Effects generally last between 6 and 12 hours, although some research indicates some effects can last much longer. Drug tests can still detect Crystal Meth in a user's system 2-4 days after the last dose.

When it is smoked or injected there is an almost instant "flash" – a very intense rush that is extremely pleasurable. However, this only lasts for a few minutes. After the 'flash', a less intense, but still very pleasurable high may last several hours.



There are three main patterns of use with Crystal Meth.

**Low Intensity User**

This is a person who uses the drug by snorting or swallowing so they don't get the 'flash' or intense rush that people who smoke or inject get. These users most likely don't use large quantities or on a consistent basis. However, negative drug effects and addiction can still be major problems.

**Chronic periodic use**

The user takes hits throughout the day, as often as every half hour. However, they usually stop early enough to get at least some sleep. With chronic periodic use comes many of the negative effects that we will discuss in a few minutes.

The third pattern is the binge and crash.



So if you look at the cycle you'll see that the user who smokes or injects experiences the rush, then the high, then they start the binge phase which is when they use for days at a time without sleeping or eating. Some users then begin to tweak, which I'll explain in a minute, while others crash. The crash happens when the user runs out of the drug, becomes too disoriented to continue or the brain stops responding. The user then rests, usually sleeping for 1 – 3 days. They typically don't use again for a period of time and go into withdrawal. When the withdrawal gets too hard to handle they may move to a chronic use pattern or start another binge and crash pattern where they typically use more meth to get the same high. However, many users start bingeing again because they crave the intense rush. But back to tweaking. Tweaking is when the user has binged and is slipping into a strong depression with paranoia, aggression, anxiety, fatigue, and an intense craving for the drug. They can be unpredictable and dangerous or violent. Eventually the user will collapse from exhaustion, only to awake a couple of days later to start the cycle again. So we've talked about the flash and the patterns that people generally follow when using Crystal Meth, now we're going to talk about some of the short term effects.

Slide adapted from [www.crystalrecovery.com](http://www.crystalrecovery.com)

- ### Short Term Effects I
- Pleasure
  - Confidence
  - Sexy
  - Joy
  - Irritability
  - Aggression
  - Power
  - Fatigue

Short term and long term effects are the same no matter how the drug is administered. The only exception is when injection is used. The risk of this method includes all of those associated with injection use, such as HIV/AIDS and hepatitis.

So, what have you heard about how Crystal Meth makes you feel?

**Write answers down.**

**Then show our answers dropping in.**

People often say Crystal Meth is initially really pleasurable, they feel really confident, powerful, and successful. They also say they feel really sexy (which puts users at higher risk for HIV/AIDS too), and happy or joyful. However, some of the short term effects are not as pleasant. Some users become irritable and aggressive, and tired when the drug starts to wear off.

- ### Short Term Effects II
- Increased wakefulness, breathing, and heart rate
  - Decreased appetite
  - Dry mouth
  - Overheating
  - Tremors and Convulsions
  - Depression as it wears off

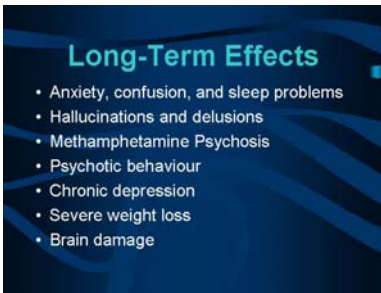
Other short term effects include... **Read the list.**

- ### A Side Note
- Overdose
  - Tolerance
  - Addiction

Just a comment on a few issues.

Overdose can occur with relatively little amounts of crystal meth, especially for new users. Overdose can cause delusions, hallucinations, seizures, stroke, and coma. And some of the effects of an overdose, like convulsions, overheating, and heart failure can result in death. Seizures, however, are probably the most common cause of death of Crystal Meth users. Tolerance also occurs with Crystal Meth quite quickly. Tolerance is when you have to use more of the drug to get the same effect. This is especially common in regular users and can lead to addiction.

And yes, addiction does occur with Crystal Meth, another reason that it concerns so many people. In fact, Crystal Meth may be as addictive as crack cocaine. Although addiction to Crystal Meth can occur quickly, addiction is generally considered a long-term effect. So, let's take a look at some of the other long term effects.



Just like short term effects, we're showing you many, but not all, of the long-term effects that can occur. However, it is important to remember that every user is different. Individual users may experience only one or two of these effects, or they may experience all of them.

These effects include anxiety, confusion, and sleep disturbances.

They can experience hallucinations and delusions, such as bugs crawling under their skin, this is called formication. Abusers try to get rid of these imaginary bugs by picking at their skin so much that they get big open sores which can be so severe they lead to permanent disability or scarring.

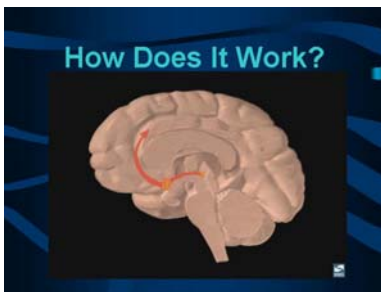
Meth psychosis is a mental disorder that resembles paranoid schizophrenia. Users think that people are out to get them and they engage in erratic, disorganized, and odd behaviours.

Unfortunately, the paranoia can result in murderous and/or suicidal thoughts.

Chronic abuse of Crystal Meth can lead to psychotic behaviour, such as out of control rages with extremely violent behaviour. Unfortunately, these psychotic symptoms can persist for months or years after drug use stops.

Some users also experience chronic depression, which can prevent people from functioning properly in society. Other chronic users experience severe weight loss (40-50 pounds or more) and malnutrition in a matter of weeks

Possible brain damage can happen for a variety of reasons. We'll talk about those a little later.



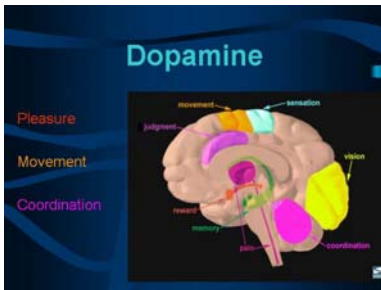
So how does it all work? Well, let's take a quick look at what goes on in the brain.

See the orange area here. This is called the reward pathway. Take a guess, what do you think the reward pathway does?

Yep, it makes us feel good, and as a result we want to do whatever it is that made us feel good, again, and again, and again.

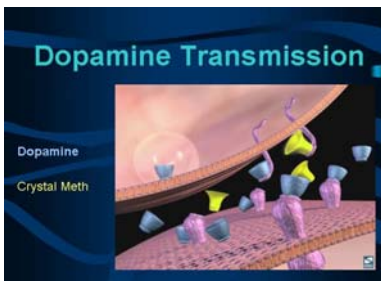
Well, Crystal Meth acts on the brain's reward pathway, by affecting a neurotransmitter called dopamine. Neurotransmitters are the chemical messengers that allow different parts of the brain to communicate.

The following 4 slides are either taken or adapted from [www.nida.nih.gov](http://www.nida.nih.gov)



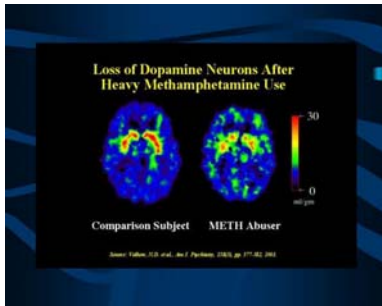
So what does dopamine actually do?

Dopamine is important for us to feel pleasure, so like I said, it is very active in the reward pathway. What you need to know is that too little dopamine can lead to depression and too much dopamine can lead to mania. However, dopamine is also active in the area of the brain that controls movement, as well as somewhat active in the coordination area.



So now we know what Dopamine does, but what does Crystal Meth do to Dopamine? Well, Crystal Meth does two things. First, it stimulates the release of a lot of extra dopamine, so the reward pathway is getting much more stimulation than normal. Secondly, Crystal Meth also prevents the brain from being able to reabsorb that extra dopamine. Normally, if there is too much stimulation going on because too much dopamine is present, the part that released the dopamine will reabsorb some of it to help things get back to normal. However, because Crystal Meth stops this from happening, the extra dopamine that is released is able to remain active much longer than it normally would. These two factors exaggerate the normal actions of the neurotransmitter and this is why it initially feels so good and why some people become manic and do very bizarre things.

Because Crystal Meth prevents the neuron from reabsorbing the dopamine, the neuron has to manufacture new dopamine from scratch. This is one reason why it takes users longer to feel pleasure again.



Remember I mentioned brain damage? Well, brain damage can result from an elevated temperature or stroke from high blood pressure, both of which can be caused by using Crystal Meth. Some structural damage can also occur to the brain. For example, researchers have reported that as much as 50% of the dopamine producing cells in the brain can be damaged after prolonged exposure to even small amounts of meth. As a visual example of the brain damage, do you see the red area in the comparison subject? See how much red there is and how deep it is? That means that dopamine is really active in those areas and that the comparison subject is able to feel lots of pleasure from everyday activities. See the red in the meth abuser. Way less, hey. This means the meth abuser feels less pleasure, or even no pleasure at all, even from activities that were once highly pleasurable, such as sex and eating. This damage and inability to feel pleasure from normal activities can be very long lasting, even permanent. Unfortunately, the abuser may only be able to feel pleasure from taking Crystal Meth.

### Balancing Balloons

- Group of 5
- Get in a circle and hold hands
- Keep the balloons in the air

You need a group of no more than 5 volunteers from the class. They are to stand in a circle holding hands. They are to keep the balloons afloat without breaking the circle. They can use their feet, shoulders, elbows, heads etc, but cannot let go of the person beside them. The first balloon is a black, or dark, balloon that is only semi-full. It should have Crystal Meth written on it. This balloon will be the hardest to keep up in the air, and is the ONLY balloon that they MUST keep in the air. When it hits the ground, the activity ends. The students start off with crystal meth and it seems to be fairly easy. Then you throw a white balloon, blown all the way up, into the circle. After a little bit, throw yet another full white balloon in, then another etc. After 3 white balloons, they will probably not be able to keep them all afloat and will let some hit the ground to keep the black one up. Throw more white ones in. Eventually, the black one hits the ground. Every white balloon should have some sort of influence written on it. E.G., friends, family, job, church/mosque/synagogue, sports, school, musical instrument, boyfriend, girlfriend, dancing etc. The activity is meant to represent the strength, problems, and devastation of addiction. In order to keep the drug afloat, the students will sacrifice all the white balloons (all the really important things in their lives). This quite accurately parallels real addiction. Ask the students who were watching if they thought it was hard or easy. Sometimes, a student will break the circle and step out because it is too hard or whatever. The circle usually closes up quickly behind them. Ask the one who stepped out if it was hard to do, hard to watch everyone else seemingly having fun