

Meth 101: An Introduction to Methamphetamine

A Presentation Provided by Get Smart About Drugs, A DEA Resource for Parents | Communities of Practice. Published August 2011

Meth 101: An Introduction to Methamphetamine

<http://www.getsmartaboutdrugs.com>

- An educational outreach and awareness website that helps parents and caregivers identify and prevent drug abuse
- Located at <http://www.getsmartaboutdrugs.com>
- Provides a number of resources parents can use to get help if they suspect their child has a problem with drugs

Presenter Notes:

Get Smart About Drugs is an educational outreach and awareness website that helps parents and caregivers identify and prevent drug abuse. The website located at <http://www.getsmartaboutdrugs.com> also provides a number of resources parents can use to get help if they suspect their child has a problem with drugs.

The website features tools to help parents:

- Visually identify drugs
- Understand hidden dangers in their home
- Learn the signs of drug use
- Prevent drug abuse in their home
- Explore ways to talk to their children about drugs
- Find resources for getting help

Presentation Outline

- Overview of Methamphetamine
- How Methamphetamine is Made
- The Effects of Meth Abuse
- Signs of Meth Abuse
- Addressing Meth Abuse with Your Children

Presenter Notes:

Today, we will cover:

- An Overview of Methamphetamine
- How Methamphetamine is Made
- The Effects of Meth Abuse
- Signs of Meth Abuse
- Addressing Meth Abuse with Your Children

Overview of Methamphetamine

- A highly addictive stimulant drug
- Strongly affects certain systems in the brain
- Usually produced and distributed illegally
- Can have serious side effects, including death
- Most widely-abused, domestically-produced synthetic drug in the United States

Source: <http://www.nida.nih.gov/DrugPages/Methamphetamine.html>

Presenter Notes:

So what is methamphetamine? Methamphetamine, or “meth” is a powerful, highly addictive stimulant drug. Meth is toxic to dopamine nerve terminals in the central nervous system, which, in turn affects certain systems in the brain.

It is usually illegally produced and distributed. Meth can have many harmful side effects and could lead to death.

Methamphetamine is the most widely-abused, domestically-produced synthetic drug in the United States. It is used across all genders, ages, and socio-economic levels.

Street Names

- Crank
- Speed
- Chalk
- Ice
- Crystal
- Crypto

Source: *White House Office of National Drug Control Policy: “Street Terms”*

Presenter Notes:

Like most drugs, meth has many different street names, including:

Crank, speed, chalk, ice, crystal, glass, tina, crypto, white cross, tweak, to name a few.

Forms of Meth Abuse

Methods of abuse include:

- Taking Orally
- Injecting
- Snorting
- Smoking

Source: <http://www.theantidrug.com/drug-information/commonly-abused-drugs/meth/default.aspx>

Presenter Notes:

Meth comes in several forms---including tablets, powder, crystal, and rocks.

Meth can be taken orally in its tablet or powder form, injected, snorted, or smoked.

The type and length of the high vary depending on how the meth is taken. As some users use meth for longer periods of time, they may change their method of taking it.

How Methamphetamine is Made

Meth Labs:

- Meth is Made in Very Crude “Laboratories”
- “Superlabs” produce large quantities of meth
- “Small toxic labs” produce smaller quantities of meth

Presenter Notes:

Meth is often manufactured, or “cooked,” in very crude laboratories, mostly lacking in sophisticated chemistry equipment. A meth “cook” does not need to have had any chemistry training.

Meth is manufactured both in the United States and abroad. It is frequently smuggled in from foreign countries.

There are two basic categories of meth labs:

The first kind of meth lab is a superlab. Superlabs produce large quantities of meth and supply organized drug trafficking groups that sell the drug in communities across the U.S. Most of the larger labs are controlled by Mexican Drug Trafficking Organizations operating in the U.S. and Mexico.

The second category is the small toxic lab. These labs produce smaller quantities of meth. They can be set up in homes, motel rooms, inside automobiles, in parks or rural areas; really almost anywhere.

Ingredients

- Pseudoephedrine or ephedrine
- Paint thinner
- Freon
- Acetone
- Anhydrous ammonia
- Iodine crystals
- Red phosphorus
- Brake cleaner
- Drain cleaner
- Battery acid
- Lithium

Presenter Notes:

Meth can be produced using common household chemicals. The most common ingredient of meth is pseudoephedrine or ephedrine, commonly found in cold medicine. Through the cooking process, the pseudoephedrine or ephedrine is chemically changed into methamphetamine.

Chemicals that are added to make this chemical process work include:

- Ether– commonly found in starter fluid
- Paint thinner
- Freon
- Acetone
- Anhydrous ammonia – a fertilizer
- Iodine crystals
- Red phosphorus, which is usually taken from matchbook strike plates
- Brake cleaner
- Drain cleaner
- Battery acid
- And lithium from inside batteries

Ask yourself: Would I ingest any one of these chemicals? And yet, a meth user is consuming all of them.

Signs of a Meth Lab

- Large number of cold tablet containers
- Unusual chemical smells like ether, ammonia, or acetone
- Chemical containers
- Containers or coffee filters with white or red sludge or crystals
- Spent propane containers with green residue
- Rubber tubing
- Lithium batteries, especially ones that have been stripped

Presenter Notes:

There are many signs that indicate that someone is operating a meth lab.

You might see a large number of cold medicine containers or packages. Unusual chemical smells like ether, ammonia, or acetone are another possible indication. Empty chemical containers are also a possible sign, especially if you see a combination of containers labeled iodine, red phosphorus, sulfuric acid, muriatic or hydrochloric acid, camp fuel, paint thinner, acetone, starter fluid, lye, or other drain cleaners.

You might also see containers with white or red sludge or crystals (sometimes inside a clear liquid). Spent propane containers with green residue around the valves might also be present.

Finally, look for rubber tubing and lithium batteries, especially ones that have been ripped open and stripped. Many of these items may be present in or around a meth lab. If you suspect someone is operating a meth lab, or has dumped the chemicals and equipment from a meth lab, call the police immediately. These labs and the chemicals used are extremely dangerous and must be dealt with by professionals.

The Effects of Meth Abuse

The Effects of Meth On...

- The Mind
- The Body
- The Environment
- Society

Presenter Notes:

Now let's take a look at the damage methamphetamine causes to the mind and body of those who abuse it, as well as to the environment, and to society.

Effects on the Mind: The Short Term

Initially, meth...

- Induces euphoria
- Provides an intense rush

Then...

- Agitation
- Violent behavior
- Impaired judgment
- Risky behavior

Presenter Notes:

When a person first uses methamphetamine they will usually experience euphoria or an intense rush. This is often followed by a state of high agitation, sometimes leading to violent behavior.

Meth will usually change the way a person acts. Meth use lowers inhibitions, increases libido, and impairs judgment, often leading to risky behavior. And, given how meth impairs your judgment, there is also a risk of acquiring HIV, hepatitis, and STDs through promiscuous behavior.

Effects on the Mind: The Long Term

- Addiction
- Higher tolerance
- Irritability, confusion, anxiety
- Inability to sleep
- Aggressive behavior
- Depression
- Psychotic behavior, paranoia

Presenter Notes:

Sustained meth abuse leads to addiction, coupled with a higher tolerance for the drug. The user may take increasingly higher doses of meth trying to catch that high he or she first experienced. They may take it more frequently or may go on binges. They may change the way they take meth. For example they may have started by taking a pill, but as they develop a tolerance they may begin injecting it.

A person using meth over a sustained period may also feel irritable and fatigued. They may get headaches, suffer from confusion, and experience anxiety. They may be unable to sleep, and become aggressive. They may experience violent rages and cravings, especially for more meth. They may become depressed, often severely so.

They may become psychotic and experience paranoia, have auditory hallucinations, mood disturbances, and delusions. The paranoia may lead to homicidal or suicidal thoughts.

Effects on the Body: The Short Term

- Feeling of pleasure
- Boost in energy
- Sense of control
- Suppressed appetite
- Increased metabolism

Presenter Notes:

Meth use causes the release of very high levels of dopamine into areas of the brain that regulate feelings of pleasure. This accounts for the euphoria that users initially feel. Meth abusers feel like they have increased energy and don't need to sleep. They feel a sense of control.

Their appetite will be suppressed and their metabolism may increase, which may cause weight loss.

Effects on the Body: The Long Term

- Deterioration of brain areas
- Reduced motor skills
- Impaired verbal learning
- Convulsions
- Increased heart rate and blood pressure
- Damaged blood vessels in the brain

- Cardiovascular problems
- Extreme anorexia
- Hyperthermia

Presenter Notes:

Meth produces long-lasting changes to brain areas that contain dopamine as well as serotonin, another neurotransmitter. Over time, meth reduces dopamine activity in certain brain areas, which is associated with reduced motor speed and impaired verbal learning. Recent studies in chronic meth abusers have also revealed severe structural and functional changes in areas of the brain associated with emotion and memory.

Over time, meth use can also cause convulsions. Methamphetamine causes increased heart rate and blood pressure and can cause irreversible damage to blood vessels in the brain, producing strokes. Other effects of methamphetamine include respiratory problems, irregular heartbeat, and extreme anorexia. Its use can result in cardiovascular collapse and death.

High doses of meth can cause hyperthermia (or elevated body temperature), overheating the body to dangerous, and sometimes deadly levels.

Effects on the Environment

- Meth causes major damage to the environment
- Chemicals often dumped into the ground, potentially contaminating soil and ground water
- 1-lb meth produced = 5- to 7-lbs toxic waste
- Combined toxic chemicals can have explosive effects

Presenter Notes:

The chemicals used in the making of the drug include lye, red phosphorus, hydriodic acid, and iodine. These chemicals are often dumped into the ground near a laboratory, which could contaminate the local soil and ground water.

Every pound of meth produced can yield between five to seven pounds of toxic waste.

Some of the chemicals used to produce meth have independent toxicity. When these chemicals are combined, they can have serious toxic and explosive effects.

Effects on Society

- Clouded judgment leaves meth abusers susceptible to criminal activity
- High incidence of meth-related domestic violence
- Severe impact on drug-endangered children

Presenter Notes:

Meth use clouds one's judgment, leaving most meth abusers susceptible to criminal tendencies.

In fact, meth addicts are often used by identity theft rings to search for discarded documents in places like dumpsters for the purposes of stealing identity information - a practice known as "dumpster diving."

For men and women who are desperate for meth, their partners often become a source. In many cases, violence and abuse are part of the equation.

NOTE: According to the Spring 2006 issue of The Source, "Over 85 percent...of women in treatment for methamphetamine dependence reported experiencing violence. The most common perpetrator of the violence was the woman's "partner."

Many neglected children are rescued from homes with meth labs or meth using parents. Meth, chemicals, and syringes are all within reach of these children. The mental, physical, and emotional consequences for these drug endangered children can be severe.

Financial Impact on Society

- Every family pays an annual \$1,500 in taxes to cover drug related costs to society
- DEA spent an estimated \$215 million in FY 2009 to combat meth production and trafficking
- Total lifetime costs associated with caring for drug-exposed children ranges from \$750,000 to \$1.4 million
- Drug possession and distribution can lead to loss of eligibility for federal student loans

Presenter Notes:

Every American family pays \$1,500 in taxes each year to cover drug related costs to society.

Based on work hours, chemist analysis hours, training costs, and clean-up costs, in FY 2009, the DEA spent an estimated \$215 million targeting methamphetamine production and trafficking.

Drug exposed children cost society millions of dollars. The total lifetime costs associated with caring for babies that were prematurely exposed to drugs or alcohol range from \$750,000 to \$1.4 million. These figures take into account the hospital and medical costs for drug exposed babies, housing costs, and outside care costs. The long-term health damage to meth-exposed children has not yet been calculated.

Add to this the individual financial consequences that a meth user can face: students convicted of possession or selling drugs may lose their eligibility for federal student loans for a period of time, or forever.

Signs of Meth Abuse

- Physical signs
- Behavioral signs
- Meth paraphernalia

Presenter Notes:

In this section, we are going to cover signs that indicate the possibility of meth abuse. We will break these signs into three categories:

- Physical signs
- Behavioral signs, and
- Meth paraphernalia

Physical Signs

- Extreme anorexia
- Tremors and convulsions
- Increased heart rate and blood pressure

Presenter Notes:

Some of the key physical signs of meth abuse are:

Extreme anorexia, tremors and (possibly) convulsions, an elevated heart rate, and elevated blood pressure.

But the physical signs don't end there...

Physical Signs: The Faces of Meth (Jennifer)



Presenter Notes:

These two photos were taken one and half years apart.

Physical Signs: The Faces of Meth (Patrick)



Presenter Notes:

These two photos were taken two and half years apart.

Physical Signs: The Faces of Meth



Presenter Notes:

These two photos were taken 11 months apart.

Physical Signs: “Crank Bugs”



Presenter Notes:

In these pictures, we see the remnants of “crank bugs,” the product of just one form of meth-induced hallucination that leaves its mark on its victims. One of the effects of meth abuse, “crank bugs” refers to the delusion of insects or parasites, crawling under one’s skin. Users scratch at the skin, to fight these imagined insects, causing open sores that can often lead to infections.

Physical Signs: “Meth Mouth”

Meth can cause severe tooth decay because:

- Meth causes dry mouth, reducing the amount of protective saliva around the teeth
- Meth users crave high-calorie, sugared, carbonated soft drinks
- Meth users tend to lack personal oral hygiene
- Meth causes tooth grinding and jaw clenching

Presenter Notes:

Meth reduces the amount of protective saliva around the teeth. Meth users also consume excess sugared, carbonated soft drinks, tend to neglect personal hygiene, grind their teeth and clench their jaws, leading to what is commonly called “meth mouth.” Teeth can eventually fall out from meth abusers’ mouths—even as they do simple things like eat a sandwich.

Behavioral Signs

- Irritability, dizziness, or confusion
- Inability to sleep
- Increased sensitivity to noise
- Nervous physical activity, like scratching

- Paranoia
- Hallucinations

Presenter Notes:

As meth directly attacks the nervous system, meth abuse leads to many behavioral changes. Some behavioral signs of meth abuse are:

- Irritability, dizziness, or confusion
- Inability to sleep
- Increased sensitivity to noise
- Nervous physical activity, like scratching
- Paranoia, and
- Hallucinations

Meth Paraphernalia

- Razor blades
- Mirrors
- Straws
- Syringes
- Heating spoons
- Surgical tubing

Presenter Notes:

Paraphernalia is also a strong indicator of possible meth abuse.

Items that suggest this include:

- Razor blades
- Mirrors
- Straws
- Syringes
- Heating spoons, and
- Surgical tubing

Addressing Meth Abuse with Your Children

- Children who learn about the risks of drug abuse from their parents are 50% less likely to use than those who do not.
- Take advantage of “teachable moments”

- Encourage your children to think and act responsibly.

Source: *The Partnership at Drugfree.org*: www.drugfree.org

Presenter Notes:

Addressing drug abuse with your children is often a very difficult task, but remember: the role you play in keeping your children safe from drugs is vital. In fact, children who learn about the risks of drug abuse from their parents are 50% less likely to use than those who do not.¹ Talk to them about the risks of methamphetamine.

Use blocks of time such as after dinner, before bedtime, before school, or on the drive to or from extracurricular activities to talk about drugs and why they're harmful. Take advantage of everyday "teachable moments" and, in no time at all, you'll have developed an ongoing dialogue with your child. Teachable moments refer to using everyday events in your life to point out things you'd like your child to know about. Use the following "teachable moments" as a starting point, but develop others based on your own life:

Use newspaper headlines or TV news stories as a conversation starter. The daily news is filled with stories that detail the consequences of alcohol and drug abuse. Talk to your child about the mother who used drugs and was arrested. Who will take care of her baby now? Did she make a good decision when she used drugs?

Watch TV with your kids, and ask them what they think. Do the shows and advertising make drug use look acceptable and routine? Or do they show its downside? How did that program make your child feel about drugs? Write a letter with your child to companies or TV networks about the messages they put out about drugs. Also remember that anti-drug messaging—such as that from The Partnership at Drugfree.org—is a great kickoff to discussion.

Encourage your children to think and act responsibly.

The Partnership at Drugfree.org has different scenarios you can act out in their Parent Talk Kit at <http://www.timetotalk.org>.

In addition, the Get Smart About Drugs website has a variety of tools and resources available to help you talk to your child about drugs at <http://www.getsmartaboutdrugs.com/content/prevent.html>.

Finding Treatment (Hotlines)

Hotlines for drug abuse:

- **Center for Substance Abuse Treatment Hotline:** 800-662-HELP (4357)

- **Girls and Boys Town National Hotline:**
 - 800-448-3000
- **National Alcohol Substance Abuse Information Center:**
 - 800-784-6776

For more resources, visit: <http://www.getsmartaboutdrugs.com/content/help.html>

Presenter Notes:

If you suspect that your child, a loved one, or even an acquaintance has a problem with drugs or alcohol, know that you are not alone and that you don't have to face it alone. There are many resources available where you can get help. You can find contact information for these resources on the Get Smart About Drugs site.

There are a number of hotlines, such as the Center for Substance Abuse Treatment Hotline at 800-662-HELP, the Girls and Boys Town National Hotline at 800-448-3000, and the National Alcohol and Substance Abuse Information Center at 800-784-6776, where you can call to get information, help, and resources.

Finding Treatment (Online Resources)

Online resources for finding treatment

- **The Partnership at Drugfree.org's "Get Treatment" page:** <http://www.drugfree.org/get-treatment>
- **Just Think Twice - "Find Help":** http://www.justthinktwice.com/content/find_help.html
- **SAMHSA Substance Abuse Facility Locator:** <http://dasis3.samhsa.gov/>
- **NIDA Treatment Research:** <http://www.nida.nih.gov/drugpages/treatment.html>

For more resources, visit: <http://www.getsmartaboutdrugs.com/content/help.html>

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Online Resources

Government Agencies:

- **DEA**
 - <http://www.getsmartaboutdrugs.com>
 - <http://www.justthinktwice.com>
- **National Institute on Drug Abuse**
 - <http://www.nida.nih.gov/nidahome.html>
- **Center for Substance Abuse Prevention**
<http://www.prevention.samhsa.gov>

For more resources, visit: <http://www.getsmartaboutdrugs.com/content/help.html>

Presenter Notes:

Here are a number of government agencies including DEA, that work in the drug abuse prevention, treatment and education fields and can be an excellent resource for parents.

DEA provides resources and updated information for parents and caregivers at www.getsmartaboutdrugs.com. DEA also has a teen-focused website <http://www.justthinktwice.com> that presents information on drug use and abuse to teens and teaches teens about drugs facts and fiction.

The National Institute on Drug Abuse, NIDA, is a part of the National Institutes of Health, and is the nation's leading supporter of scientific research on drug abuse and addiction. More information is available at <http://www.nida.nih.gov> or 301-443-1124.

The Center for Substance Abuse Prevention or CSAP. CSAP is part of the U.S. Department of Health and Human Service's Substance Abuse and Mental Health Services Administration, and works with states and communities to develop comprehensive prevention systems that create healthy communities. More information is available at: <http://www.prevention.samhsa.gov> or 240-276-2420.

Online Resources (continued)

Drug Prevention Organizations

- The Partnership at Drugfree.org: <http://www.drugfree.org>
- American Council for Drug Education: <http://www.acde.org>
- Boys and Girls Clubs of America: <http://www.bgca.org>
- The Anti-Drug: <http://www.theantidrug.com>

- D.A.R.E. America: <http://www.dare.com>
- Join Together: <http://www.jointogether.org>

For more resources, visit: <http://www.getsmartaboutdrugs.com/content/help.html>

Presenter Notes:

There are quite a few drug prevention organizations dedicated to keep communities and families drug free, including:

The Partnership at Drugfree.org, a nonprofit organization that helps parents in the prevention, intervention, and treatment of drug and alcohol use by their children. More information is available at <http://www.drugfree.org>.

American Council for Drug Education (ACDE), a substance abuse prevention and education agency that develops programs and materials based on the most current and scientific research on drug use and its impact on society. More information is available at <http://www.acde.org>.

Boys and Girls Clubs of America (BGCA), with over 4,000 clubs throughout the country serving more than 4.8 million children, the BGCA has programs available in the areas of education, alcohol, and drug prevention, gang prevention and leadership development. More information is available at <http://www.bgca.org>.

The Anti-Drug, a drug prevention and information center, and support community for parents to learn from each other. More at <http://www.theantidrug.com>

D.A.R.E. America, D.A.R.E. or Drug Abuse Resistance Education is a police officer-led classroom program for anti-drug, anti-gang, anti-violence education for children from kindergarten through senior high school. For more information please visit <http://www.dare.com>

Join Together, a national resource that helps community leaders understand and use the most current, scientifically valid prevention and treatment approaches. For more information please visit <http://www.jointogether.org>.

Visit <http://www.getsmartaboutdrugs.com/content/help.html> to learn about more government agencies and drug prevention organizations that can be helpful resources in drug prevention.

Online Resources (continued)

Drug Prevention Organizations

- U.S. DEA information on Methamphetamine:

- <http://www.justice.gov/dea/concern/meth.html>
- Meth Resources:
<http://www.methresources.gov>
- The Anti-Drug, Methamphetamine information page:
<http://www.theantidrug.com/drug-information/commonly-abused-drugs/meth/default.aspx>
- Helping Children Exposed to Clandestine Methamphetamine Sites:
<http://www.ojp.usdoj.gov/ovc/publications/bulletins/children/197590.pdf>

For more resources, visit: <http://www.getsmartaboutdrugs.com/content/help.html>

Conclusion

- Know the facts about methamphetamine
- Be aware of the risks associated with meth
- Learn to detect signs of meth abuse
- Talk to your children about the risks associated with meth, and keep them safe
- Share your knowledge about meth with others

Presenter Notes:

Thank you for taking the time today to come to this presentation about Methamphetamine.

Now that you know about meth, please PASS IT ON.

Talk to your friends. Talk to your family. Talk to your children. Talk to your neighbors. Talk to anyone you can.

Visit <http://www.getsmartaboutdrugs.com> for more information and tools to identify, prevent, and get help for drug abuse.