



Session 4: Methamphetamine and Cocaine



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Treatment
www.samhsa.gov

Differences Between Cocaine and Methamphetamine

- Cocaine effects: 1 to 2 hours.
- Methamphetamine effects: 8 to 12 hours.
- Withdrawal from methamphetamine can cause more intense symptoms and last longer.

Dopamine

- Is a chemical that is always present in the brain
- Plays an important role in
 - Body movement
 - Thinking
 - Motivation and reward
 - Pleasure responses

Example of Dopamine's Effect


Eating → ↑ Dopamine → Pleasure →

Motivation (**desire**) to eat again
when hungry

Dopamine Imbalance

- Too *much* dopamine causes nervousness, irritability, aggressiveness, paranoia, and bizarre thoughts.
- Too *little* dopamine causes low mood, fatigue, tremors, and problems with muscle control.

Dopamine and Stimulant Drugs

Meth/cocaine =  Dopamine =

Mostly Pleasure + Some Negative Effects

Dopamine and Stimulant Use Over Time

Stimulant use = **Damaged** dopamine system =

Some pleasure + many negative effects

Use → Depression → Craving → Use

Cycle = Addiction

Route of Administration

How a drug is taken influences

- How quickly it produces an effect
- The strength of the drug's effects, both positive and negative
- The kind of negative effects a person will experience

Methamphetamine

Street Names

Known on the street as

- Meth
- Ice
- Glass
- Crank
- Crystal
- Speed
- Chalk
- Tweak

Popularity of Meth

- Meth use more than doubled between 1994 and 2000.
- From 2002 to 2004 the number of people using meth and starting to use meth has been constant.
- From 2002 to 2004, the average age when people start using jumped from 19 to 22.

Who Uses Meth?

- Meth is traditionally used by Caucasian, male, blue-collar workers.
- Use spread to the party and club scene.
- Use is increasing among Hispanics and young people who are homeless.
- Men and women use in equal numbers.
- Use is increasing in the workplace.

Immediate Psychological Effects

- Increased euphoria
- Increased alertness or wakefulness
- Increased feelings of strength/energy
- Increased feelings of invulnerability
- Increased feelings of confidence/competence
- Increased feelings of sexual desire
- Decreased boredom, loneliness, and shyness

Immediate Physical Effects

Increased

- Heart rate
- Blood pressure
- Pupil size
- Breathing rate
- Sound sensitivity
- Body temperature

Decreased

- Appetite
- Sleep
- Reaction time

Toxic Effects

- Methamphetamine can cause serious psychological and physical damage.
- Negative effects begin fairly soon.



Chronic Psychological Effects

- Confusion
- Loss of ability to concentrate and organize information
- Loss of ability to feel pleasure without the drug
- Paranoia
- Insomnia and fatigue
- Mood swings
- Irritability and anger
- Depression
- Anxiety and panic disorder
- Reckless, unprotected sexual behavior

Severe Psychological Effects

- Hallucinations
- Severe depression that can lead to suicidal thoughts or attempts
- Episodes of sudden, violent behavior
- Severe memory loss that may be permanent

Chronic Physical Effects

- Tremor
- Weakness
- Dry mouth
- Weight loss/malnutrition
- Increased sweating
- Oily skin
- Sores
- Headaches
- Severe problems with teeth and gums

Severe Physical Effects

- Seizures
- Damaged blood vessels in the brain/stroke
- Damaged brain cells
- Irregular heartbeat/sudden death
- Heart attack or chronic heart problems
- Kidney failure
- Liver failure
- “Tweaking”
- Infected skin sores

Meth Is Not Just Meth

Up to 60 percent of what a person injects, snorts, or smokes is *not* meth:

- Meth is full of impurities, such as lead acetate or mercury, which can lead to heavy metal poisoning.
- Meth is “cut” with other substances to maximize profits.

Injecting Meth

Injecting meth can cause

- Blood clots
- Skin abscesses
- HIV, tuberculosis, or hepatitis C virus exposure
- Heart inflammation
- Pneumonia
- Kidney failure

Snorting Meth

Snorting meth can cause

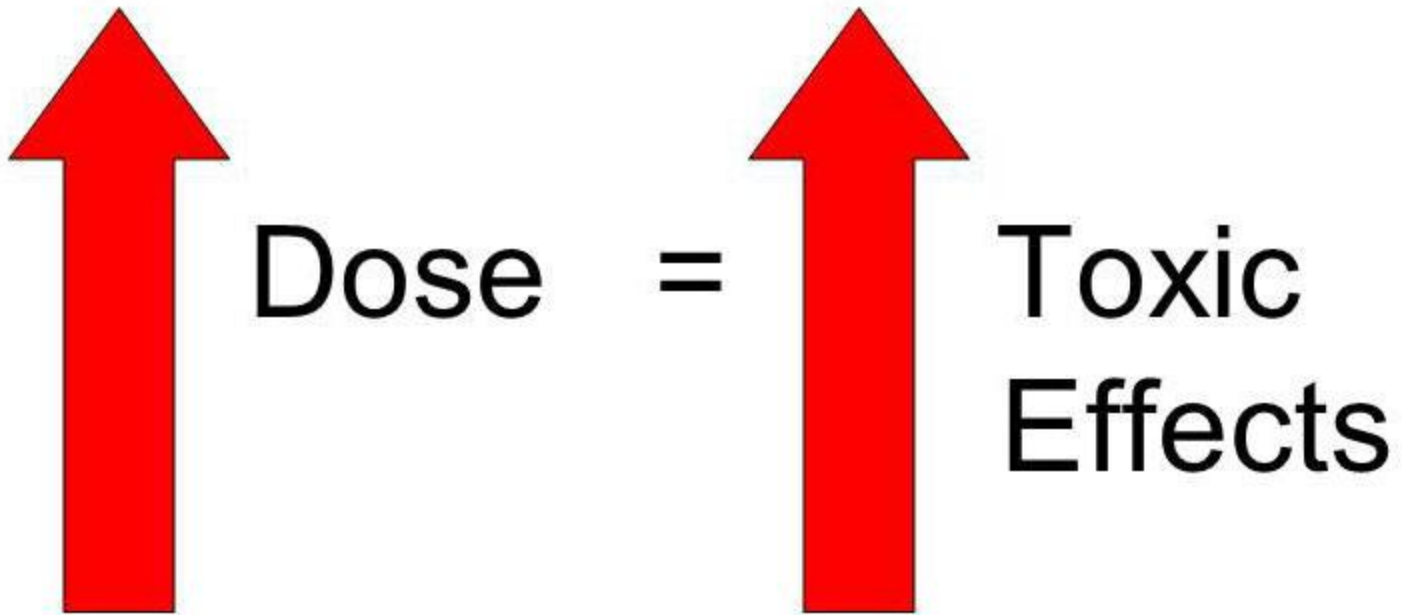
- Sinus infection
- Holes in the septum
- Hoarseness
- Nosebleeds

Smoking Meth

Smoking meth can cause

- Throat problems
- Burned lips
- Lung congestion
- Severe coughing with black mucus
- Chronic lung disease

Meth Dose and Effects



Pregnancy and Meth

Increased risk of

- Fetal stroke or brain hemorrhage, often causing death
- Premature birth
- HIV or hepatitis virus exposure

Babies of mothers who used meth during pregnancy may have

- Abnormal reflexes
- Extreme irritability
- Trouble eating and digesting food

Other Effects on Children

Children living in home-based meth labs are affected by

- Fires, explosions, chemical spills, and toxic fumes that can burn lungs; can damage the brain, kidneys, or liver; and even can be fatal
- Abuse and neglect by parents or others

700 children present in meth labs in 2001 tested positive for toxic chemicals.

Other Problems With Meth Labs

- Toxic fumes remain in walls/carpets, putting everyone in the house at risk.
- People moving into a home that once housed a meth lab are at risk.
- For every pound of meth produced, 5 to 6 pounds of toxic waste are created and dumped.

Cocaine

Street Names

Known on the street as

- Coke
- Snow
- Flake
- Blow

Crack Cocaine

- A smokable form of cocaine
- Sometimes called “rock” or “freebase”

Popularity of Cocaine

- Nearly 34 million Americans have used cocaine at some time in their lives.
- About 2 million people in the United States reported *current* use of cocaine.
- 2.5 percent of young people ages 12 to 17 reported that they had used cocaine at least 1 time.
- 16 percent of young adults ages 18 to 25 reported using cocaine at least 1 time.

Who Uses Cocaine?

- Adults 18 to 25 years old have a higher rate of current cocaine use than those in any other age group.
- Overall, men have a higher rate of current cocaine use than do women.

Immediate Psychological Effects

- ↑ Increased euphoria
- ↑ Increased energy
- ↑ Increased talkativeness
- ↑ Increased sensitivity to sensations of sight, sound, and touch
- ↑ Increased mental alertness
- ↑ Increased confidence
- ↑ Increased feelings of sexual desire

Immediate Physical Effects

Constricted blood vessels

Increased

- ↑ Pupil size
- ↑ Heart rate
- ↑ Temperature
- ↑ Blood pressure

Decreased

- ↓ Appetite
- ↓ Sleep

Warning

In rare instances, sudden death can occur with cocaine use.

Alcohol + Cocaine = Increased risk

Chronic Psychological Effects

- Irritability
- Depression
- Increasing restlessness
- Paranoia
- Auditory hallucinations
- Bizarre and/or violent behavior
- Damaged ability to feel pleasure
- HIV or hepatitis C virus exposure

Chronic Physical Effects

- Disturbances in heart rhythm
- Heart attacks
- Chest pain
- Pneumonia
- Respiratory failure
- Strokes
- Significant weight loss/malnutrition
- Seizures
- Headaches

Injecting Cocaine

Injecting cocaine can cause

- Abscesses (infected sores) at injection sites
- Severe allergic reactions
- Exposure to HIV and hepatitis C virus

Snorting Cocaine

Snorting cocaine can cause

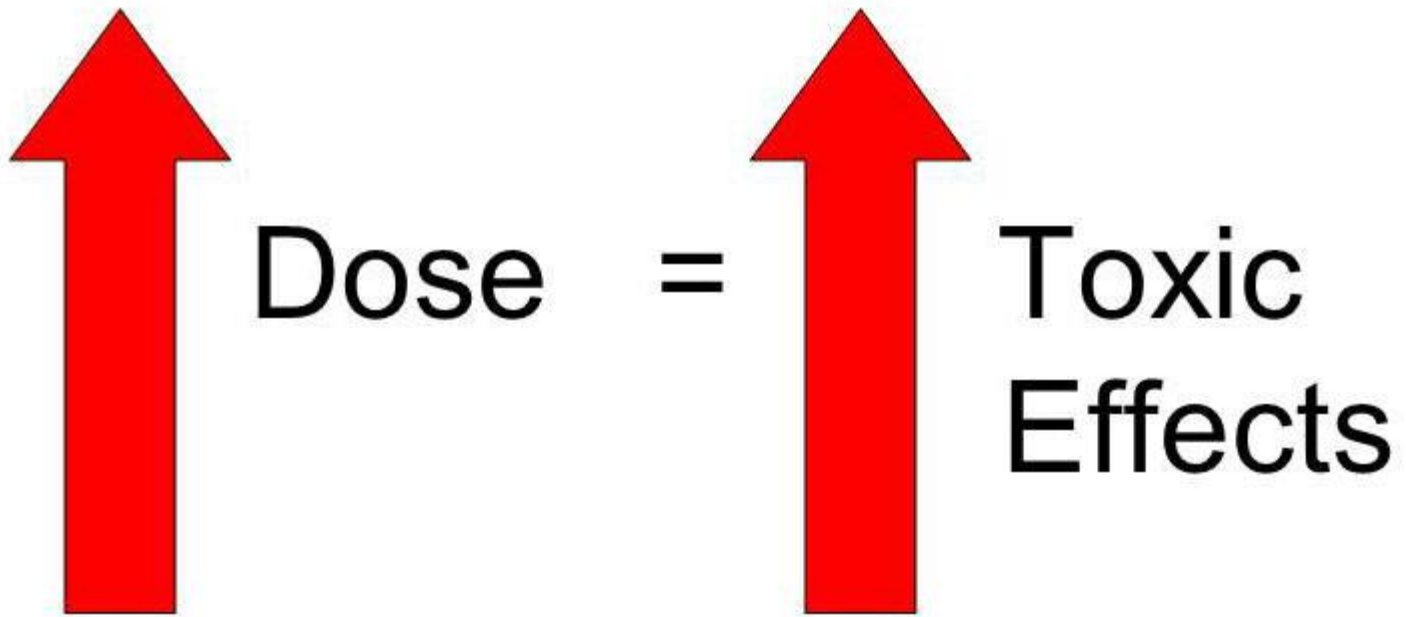
- Loss of sense of smell
- Problems with swallowing
- Chronically inflamed, runny nose
- Nosebleeds
- Hoarseness
- Deviated septum

Smoking Crack

Smoking crack can cause

- Throat problems
- Burned lips
- Lung congestion
- Severe coughing
- Chronic lung disease

Cocaine Dose and Effects



Pregnancy and Cocaine

Increased risk of

- Premature birth
- Low birth weight
- Smaller than normal head size
- Shorter than normal length
- HIV or hepatitis virus exposure

Cocaine–Exposed Children

As cocaine-exposed children grow up, they may

- Have trouble paying attention to tasks
- Have trouble thinking things through
- Have trouble learning new information