

Methamphetamine Information Fact Sheet

Scientific Name:

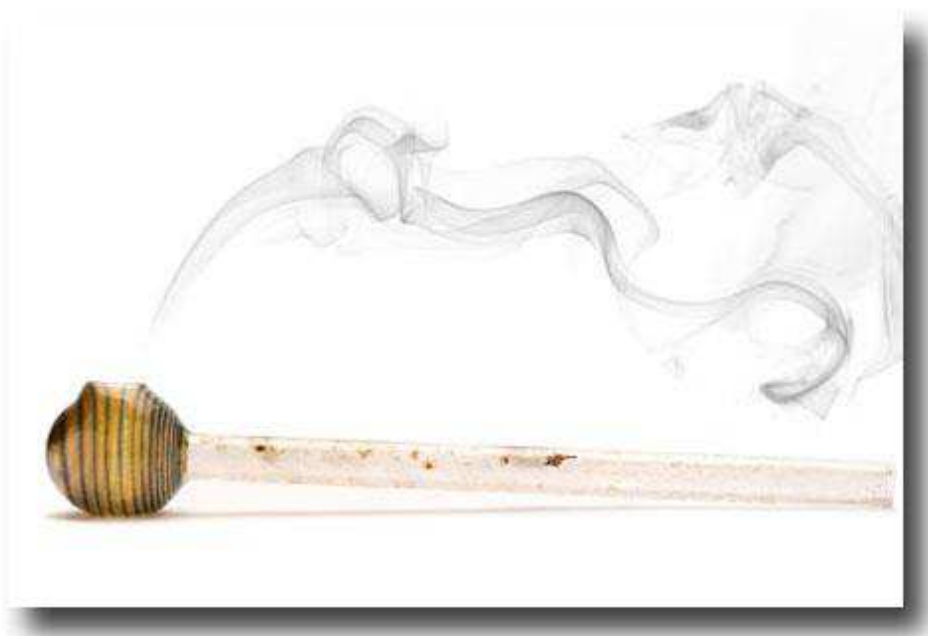
N, α -dimethylphenethylamin (member of the Phenethylamine family)

Other Common Names:

Meth, Ice, Crystal, Chalk, Speed, Crank, Tina, Glass

Description:

Also called Methylamphetamine or Desoxyephedrine, methamphetamine is a central nervous system stimulant.



Source:

Methamphetamine is a synthetic chemical manufactured in laboratories. It is highly addictive. Illicit meth is manufactured in home or hidden laboratories, creating a potentially explosive situation as a result of dangerous gases produced during drug making and the volatility of chemicals used. The noxious chemicals used and produced during the manufacturing process can cause significant health and safety problems to the manufacturer and create severe environmental impacts in the structure where it is manufactured. These are the “meth labs” frequently mentioned in the news.

Methamphetamine base is a colourless volatile oil that is difficult to inject, so hydrochloride (salt) is commonly used to turn it into a powder or crystals that are soluble in water. Crystal meth is made by reducing the precursor's ephedrine or pseudoephedrine through a process of hydrogenation. Many of the chemicals used in making methamphetamine are extracted from legal products like cold medicines, matchbooks (phosphorous), isopropyl alcohol, and many others. Typical cutting agents include caffeine, sugars, and sometimes ketamine and ephedrine. Other than ice, there are normally a mixture of powders in the meth powder form.

Meth works on the brain by effecting the neurotransmitters dopamine, norepinephrine, epinephrine, and serotonin. However, its greatest impact is on dopamine which controls, movement, emotions, thought processes, and the reward or pleasure centers of the brain. Meth stimulates the dopamine transmitters to release an excessive amount of dopamine and then blocks the dopamine reuptake. A gradual chemical build-up of dopamine occurs, producing effects that include a roller coaster ride of euphoria and depression as the dopamine surges and then wears off.

Other processes involve the norepinephrine, epinephrine, and serotonin neurotransmitters to a lesser degree than dopamine. Norepinephrine plays a role in attention, alertness, and ability to concentrate. It also plays a key role in the synthesis of the hormone adrenaline. Meth blocks the re-uptake of norepinephrine. It also blocks the epinephrine (adrenaline) re-uptake, meaning there is a build-up of an excess amount of the neurotransmitter. The "rush" and the "crash" felt by meth users is partially due to the build-up and then depletion of adrenaline or epinephrine. As for serotonin, meth reduces its level in the brain by blocking its synthesis and release. The impact is a radical negative mood change.

Continued use of meth is neurotoxic, meaning prolonged use will permanently damage or destroy dopamine, serotonin, and other neurons.

Methamphetamine is one of the "club drugs" that young adults use at all-night dance parties called "raves", clubs, and other entertainment venues. The dance events usually have pulsating lights and extremely loud music. Meth enhances the experience by creating a sense of euphoria and a higher energy level.

Forms:

Meth is sold as crystalline powder, rock-like crystals, and tablets. The crystalline powder form of methamphetamine, often called crystal meth, can range in colour from white to tan. Ice, a rock-like form of meth, is the purest crystalline hydrochloride form. The drug can be snorted, swallowed, injected, and smoked.

Health Effects:

- **Psychological Effects:**

The surge of dopamine in the brain produces a euphoric rush. Long-term, people using meth

can experience anxiety, confusion, mood swings, insomnia and violent behaviour. The meth user can develop paranoia, begin hallucinating, and become delusional. There may be problems with memory and managing emotions.

- **Physical Effects:**

- **Acute** – Meth is a powerful drug that can increase respiration and heart rate, increase energy levels, produce an irregular or rapid heartbeat, increase blood pressure and body temperature, and decrease appetite. Severe weight loss is typical because of its appetite suppression qualities. It creates an initial “rush” accompanied by flushed skin, heavy sweating, twitching or excessive movement, and/or tremors. While under the influence of the drug, the false sense of energy leads to the drug user pushing the body beyond its normal limits, so there is an obvious physical and mental breakdown as the drug wears off. The drug’s effects can last from four to eight hours.
- **Long-term** – Continued use of meth can lead to impaired verbal learning and motor skills. The “meth mouth” may develop in which the person has severe decay, loss of teeth, and other issues. Prolonged use of meth includes high blood pressure, aggression, hallucinations, insomnia, paranoia, disordered thinking, fearfulness, and depression. Permanent blood vessel damage is likely, as is liver, kidney, and lung damage. Frequent high doses of meth can cause permanent brain damage. The drug user loses the ability to understand abstract thoughts and suffers memory loss.

Detection Period:

Meth can be detected by a saliva drug test or a urine drug test for 1-4 days after use.

Legal Status:

Methamphetamine is a Schedule 8 Controlled Drug in Australia, meaning it can be prescribed by a physician for medical use only. Schedule 8 drugs are considered addictive and have the potential to be abused. It is against the law to be in possession of a Schedule 8 controlled substance without a proper prescription. Without a prescription, the drug becomes prohibited and subject to penalties that range from 2 years imprisonment and/or fines of up to \$2,000 to a maximum penalty of 25 years imprisonment and/or fines up to \$100,000 for intent to supply or trafficking. It is an offence to manufacture or supply meth. Supplying ice pipes and other drug paraphernalia is illegal in Western Australia, as in other states and territories.

Other Information:

Pharmaceutical methamphetamine is legally prescribed to treat narcolepsy, ADHD, obesity, depression, and fatigue. However, methamphetamine is infrequently prescribed because of the potential for addiction. Drugs containing methamphetamine are not manufactured in Australia.