

Heroin

Profile

Heroin (diacetylmorphine) is a highly addictive Schedule I drug, and a heavily abused and extremely potent opiate. It is processed from morphine, a naturally-occurring substance extracted from the opium poppy - *Papaver somniferum* - a plant indigenous to the Middle East and Southeast Asia. Pure heroin, which is a bitter-tasting white powder, is rarely sold on the streets.¹ Most that is sold is a powder varying in color from white to dark brown. The differences in color are due to impurities in the manufacturing process and/or the presence of other drugs or additives such as powdered milk or quinine.² Another form of heroin known as “black tar” is available mostly in the western and southwestern United States. This form is primarily made in Mexico using crude processing methods.³ Currently, it has become an issue because it is cheaper than conventional heroin, but is extremely potent and addictive.

History

The opium poppy has had a long history. Our earliest knowledge of its cultivation dates back to the ancient Mesopotamian and Sumerian cultures, who passed it on to the Assyrians, Babylonians, and Egyptians. The Greeks introduced opium to Persia and India, where it was grown in mass quantities. In the eighteenth century, the British began exporting it to China, where they traded it for tea. Opium abuse reached epic proportions in China, where millions of people became addicted in the 1800's. When the Chinese government tried to ban all opium imports in 1839, The First Opium War began, ending in the British taking Hong Kong. The Second Opium War of 1856 made opium imports into China legal again, still against the wishes of the Chinese government. Heroin was synthesized from morphine in 1874 by the pharmaceutical company Bayer and was touted as a safer, non-addictive form of morphine.⁴ It became a widely used drug in cough medicines and a variety of other ailments. By the beginning of the twentieth century, heroin was understood to be highly addictive and in 1914 was banned as part of the Harrison Narcotics Act.⁵

Methods of Use

Heroin is most often injected intravenously for a quick and potent high, but there is a rising segment of users who sniff, snort, and smoke heroin to avoid the dangers of sharing needles.⁶ There are also reports of users sniffing liquefied heroin using a nasal spray bottle, a practice known as “shabanging.”⁷ Users have also been known to combine heroin and cocaine, snorting alternate lines or “crisscrossing,” or injecting the two drugs simultaneously, called “speedballing.”⁸ A common misconception is the idea that snorting or smoking heroin is not as addictive as injecting heroin. The truth is, however, that heroin is a highly addictive drug regardless of the route of administration.

Heroin's Effects on the Brain

Heroin, like all opiates, works as a central nervous system depressant. In fact, the human brain contains numerous opiate receptors, as morphine is a naturally occurring chemical. Heroin and morphine are both chemically similar to endorphins, the body's natural painkillers, as they all bind to those opiate receptors related to pain, movement and emotion.

Short-Term Effects

The short-term effects of heroin abuse appear soon after a single dose and last for a few hours. Intravenous injection provides the greatest intensity and most rapid onset of effects, as users can feel peak effects after 7 to 8 seconds.⁹ Intramuscular injection produces the euphoric high within 5 to 8 minutes, and when the drug is sniffed or smoked, effects are felt within 10 to 15 minutes. After taking heroin, the user reports feeling a surge of euphoria (or a "rush") accompanied by a warm flushing of the skin, a dry mouth, and heavy extremities. Following this initial euphoria, the user goes "on the nod" for several hours – a period of alternating between a wakeful and drowsy state. Mental functioning becomes clouded due to the depression of the central nervous system. Also, breathing may become slowed to the point of respiratory failure.¹⁰ Other short-term effects can include dry mouth, nausea, vomiting, and severe itching.

Long-Term Effects

After repeated use of heroin, more long-term effects may begin to appear. Chronic users may develop collapsed veins, infection of the heart lining and valves, abscesses (pus-filled infections), liver disease, and lung-related complications such as pneumonia. In addition to the effects of the drug itself, some heroin may contain additives that do not easily dilute in the bloodstream, resulting in clogging of the blood vessels in the lungs, liver, kidneys, or brain. Overdose, severe addiction, and/or death may also occur following initial use.

In addition to the dangers of the drug itself, users who inject heroin also put themselves at risk for contracting HIV, Hepatitis B and C, and other blood-borne pathogens. This type of risk is the cause for controversial "needle-exchange programs" that have been established in areas of highest heroin use. Yet another threat for heroin users is that they cannot know the real strength of the drug or its true contents, putting them at an increased risk for overdose or even death.

Addiction and Withdrawal

One of the most significant effects of heroin use is addiction. Also, with regular use, a tolerance develops, where more and more heroin is needed to achieve the same effect.

The average heroin addict can spend up to \$200 per day to maintain his or her addiction.¹¹ As higher doses are taken over time physical dependence and addiction will develop. Within a few hours after the last administration of heroin, withdrawal may occur, producing intensely negative effects such as drug craving, restlessness, muscle and bone pain, and vomiting. Methadone and Buprenorphine, both semi-synthetic narcotic opiates, were developed as a way to minimize the drug's severe withdrawal symptoms. In the worst cases, this withdrawal can even cause death. Many users continue abusing the drug even after they no longer experience the euphoric effects, simply to provide relief from the painful, flu-like withdrawal symptoms. In heavy users, major withdrawal symptoms peak between 48 and 72 hours after the last dose and subside after about a week.¹²

Overdose

Overdosing is a very real danger for heroin users. It is far more common than one might expect; a 2001 study in Australia concluded that 54% of regular injecting drug users reported experiencing at least one non-fatal overdose in their lifetime.¹³ Signs of an overdose can include one or more of the following: extremely slow and shallow breathing, convulsions, pinpoint pupils, confusion, and possibly coma or death.¹⁴ Someone who is overdosing should be taken to the hospital immediately.

Paraphernalia

Those who inject heroin use a set of paraphernalia that includes hypodermic needles, small cotton balls used to strain the drug, spoons or bottle caps for "cooking" (liquefying) the heroin, and a "tie-off" that the user wraps around his or her arm to make his or her veins protrude. Paraphernalia for sniffing or smoking heroin can include razor blades, straws, rolled dollar bills, and pipes. Also, balloons are used as a method of transporting and/or trafficking the drug.

Terminology

General: Smack, Dope, Junk, Mud, Skag, Brown Sugar, Brown, 'H', Big H, Horse, Charley, China White, Boy, Harry, Mr. Brownstone, Dr. Feelgood

Other Slang:

Junkies – heroin addicts

Mainlining – injecting heroin into a vein

Skin-popping – injecting heroin just below the skin's surface

Chasing the Dragon – heating the drug until it begins to smoke, and inhaling the smoke through a straw

Speedballing – injecting heroin combined with cocaine

Crisscrossing – snorting heroin along with cocaine

Shabanging – sniffing liquefied heroin from nasal spray bottle

The Works / Outfit / Rig – a heroin user’s set of tools and paraphernalia used for injection

Tie-off – used to tie around the arm (to constrict blood flow) in order to make a vein protrude

Links

- [ONDCP Heroin Overview](#)
- [NIDA InfoFacts: Heroin](#)
- [Partnership for a Drug-Free America: Heroin](#)
- [SAMHSA Tips for Teens: Heroin](#)
- [In The Know Zone: Heroin](#)

¹ InTheKnowZone: Heroin. Retrieved October 20, 2006, from <http://www.intheknowzone.com/heroin/index.htm>.

² ONDCP Drug Facts: Heroin. Retrieved October 20, 2006, from <http://www.whitehousedrugpolicy.gov/drugfact/heroin/index.html>.

³ ONDCP Drug Facts: Heroin.

⁴ ONDCP Drug Facts: Heroin.

⁵ ONDCP Drug Facts: Heroin.

⁶ ONDCP Drug Facts: Heroin.

⁷ Texas Commission on Alcohol and Drug Abuse. (1997). A Dictionary of Slang Drug Terms, Trade Names, and Pharmacological Effects and Uses. Retrieved October 20, 2006, from <http://www.tcada.state.tx.us/research/slang/terms.pdf>.

⁸ BBC News. (2006, September 13). “The Nightmare of ‘Speedballing’.” Retrieved October 20, 2006, from <http://news.bbc.co.uk/1/hi/uk/5341642.stm>.

⁹ ONDCP Drug Facts: Heroin.

¹⁰ NIDA InfoFacts: Heroin. Retrieved October 20, 2006, from <http://www.nida.nih.gov/Infofacts/heroin.html>.

¹¹ InTheKnowZone: Heroin.

¹² NIDA InfoFacts: Heroin.

¹³ Paul Dietze et al. (2001). “The Context, Management and Prevention of Heroin Overdose in Victoria, Australia: The Promise of a Diverse Approach.” *Addiction Research and Theory* 9:437-458.

¹⁴ InTheKnowZone: Heroin.