Heroin

Heroin is an illegal narcotic substance derived from morphine, a naturally occurring substance that can be extracted from the seed pod of various types of poppy plants, particularly those found in East Asia. Highly addictive with potentially deadly consequences, heroin is considered the most abused opiate in the United States.

HISTORY AND LEGAL CONCERNS
Heroin was first produced in 1874 when the substance was extracted from the morphine of an Asian poppy plant. Commercially marketed in 1898 as a new pain reduction medication, heroin became widely used for medicinal purposes and was frequently prescribed by physicians unaware of its highly addictive and potentially deadly properties. In 1914 heroin became a controlled substance under the United States' Harrison Narcotic Act. Today heroin is considered a Schedule I Controlled Substance under the Controlled Substances Act, meaning that it has a high potential for abuse and is not currently accepted for medical use under any circumstance.

PHYSICAL EFFECTS
Heroin acts as a depressant on the central nervous system, relieving the user of pain as well as mental function, and slowing vital physical functions such as breathing and cardiac activity to dangerously slow rates. Heroin is used to achieve both a short term euphoria or "rush", as well as a long term peaceful semi-drowsy state known as "on the nod". During the initial rush, which can occur anywhere between 7-8 seconds and 10-15 minutes after exposure depending on the method of absorption, users report a warm flushed feeling accompanied by an elevated risk of accidental overdose or death. Not knowing the strength of their heroin, nor its true contents, facilities, each batch of heroin is unique. Users will frequently add one's risk of severe respiratory distress and/or failure. In addition to the dangers of additives is the uncertainty of heroin one's risk of sudden death. When snorted or smoked, additives may increase one's risk of severe respiratory distress and/or failure. In addition to the dangers of additives is the uncertainty of heroin itself. As heroin is produced in illegal underground laboratory facilities, each batch of heroin is unique. Users will frequently not know the strength of their heroin, nor its true contents, leading to an elevated risk of accidental overdose or death.

TOLERANCE AND ADDICTION
Heroin is extremely addictive, and repeated use can produce both tolerance and physical dependence. In fact, according to Pulse Check, a publication of the Office of National Drug Control Policy, heroin was associated with the most serious medical, legal, and societal consequences in 15 of the 20 United States Pulse Check sites during the first half of 2002. Over time a user's body begins to adapt to the presence of heroin, a phenomenon known as "tolerance". With regular use, a dependent individual will need to continually increase the quantity of administered heroin in order to achieve the desired effect. The higher doses of heroin increase the body's dependence on the presence of this illegal substance, increasing the user's risk of dependence, or, addiction.

According to the Drug Abuse Warning Network (DAWN) which tracks drug-related emergency department visits, in 2001 93,064 reports made mention of heroin, an increase of 47.4% since 1994. Heroin use and related complications comprised 15% of the 638,484 total emergency department visits tracked by DAWN in 2001. Heroin abuse is widespread, and on the rise.

TREATMENT AND WITHDRAWAL
Once an individual becomes addicted to heroin, s/he can not function normally without it. Without heroin the user will go through withdrawal, a process by which the body violently reacts to the lack of heroin. Signs and symptoms of withdrawal can begin as soon a few hours after last use, and can include restlessness, insomnia, muscle and bone pain, diarrhea, vomiting, cold flashes, involuntary movement (kicking movements commonly referred to as "kicking the habit"), among others. Depending on the individual, these symptoms may peak anywhere between 24 and 72 hours after the administration of the last dose of heroin, and can last anywhere from a few days to a month with the typical withdrawal lasting several weeks.

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Heroin withdrawal can be temporarily debilitating, heroin withdrawal is rarely fatal in an otherwise healthy adult. However, heroin withdrawal by a heavily dependent users who are also in poor general health can occasionally cause death, and studies have shown that heroin withdrawal can terminate pregnancy in a pregnant addict. Despite these risks, heroin withdrawal is rarely fatal, and is considered much less dangerous than withdrawal from alcohol or another barbiturate.

Although treatment for heroin addiction is varied, most programs begin with a form of detoxification. One of the most well known detoxification substances with regards to heroin and other opioid addictions is methadone, which has been used in drug treatment programs for more than 30 years. Methadone is a synthetic opiate (narcotic) that, when administered at a very high dosage, has been proven to help suppress heroin withdrawal symptoms for 24-36 hours. Other approved substances with similar effects are naltrexone and naloxone. Detoxification is not a treatment for addiction, but rather an aid used to help individual users transition between heroin use and long-term treatment. Substances such as methadone do not alleviate an individual's physical dependence on heroin or any other drug, but rather ease the symptoms that result from withdrawal.

Buprenorphine is new to the market, and has been shown to not only help reduce the symptoms of heroin/opioid withdrawal, but to simultaneously lower one's physical dependence on the substance. Another benefit of buprenorphine is that it can be administered in a private doctor's office, as opposed to methadone, naloxone, and naltrexone which are typically administered in rehabilitation centers or clinics. There is also preliminary evidence that methadone and buprenorphine may help to reduce the harm caused to the fetus of an addicted pregnant woman, although most infants still require treatment for withdrawal beginning immediately after birth.

Detoxification is only one piece of the process. Most rehabilitation centers and clinics also use behavioral therapy (both residential and outpatient) as a way of helping addicted individuals modify their daily behavior to increase their chances of long-term success. Some clinics utilize contingency management therapy, a voucher-based system where patients earn points for negative drug tests which they can then exchange for items that encourage a healthy lifestyle. Cognitive-behavioral interventions are also used as a way of helping to modify an individual's thinking and daily expectations to make him/her more aware of his/her addiction and build life-long coping skills. Upon successful completion of a treatment or rehabilitation program, many heroin users are able to stop their use of heroin and return to a stable and productive life.

National data for 2000 showed that heroin addiction accounted for 15.2% of all admissions to drug treatment and rehabilitation facilities. 66.9% of heroin treatment admissions were male.

STUDENT USE
Heroin affects all strata of society, with its highest prevalence among young adults between the ages of 18 and 30, specifically white males.

GETTING HELP
If you or a friend is suffering from a heroin related problem or addiction, know that you are not alone. The University Health Service (UHS) at the University of Rochester offers both counseling and clinical treatment options to students, staff, and faculty. See Links and Resources for more information. To make an appointment with your primary health care provider at UHS, call 275-2662.

LINKS AND RESOURCES
ONDCP
http://www.whitehousedrugpolicy.gov/publications/factsht/heroin

National Institute on Drug Abuse

streetdrugs.org
http://www.streetdrugs.org/heroin.htm

do it now! Foundation
http://www.doitnow.org