

HEROIN ADDICTION

Heroin is an opioid analgesic synthesized from morphine. Morphine occurs naturally in the seeds of the Asian poppy plant. Heroin is 2-4 times stronger than morphine. It appears as a white or brown powder or as a black gummy substance. Illicit heroin contains adulterants and potentially toxic substances used to dilute the drug.

The United States Controlled Substances Act of 1970 classifies heroin as a Schedule I drug because of its high potential for abuse and it currently has no use in medical practice. In the United Kingdom and several other European countries heroin is legally prescribed for pain management and addiction.

People use heroin recreationally for the intense euphoria it produces. The intensity of pleasure correlates to how quickly the blood level of heroin rises. Intravenous injection causes the quickest elevation of heroin in the blood, within seconds, followed by smoking, suppository, snorting and ingestion.

Heroin passes very quickly through the blood-brain barrier, metabolizes into morphine and binds to the opiate receptors. This produces a surge of euphoria, pain relief and relief of anxiety. The surge or rush of euphoria is most intense following injection of the drug. After the initial rush, depression of the central nervous system causes alternate states of sleep (nodding) and wakefulness, respiratory depression and pinpoint pupils.

Opiate receptors are located throughout the brain, spinal cord and gut. The brain responds to chronic heroin use by producing more receptors. This causes tolerance with the need for higher doses to produce the desired affect and physical dependence.

Intravenous and subcutaneous injection (popping) carries the risk of bacterial infection at the injection site and vein collapse. The user is also at risk for Hepatitis, HIV, infection of the heart lining and valves, pneumonia and constipation.

The chronic user experiences withdrawal symptoms within 4-24 hours of the last dose. Symptoms include muscle and bone pain, anxiety, muscle spasms and kicking leg movements,

cold skin with goose bumps and sweating, nausea, vomiting, insomnia and an intense desire to use.

Heroin blocks the opiate receptors in the brain stem, suppressing the reflex to breathe. Overdose causes slow and shallow breathing resulting in decreased oxygen in the blood. Decreased oxygen to the brain depresses arousal and may progress to coma and death. Administration of an opiate antagonist, such as naloxone, reverses heroin overdose.

Signs of heroin use include:

- Cycles of wakefulness with sudden, momentary dozing
- Pinpoint constriction of pupils
- Runny nose
- Picking at skin, infection at injection sites
- Weight loss
- Change in behavior such as: withdrawal, isolation, lying, apathy, stealing, hostility, decreased attention to hygiene
- Burned silver spoons, aluminum foil with burn marks, syringes