

INTRODUCTION

Heroin is an illicit, semi-synthetic opioid drug made from morphine in poppy plants.^{1,2} Like morphine, heroin is a central nervous system depressant, but it reaches the brain faster and has a greater effect than morphine.² Heroin can be injected, snorted, or smoked. Heroin is primarily found in three forms:³

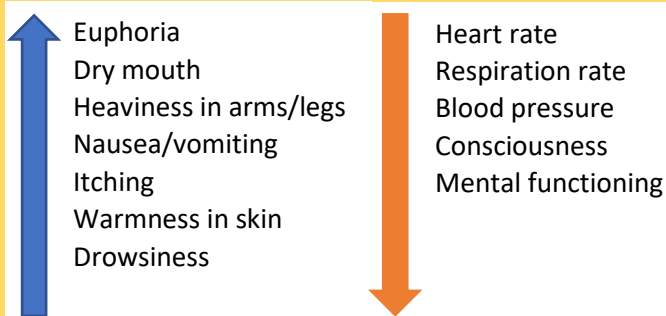


Common slang terms for heroin are: H, Big H, Hell Dust, Black Tar, Negra, Chiva, Smack, Thunder, Horse, Brown Sugar, China White, Dope, Snow, Hero, Beast, Skag, Junk.^{3,4}

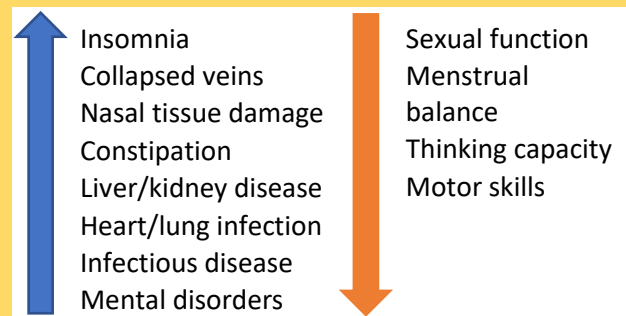
GENERAL PRESENTATION

Short-term and long-term use of heroin have distinct effects on both the body and mind. Individual experiences vary. In 2020, heroin was involved in nearly one fifth of opioid overdose deaths.⁵ In 2021, 7% of drug-related emergency department visits were due to heroin use.⁶

Short-term use effects:^{1,8}



Long-term use effects:¹



HEALTH IMPACT

Heroin negatively impacts major bodily systems, such as the nervous system and the circulatory system, and increases the risk of brain, heart, and lung damage.^{8,9}

Brain

Memory
Decision-making
Impulse control
Emotional processing
Mental disorders



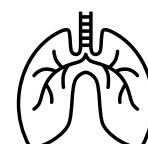
Heart

Collapsed veins
Heart infection
Blood vessel infection



Lung

Pneumonia
Tuberculosis
Lung damage



POLYSUBSTANCE USE

Opioids, fentanyl, and other depressants

- About 80% of heroin users misused prescription opioids before using heroin.¹
- In 2020, nearly 68% of overdose deaths involving heroin also involved fentanyl. Fentanyl is 50 times more potent than heroin. Often, people don't know that heroin is laced with fentanyl.^{10, 11}
- The combined use of heroin and opioids (e.g., oxycodone), fentanyl, benzodiazepenes, or alcohol can increase the risk of brain damage, heart damage, and overdose.⁸

Methamphetamine and other stimulants

- The combined use of heroin and crack cocaine is called "speedballing." Speedballing is dangerous because the body has to work harder to get enough oxygen, which can cause brain damage and increase risk of overdose death.¹²
- Methamphetamine and other stimulants mask overdose signs (e.g., slowed breathing) and increases the risk of accidental overdose.¹⁰
- Overdose deaths involving combined use of opioids and methamphetamine more than doubled from 2014 to 2020.¹¹

TOXICITY and TREATMENT

The main pathways affected by heroin are respiratory and vascular. An overdose of heroin results in slowed breathing and oxygen loss. The primary cause of death from heroin poisoning is from respiratory failure (breathing stops and the brain loses too much oxygen).¹

Several prevention, treatment, and recovery support options are available:^{13, 14}

Harm Reduction

- Naloxone
- Clean needle exchange
- Fentanyl test strips
- Infectious disease testing/treatment
- Safe smoking kits

Social Support Services

- Community meetings (e.g., Alcoholics Anonymous)
- Peer support services (e.g., certified recovery specialists)
- Community agencies addressing social determinants of health (e.g., housing, employment)

Medication-Assisted Treatment (MAT)

- Buprenorphine
- Naltrexone
- Methadone

*These can be inpatient or outpatient

Behavioral Therapies

- Cognitive-behavioral therapy
- Contingency management
- Family behavior therapy

*These can be inpatient or outpatient

1. National Institute on Drug Abuse. Heroin DrugFacts. <https://nida.nih.gov/publications/drugfacts/heroin>. Updated June 1, 2021. Accessed June 13, 2022. 2. The Recovery Village. Differences Between Heroin and Morphine. <https://www.therecoveryvillage.com/heroin-addiction/heroin-and-morphine/>. Updated April 29, 2022. Accessed June 13, 2022. 3. Department of Justice Drug/Enforcement Administration. Heroin Drug Fact Sheet. <https://www.dea.gov/sites/default/files/2020-06/Heroin-2020.pdf>. Updated April 2020. Accessed June 13, 2022. 4. American Addiction Centers. Heroin Street Names, Nicknames & Slang Terms. <https://americanaddictioncenters.org/heroin-treatment/slang-names>. Updated December 20, 2021. Accessed June 28, 2022. 5. Centers for Disease Control and Prevention. Opioid Basics: Heroin. <https://www.cdc.gov/opioids/basics/heroin.html>. Updated May 23, 2022. Accessed June 13, 2022. 6. Substance Abuse and Mental Health Services Administration. Preliminary Findings from Drug-Related Emergency Department Visits, 2021; Drug Abuse Warning Network (HHS Publication No. PEP22-07-03-001). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, 2022. Retrieved from https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP22-07-03-001.pdf. 7. National Institute on Drug Abuse. What are the immediate (short-term) effects of heroin use? <https://nida.nih.gov/publications/research-reports/heroin/what-are-immediate-short-term-effects-heroin-use>. Updated April 13, 2021. Accessed June 13, 2022. 8. The Recovery Village. How Heroin Affects the Nervous System. <https://www.therecoveryvillage.com/heroin-addiction/heroin-affects-nervous-system/>. Updated October 11, 2021. Accessed June 13, 2022. 9. National Institute on Drug Abuse. What are the medical complications of chronic heroin use? <https://nida.nih.gov/publications/research-reports/heroin/what-are-medical-complications-chronic-heroin-use>. Updated April 13, 2021. Accessed June 13, 2022. 10. Centers for Disease Control and Prevention. Stop Overdose. <https://www.cdc.gov/stopoverdose/index.html>. Updated February 23, 2022. Accessed June 13, 2022. 11. National Institute on Drug Abuse. Trends & Statistics: Overdose Death Rates. <https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates>. Updated January 20, 2022. Accessed June 13, 2022. 12. Addiction Center. Speedball. <https://www.addictioncenter.com/drugs/heroin/speedball/>. Updated November 9, 2021. Accessed July 5, 2022. 13. National Institute on Drug Abuse. Evidence-Based Approaches to Drug Addiction Treatment. <https://nida.nih.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment>. Updated June 3, 2020. Accessed June 13, 2022. 14. Substance Abuse and Mental Health Services Administration. Harm Reduction. <https://www.samhsa.gov/find-help/harm-reduction>. Updated June 8, 2022. Accessed June 13, 2022.