

THE OPIOID EPIDEMIC

HAL MARCOVITZ



CONTENTS

Introduction	4
The Victims of Opioids	
Chapter One	8
A Problem of Epidemic Proportions	
Chapter Two	20
How Do People Get Addicted?	
Chapter Three	31
Living in the Grasp of Opioids	
Chapter Four	43
Regulating Opioids	
Chapter Five	55
Prevention, Treatment, and Recovery	
Source Notes	66
Find Out More	71
For Further Research	74
Index	76
Picture Credits	80

CHAPTER TWO

How Do People Get Addicted?

Opioid painkillers are usually ingested in pill form. In the case of heroin, the drug is typically liquefied from a powder and injected into the body with a needle—although users are also known to inhale the powder through their noses or smoke it in pipes or rolled in cigarette papers. Regardless of how the user ingests opioids, they are soaked up by the blood, which carries the drugs on a quick journey through the body.

Although opioid painkillers are very effective in relieving pain, the drugs have nothing to do with healing the injury or curing the illness that causes the pain. A patient who swallows an opioid pill after breaking an ankle would not find the drug heading for the source of the injury where it enhances healing or deadens the pain just in the ankle. Rather, opioids are carried to the brain, which, essentially, makes the body believe it hasn't been injured.

As soon as the drugs arrive in the brain, they attach themselves to clusters of molecules known as opioid receptors. The arrival of the opioid drug then sparks the brain into releasing dopamine, a chemical that is known as a neurotransmitter. Dopamine helps people think, move their limbs, and feel emotions—particularly pleasure. Anybody who has heard a favorite song on the radio, enjoyed a tasty meal, laughed at a joke, or opened a birthday gift has experienced something of a “dopamine rush.”

In the case of opioids, the dopamine rush is so intense that feelings of deep and throbbing pain are made to disappear. And so are virtually all other feelings, thoughts, and emotions that people may find troubling. “My brain on [opioids] felt like pure heaven,” says Joani Gammill, who started using opioids as a

nursing student in college. “Euphoria and a sense of well-being enveloped my experience, and I felt truly happy for the first time in my life.”¹⁴

Developing Drug Dependencies

All opioids spark the release of dopamine, but not all opioids help release dopamine at the same pace. A heroin user may feel the rush of dopamine within seconds of injecting the needle into his or her arm. Somebody who consumes Percocet may have to wait fifteen minutes for the dopamine rush. Vicodin typically takes about thirty minutes before users start feeling the effects. The time it takes for the drugs to take hold, as well as the length of the drugs’ effects, depends on how the medications are formulated by their manufacturers.

Moreover, the effectiveness and length of the drugs’ pain-killing qualities have a lot to do with the size of their dosages. Doctors would ordinarily prescribe a much stronger dose of an opioid painkiller for the most severe conditions, such as cancer, than they would to reduce the pain emanating from a sprained ankle. And most people do follow their doctors’ orders: They take their opioid painkillers for only as long as they need them. As their injuries heal and their pain recedes, they take fewer pills or smaller doses and, when they feel better, they stop taking them.

However, some people find it very difficult to give up the intense feelings of pleasure brought on by a dopamine rush—and it is these users who frequently become addicted. “It can cause the person to want to recreate this sensation over and over again, and eventually, they start to need to stimulate it in order to avoid becoming sick by not taking,” says Massachusetts physician Peter Grinspoon, who has firsthand knowledge of opioid effects, having spent nine years addicted to Percocet. “On an [opioid], things can feel dream-like and unbelievably euphoric. You don’t feel physical or mental pain as much.”¹⁵

“On an [opioid], things can feel dream-like and unbelievably euphoric. You don’t feel physical or mental pain as much.”¹⁵

—Peter Grinspoon, Massachusetts physician and former opioid addict

Opioid addiction occurs because people develop dependencies on their drugs—they find they can’t function normally without



Some opioids are ingested in pill form. However, heroin is a powder that can be liquefied and injected in the body with a needle, or can be smoked.

consuming the opioid. People who take too many opioids over too long a period often find the chemistry in their brains changing: Since the dopamine produced by their brains is sparked by opioid drugs, eventually their brains stop producing dopamine on their own. Only with a kick-start from the opioid will the body produce the neurotransmitter. “If you repeatedly ingest drugs like [opioids], your brain will adapt,” says Gammill. “It has come to depend on the large influx of dopamine from the drugs and so stops producing dopamine naturally. This adaptation has the effects of not only reducing or eliminating the feelings of pleasure we would experience through normal activities but also of creating a powerful motivation to use the drug—if only to feel normal. At this point, addiction has now taken hold.”¹⁶

The Heroin High

As an opioid, heroin also provides a dopamine rush and—as with painkillers—a dependency on the drug can be developed very quickly. Many people who find themselves addicted to heroin typically did not start taking the drug to kill the pain of a broken rib or extracted tooth. Heroin has not been a legal drug in America for nearly a century. Therefore, for many years people who used heroin experimented with the drug solely for the euphoric effect—the high—and for no other reason.

However, recent studies have indicated that many people move on to heroin after first taking opioid painkillers. A 2014 study published in the *Journal of the American Medical Association (JAMA)* found increasing evidence to suggest that many

Doctors Often Overprescribe Opioids

Since evidence of the opioid epidemic first surfaced, the medical community has shouldered a great deal of the blame. Experts say doctors have been overprescribing the drugs—in other words, writing too many prescriptions for their patients. In fact, a 2016 study by the National Safety Council, a nonprofit group that promotes policies that enhance health and safety, concluded that a staggering 99 percent of doctors write prescriptions for opioid painkillers for periods of time beyond what their patients need—usually just seven days. The study found physicians almost always write prescriptions for opioid painkillers in doses that are stronger than what their patients need to address their pain. Also, the study reported that opioid prescriptions are typically written for many ailments that can be effectively addressed with non-opioid painkillers, such as over-the-counter products like Tylenol, Motrin, or Advil.

Among those ailments, the study said, is pain caused by toothaches. “Studies have shown that once we get beyond seven days of these [opioid] prescriptions for acute pain, the outcomes become much worse,” says Donald Teater, medical adviser for the National Safety Council. “[Patients] get on these for a long time and have a hard time getting off them.”

Quoted in John Keilman, “Almost All Doctors Routinely Overprescribe Pain Pills: Survey,” *Chicago Tribune*, March 24, 2016. www.chicagotribune.com.

people transition to heroin from opioid painkillers—either because their doctors cut off their opioid prescriptions or because heroin is cheaper. (On the black market, drug dealers may sell a single opioid pill for thirty dollars, whereas a dose of heroin may cost fifteen dollars.)

“It will cling to you like an obsessed lover. The rush of the hit and the way you’ll want more, as if you were being deprived of air—that’s how it will trap you.”¹⁹

—Sam, a fifteen-year-old heroin addict

Says the *JAMA* study, “Reports from law enforcement and substance abuse treatment professionals have long suggested that many individuals who become addicted to prescription painkillers eventually move on to heroin when it becomes too difficult or expensive to access prescription opioids.”¹⁷

For the first-time heroin user, a feeling of nausea might accompany the dopamine rush, but that ailment passes quickly as the drug takes effect. The rush provided by heroin arrives within seconds if injected (or about fifteen minutes if sniffed or smoked), providing the user with an intense feeling of euphoria. After a minute or so, the initial rush wears off but the high continues. According to the addiction treatment website TheGoodDrugsGuide.com,

Once the initial rush has passed, there can be a feeling of heaviness, as though your bones have melted down into your feet; followed by a feeling of distance from events around you, as though you’ve been wrapped in cotton wool. Heroin sedates the central nervous system clouding mental function and making you feel drowsy for several hours after a dose.

The result is a comforting glow and a deep sense of satisfaction. Any problems or stresses the user may have in his or her life seem very far away during this time, which can last for four or five hours. You may appear to be asleep, but actually be awake.¹⁸

As with opioid painkillers, though, people who go back for more are likely to find themselves developing dependencies on the drug: Their bodies will not manufacture dopamine without

the heroin kick-start. Sam, a fifteen-year-old heroin addict, told the advocacy group Foundation for a Drug-Free World, “When you first shoot up, you will most likely puke and feel repelled, but soon you’ll try it again. It will cling to you like an obsessed lover. The rush of the hit and the way you’ll want more, as if you were being deprived of air—that’s how it will trap you.”¹⁹

The Crash

The heroin high may last three or four hours. Afterward the user comes down. Heroin users often call this phase *crashing*, and it is easy to see why. Soon after the effects of the drug wear off, the user may feel irritable or depressed. These ill feelings can be so pervasive that the user soon seeks to renew the high by ingesting more heroin.



A heroin high usually lasts three or four hours. As the high wears off, many users experience intense symptoms such as irritability or depression. This is referred to as crashing, and it leads many users to seek out more heroin to avoid the crash.

According to TheGoodDrugsGuide.com, it is not unusual for a heroin user to seek a new high within twenty-four hours of crashing from a previous high. During the crash there are often physical symptoms as well, including insomnia, muscle aches, and diarrhea. Finding a way to escape these physical effects gives the heroin user a reason to ingest another dose of the drug. Says TheGoodDrugsGuide.com,

Since the drug affects the pleasure centers in the user's brain, their emotions may flat line in between times. After a time, the person may find that they don't have good feelings unless they are doing the heroin dance. In searching for a way to cope with or escape from negative feelings, they don't feel much of anything. The drug becomes the way for them to experience something positive in their lives.²⁰

When taken in prescribed doses, in accordance with doctors' orders, opioid painkillers generally do not spark the interstellar highs or deep comedowns that most heroin users experience.

"I would weep and laugh hysterically—I was convinced demons lived in my ceiling—and I could barely walk."²¹

—Cathryn Kemp, former fentanyl addict

Nevertheless, once patients start abusing the drugs—taking them in larger quantities than their doctors have prescribed as well as for longer periods—opioid painkillers are certainly capable of providing their own crashes.

British patient Cathryn Kemp found herself addicted to fentanyl after her release from the hospital in 2007 for treatment of pancreatitis, an inflammation of the pancreas. In 2008 she continued to take fentanyl tablets as a pain reliever, but after a breakup with a boyfriend she started relying on the opioid to ease her depression. Within a short time she was taking some thirty fentanyl tablets a day—and soon even more. She describes the crashes that afflicted her between pills:

By the end of 2009 I had tried to cut down but the more I was taking the worse the withdrawal symptoms became.

At this stage I needed to have six every morning on waking just to stop the shaking and vomiting, since my body [absorbed] the previous day's dose overnight. I was taking forty-five lozenges throughout the day simply to keep these withdrawal symptoms at bay. I would weep and laugh hysterically—I was convinced demons lived in my ceiling—and I could barely walk.²¹

A Young Football Player's Story of Addiction

Growing up in the Seattle, Washington, suburb of Kitsap County, John Haskell lived and breathed football. By the age of thirteen, he already weighed 250 pounds (113 kg), large enough to play on the offensive and defensive lines on his middle school team. But John also sustained many injuries, including five concussions, and was living in constant pain.

His family doctor prescribed Vicodin. "I assumed it was perfectly fine," says John. "All I noticed was how the meds made me feel. There was no more pain going on." But John began relying too much on his Vicodin prescription to kill the pain, and he was soon addicted. "That high became all I cared about," he says. "Once I started, there was no turning back."

Within a year of beginning his Vicodin prescription, John moved on to heroin. John's parents missed the signs of his addiction. Their attention was focused mostly on the health of his mother, who suffered from multiple sclerosis, a debilitating illness that often leaves patients crippled. When he was sixteen, though, John's parents finally intervened and sent him to a drug rehabilitation program. John did emerge successfully from drug rehab.

But many teen addicts do not. "If teens are introduced at such a young age to powerful prescription drugs like Vicodin, you're only going to see damaging effects," says Jamison Monroe, director of Newport Academy, the drug treatment facility in California that treated John. "And the younger the person is, the more likely they are to become addicts."

Quoted in Blake Wyman, "Is Your Teen Addicted to Painkillers? I Was, Says Former Football Star," *Hamilton Spectator* (Ontario, Canada), April 24, 2017. www.thespec.com.

SOURCE NOTES

Introduction: The Victims of Opioids

1. Zachary Siegel, "Prince's Death Reveals What's Wrong with Addiction Treatment," *Daily Beast*, June 2, 2016. www.the-dailybeast.com.
2. Quoted in Jessica Boddy, "Poll: More People Are Taking Opioids, Even as Their Concerns Rise," *National Public Radio*, March 3, 2017. www.npr.org.
3. Quoted in Teresa Carr, "Prince's Death and the Addiction Risk of Opioids," *Consumer Reports*, June 2, 2016. www.consumerreports.org.
4. Quoted in Carr, "Prince's Death and the Addiction Risk of Opioids."
5. Quoted in Joseph Pleasant, "Fentanyl: Deadly on the Streets but Lifesaver in the Operating Room," *WKRN*, March 16, 2017. www.wkrn.com.
6. Quoted in Pleasant, "Fentanyl."

Chapter One: A Problem of Epidemic Proportions

7. US Department of Health and Human Services, "The Opioid Epidemic: By the Numbers," June 2016. www.hhs.gov.
8. Edward M. Brecher, *The Consumers Union Report on Licit and Illicit Drugs*, 1972. www.druglibrary.org.
9. Russell Portenoy and Kathleen Foley, "Chronic Use of Opioid Analgesics in Non-Malignant Pain: Report of 38 Cases," *Pain*, May 1986. www.ncbi.nlm.nih.gov.
10. Quoted in Sonia Moghe, "Opioid History: From 'Wonder Drug' to Abuse Epidemic," *CNN*, October 14, 2016. www.cnn.com.
11. Quoted in Jessica Bliss, "Retired Nurse Couldn't Save Own Daughter from Opioids," *Tennessean* (Nashville, TN), December 17, 2016. www.tennessean.com.
12. Quoted in Bliss, "Retired Nurse Couldn't Save Own Daughter From Opioids."
13. Quoted in Pierre Thomas and Brandon Baur, "Waging War on Heroin in the Suburbs," *ABC News*, October 28, 2014. <http://abcnews.go.com>.

FIND OUT MORE

American Medical Association (AMA)

AMA Plaza
330 N. Wabash Ave., Suite 39300
Chicago, IL 60611-5885
website: www.ama-assn.org

The AMA advises physicians on best practices for reducing opioid use among their patients. Visitors to the AMA website can find information on the AMA Task Force to Reduce Opioid Abuse, which discusses such issues as Naloxone, state databases that monitor opioid prescriptions, and guidelines for how physicians should prescribe opioid painkillers.

Canadian Centre on Substance Abuse (CCSA)

75 Albert St., Suite 500
Ottawa, ON
K1P 5E7 Canada
website: www.ccsa.ca

The CCSA monitors the abuse of alcohol and drugs among Canadian citizens. Many reports on opioid abuse and related topics are available for downloading on the organization's website, including its 2015 comprehensive report, *Prescription Opioids*.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

Praça Europa 1, Cais do Sodré
1249-289 Lisbon
Portugal
website: www.emcdda.europa.eu

The EMCDDA monitors drug addiction trends in thirty European countries. Visitors to the organization's website can download a copy of *European Drug Report 2017*, which provides an overview of the drugs that are abused in Europe, including opioids.

FOR FURTHER RESEARCH

Books

Fareed Ayman, *Opioid Use Disorders and Their Treatment*. Hauppauge, NY: Nova Science Publishers, 2014.

Judy Foreman, *The Global Pain Crisis: What Everyone Needs to Know*. New York: Oxford University Press, 2017.

Joani Gammill, *Painkillers, Heroin, and the Road to Sanity: Real Solutions for Long-Term Recovery from Opiate Addiction*. Center City, MN: Hazelden, 2014.

Sam Quinones, *Dreamland: The True Tale of America's Opiate Epidemic*. New York: Bloomsbury Press, 2015.

Herbert Stephenson, *Junkbox Diaries: A Day in the Life of a Heroin Addict*. Chicago: Joshua Tree, 2017.

Internet Sources

Walter Bird Jr., "Pill Man: One Man's Fight to Overcome Opiate Addiction," *Worcester Magazine*, July 17, 2014. <https://worcestermag.com/2014/07/17/pill-man-one-mans-fight-overcome-opiate-addiction/25284>.

Alison Block, "A Doctor's Dilemma: Do I Prescribe Opioids?," *Washington Post*, June 10, 2016. www.washingtonpost.com/opinions/a-doctors-dilemma-do-i-prescribe-opioids/2016/06/10/be4bb51e-2c31-11e6-b5db-e9bc84a2c8e4_story.html?utm_term=.0f67f7f80613.

Jessica Boddy, "Poll: More People Are Taking Opioids, Even as Their Concerns Rise," National Public Radio, March 3, 2017. www.npr.org/sections/health-shots/2017/03/03/518155165/poll-more-people-are-taking-opioids-even-as-their-concerns-rise.

Teresa Carr, "Prince's Death and the Addiction Risk of Opioids," *Consumer Reports*, June 2, 2016. www.consumerreports.org/drugs/prince-death-and-addiction-risk-of-opioids.

TheGoodDrugsGuide.com, "What Is Heroin?," 2017. www.thegooddrugsguide.com/heroin/index.htm.

Kenneth Lin, "Lying to Receive Pain Medications Hurts Patients in True Pain," *KevinMD.com* (blog), August 28, 2014. www.kevinmd.com/blog/2014/08/lying-receive-pain-medications-hurt-patients-true-pain.html.

Sonia Moghe, "Opioid History: From 'Wonder Drug' to Abuse Epidemic," CNN, October 14, 2016. www.cnn.com/2016/05/12/health/opioid-addiction-history/index.html.

New York Times, "Inside a Killer Drug Epidemic: A Look at America's Opioid Crisis," January 6, 2017. www.nytimes.com/2017/01/06/us/opioid-crisis-epidemic.html?_r=2.

PBS, "Chasing Heroin," February 23, 2016. www.pbs.org/wgbh/frontline/film/chasing-heroin.

Eli Saslow, "How's Amanda? A Story of Truth, Lies, and an American Addiction," *Washington Post*, July 23, 2016. www.washingtonpost.com/sf/national/2016/07/23/numb.

Chris Villani, "Doctors Pioneer Pot as an Opioid Substitute," *Boston Herald*, October 4, 2015. www.bostonherald.com/news_opinion/local_coverage/2015/10/doctors_pioneer_pot_as_an_opioid_substitute.

INDEX

Note: Boldface page numbers indicate illustrations

- Access to Opioid Medication
 - in Europe (ATOME), 49
- addiction/addiction rate
 - development of, 21–22
 - among military veterans, 28–29
 - in rural areas, 19
- American College of Physicians (ACP), 61
- American Medical Association (AMA), 48
- American Society of Addiction Medicine, 8

- Bailey, David, 36–37
- Block, Alison, 54
- Brackett, Tiffany, 56
- Brady, Kathleen, 19
- brain
 - dopamine and, 20
 - long-term opioid use and changes in, 22, 58
 - opioid receptors in, 34
 - drugs blocking, 55–56, 64
- Brecher, Edward M., 11–12
- Burke, John, 40

- Canadian Centre on Substance Abuse, 8
- Carson, Kit, 10
- Casavant, Marcel, 34

- Castlight Health, 14, 19
- Centers for Disease Control and Prevention (CDC)
 - on deaths from prescription opioids, 8, **10**
 - among women, 15
 - issues guidelines on prescribing opioid drugs, 45
 - on prevalence of opioid prescriptions, 14–15
 - on states with highest/lowest rates of opioid prescriptions, 62
- Civil War, use of morphine in, 9, **13**
- codeine, 12
- cognitive-behavioral therapy (CBT), 58, 60
- constipation, opioid induced, 34
- Controlled Substances Act (1970), 64
- Cornacchia, Michael, 30
- crashing, 25–27
- Cuomo, Andrew, 6–7

- Davis, Pat, 61
- deaths, from opioid overdoses, 8
 - among women, 15
 - states with largest increases in, **10**
- Department of Health and Human Services, US (HHS), 8, 15