

# Opium: A brief history



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By Associate Producer Scott Calbeck, © 2011.

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**OPIUM: A BRIEF HISTORY**

by Scott Calbeck

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**Introduction: A “World Pain Crisis”?**

For over five thousand years, people have recognized the medicinal value of the poppy. It is just a flower, but the opium it produces is the source of the most potent pain relievers known to man. Every day doctors prescribe the morphine and codeine that derive from opium. However, morphine is also used to produce heroin. Opium is both a “gift of the gods” and a scourge of modern society.

Opium, morphine, and heroin form the basis of a multinational trade, both legal and illegal, that is larger than the gross economies of some countries. Today in Afghanistan, despite efforts to introduce alternative crops, poppy cultivation is the backbone of the rural economy. The bulk of the country’s poppy crop comes from Helmand and Kandahar provinces, where a majority of residents are rural and there are few ways to earn a living from this land today.

Before the Soviet Union’s invasion of Afghanistan in 1979, Kandahar province boasted a wide range of crops. There was fruit: many people grew apples, apricots, grapes, pears, plums, and pomegranates. Others produced cotton, barley, corn, sesame, sunflowers, and wheat. But decades of war, and drought, have changed that. Some farmers still cultivate wheat. But they make ten times less than farmers who choose to grow *Papaver somniferum* – the opium poppy.

Cultivation of the poppy is labour intensive, providing income for thousands of people. The plant thrives in the arid conditions of southern Afghanistan, as it is hardy and requires less water than other crops. Raw opium is easy to store for a long time, with no spoilage and no loss of potency.

Perhaps most important, the world’s constant demand for heroin means that opium dealers are willing to pay farmers in advance. The opportunity to receive money in November’s planting season for a crop that will not be ready to harvest until spring is a powerful incentive for peasants with no other way to earn cash.

From merchants of the British East India Company in the mid-eighteenth century, to gangsters of the French Connection in the mid-twentieth century, to the Taliban and its supporters in present-day Afghanistan, people have sought to profit from the opium trade.

But the fact that Afghanistan treats cultivation of the opium poppy as a crime not only deprives destitute farmers of the necessities of life – it deprives the world of something many of its citizens desperately need to kill pain.

The World Health Organization estimates that there will be ten million cases of cancer per year in developing countries, in addition to millions of people with HIV/AIDS. It describes the likely demand for opium-based medicines as the source of a world pain crisis.

The International Narcotics Control Board licenses the traffic in morphine and codeine. It reports that the richest nations – Australia, Britain, Canada, France, Germany, Japan, and the United States – consume nearly all of the world's legal opiates, leaving eighty per cent of the globe's population virtually without.

Meeting global demand for pain medication would require perhaps about double the current Afghan production. Purchasing the entire annual Afghan poppy crop at the current market price, which drug warlords set, would cost about \$600 million – roughly 10 per cent of what the United States spends in a month on the Afghan war.

### **Opium: Relief from Suffering**

Opium and its derivatives, which include morphine, codeine, and thebaine, are narcotics – from the Greek *narcosis* (benumbing or deadening). These substances not only relieve pain; they also change mood and behaviour, producing a relaxed feeling of well-being or relief. Therefore they reduce the anxiety that often accompanies and can even worsen pain. Today, medicines from opium treat pain incredibly effectively in four key clinical areas: cancer, HIV/AIDS, post-operative treatment, and general chronic pain.

Most patients taking narcotics state that they are experiencing just as much pain as they did without the medication, but they find the pain less troubling. Narcotics constrict the pupils of the eyes, slow breathing, and widen the veins of the skin, which effects make the body look flushed and feel warm. They slow the digestive system and are a traditional remedy for diarrhoea. They have a calming action on coughs and have long been standard treatment for them.

Humans have always searched for ways to relieve pain. Opium was probably the first drug that early peoples discovered, and one of the oldest civilizations cultivated opium: the Sumerians, who lived six thousand years ago in the Fertile Crescent – the area surrounding the Tigris and Euphrates rivers in present-day Iraq. They valued *hul gil* (the plant of joy) for its ability to relieve pain. They introduced opium to the Assyrians, who in turn shared it with the Babylonians. The Babylonians passed on their knowledge to the Egyptians.

The opium poppy was historically indigenous throughout Europe, the Middle East, and North Africa. Egyptian records show that trade in and consumption of opium flourished under several pharaohs, including King Tutankhamun. Archaeologists have found opium-extracting equipment in the tombs of pharaohs, for whom it was to help harvest poppies in the next life.

Egyptians usually ate the plant, although some pressed the entire flower to make poppy juice. Most families kept a stock in their homes and used it to treat asthma, digestive disorders, and headaches, as well as colic. Archaeologists have uncovered a "Remedy to Prevent the Excess Crying of Children": "Mix opium with the excretions of flies found on the walls, strain to a pulp, pass through a sieve, and administer on four successive days. The crying will stop at once."

In the early twentieth century, North Americans were still using opium to treat colic. And the method of harvesting it has not changed in all these millennia.

### **The Spread of the Opium Poppy: From the Greeks to the Chinese**

Opium poppy plants grow in temperate climates around the world. They bear flowers that range in colour from pure white to brilliant purple. The female structure – the pistil – lies at the centre of the flower. After pollination, seeds begin to mature within the pistil, which swells to form a seedpod. Within a few days, the flower petals fall off to expose the seedpod. If farmers leave the seedpod on the plant, the seeds mature and dry out. Poppy seeds are useful in cooking and baking and are also convertible to oil.

But scoring the pod with shallow cuts by a knife releases opium in the form of thick, white resin that oozes from the slits. As it contacts the air, the resin darkens and congeals. People then scrape it from the seedpod and combine it with resin from other

plants to form a ball of crude opium. They then boil and filter this crude opium and shape it into blocks. In contrast to many other agricultural crops, opium is non-perishable, easy to store, low in weight, and high in value.

Homer knew about opium. In the *Odyssey*, Helen adds it to the wine to lighten the mood at a gathering following an encounter on the fields of Troy. Many Greeks believed that opium had metaphysical qualities, but Hippocrates disagreed, seeing it as potentially beneficial only if one used it sparingly and under control. He worried little about its potential abuse – to him, alcohol seemed a far more dangerous social addiction.

Alexander the Great knew about opium, and introduced it to India and Persia. The Romans learned about opium and other medicines from the Greeks. Roman citizens used opium as the equivalent of aspirin; they ate it with honey, to suppress its bitterness, or drank it as a juice. Opium was available in local shops and from travelling salesmen. The great philosopher-emperor Marcus Aurelius was an addict.

Arab physicians recognized the substance for its medicinal virtues. But partly because Islam forbade alcohol, opium became a popular social drug. By the seventh century, natives of what is now Turkey developed a new way to use the substance. Instead of eating it or brewing parts of the plant to make a tea, they found that heating a ball of opium and inhaling the smoke it produced allowed them to experience the benefits much faster. What they did not know was that smoking opium rather than eating it was more likely to make users dependent.

The expansion of the Arab world in the Middle Ages brought traders into contact with Persia (Iran), India, and China. Opium grew well in India and became a major source of revenue for the Mogul empire in the north. Arab traders had introduced opium to China during the eighth century. It soon became a valuable item in medicine cabinets there, and remained primarily a remedy rather than a recreational drug for nearly one thousand years.

But by the end of the nineteenth century opium would become a poignant symbol of Chinese decline, thanks in large part to one of the largest drug cartels the world has ever known: the British government.

### **Britain, China, and the Opium Wars**

Imagine that a Colombian drug cartel launches a successful military offensive against the United States and forces the country to legalize cocaine and allow its importation into major cities, without supervision or taxation. The cartel then forces the United States to reimburse it for the costs of the war. Less than two hundred years ago, the British did just that to China; the drug in question was opium.

Only a few centuries ago, China was a mysterious and unknown country to much of the world. As Western powers began the age of exploration by sea, Portugal and Spain were the first to make contact with it and enjoyed a virtual monopoly of trade there in the sixteenth century. In 1557 the Chinese emperor allowed the Portuguese to lease the small peninsula of Macao in the south.

The ruling philosophy, Confucianism, looked down on traders no matter what their culture. So the Chinese viewed the foreigners with contempt as barbarians, and would deal with their traders only through the port of Canton. But while the empire would soon find Europe a huge market for its tea, silk, and porcelain, it was otherwise self-sufficient and had little need to import foreign goods.

Many Chinese, however, developed a passion – which would, for millions, become an addiction – for smoking a mixture of tobacco and Indian opium in a pipe. The Spanish had introduced pipe smoking to China. By the early seventeenth century, Indian opium was for sale in China. As the habit of smoking opium spread, the emperor issued an edict in 1729 banning the smoking of the substance and its importation. But the vast country had close to 300 million people. How to enforce any ban – especially against a substance that addicted its users? The penalty for dealing in opium was strangulation. But there were so many addicts that smugglers were willing to ignore the imperial decree.

The British were latecomers to the trade, but as their influence in India grew they took over the rich opium fields of Bengal. In 1772 the British governor general, Warren Hastings, established a colonial monopoly on opium and gave the British East India Company the exclusive right to purchase it from Bengal's farmers.

The British had developed a love affair of their own – with tea. In 1664 King Charles II received two pounds of black, strange-smelling leaves from China. By 1785, Britain was importing 15 million pounds of tea a year from that nation. A huge trade

imbalance resulted, because the self-sufficient Chinese insisted on payment in silver. The solution was opium. It was an ideal cargo – easy to transport, non-deteriorating, low in weight, and very valuable, producing huge profits. Its addictive properties guaranteed an expanding market.

As the opium trade was officially illegal in China, the British East India Company licensed – and controlled – private traders who smuggled the substance to Macao. Rapid travel from India to China was essential, to avoid both storms and pirates, and a new kind of ship emerged – the sleek, fast opium clipper. Crews transferred huge quantities of opium on the island of Lintin to fast Chinese vessels with flat bottoms – “fast crabs” – which used up to forty oarsmen. The death penalty awaiting anyone on capture spurred the process.

In 1799 the Chinese emperor decreed a total ban on opium, but increasing local demand meant that the trade continued to flourish. By the 1830s, three million addicts were consuming 1,500 tons of Indian opium each year.

There was opposition in Britain to the country’s involvement in the opium trade. Some people felt it inconsistent with the honour and duty of a Christian kingdom; others called it a national crime. But tax revenues from opium were an important source of revenue for the government in Britain. If the Chinese had a physical addiction, the British had a financial one.

Parliament finally revoked the British East India Company’s charter in 1833. But free traders flocked to Macao, and the illegal sale of Indian opium continued to thrive all along the Chinese coast. Opium was by now undermining the country’s social and economic life; its use was rampant among soldiers and civil servants. The emperor’s apparent powerlessness seemed a threat to the survival of his dynasty. The government decided to target British traders and demand that they surrender their opium. When the British relinquished only a token amount, authorities banned all trade and movement of British ships along the Canton River.

From 1839 to 1842 (the First Opium War), a British expeditionary force shelled and captured various cities in China, whose armed forces were unable to defend them. This predicament humiliated the Chinese and highlighted their weakness. The Treaty of Nanjing forced them to cede the island of Hong Kong to Britain for 175 years and open other ports to foreign trade. Over the next ten years, the empire’s import of Indian opium doubled.

In 1856 the Chinese, furious about the flood of a product that they had declared illegal, seized a ship smuggling opium. The vessel was flying the Union Jack. The British responded by bombarding Canton. Fighting went on from 1856 to 1860 (the Second Opium War) and culminated with the invaders destroying the emperor’s Summer Palace in Peking (Beijing). The palace boasted eighty square miles of exquisite parkland and gardens. Its two hundred pagodas, palaces, and pavilions housed libraries, artwork, and other treasures. It took two days for this living museum to burn to the ground.

A new treaty opened more Chinese ports to trade and made importation of opium legal. Over the next twenty years, imports of opium from India continued to rise. Chinese officials fostered local production to cut into the Indian trade, but this also encouraged more use and addiction at home.

By 1906 over 13 million Chinese addicts were consuming almost 40,000 tons of opium a year. When the Japanese occupied the country in the late 1930s they found that about ten per cent of the population – 40 million people – were addicts, so they flooded the nation with opium and morphine. After 1949, Communist rulers finally ended the opium problem, executing dealers and forcing users into treatment.

In some ways the havoc that heroin addiction has brought to the West in the last century seems almost poetic justice for its economic and political exploitation of a decaying Chinese empire. Some observers have said that the British empire really began to decline when the British gave up the opium business.

## **Opium in the West**

### ***The Early Modern Era***

By 1900 opium was also becoming prevalent in Europe, even though it was not new there. Knights returning from the Crusades had brought opium with them, and it soon became a substance of legend.

When the Catholics drove the Moors from Spain and the influence of Islamic traders diminished in the fifteenth century, the Venetians took over the opium trade. Merchants and rulers asked Columbus, Cabot, da Gama, and Magellan to bring back opium from their voyages of discovery.

In the late 1500s Paracelsus, an eccentric physician, philosopher, and healer from Switzerland, developed a new method of consuming opium. He realized that its components did not dissolve easily in water because of their alkaline nature.

By experimenting, he found that he could completely dissolve the substance in alcohol. He created a mixture of opium in brandy that he named laudanum – “something to praise.” He claimed that it could treat any disease that caused pain. He even boasted that patients whom pain had restricted to their beds regained much of their former, active lives after taking it. Interest in laudanum surged. The drink became popular as a medicine and for recreational use.

In 1680 Thomas Sydenham, an English physician and apothecary, revised Paracelsus’s recipe to make “Sydenham’s Laudanum.” Containing opium, sherry wine, saffron, cinnamon, and cloves, his brew not only tasted better – it cost less, too. He became an enthusiastic proponent: “I cannot forbear mentioning with gratitude the goodness of the Supreme Being, who has supplied afflicted mankind with opiates for their relief; no other remedy being equally powerful to overcome a great number of diseases, or to eradicate them effectually.”

### **Nineteenth-Century Britain**

Thomas de Quincey was one of the first Europeans to write about opium. After taking it to treat pain from a toothache, he continued to use it recreationally. He began to save his supply for events such as a trip to the opera, because it enhanced his senses and made the experience seem larger than life. His *Confessions of an English Opium Eater* appeared in 1822: “That my pains had vanished was now a trifle in my eyes ...Here was the secret of happiness, that which philosophers had disputed for so many ages, at once discovered; happiness might now be bought for a penny, carried in the waist coat pocket; portable ecstasies might be had corked up in a pint bottle; and peace of mind could be sent down by the mail.” De Quincey’s *Confessions* popularized the drug, but few people read his later *Miseries of Opium*, about the agonies of his addiction.

English chemists (i.e., pharmacists) stocked opium liniment, opium pills, opium soap, opiate lozenges, and opiate plasters. Many cough syrups and elixirs contained opium. Thomas Dover was a well-known sea captain, and rescued the real-life Robinson Crusoe. When his sailing career ended, he announced plans to spend the rest of his life healing people. But he was already forty and unwilling to go to medical school. He preferred to heal people with his own opium elixir. His friendships with sailors active in the opium trade allowed him to obtain all the opium he needed. Dover’s Powder became one of the best-selling self-remedies in England.

Opium formed the base of several soothing baby syrups. In 1862 a pharmacist in Nottingham estimated that he sold 12,000 doses a week, mostly to poor women who had to work long hours and take care of children. Soothing syrups helped to keep the youngsters quiet; they also suppressed hunger and therefore saved on food.

Laudanum continued in use. Victorian doctors often prescribed it for “neurasthenia” – fatigue, headache, and irritability or, less charitably, “women’s troubles” or “female complaints.” The great poet Elizabeth Barrett Browning consumed it most of her adult life. Historians disagree on her original reasons for trying it, but most concur that she continued with it to treat her neurasthenia:

It might strike you as strange that I who have no pain – no acute suffering to keep down from its angles – should need dope in any shape. But I have had restlessness until it made me almost mad.

At one time I lost the power of sleeping quite – and even in the day, the continual aching sense of weakness has been intolerable – besides palpitation – as if one’s life, instead of giving movement to the body, were imprisoned undiminished within it, and beating and fluttering impotently to get out, at all the doors and windows.

So the medical people gave me opium – and ever since I

have called it my drink of the gods, my elixir – because the tranquilizing power has been wonderful.

### **The New World**

Opium travelled with settlers to the New World in the early 1600s. Newcomers planted poppy seeds and grew fields of opium. As people had done for centuries – and continue to do today – they made cuts in the seedpod and scraped the resin from it. Then they dissolved the gooey sap in whisky to treat pain and coughs. They also allowed some plants to mature and collected the small black seeds for breads, pastries, and cooking oil.

During the California gold rush (1849-60), large numbers of Chinese people immigrated to North America, bringing with them many of their customs. Some established opium dens – quiet rooms where customers could buy and smoke the substance under the proprietor's watchful eye.

For the first twenty years Chinese immigrants were the dens' only customers; white settlers, viewing the places with suspicion, did not enter. Some locals feared the activity because they thought it dangerous; others disliked the Chinese immigrants. Many others simply thought it a strange and sinful practice. However, by 1868, Americans began to smoke opium.

The frontier town of Deadwood, South Dakota, was infamous in the Old West: it catered to every conceivable vice, including prostitution, drinking, and gambling. But the sheriff was shocked when he found members of the middle class smoking opium. Afraid that this vice would rob a man of all semblance of manhood, he closed all ten opium dens.

But some historians have suggested that people in the Old West used more opium than alcohol. Famous cowboys such as Kit Carson and Wild Bill Hickok were regular customers in opium dens. The Old West might conjure up for us images of saloons full of cowboys, but in reality many cowboys were lying on cots in opium dens – a novel way to pass the day in a pleasant, pain-free stupor.

In San Francisco in the 1890s, a physician estimated that at least ten thousand locals had the habit: "A large portion of the city had taken up smoking opium, hitting the pipe as often as three times a day. I found girls from sixteen to twenty years of age lying half-undressed on the floor or couches, smoking with their lovers." By this time, the British were consuming around 60,000 pounds of opium a year. There was trade in Bristol, Dover, and Liverpool, and auctions took place every two weeks in London.

### **Opium Dens in the Nineteenth Century**

There were dens all over the world in the nineteenth century, in large port cities such as Hong Kong, London, New York, San Francisco, and Sydney. The phrase "to be hip" described the reclining position of the customers. The best smoke required that the flame and the ball of opium combine at the right temperature and the right angle.

Novelist Graham Greene explained his state of mind after trying opium for the first time:

My mind felt alert and calm – unhappiness and fear of the future became like something dimly remembered which I had thought important once. I, who feel shy at exhibiting the grossness of my French, found myself reciting a poem of Baudelaire to my companion.

When I got home that night, I experienced for the first time the white night of opium. One lies relaxed and wakeful, not desiring sleep. We dread wakefulness when our thoughts are disturbed, but in this state one is calm – it would be wrong even to say one is happy – happiness disturbs the pulse.

And then suddenly without warning one sleeps. Never has one slept so deeply a whole night-long sleep, and then the waking and the luminous dial of the clock showing that twenty minutes of so-called real time have gone by.

Whether in a den in the south of France, in a room off an alley in San Francisco, or in the home of a rich mandarin in Canton, the smoker followed a traditional procedure. The layout usually consisted of a pipe, a spirit lamp, a large needle and a container of opium paste, a scraper for cleaning out the bowl, a sponge, scissors for trimming the wick of the lamp, and a set of scales for measuring out the opium.

A new type of opium pipe was developed in China, and consists of a long stem or tube, a ceramic bowl, and a metal saddle that holds the bowl. The opium is not burned but converted to a vapour and inhaled. Opium pipes range from simple bamboo tubes to exquisite ivory or jade carvings.

The smoker makes himself or herself comfortable – the most efficient position for smoking is reclining. He takes a pea-sized ball, or pill, of the paste with the needle and holds it over the lamp's flame until the opium bubbles and swells and turns golden. Pushing the opium into the hole in the bowl, he holds the bowl close to the lamp so that the flame hits the ball of opium and takes deep pulls at the pipe until the opium is completely consumed.

Some people had alternatives to opium dens: in the United States in the late nineteenth century, the majority of male addicts were physicians. Some opium dens were houses of prostitution, and it became easy for Westerners to demonize opium dens as places where Chinese men seduced middle-class white girls. Unfamiliar Chinese habits, languages, and mannerisms could seem menacing to Westerners. Chinese opium dens became a focus of international contempt.

For many people, however, opium was representative of the intriguing and exotic ways of foreign lands. But anti-drug crusaders forced governments to heed demands for a halt to the trade. In the course of a few decades, taking opium changed from an exotic if legal vice to a criminal activity run by gangs selling drugs on the streets. Heroin was easier to surreptitiously consume, and by the turn of the twentieth century opium dens had become a thing of the past.

### **The Discovery of Morphine (1806)**

Scientists had long worried about opium's addictive nature. A number of them studied it in the early nineteenth century in the belief that its active pain-relieving ingredient alone would not be addictive.

In 1806 a German pharmacist's assistant, Friedrich Serturmer, changed medicine and the treatment of pain. He diluted opium in acid and then neutralized it with ammonia. His research showed that opium was a mixture of sugars, resins, waxes, water, and more than twenty alkaloids. One of these alkaloids had a dramatic sleep-inducing effect on animals. Serturmer named it morphine after Morpheus, the Greek god of dreams. He also experimented with it on himself, and the results frightened him: "I consider it my duty to attract attention to the terrible effects of this new substance in order that calamity may be averted."

But many experts hailed morphine as the next wonder drug. By the mid-1820s it was widely available in western Europe. Florence Nightingale, as a nurse with the British army in the Crimea in the 1850s, used sharpened quills to administer it. Its value as a pain reliever greatly increased in 1853, when Dr. Alexander Wood perfected the hypodermic syringe.

Rather than have patients eat or drink a morphine elixir, doctors could now deliver a measured dose. Bypassing the digestive system also gave faster results. In addition, doctors believed that opium was addictive because it was digested in the stomach. Introducing morphine directly into the bloodstream, they assumed, avoided the threat of addiction.

Morphine and the hypodermic syringe were ready for use in the U.S. Civil War and the Franco-Prussian War. Medical personnel administered it orally and by injection to help quell the pain of injuries and emergency surgery. They distributed it liberally to treat dysentery and malaria. According to historian Martin Booth, "Union Surgeon Major Nathan Mayer did not even dismount from his horse to dispense opium. He poured out what he termed 'exact doses' into his hands and let recipients lick it from his gloves." Sadly, Serturmer's wonder drug turned soldiers into addicts – it has been claimed that what came to be called the "soldiers' disease" afflicted as many as 400,000 Civil War veterans.

At one time, surgeon William Halsted was suffering from addiction to cocaine, a highly stimulating drug. Advertisements promoted morphine as a safe, non-addictive drug that could treat addiction to other drugs. Halsted tried it and weaned himself off cocaine. However, he was never able to escape his daily fix of morphine. Medical professionals often experimented on themselves with new drugs when manufacturers introduced them. In educating himself about medications to help his patients, Halsted learned at first hand about the addictive powers of the opiates.



Even though morphine addiction and its symptoms were gaining recognition, very few people fully understood its dangers, and its use continued to spread through the century. In both Europe and the United States, many members of the middle class and high society injected the drug daily, as a "cure" for opium addiction, to treat pain, or for the pleasurable feelings it gave. Stores and magazines openly sold morphine and syringes; the Sears catalogue featured syringe kits. By 1900 the United States had perhaps 100,000 morphine addicts.

Most habitués began through medical use of the substance. Pharmacies sold a variety of remedies that contained either morphine or opium. Paregoric, a mixture of opium and alcohol, was advertised as a treatment for babies with upset stomachs. It is one of the few early opium remedies still available today.

As doctors documented more and more morphine addiction, their concerns grew. Eventually, they could no longer ignore the new drug's darker side. John Witherspoon, later president of the American Medical Association, begged his colleagues to "save our people from the clutches of this hydra-headed monster which stalks abroad through the civilized world, wrecking lives and happy homes, filling our jails and lunatic asylums, and taking from these unfortunates, the precious promise of eternal life."

### **The Discovery of Heroin (1874)**

Soon researchers turned back to the laboratory in pursuit of that elusive, non-addicting pain killer. In 1874 English pharmacist C.R. Alder Wright cooked morphine with acetic anhydride and obtained a white, crystalline powder that he named diacetylmorphine. After testing the chemical on dogs, Wright found that it caused "great prostration, fear, sleepiness speedily following the administration and a slight tendency to vomiting." He decided against any further research on it.

In 1897, German scientists at Bayer Pharmaceutical Company re-examined his finding with a different perspective. Heinrich Dreser, head of the lab, realized the commercial possibilities of a morphine-related medication. He set out to test diacetylmorphine on a variety of animals, including fish, frogs, and rabbits. He even tested it on the workers at the Bayer plant. The drug provided them with instant pain relief along with intense euphoria and several hours of dreamy relaxation. Most of them loved it, and some reported that it made them feel strong, even "heroic" – hence the name heroin.

By 1898 Bayer was manufacturing the chemical and promoting it as a treatment for asthma, bronchitis, and coughing, as well as a cure for morphine addiction. Optimistically, Bayer claimed that the treatment had the pain-killing properties of morphine but none of the troublesome addictive effects.

Bayer sent samples to doctors all over the world and began an aggressive advertising program. By 1899 it was producing a ton a year. Heroin became one of its most valuable products, making up 5 per cent of its drug sales. The majority of its heroin landed in the United States, where the drug was an immediate sensation. Initially the American and other national medical communities were as keen about the substance as they had been about morphine. In 1900 the *Boston Medical and Surgical Journal* commented: "It possesses many advantages over morphine. It's not hypnotic and there's no danger of acquiring a habit."

Many doctors prescribed it to relieve constant, hacking coughs. Physicians were also seeking new ways to treat fatal respiratory diseases such as tuberculosis and pneumonia. Antibiotics held promise but were relatively new and not yet able to eliminate many deadly respiratory conditions. Heroin quickly became their choice for incurable tuberculosis, and doctors prescribed it to hundreds of patients to stop their painful coughs.

Slowly, reports of addiction trickled back to the U.S. medical community, and warnings began to appear in the literature. In 1903 Dr George E. Pettey wrote "The Heroin Habit: Another Curse" in the *Alabama Medical Journal*. He reported that in the last 150 cases he had treated for addiction, heroin was the culprit in eight cases, three of them during treatment by medical professionals.

Even so, some physicians did not readily believe the drug was dangerous. Across the country, medical practitioners continued to prescribe heroin. In 1911 John D. Trawick of Kentucky described the dilemma: "I feel that bringing charges against heroin is almost like questioning the fidelity of a good friend. I have used it with good results, and I have gotten some bad results, such as a peculiar band-like feeling around the head, dizziness, etc., but in some cases referred to, it has been almost uniformly satisfactory."

Many proponents had read reports that directly conflicted with their own observations. The discrepancy was due to two factors. Most of these physicians prescribed heroin in pill form, which caused addiction so gradually that neither they nor patients noticed it. Also, scores of patients suffered from life-long health problems, so they never stopped taking the medicine, and therefore never suffered withdrawal symptoms – the standard signal of addiction.

In 1913 Bayer decided to stop making the wonder drug. It had received hundreds of reports of hospital admissions for overdoses in the United States. It was clear that the substance had a following of recreational users. Observers had identified a large group of habitual users and nicknamed them "junkies" because they raised money for their habits by collecting and selling junk metal. Without Bayer as a source of drugs, many users turned to illegal markets.

By 1925 it was impossible for anyone to ignore the warnings any longer. Researchers reported that in the United States there were more than 200,000 heroin addicts. The drug proved to be much more addictive than morphine. Eventually, U.S. authorities banned it from medical use.

Today scientists know more about heroin than Wright or Dreser could ever have hoped to learn. It is a powerful drug, even more potent than morphine. Heroin's potency comes from its ability to dissolve in fat. Since much of the tissue in the brain contains fat, heroin passes into brain cells faster than morphine. Therefore it gives quicker, more dramatic results.

Its power is clear in one young man's description: "After that first shot of heroin, I thought 'WOW, where have you been my whole life, this is where it's at.' It gave me that false euphoric feeling I had never known before; it became my girlfriend, my God, my mother and my career."

### **The Science of Pain Today**

In the mid-twentieth century researchers began exploring how narcotics block pain. Previous experiments had shown that drugs enter cells in one of two ways: directly through the cell membrane or by special receptors. In experiments, they mixed brain tissue with narcotics that they had tagged with radioactive materials and found that the tissue quickly attached itself to small amounts of opiates. This indicated that brain cells might have receptors for opiates. Solomon H. Snyder and Candace Pert, working at Johns Hopkins University School of Medicine, located these receptors in 1973.

Some areas of the nervous system have more opiate receptors than others. There are a lot in the part of the spinal cord that determines the ability to tolerate pain. Snyder explains, "Opiates relieve pain at the spinal cord level by raising pain thresholds. Thus, if you were treated with morphine, an experimenter would have to administer a more painful stimulus than normal in order for you to notice any pain at all." The segment of the brain that recognizes pain also has plenty of opiate receptors. Snyder says that opiates reduce pain not so much by raising the pain threshold as by blunting the brain's subjective appreciation of pain. Patients who have received morphine to treat severe post-operative discomfort or extreme pain from cancer frequently tell their doctors: "It's a funny thing. The pain is still there, but it doesn't bother me." In short, when the brain stops worrying about the pain, the pain becomes more manageable.

The euphoria that opiates produce also has a biochemical basis. In the brain, several structures are collectively referred to as the limbic system because they form a ring, or 'limbus,' surrounding the brainstem. A large body of research suggests that these structures are the major regulators of emotional behaviour. The presence of opiate receptors there ties opium use to feelings of happiness.

Opium's extraordinary power to alter sensation flows from the close fit of opium molecules with the receptors in the human brain. Opium and its derivatives match structures in the brain like keys slipping into locks. After researchers Snyder and Pert found that the body possessed natural opiate receptors, they asked the next logical question: since the body does not make opiates, why does the brain have special receptors for them?

Scientists theorized that the body makes compounds that normally fit these receptors and that these substances have a chemical structure similar to that of opiates. Even before they located these natural chemicals, scientists named them "endorphins" (endogenous morphine). They now know that endorphins are neurotransmitters that the body releases in response to deep pain. Endorphins are short-lived, natural chemicals that bind to the receptors and then rapidly degrade. Because they do not remain in brain cells for a long time, they have none of the harmful effects of narcotics – for example, they are not addictive.

Endorphins play valuable roles in human survival. When a person is in danger, endorphins flood the body, preventing the perception of pain. This enables a person to escape from danger even if he or she has an injury. Runners and other athletes produce large amounts of endorphins when they push their bodies to their physical limits. Many athletes report that they never feel bad or suffer any pain until after a competition, when their endorphin levels begin to drop.

## **The Criminalization of Opium**

### ***The Harrison Act (1914)***

American states introduced legislation against opium smokers in the late nineteenth century. It was the first drug legislation anywhere to criminalize users rather than to regulate substances. At one time, addicts were generally viewed as the unfortunate victims of an illness. But by the end of the nineteenth century, society treated addicts as insane, criminal, depraved, or mentally deficient. In the United States alone, over half a million people were opium, morphine or heroin addicts by 1900.

In the early twentieth century the United States began to enforce a general policy of drug prohibition. This was the beginning of the conceptualization of addiction as crime and derived from American reactions to cannabis, cocaine, and opiates. Heroin had not been considered a problem until the passage of laws against illicit or recreational use of drugs. Restrictions on the supply of cocaine and opium directed users towards heroin.

In 1914 the U.S. Congress took a critical step towards limiting use of narcotics when it passed the Harrison Narcotics Act. This legislation stated that only doctors and pharmacists could buy, sell, or dispense opiates, and those who did so must first register with the federal government and pay a tax. Additionally, they had to record all transactions relating to heroin. The punishment for not doing so was a fine and a prison sentence. The need for a tax-collecting agency to assess penalties for non-compliance led to creation of the Bureau of Narcotics.

The Harrison Narcotics Act had a tremendous impact on two groups of people -- addicts and their physicians. The addicts were in a bad position for several reasons. Once the act went into effect, it became very difficult to obtain opiates. At the same time, addicts' status fell; people viewed them no longer as ill, or victims of faulty medical treatment, but as social outcasts. One young heroin user said that he was now "one of a band set apart by the will of society, too, and harried for our nonconformity. At least it seemed to me that we were being persecuted only because we were different, not because we were dangerous."

Not only did it treat addiction as a crime, but law enforcement ensured that virtually all addicts had to behave like criminals. Addicts looked for treatment programs, but there were very few available. Thousands of them who turned to the medical community found a cold shoulder that they had not expected. Many doctors decided to avoid them because the Harrison Act made it cumbersome and complicated to treat them.

The few willing to treat them found themselves in an awkward situation. Doctors and pharmacists assumed that they could care for drug addicts in the way they saw fit as long as they completed all the necessary paperwork. Therefore many of them continued writing prescriptions for maintenance doses of opiates. But the Treasury Department frowned on this practice because it wanted to end the use of drugs. Consequently, it required that doctors write prescriptions for increasingly smaller doses with the goal of weaning addicts off their drugs.

The logic grew out of a traditional, but erroneous belief that a professional's care could easily cure addiction. No one realized that even if a practitioner could help, relapse was very common. Many doctors and druggists who failed continued to prescribe maintenance doses, and quite a few of them experienced arrest and fines.

Congress had intended the act to prohibit recreational use of opiates and only to allow doctors to prescribe them in "good faith" as part of a legitimate medical practice. Although "good faith" may have originally been ambiguous, zealous Treasury agents soon made it quite clear. The overall effect of the Harrison Act was to prohibit most medical use of opiates.

Treasury agents were quick to investigate and to prosecute opiate-prescribing physicians. In fact, between 1915 and 1938, authorities received more than over 25,000 reports of doctors violating the Harrison Act. It is not surprising that the medical community began to shun opiates for treating not only addiction but also the organically ill.

***Reaction to the Harrison Act***

The Harrison Act unintentionally provided a lucrative business opportunity for less savoury elements of society. With so few places for addicts to buy drugs, a new market appeared: thousands of people who desperately wanted heroin. Arnold Rothstein was one of the many crime bosses who took advantage of this market in the 1920s.

An innovator of sorts, he created a system for smuggling illegal drugs into the United States. He knew that pushers in the New York area had very little stock to sell. What they did have they had smuggled in from China, stolen from drug manufacturers, or ordered via fake companies that set up temporary addresses in Mexico.

None of these sources could supply Rothstein's vast market, so he sent his representatives to legitimate drug manufacturers in Europe. There they bought hundreds of pounds of narcotics with no questions from the sellers. They crated these purchases, labelled them as plumbing supplies, engine parts, or other bogus items, and shipped them to the United States.

Rothstein's men picked up shipments at U.S. ports and distributed them to sellers in major cities. In no time, other criminals were copying his techniques, and illegal drugs were pouring into American harbours. However, by 1930 authorities had figured out Rothstein's ruse and were seizing drugs as soon as they arrived on American soil, forcing many illegal drug entrepreneurs out of business.

***International Activity***

In 1926 the British government announced a plan to progressively scale back the cultivation of poppies in India. Persia (Iran) immediately became a major source of opium. Large shipments went to Russia and Japan, which manufactured it as heroin. Hong Kong processed Chinese opium. Bulgaria, Serbia, and Turkey also became sources of opium. By the early 1930s there were three factories in Istanbul, each producing up to 2,000 kilograms of heroin every month.

The Japanese government promoted drug addiction among the Chinese in territories that it occupied in the late 1930s. According to Sir Thomas Russell, it "had decided on heroin addiction as a weapon of aggression and deliberately converted the territories she conquered from China into one huge opium farm and heroin den."

The anti-opium movement had aroused new demand for opium derivatives, as morphine and heroin were easier to transport and consume surreptitiously than opium. With opium and its derivatives out of reach of the ordinary person, they became the centre of an emerging criminal class. Violence, gang warfare, and smuggling escalated on an international scale.

***International Drug Smuggling since the 1940s***

In 1946 the United States deported to Sicily about 400 gangsters, who interested the local Mafia in drug trafficking, something in which they had not previously participated. They began buying raw opium from Turkey, processing it in Sicilian heroin labs, and smuggling it into the United States and Canada.

At the same time, the American government was fighting the Cold War and intent on stemming Communist threats everywhere. The Central Intelligence Agency supplied arms and money to Corsican groups that attacked and harassed French trade unionists and Communists. Soon these Corsican gangs controlled the Marseilles docks, which by 1950 constituted an international drug centre – the French Connection.

Because of its fear of Communism, the American government tolerated the French Connection as a necessary evil. Heroin was produced from Turkish opium converted to morphine base in Lebanon and shipped to clandestine labs in France. By 1969 up to ten tons of heroin went from Marseilles to the United States annually.

The CIA also supported anti-Communist elements in Southeast Asia and protected their heroin business in exchange for their co-operation. Much of the heroin in the United States arrived illegally from Asia. One region in particular, the Golden Triangle – in the highlands of Burma, Laos, and Thailand – had long been a source of opium. Poor farmers there still grow opium in remote areas.

Opium and morphine extracted from opium travelled from north-eastern Burma in horse and donkey caravans to refineries along the Thailand-Burma border for conversion to heroin. Most of the resulting products crossed the border into various towns in northern Thailand and south to Bangkok for distribution to foreign markets.

Major Thai-Chinese and Burmese-Chinese traffickers in Bangkok controlled much of the foreign sales and movement of Southeast Asian heroin from Thailand, but a combination of law enforcement, publicity, and drought significantly reduced their role. As a consequence, many minor traffickers in Bangkok and other parts of Thailand controlled smaller quantities of the heroin going abroad.

Heroin from Southeast Asia reached the United States most often via couriers, typically Thai and U.S. nationals and Hong Kong Chinese, travelling on commercial airlines. California and Hawaii were the primary entry points, but small amounts reached New York and Washington, D.C.

While Southeast Asian groups have had success in trafficking heroin to the United States, they initially had difficulty arranging street-level distribution. However, incarceration of Asian traffickers in American prisons during the 1970s allowed them contacts with U.S. inmates and hence access to individuals and organizations distributing heroin at the retail level.

### **Heroin and the Vietnam War**

The availability of heroin in Vietnam during the war there, in part because of U.S. support for opium warlords opposed to the Communists in China, caused problems for U.S. forces. Many servicemen tried heroin, an attractive escape from the painful realities of combat. In 1972 the *Consumer's Union Report on Licit and Illicit Drugs* by Edward M. Brecher and the editors of *Consumer Reports* magazine quoted one soldier:

"I had my all-expense-paid vacation in sunny SE Asia in 1970-71. I still remember stepping off base onto Highway 1 at Phu Bai Combat Base south of Hue one mid-morning and being approached by a kid about ten years old who had jumped off the back of a cyclo to offer me a small vial of 'skag' (heroin) for only two dollars."

During 1971, the U.S. media reported that addiction among soldiers ran as high as 10 to 15 per cent, a figure that many Americans found unbelievable. However, 930 returnees passing through the army terminal at Oakland, California, voluntarily answered anonymous questions, and 16 per cent had used heroin within the previous thirty days.

Dr. Peter Olsson, a psychiatrist in New Hampshire, worked for the U.S. Army and conducted extensive interviews with servicemen about their drug use. He knows of people who enlisted in order to have ready access to heroin in Vietnam. He also points out that many soldiers gave up their heroin habit upon their return to the U.S., which suggested that the stress of combat was a major factor in heroin use by soldiers.

### **The War on Drugs**

Throughout the 1960s and 1970s, organized crime groups ran extensive networks to distribute their illegal goods. As the numbers of heroin users swelled through the 1970s, government officials worried that the American way of life might be in danger. By the time Richard Nixon became president in 1969, drug use was up in the United States, with estimates of 750,000 heroin addicts.

Nixon thought the War on Drugs was America's "second Civil War." In July 1969 he announced a global campaign against drugs and traffickers, even though he was said to have depended on a friend to provide him with Dilantin (for its anti-anxiety effects). The U.S. government created its Drug Enforcement Agency in 1973.

Such organizations have a vested interest in escalating the War on Drugs. The DEA grew from 1,800 agents in 1980 to 9,000 in 2000. After the end of the Cold War, the fight against drugs replaced that against Communism as the principal moral imperative of American foreign policy.

With the end of the Vietnam War, Southeast Asian heroin producers focused on Europe. Heroin made from Turkish opium, already reaching the United States by way of the French Connection, filled even more of American market demand. A memo from presidential aide Daniel Moynihan to Attorney General John Mitchell illustrated the urgency with which the Nixon administration viewed the heroin problem:

If the United States moves with energy and determination we could cripple the heroin traffic in the course of twelve to twenty-four months. If we do not disrupt the heroin traffic now, it is likely shortly to drift into the hands of middle-class Americans, and may become unstoppable.

What is needed is a major diplomatic initiative, accompanied by economic inducements, and if need be, sanctions designed to get Turkey out of the business.

But Turkish Prime Minister Suleyman Demirel knew that his farmers depended on opium. He also knew that his government depended on the farmers: "Eradication would create a clash between the government forces and the people, and would make the problem worse, since it would create public support for plantings."

Turkish authorities insisted that eradication would bring down the government. Instead, they began to implement a licensing program for the production of pain-relieving medicines. The United Nations eventually granted them technical assistance for the construction of poppy-processing facilities and resources for the control of licensed cultivation.

Each year the Turkish Grain Marketing Board licenses approximately 100,000 farmers, and about 600,000 people earn their living from poppy cultivation. The national processing factory produces 75 tons of morphine annually. Instead of the labour-intensive scoring and scraping required to collect opium, the entire poppy plant is harvested and processed. Concentrated poppy straw (CPS) is the extracted opiates crystallized out of solution. Close to 95 per cent of Turkey's opium production is for export.

### Opium Today

Opium is still consumed socially throughout the world. The opium poppy is also cultivated legally in Australia (Tasmania is the world's largest producer of opiates for the pharmaceutical market), France and India. England is using domestic opium to produce pain medication for its National Health Service.

The prohibition of opium is questioned by many, including Peter Lee in the book Opium Culture: "It's a well-known fact of medical science that opium readily relieves such common conditions as insomnia, hypertension, depression, and chronic pain, for relief of which so many millions of people today have become addicted to expensive tranquilizers, antidepressants, painkillers, and other patented pharmaceutical drugs. The more one investigates the truth about opium, the more one realizes that the real reason it has been prohibited is to protect the profits of the politically powerful pharmaceutical cartels, which have established a lucrative international monopoly in the vast markets for medical drugs throughout the world."

Today, most Afghan opium is converted to heroin in that country and shipped east through Iran, north through Tajikistan, and south through Pakistan to world markets. Opium grown in Colombia and Mexico also reaches North American markets. Iran has more opium users and heroin addicts than any other country.

Opium-based pain medication is virtually non-existent in most Third World countries, including Afghanistan, which produces more than 90 per cent of the world's illicit opium. An international think tank, the ICOS Group, has called for testing of a licensing program for poppy farmers in Afghanistan. Selected villages would produce opium for conversion to morphine, for use in local hospitals and clinics.

Critics argue that until the country enjoys a minimum level of security, any licensing program is unmanageable. The ICOS Group believes that the traditional village-level structure of governance is capable of monitoring poppy cultivation and discouraging any illicit trade.

For five thousand years, people have known of opium's benefits. Its negative aspects must also be recognized. But prohibition of anything that people demand has always resulted in the chaos of black markets and unregulated criminal enterprise. The challenge is to find ways to harness the power of the poppy that benefit society.

**For further reading:**

De Quincey, Thomas	<u><a href="#">Confessions of an English Opium-Eater (1822)</a></u>
Dikotter, Frank	<u><a href="#">Narcotic Culture: A History of Drugs in China (2004)</a></u>
Glenny, Misha	<u><a href="#">McMafia: A Journey Through the Global Criminal Underworld (2008)</a></u>
Hafvenstein, Joel	<u><a href="#">Opium Season: A Year on the Afghan Frontier (2007)</a></u>
Hodgson, Barbara	<u><a href="#">Opium: A Portrait of the Heavenly Demon (1999)</a></u>
Hodgson, Barbara	<u><a href="#">Into the Arms of Morpheus (2001)</a></u>
Lee, Peter	<u><a href="#">Opium Culture: The Art &amp; Ritual of the Chinese Tradition (2006)</a></u>
Mate, Gabor, M.D.	<u><a href="#">In The Realm of Hungry Ghosts: Close Encounters with Addiction (2008)</a></u>
McCoy, Alfred	<u><a href="#">The Politics of Heroin: CIA Complicity in the Global Drug Trade (2001)</a></u>
Peters, Gretchen	<u><a href="#">Seeds of Terror: How Heroin is Bankrolling the Taliban and Al Qaeda (2009)</a></u>
Robbins, Christopher	<u><a href="#">Air America: The Story of the CIA's Secret Airlines (1979)</a></u>
Scott, Peter Dale	<u><a href="#">Drugs, Oil and War: The United States in Afghanistan, Colombia and Indochina (2003)</a></u>
Shearing, Colin	<u><a href="#">Opium: A Journey Through Time (2004)</a></u>
Tosches, Nick	<u><a href="#">The Last Opium Den (2004)</a></u>
Zheng, Yangwen	<u><a href="#">The Social Life of Opium in China: A History (2005)</a></u>

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