Opium

- PowerPoint
- Introduction and History

Opium

And soon they found themselves in the midst of a great meadow of poppies... Now it is well known that when there are many of these flowers together their odor is so powerful that anyone who breathes it falls asleep, and if the sleeper is not carried away from the scent of the flowers he sleeps on and on forever.

Opium

But Dorothy did not know this, nor could she get away from the bright red flowers that were everywhere about.

Opium

So presently her eyes grew heavy and she felt she must sit down to rest and to sleep... Her eyes closed in spite of herself and she forgot where she was and fell among the poppies, fast asleep.

Opium

They carried the sleeping girl to a pretty spot beside the river, far enough from the poppy field to prevent her breathing any more of the poison of the flowers, and here they laid her gently on the soft grass and waited for the fresh breeze to waken her.

Opium

From the land of Oz to the streets of Harlem, the poppy has caused much grief – and much joy... Opium is truly a unique compound!

Opium

Opium is a highly addictive non-synthetic (i.e. natural) narcotic that is extracted from the poppy plant, Papaver somniferum.

Opium consists of over two dozen alkaloids. Out of all these alkaloids, only morphine and codeine have medicinal significance.

The opium poppy is the key source for many narcotics, including morphine, codeine, and heroin. The word opium comes from the Greek word opós, meaning “juice or sap.”

Papaver somniferum

Opium

The opium poppy's botanical name is Papaver somniferum (literally “the poppy that brings sleep”).

The Papaver somniferum is an annual plant growing 3 – 4 feet in height.

Its large flowers are typically about 4 or 5 inches in diameter and can be white, pink, red, or purple.
• This variety is the ONLY type of poppy that produces opium!!!
  – Common garden plants such as the red Oriental poppy or the yellow California poppy LOOK similar but do NOT produce psychoactive effects.

11 Basic Parts of the Opium Poppy Plant (Papaver somniferum)

12 Papaver somniferum (Continued)

13

14 Ode to the Poppy, 1792
  “Hail, lovely blossom! –
  thou can't ease,
The wretched victims of
disease;
Can't close those weary eyes,
in gentle sleep,
Which never open but to
weep;
For, oh! Thy potent charm,
Can agonizing pain disarm;
 Expel imperious memory
from her feat,
And bid the throbbing heart
forget to beat.”

-Charlotte Smith

•

15 The Goddess of Opium
  • These pictures show a 14th century B.C. statue from Crete that prove how revered a substance opium was and still is today.

16

17 Opium Harvesting
  • The present-day method of opium harvesting has NOT essentially changed for more than 3,000 years...

18 Opium Harvesting (Continued)
  • When the petals of the opium poppy have fallen, but the seed capsule of the plant underneath the petals is NOT yet completely ripe, laborers make small, shallow incisions in the capsules.
  – This allows a milky white juice to ooze out.

19 Opium Harvesting (Continued)
  • The next day, this milky white juice will have oxidized and hardened by contact with the air.
  – At this point the substance is now reddish brown and has a consistency of heavy syrup.
Opium Harvesting (Continued)
- They cut the seedpod with a multi-bladed tool that lets the opium “gum” ooze out (as we saw in the pictures on the previous slides).
  - The semi-dried “gum” is harvested with a curved spatula and then dried in open wooden boxes.
- The dried opium resin is placed in bags or rolled into balls for sale.

Opium Harvesting (Continued)
- The substance is collected, plant by plant, onto large poppy leaves just like we talked about in the last slide.
  - Later, it will darken further and form small gum-like balls that look like tar, taste bitter, and smell like new-mown hay.

The Silk Road
- The Silk Road is an 18th-century term for a series of interconnected ROUTES that went from Europe to China.
  - These were trade routes that were developed between the empires of Persia and Syria on the Mediterranean coast and the Indian kingdoms of the East.
  - The routes extended from Italy in the West to China in the East and to Scandinavia in the North by the late Middle Ages.
- Opium was one of the products that was traded along the Silk Road.

The Silk Road (Continued)

History of Opium
- Opium was first described in specific detail in the early third century B.C., but we can be fairly sure that it was used for at least 1,000 years before that...
- A ceramic opium pipe has been excavated in Cyprus, dating from the Late Bronze Age, about 1200 B.C.
  - Cypriot vases from that era depict incised poppy capsules.

History of Opium (Continued)
- From evidence contained in the Ebers Papyrus writings, Egyptians were also knowledgeable about the medicinal value of opium.

History of Opium (Continued)
- Opium’s narcotic properties were first noted by Hippocrates and a number of other fifth-century B.C. Greek physicians, botanists, and thinkers.
  - However, evidence that it was used medically is sparse.
- Poppy remedies, rather than opium ones, were recommended.
  - For example, Hippocrates recommended meconium (poppy heads soaked in
water) as a treatment for dropsy (swelling and/or difficulty in breathing).

36 History of Opium (Continued)
- In the second century A.D., Claudius Galen, the famous Greek physician and surgeon to Roman gladiators, recommended opium for practically everything.
  - He wrote that opium:
    - "...resists poison and venomous bites, cures chronic headache, vertigo, deafness, apoplexy, dimness of sight, loss of voice, asthma, coughs of all kinds, spitting of blood, tightness of breath, colic,...jaundice, hardness of the spleen,...urinary complaints, fever,...leprosies, the troubles to which women are subject, melancholy, and all pestilences."

39 History of Opium (Continued)
- Western Europe was introduced to opium in the eleventh and twelfth centuries by returning crusaders who had learned of it from the Arabs.
  - At first, opium was used only by sorcerers as an ingredient in their potions.

40 History of Opium (Continued)
- In the sixteenth century, a maverick scholar named Phillipus Aureolus Theophrastus Paracelsus Bombastus of Hohenhein (or Paracelsus for short) came on the scene...
  - Paracelsus was a Swiss-born alchemist who developed the theory that illness from unknown sources sprang from disruptions in the body’s chemical state.
    - His main pharmaceutical repertoire consisted of sulfur, salt, and mercury, but opium also played an important part in his treatments.
      - He advocated applying essences of plants and minerals, believing that they were the most effective means of treating illness, and he prescribed opium and poppy for epilepsy and mania, attributing them with “wonderful power.”

41 History of Opium (Continued)
- In 1520, Paracelsus started promoting himself as the foremost medical authority of his day...
  - He introduced a medicinal drink combining opium, wine, and an assortment of spices.
    - Paracelsus called the mixture laudanum, which is derived from the Latin phrase meaning “something to be praised.”
      - Before long, the formula of Paracelsus was being called “the stone of immortality.”
  - The time surrounding Paracelsus can be thought of as the first stirrings of modern medicine in Europe, and opium began to be regarded as a therapeutic drug.
    - Paracelsus himself denounced many of the doctrines of earlier physicians in history, but he did continue the time-honored tradition of recommending opium for practically every known disease.

42 History of Opium (Continued)
- John Baptiste van Helmont was a Leyden professor of medicine who was influenced by Paracelsus, and he became a leading proponent of Iatrochemistry.
  - Iatrochemistry was the theory that chemical changes in the body were responsible for illness.
History of Opium (Continued)
- The opium that so many of this century depended on usually came in the form of laudanum.
- Laudanum reigned almighty in the pantheon of opium drugs, not only in Britain, where it was hugely popular, but also in North America.
  - Laudanum, as listed in the London Pharmacopoeia in 1618 was a pill made from opium, saffron, castor, ambergris, musk, and nutmeg.

History of Opium (Continued)
- In 1680, the English physician Thomas Sydenham, considered to be the father of clinical medicine, introduced a highly popular version of opium DRINK similar to that of Paracelsus, called Sydenham’s Laudanum.
  - Sydenham’s Laudanum began being called Laudanum for short, and for the next 200 plus years, it was the acceptable form of taking opium among Europeans and Americans (i.e. – they DRANK it).
- Laudanum was a potent mixture of wine, opium, saffron, and cinnamon, and it was the most famous drink at this time.

History of Opium (Continued)
- Laudanum in the mid-1800s was sold in glass-stoppered bottles.
  - The tops were covered with chamois and the labels were often attached to a string tied around the neck.
  - These pictures show some bottles of Laudanum from this time period.

History of Opium (Continued)
- Here are some more various Laudanum bottles and advertisements.

History of Opium (Continued)
- Here is another bottle of Laudanum as well as an advertisement for the popular drink.
  - Notice in this advertisement that Laudanum is being recommended for babies too!

History of Opium (Continued)
- This chest was owned first by William Cooper, 26 Oxford Street, then by J.G. Gould, 198 Oxford Street, London in 1900.
  - This case still contains camphor, rhubarb (used for treating constipation), Laudanum, calomel, sal volatile, Dr. Gregory’s Stomachic Powder, ipecacuanha, carbonate of potash, and a set of scales.

History of Opium (Continued)
- This is a picture of a drawing titled “The Serpent Cigarette” that appeared in the Harper’s Weekly magazine on October 14, 1882.
  - At this time (and as the picture shows), tobacco was seen by some as a more pressing problem than narcotics...

Patent Medicine Industry
• The U.S. during the nineteenth century could basically be described as a “dope fiend’s paradise.”
  – Opium was on sale LEGALLY, conveniently, and at low prices.

52 Patent Medicine Industry (Continued)
• Physicians dispensed opiates directly to their patients, or wrote prescriptions for them.
• The drugstores sold opiates over-the-counter (OTC) to customers WITHOUT a prescription.
• Grocery stores and general stores sold opiates just as freely as the pharmacies did.
• If users were unable or unwilling to patronize a nearby store, then they could order their opiates by mail!
• There were also countless patent medicines on the market containing opium at this time...

53 Patent Medicine Industry (Continued)
• These pictures show some apothecary vessels for the storage of opium as a pharmaceutical from Germany in either the 18th or 19th century, as well as various forms of opium.

54 History of Opium (Continued)
• The original formula for Dover’s Powder was published in Thomas Dover’s “The Ancient Physician’s Legacy to His Country” in 1742.
  – Thomas Dover was a one-time apprentice of Thomas Sydenham, and Thomas Dover had been a South Seas adventurer before turning to medicine.
• Thomas Dover was known as “The Quicksilver Doctor” because he freely prescribed mercury.
  – In Thomas Dover’s book, he specifies that Dover’s Powder is a cure for gout — although they used it for many ailments, including teething.

55 Patent Medicine Industry (Continued)
• This picture shows an advertisement sheet for “Perry Davis’ Vegetable Pain Killer.”
• The “Perry Davis’ Vegetable Pain Killer” was patented by Perry Davis in 1845, and it is believed to be the first nationally advertised remedy SPECIFICALLY for pain – as distinct from a particular disorder.
  – The “Perry Davis’ Vegetable Pain Killer” was distributed by Christian missionaries around the world, and it was regarded as a wonderful drug.
• The ingredients in “Perry Davis’ Vegetable Pain Killer” were mainly opiates and ethyl alcohol, which was all entirely natural.

56 Patent Medicine Industry (Continued)
• “Perry Davis’ Vegetable Pain Killer” was on the market from 1830 until about 1956.
  – During the late 1800s “Perry Davis’ Vegetable Pain Killer” was made from myrrh, capsicum, opium, benzoin, guaiac, and alcohol.
• This picture shows a portrait of Perry Davis that was on the packaging for “Perry Davis’ Vegetable Pain Killer.”

57 Patent Medicine Industry (Continued)
Here are some more various advertisements for Perry Davis’ Vegetable Pain Killer.
The seemingly indiscriminate use of medicinal opium in the past is a complex subject, and at times it is incomprehensible to our modern minds...

– WHY did all of these doctors prescribe such addictive medicines?
– WHY did all of these mothers drug their children?

It is very easy to take a critical point of view, but we need to keep an open mind!

Before the twentieth century (1901 – 2000), people who were ill had little choice but to turn to a substance such as opium...

At least three conditions paved the way for this situation:
1. First, opium was a vital means of coping with cholera, dysentery, and tuberculosis – diseases born of the horrific living conditions such as those of the Industrial Revolution.
   - Opium reduced the physical manifestations of these diseases (for example, diarrhea and coughing).
2. Second, many diseases were incurable; opium eased the pain brought on by these ailments.
3. Third, because opium was effective, available, and cheap, those who distrusted or couldn’t afford medical help diagnosed and treated their ailments themselves.
   - In cases where the medical profession was consulted, many doctors knew little more than their patients, and so they prescribed opium for the same reasons!

These fabulous claims were made by American patent medicine companies in the 1880s and 1890s when the patent medicines hit a peak.
– They offered cures for everything from asthma to yellow fever, and they exploited their sufferers shamelessly, lacing their medicines with habit-forming substances such as opium and alcohol...

Patent medicines are more accurately known as proprietary medicines.
– The patent medicines were almost NEVER patented, and they appealed to the most poor people.
– They were easily available and relatively cheap and often seemed effective if they contained a powerful substance like opium...
– The patent medicines could also be self-administered which was an advantage in a
time where doctors were not only expensive but downright dangerous at times...

64 Patent Medicine Industry (Continued)
- Patent medicines were shrouded in secrecy.
  - Their creators avoided the patent process that required them to reveal the sometimes fraudulent, sometimes hazardous, and ALWAYS questionable contents of their “miracle” cures and instead chose to protect their trademark.
- The phrase “patent medicine” became a misnomer and a catchall.
- This does NOT mean that there were no truly patented medicines:
  - The first such patent in Britain was taken out in either 1698 or 1711 and in the United States in the 1790s.

65 Patent Medicine Industry (Continued)

66 Patent Medicine Industry (Continued)
- Opium use before the turn of the century has been compared with taking aspirin today...
  - This wasn’t quite the case; aspirin has never been classified as a poison, as opium was (Opium was classified as a poison in Britain in 1868).
- Under ordinary circumstances, however, there was no need to fear opium, and its benefits outweighed its drawbacks.
  - Noteworthy, undesired effects such as dependency only manifested themselves after excessive or prolonged use.

67 Patent Medicine Industry (Continued)
- These are bottles of opium for asthma and the box the bottle came in.
  - With 40% alcohol plus 3 grams of opium per tablet in it – you weren’t going to be cured but you wouldn’t care!

68 Patent Medicine Industry (Continued)
- A popular tincture during this time (that was sold by various different companies) was Paregoric, from the Greek word paregoricon, meaning “soothing.”
  - Paregoric contained opium as well as honey, licorice, benzoic acid, camphor, anise, and alcohol.

69 Patent Medicine Industry (Continued)
- Here are some more pictures and advertisements about Paregoric.

70 Patent Medicine Industry (Continued)
- These pictures show opium for newborns in the popular medicine Stickney and Poor’s Paregoric... (Yet another form of Paregoric!)
  - With 46% alcohol in it plus the opium – it’s not surprising the newborns would sleep well!

71 Patent Medicine Industry (Continued)
- Nearly all infants and young children in Britain and America during this period were given opium, often from the day they were born.
  - Dozens of Laudanum-based patent medicines, with appealing names like Godfrey’s Cordial, A Pennysworth of Peace, and Mrs. Winslow’s Soothing Syrup were used to dull teething pain or colic, or simply to just keep the children
quiet...

72 Patent Medicine Industry (Continued)
- The administration of opium to babies was particularly attractive in the new, industrial-age lifestyle of female workers, who had to leave their infants in the care of elderly women or young children when they went off to work in the factories.

73 Patent Medicine Industry (Continued)
- Opium eased the pains of teething and controlled diarrhea brought on by weaning, but it was also a cheap babysitter for poor women who worked outside the home.
  - Mothers could dose their babies and leave them, knowing that they would sleep through the day...

74 Patent Medicine Industry (Continued)
- Furthermore, a child fed opium loses its appetite, which was another benefit for poor families who couldn’t afford to feed their children properly.
  - Dosed children became jaundiced and thin.

76 Patent Medicine Industry (Continued)
- Of all the soothing syrups, none reached the success attained by the American product, Mrs. Winslow’s Soothing Syrup...
  - Mrs. Winslow’s Soothing Syrup was sold from 1830 until at least 1910.
  - Mrs. Winslow’s Soothing Syrup was a potent teething elixir made from sugar syrup, fennel, anise, caraway, alcohol, and morphine sulfate (it contained opium before morphine was discovered).
  - Nostrums in 1911 attributed a number of deaths to the potion, Mrs. Winslow’s Soothing Syrup, for the years 1906-1910...

77 Patent Medicine Industry (Continued)
- This picture shows “Mrs. Winslow’s Domestic Receipt Book” that was used to promote Mrs. Winslow’s Soothing Syrup in 1877.
  - The bottom picture shows Mrs. Winslow’s Soothing Syrup advertising in English, German, and French.

78 Patent Medicine Industry (Continued)
- This picture shows an 1887 trade card for Mrs. Winslow’s Soothing Syrup.
  - Mrs. Winslow’s Soothing Syrup was made up of opium and 90 proof alcohol.

79 Patent Medicine Industry (Continued)
- Here are more bottles and advertisements for Mrs. Winslow’s Soothing Syrup.

80 Patent Medicine Industry (Continued)
- This is a picture of a trade card for Brown’s Dentifrice, but it was originally distributed for Mrs. Winslow’s Soothing Syrup.
  - If you look closely, you will see a labeled bottle of Mrs. Winslow’s Soothing Syrup sitting on the table.

81 Patent Medicine Industry (Continued)
- One calculation determined that on the basis of 750,000 bottles of Mrs. Winslow’s Soothing Syrup sold annually in the United States, each with an average of ¾ grain
of morphine in it (a total of 562,500 grains)...was “enough to kill a half million infants not accustomed to its use.”

83 Patent Medicine Industry (Continued)
- This picture shows a nurse reading the latest book by Claude Duval as her baby lies in her lap, stupefied by a soothing syrup.

84 Patent Medicine Industry (Continued)
- These are almanac ads advertising Ayer’s Cherry Pectoral and Ayer’s Pills, both of which contained opium.

85 Patent Medicine Industry (Continued)
- These are some trade cards from the 1880s.

87 Patent Medicine Industry (Continued)
- What was the dividing line between legitimate and quack medicines?
  - The distinctions were vague, especially since some medicines now considered fraudulent were sold by pharmacists...
  - Two such opium medicines included in the London Pharmacopoeia were:
    - Daffy’s Elixir (consisting of opium and senna)
    - Matthew’s Pills (made of opium and soap)
  - Opium, and after 1820, morphine, was mixed with EVERYTHING IMAGINABLE: mercury, hashish, cayenne pepper, ether, chloroform, belladonna, whisky, wine, and brandy, etc...

88 Patent Medicine Industry (Continued)
Here are some more examples of opium that was EVERYWHERE at this time.

89 Patent Medicine Industry (Continued)
- Dr. McMunn’s Elixir of Opium was listed in the American Journal of Pharmacy in 1846 as a cold infusion of opium and wine.
  - This broadsheet was wrapped around the bottles beneath the paper labels.
    - It contains testimonials and directions for use of the opium elixir.

91 Patent Medicine Industry (Continued)
- This broadsheet was wrapped around the bottles beneath the paper labels.
  - It contains testimonials and directions for use of the opium elixir.

95 Patent Medicine Industry (Continued)
• Godfrey’s Cordial was made of sassafras, molasses, and Laudanum, and it was a popular household remedy by 1722.
  – According to the makers of Godfrey’s Cordial, it could cure just about anything: colic, fever, measles, restlessness, and smallpox, although teething became its main focus.
• To give an idea of how much Godfrey’s Cordial was dispensed, in 1808 a Nottingham chemist sold 200 pounds of opium and 600 pints of Godfrey’s Cordial.
  – Another chemist in Long Sutton, Lincolnshire (with a population of about 6,000) sold 25 ½ gallons (204 pints) of Godfrey’s Cordial in 1871.

98 Patent Medicine Industry (Continued)
• In 1856, Dr. John Collis Browne’s Chlorodyne came out – he was the first person to make a brand of Chlorodyne.
  • Chlorodyne was a mixture of chloroform, opium, morphine, and “other ingredients.”
  • Several other people started to make their own versions of Chlorodyne shortly after.

99 Patent Medicine Industry (Continued)
• Various other companies started making their own versions of Chlorodyne...

100 Patent Medicine Industry (Continued)
• These bottles show Chlorodyne from the Parke-Davis Company.

101 Patent Medicine Industry (Continued)
• Chlorodyne contained chloroform, morphine, and alcohol.
• Chlorodyne was originally developed to combat the effects of cholera and dysentery, but it was also used against neuralgia, gout, cancer, toothache, colds, fever, and rheumatism.
  – By 1885, there were many variations of Chlorodyne as you’ve seen in the previous slides...
  • Dr. Chase’s Chlorodyne recipe in 1898 included ”stronger ether, stronger alcohol, and muriate of morphia.”
  • Dr. Ogden’s recipe for Chlorodyne had ”resin of Indian hemp,” menthol, peppermint, licorice, and molasses to give it flavor.

102 Patent Medicine Industry (Continued)
• This slide and the next few will look at a selection of opium medicines used against coughs, colds, diarrhea, teething, and innumerable other maladies...
  – Savory and Moore Chlorodyne
  –
  – Eli Lilly Camphorated Tincture of Opium Tablets

103 Patent Medicine Industry (Continued)
McMunn’s Elixir of Opium

Paregoric

Pulverized Opium Tablets

Patent Medicine Industry (Continued)

Piso’s Consumption Cure came in green bottles and it contained Cannabis indica, alcohol, and morphine sulfate up to at least 1902, even though the manufacturer declared it morphine and opium free by 1872.