

# Historical Foundations of Addiction Science

Addiction Science · Answer Key · 20 Questions

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**1. Which 19th-century chemist first isolated morphine from opium, effectively marking the beginning of modern alkaloid chemistry?**

- A) Friedrich Sertürner**
- B) Albert Niemann
- C) Arthur Eichengrün
- D) Felix Hoffmann

**2. In 1914, the United States passed the Harrison Narcotics Tax Act. What was its primary legal mechanism for controlling opioid and cocaine distribution?**

- A) A total ban on all production
- B) A registration and taxation system for sellers**
- C) Criminalization of possession for users
- D) Mandatory institutionalization of addicts

**3. The term 'addiction' was significantly refined in the 1950s by the World Health Organization (WHO) to replace which older, stigmatized term?**

- A) Habituation**
- B) Inebriation
- C) Drug mania
- D) Moral failing

**4. Who is credited with the 1964 discovery that THC (tetrahydrocannabinol) is the primary psychoactive component of cannabis?**

- A) Alexander Shulgin
- B) Raphael Mechoulam**
- C) Albert Hofmann
- D) Kary Mullis

**5. The 'Rat Park' experiments conducted by Bruce K. Alexander in the late 1970s challenged which prevailing scientific view on addiction?**

- A) The theory of metabolic tolerance
- B) The biological inevitability of chemical dependence**
- C) The role of dopamine in reinforcement
- D) The necessity of ventral tegmental activation

**6. Which neurotransmitter, identified by Arvid Carlsson in the 1950s, was later confirmed to be central to the reward-processing system targeted by addictive drugs?**

- A) Serotonin
- B) GABA
- C) Dopamine**
- D) Acetylcholine

**7. In 1898, the Bayer company famously marketed which substance as a non-addictive substitute for morphine and codeine for children's coughs?**

- A) Heroin**
- B) Methadone
- C) Fentanyl
- D) Oxycodone

**8. The 1970 Controlled Substances Act categorized drugs into five schedules. Which agency was granted primary authority for enforcement?**

- A) The FDA
- B) The DEA**
- C) The CDC
- D) The NIH

**9. Which physician and researcher is known for the 1920s development of the 'dole-nyswander' protocol, which pioneered methadone maintenance treatment?**

- A) Vincent Dole and Marie Nyswander**
- B) Solomon Snyder
- C) Candace Pert
- D) Nora Volkow

**10. What historically significant 19th-century phenomenon was driven by the availability of hypodermic needles during the American Civil War?**

- A) The 'Soldier's Disease' (morphine addiction)**
- B) The cocaine epidemic
- C) The mass use of ether
- D) The invention of barbiturates

**11. In 1973, researchers Solomon Snyder and Candace Pert identified the first specific location in the brain where opioids bind. What is it?**

- A) The opioid receptor**
- B) The dopamine transporter
- C) The serotonin 5-HT<sub>2A</sub> receptor
- D) The GABA-A receptor

**12. Which federal US agency was established in 1974 primarily to support research on the prevention and treatment of drug abuse?**

- A) NIDA (National Institute on Drug Abuse)**
- B) NIAAA (National Institute on Alcohol Abuse and Alcoholism)
- C) SAMHSA
- D) Office of National Drug Control Policy

**13. What was the primary chemical compound isolated from coca leaves by Friedrich Gaedcke in 1855?**

- A) Erythroxyllum
- B) Erythroxyline (Cocaine)**
- C) Benzoylecgonine
- D) Ecgonine

**14. During the late 19th century, 'Laudanum' was a common medical preparation consisting of opium dissolved in what solvent?**

- A) Water
- B) Ethanol**
- C) Ether
- D) Chloroform

**15. The 'War on Drugs' rhetoric gained significant political momentum in 1971 when President Richard Nixon officially designated drug abuse as what?**

- A) Public Enemy Number One**
- B) A criminal conspiracy
- C) A failure of the social contract
- D) A biological contagion

**16. Which synthetic opioid, developed in Nazi Germany in 1939 by Max Bockmühl and Gustav Ehrhart, was originally named 'Dolophine'?**

- A) Methadone**
- B) Fentanyl
- C) Carfentanil
- D) Meperidine

**17. In the history of addiction science, what was the first 'drug of abuse' to have a dedicated, specific antagonist (naloxone) approved by the FDA in 1971?**

- A) Alcohol
- B) Opioids**
- C) Nicotine
- D) Benzodiazepines

**18. Which English author and opium addict wrote 'Confessions of an English Opium-Eater' in 1821, providing one of the first detailed accounts of addiction?**

- A) Thomas De Quincey**
- B) Samuel Taylor Coleridge
- C) Charles Dickens
- D) Lord Byron

**19. The 'Temperance Movement' of the 19th century primarily targeted the consumption of which substance?**

- A) Tobacco
- B) Distilled spirits**
- C) Opium
- D) Cocaine

**20. Before its regulation, which chemical was widely used as a tonic in 'Vin Mariani,' a 19th-century wine popularized by Pope Leo XIII?**

- A) Cocaine**
- B) Morphine
- C) Amphetamine
- D) Chloral hydrate