

Addiction Science: Key Facts and Figures

Addiction Science · Answer Key · 19 Questions

1. Which neurochemical is most consistently associated with the 'reward pathway' in the brain, playing a central role in addiction?

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

2. The influential 'NIDA Principles of Drug Addiction Treatment' were first published by the National Institute on Drug Abuse in which year?

- A) 1988
- B) 1991
- C) 1999**
- D) 2005

3. The DSM-5, published in 2013, replaced the terms 'substance abuse' and 'substance dependence' with a single diagnostic category. What is this category?

- A) Substance Use Disorder**
- B) Addictive Behavior Syndrome
- C) Compulsive Substance Seeking
- D) Psychoactive Dependence

4. Which early 20th-century physician is often credited with pioneering the concept of addiction as a disease, rather than a moral failing?

- A) Sigmund Freud
- B) Benjamin Rush**
- C) Alois Alzheimer
- D) Carl Jung

5. Approximately what percentage of adults in the United States are estimated to have a substance use disorder in a given year, according to CDC data from recent years?

- A) 1-2%
- B) 5-7%**
- C) 10-12%
- D) 15-17%

6. The discovery of the opioid receptors in the brain, a crucial step in understanding opioid addiction, was largely attributed to the work of.

A) Solomon Snyder and Candace Pert

B) Arvid Carlsson

C) James Olds and Peter Milner

D) Paul Greengard

7. The Controlled Substances Act in the United States, which categorizes drugs based on their potential for abuse, was signed into law in which year?

A) 1965

B) 1970

C) 1975

D) 1980

8. Which neurotransmitter system is primarily targeted by stimulants like cocaine and amphetamines, leading to their addictive properties?

A) GABAergic system

B) Serotonergic system

C) Dopaminergic system

D) Glutamatergic system

9. The World Health Organization (WHO) recognized 'alcoholism' as a disease in its International Classification of Diseases (ICD) in which revision year?

A) ICD-6 (1948)

B) ICD-7 (1955)

C) ICD-8 (1965)

D) ICD-9 (1975)

10. The development of Methadone as an opioid substitute therapy occurred in the:

A) 1930s

B) 1940s

C) 1950s

D) 1960s

11. The concept of 'tolerance' in addiction refers to the phenomenon where a person needs:

A) A higher dose of a substance to achieve the same effect

B) A lower dose of a substance to achieve the same effect

C) A different substance to achieve the same effect

D) Less frequent use of a substance to avoid withdrawal

12. Neuroimaging techniques, such as fMRI, have revealed significant alterations in the prefrontal cortex of individuals with addiction. This region is primarily responsible for:

- A) Basic motor control
- B) Sensory perception
- C) Executive functions like decision-making and impulse control**
- D) Primary visual processing

13. The 'gateway drug' hypothesis suggests that initial use of certain substances, like cannabis, may lead to the use of more potent drugs. Research on this hypothesis gained significant traction in the:

- A) 1960s
- B) 1970s**
- C) 1980s
- D) 1990s

14. Which opioid antagonist is commonly used for emergency treatment of opioid overdose due to its rapid reversal of respiratory depression?

- A) Buprenorphine
- B) Naltrexone
- C) Naloxone**
- D) Methadone

15. The opioid crisis in the United States gained national attention and became a major public health concern primarily in the:

- A) 1990s
- B) Early 2000s
- C) Mid-2010s**
- D) Late 2010s

16. The concept of 'self-medication' in addiction proposes that individuals use substances to alleviate symptoms of:

- A) Positive reinforcement
- B) Primary reinforcers
- C) Underlying mental health disorders**
- D) Acute physical pain

17. The addictive potential of nicotine is largely due to its interaction with which type of receptor in the brain?

- A) Dopamine receptors
- B) Serotonin receptors
- C) Nicotinic acetylcholine receptors**
- D) Opioid receptors

18. The term 'enabling' in the context of addiction refers to behaviors that:

- A) Encourage the person to seek treatment
- B) Shield the person from the consequences of their addiction**
- C) Support the person's recovery efforts
- D) Provide financial assistance for treatment

19. The development of effective treatments for alcohol dependence, such as disulfiram, dates back to the:

- A) 1930s
- B) 1940s
- C) 1950s**
- D) 1960s