

Addiction Science Fundamentals

Addiction Science · Practice Test · 25 Questions

1. Which neurotransmitter is most commonly associated with the brain's reward system and the reinforcement of addictive behaviors?

- A) Serotonin
- B) Dopamine
- C) Acetylcholine
- D) Glutamate

2. In addiction science, what is the term for the physiological state where a person needs a higher dose of a substance to achieve the same effect?

- A) Withdrawal
- B) Tolerance
- C) Craving
- D) Relapse

3. Which brain region is primarily responsible for executive functions like decision-making and impulse control, which can be impaired by chronic substance use?

- A) Prefrontal cortex
- B) Cerebellum
- C) Brainstem
- D) Occipital lobe

4. What is the primary psychoactive ingredient found in tobacco products that leads to physical dependence?

- A) Tar
- B) Nicotine
- C) Carbon monoxide
- D) Ammonia

5. The condition where an individual experiences physical and mental symptoms after stopping the use of a substance they are dependent on is called:

- A) Adaptation
- B) Withdrawal
- C) Tolerance
- D) Sensitization

6. Which of the following substances is classified as a central nervous system depressant?

- A) Caffeine
- B) Nicotine
- C) Alcohol
- D) Cocaine

7. Which organ is responsible for metabolizing the vast majority of alcohol consumed by the human body?

- A) Kidneys
- B) Liver
- C) Stomach
- D) Pancreas

8. What does the term 'addiction' officially refer to in clinical terminology, such as in the DSM-5?

- A) Substance Use Disorder
- B) A moral failing
- C) A lack of willpower
- D) Bad habits

9. Which of these is a common behavioral addiction recognised by many health organisations?

- A) Gambling disorder
- B) Reading addiction
- C) Shopping addiction
- D) Television addiction

10. What is the main psychoactive chemical compound found in cannabis?

- A) CBD
- B) THC
- C) CBN
- D) CBG

11. Opioids exert their effects by binding to specific receptors located in the:

- A) Heart
- B) Central nervous system
- C) Digestive tract
- D) Skin

12. Chronic drug use can lead to long-lasting changes in the brain's structure and function; this process is known as:

- A) Neural plasticity
- B) Neuroadaptation
- C) Cognitive decline
- D) Homeostasis

13. Which of these substances is a powerful stimulant?

- A) Heroin
- B) Alcohol
- C) Cocaine
- D) Morphine

14. What is the 'reward pathway' in the brain scientifically known as?

- A) Mesolimbic pathway
- B) Visual pathway
- C) Auditory pathway
- D) Somatosensory pathway

15. Which class of drugs is primarily used to relieve pain?

- A) Stimulants
- B) Opioids
- C) Hallucinogens
- D) Inhalants

16. In addiction science, 'cue-induced craving' refers to what?

- A) Craving triggered by environmental reminders
- B) Craving caused by hunger
- C) Craving caused by weather
- D) Craving caused by exercise

17. What is the role of Naloxone in addiction medicine?

- A) To act as a stimulant
- B) To reverse an opioid overdose
- C) To reduce cravings for alcohol
- D) To prevent nicotine absorption

18. Which of the following is considered a 'gateway' substance by some researchers, though the theory is heavily debated?

- A) Water
- B) Nicotine
- C) Protein
- D) Fiber

19. What do researchers call the phenomenon where addictive substances make 'natural' rewards (like food or social interaction) seem less pleasurable?

- A) Hypofrontality
- B) Reward deficiency syndrome
- C) Tolerance increase
- D) Synaptic pruning

20. Alcohol is classified as which type of psychoactive substance?

- A) Stimulant
- B) Depressant
- C) Hallucinogen
- D) Antipsychotic

21. Which neurotransmitter deficiency is often associated with the 'crash' experienced after stimulant use?

- A) Dopamine
- B) Melatonin
- C) Insulin
- D) Thyroxine

22. What does 'detoxification' primarily aim to achieve in addiction treatment?

- A) Eliminating all cravings forever
- B) Clearing the substance from the body safely
- C) Changing the personality of the patient
- D) Improving memory

23. The 'hedonic set point' refers to:

- A) The brain's baseline level of pleasure
- B) A method of drug delivery
- C) The cost of a substance
- D) The legal status of a drug

24. Which of these is a known long-term health consequence of chronic alcohol abuse?

- A) Cirrhosis of the liver
- B) Increased lung capacity
- C) Improved vision
- D) Stronger bones

25. Why are adolescent brains considered more vulnerable to the effects of addictive substances?

- A) Because they are still developing
- B) Because they have more neurons
- C) Because they are physically smaller
- D) Because they have higher blood pressure