

Foundational Facts in Psychiatry

Psychiatry · Answer Key · 15 Questions

1. Which neurotransmitter is primarily implicated in the 'fight or flight' response and is often targeted by medications for anxiety disorders?

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

2. The hippocampus, a key brain structure, is critically involved in which cognitive function relevant to psychiatric conditions like depression and PTSD?

- A) Motor coordination
- B) Auditory processing
- C) Memory formation**
- D) Visual perception

3. Which class of psychiatric medications is most commonly used to treat bipolar disorder by stabilizing mood?

- A) Selective Serotonin Reuptake Inhibitors (SSRIs)
- B) Antipsychotics
- C) Mood stabilizers**
- D) Benzodiazepines

4. A deficiency in which vitamin is associated with increased risk of developing certain neurological and psychiatric symptoms, including depression and cognitive impairment?

- A) Vitamin C
- B) Vitamin D**
- C) Vitamin K
- D) Vitamin A

5. The amygdala, a part of the limbic system, plays a crucial role in processing which fundamental emotion, often dysregulated in anxiety and fear-related disorders?

- A) Joy
- B) Anger
- C) Fear**
- D) Sadness

6. Which neurotransmitter system is most directly associated with reward, motivation, and pleasure, and is a target in the study of addiction and schizophrenia?

- A) Glutamatergic
- B) Dopaminergic**
- C) Cholinergic
- D) Histaminergic

7. Electroconvulsive Therapy (ECT) is a treatment primarily used for severe forms of which psychiatric disorder when other treatments have failed?

- A) Obsessive-Compulsive Disorder (OCD)
- B) Schizophrenia
- C) Major Depressive Disorder (MDD)**
- D) Anorexia Nervosa

8. The basal ganglia, a group of subcortical nuclei, are essential for motor control and are implicated in movement disorders that can co-occur with certain psychiatric conditions. Which neurotransmitter is most prominent in this area?

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

9. Which hormone, released by the adrenal glands, is known as the 'stress hormone' and is often elevated in individuals with chronic stress and mood disorders?

- A) Insulin
- B) Thyroid-stimulating hormone (TSH)
- C) Cortisol**
- D) Adrenaline

10. Disruption in the circadian rhythm, the body's natural sleep-wake cycle, is often observed in individuals with which common psychiatric disorder?

- A) Post-Traumatic Stress Disorder (PTSD)
- B) Attention-Deficit/Hyperactivity Disorder (ADHD)
- C) Seasonal Affective Disorder (SAD)**
- D) Generalized Anxiety Disorder (GAD)

11. Which brain imaging technique measures metabolic activity by detecting glucose consumption and is frequently used in psychiatric research to study brain function in various disorders?

- A) Electroencephalography (EEG)
- B) Magnetic Resonance Imaging (MRI)
- C) Positron Emission Tomography (PET)**
- D) Computed Tomography (CT)

12. The prefrontal cortex, the most anterior part of the frontal lobe, is responsible for higher-level executive functions. Impairments in this area are associated with difficulties in which of the following?

- A) Basic reflexes
- B) Pain sensation
- C) Planning and decision-making**
- D) Balance and coordination

13. Which type of receptor is the primary target for benzodiazepines, leading to their anxiolytic, sedative, and anticonvulsant effects?

- A) Dopamine receptors
- B) Serotonin receptors
- C) GABA-A receptors**
- D) Histamine receptors

14. A prolonged QTc interval on an electrocardiogram (ECG) is a potential side effect of some antipsychotic medications, increasing the risk of which serious cardiac arrhythmia?

- A) Atrial fibrillation
- B) Ventricular tachycardia**
- C) Bradycardia
- D) Supraventricular tachycardia

15. The gut-brain axis, a bidirectional communication pathway, highlights the connection between the gastrointestinal system and the brain. Alterations in gut microbiota have been hypothesized to influence the development or severity of which psychiatric condition?

- A) Osteoporosis
- B) Cataracts
- C) Depression**
- D) Glaucoma