

Classical Music and Physiology

Classical Music · Practice Test · 20 Questions

1. What physiological effect is commonly observed in listeners when listening to slow-tempo classical music (60-80 beats per minute)?

- A) Increased adrenaline production
- B) Decreased resting heart rate
- C) Elevated core body temperature
- D) Increased cortisol levels

2. Which hormone, associated with stress reduction, has been shown to increase in patients listening to Mozart's compositions?

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

3. What is the 'Mozart Effect' popularly hypothesized to temporarily enhance in human cognitive performance?

- A) Spatial-temporal reasoning
- B) Long-term memory retention
- C) Physical muscle strength
- D) Visual color perception

4. How does listening to classical music often affect the autonomic nervous system?

- A) It triggers the fight-or-flight response
- B) It stimulates the sympathetic nervous system
- C) It promotes parasympathetic nervous system activity
- D) It causes autonomic nervous system failure

5. In clinical settings, classical music is frequently used to manage the perception of what physical sensation?

- A) Chronic pain
- B) Bone density loss
- C) Hyperglycemia
- D) Muscle atrophy

6. What happens to the rate of respiration in many individuals when they are exposed to rhythmic, structured classical music?

- A) It becomes erratic and irregular
- B) It synchronizes with the musical tempo
- C) It increases significantly
- D) It stops temporarily

7. Studies suggest that listening to classical music before sleep can improve sleep quality by reducing the activity of which gland?

- A) Pineal gland
- B) Pituitary gland
- C) Adrenal gland
- D) Thyroid gland

8. Which structural feature of the brain has been shown to be more developed in professional classical musicians compared to non-musicians?

- A) Corpus callosum
- B) Medulla oblongata
- C) Cerebellum
- D) Occipital lobe

9. Musical training in classical instruments is linked to improved neuroplasticity, specifically affecting which part of the brain responsible for motor skills?

- A) Prefrontal cortex
- B) Primary motor cortex
- C) Amygdala
- D) Hippocampus

10. Listening to classical music has been scientifically linked to a reduction in blood pressure, specifically which measurement?

- A) Systolic blood pressure
- B) Diastolic blood pressure
- C) Pulse pressure
- D) Mean arterial pressure

11. The study of music therapy indicates that classical music can help stimulate the release of which natural analgesic in the brain?

- A) Endorphins
- B) Adrenaline
- C) Glucagon
- D) Thyroxine

12. For patients recovering from surgery, classical music is often used to lower the dosage requirement of which type of medication?

- A) Antihistamines
- B) Antibiotics
- C) Analgesics
- D) Antacids

13. Classical music with a regular, steady beat is often used in physical rehabilitation to assist with the regulation of what?

- A) Gait and movement coordination
- B) Blood clotting speed
- C) Digestive metabolism
- D) Reflex reaction time

14. What effect does consistent practice of classical music have on the gray matter density in the auditory cortex?

- A) It decreases density
- B) It remains unchanged
- C) It increases density
- D) It causes atrophy

15. Music-based interventions for dementia patients often utilize familiar classical pieces to stimulate which type of memory?

- A) Procedural memory
- B) Autobiographical memory
- C) Sensory memory
- D) Short-term working memory

16. During active music making, such as playing a string instrument, which sensory-motor integration is most highly taxed?

- A) Auditory-motor mapping
- B) Olfactory-visual mapping
- C) Gustatory-tactile mapping
- D) Vestibular-visual mapping

17. Research suggests that classical music can reduce the time taken to fall asleep by influencing which neurotransmitter?

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

18. The 'entrainment' effect in music therapy refers to the human body's tendency to do what?

- A) Resist external rhythmic stimuli
- B) Align biological rhythms to an external stimulus
- C) Completely ignore auditory input
- D) Increase muscle tension in response to sound

19. Which brain wave pattern, associated with relaxation, is often increased by listening to sedative classical music?

- A) Beta waves
- B) Gamma waves
- C) Alpha waves
- D) Delta waves

20. In the context of the human auditory system, the perception of pitch in classical music is primarily processed in which structure?

- A) Cochlea
- B) Pinna
- C) Eardrum
- D) Stapes