

Basal Ganglia Functions in Motor Control and Cognition

Neuroscience · Practice Test · 15 Questions

1. Which brain structure is described as a gate-keeping mechanism for the initiation of motor movement?

- A) Cerebellum
- B) Basal ganglia
- C) Cerebral cortex
- D) Thalamus

2. The basal ganglia are associated with regulating which of the following functions?

- A) Auditory processing and olfaction
- B) Motor control, cognition, and emotion
- C) Visual perception and spatial awareness
- D) Sleep cycles and circadian rhythms

3. Via which structure do the basal ganglia influence motor neurons and interneurons?

- A) Cerebral cortex
- B) Thalamus
- C) Pons
- D) Cerebellum

4. Which of the following is NOT listed as a function associated with the basal ganglia via the pons?

- A) Voluntary motor movements
- B) Procedural learning
- C) Habit formation
- D) Sensory transduction

5. The basal ganglia are considered to be involved in effectively choosing which actions to allow and which to inhibit. This relates to their role in:

- A) Regulating breathing
- B) Initiating motor movement
- C) Processing sensory input
- D) Maintaining balance

6. Which of these is a component of the basal ganglia?

- A) Hippocampus
- B) Amygdala
- C) Putamen
- D) Cerebellum

7. The text mentions the basal ganglia are associated with functions including motor control, cognition, and:

- A) Digestion
- B) Respiration
- C) Emotion
- D) Temperature regulation

8. The influence of the basal ganglia on motor neurons and interneurons is facilitated via the:

- A) Thalamus
- B) Cerebral cortex
- C) Pons
- D) Medulla oblongata

9. Which specific structure is listed as a related structure to the basal ganglia?

- A) Caudate nucleus
- B) Hippocampus
- C) Cerebellum
- D) Thalamus

10. Conditional learning is mentioned as a function associated with the basal ganglia via the:

- A) Thalamus
- B) Pons
- C) Cerebral cortex
- D) Cerebellum

11. The basal ganglia play a role in habit formation, which occurs via the:

- A) Thalamus
- B) Pons
- C) Cerebral cortex
- D) Cerebellum

12. Which of the following is explicitly mentioned as a function influenced by the basal ganglia via the thalamus?

- A) Procedural learning
- B) Eye movements
- C) Habit formation
- D) Conditional learning

13. The text indicates that the basal ganglia are associated with regulating functions that are influenced via the:

- A) Pons
- B) Cerebellum
- C) Thalamus
- D) Medulla oblongata

14. Which of the following is a listed component of the basal ganglia?

- A) Putamen
- B) Cerebellum
- C) Thalamus
- D) Cerebral cortex

15. The basal ganglia's influence on cognition is mediated via the:

- A) Pons
- B) Thalamus
- C) Cerebellum
- D) Medulla oblongata