

Discover How Your Brain Builds Muscle Memory

Investigate the brain's ability to coordinate movement, develop motor skills, and create muscle memories. Read the resource at: <https://bit.ly/HYBactivity1>

1. Is standing still a voluntary or involuntary movement?
 - a. Voluntary
 - b. Involuntary
2. What is the name for the form of memory where your brain remembers movements and can perform them in a sequence without thinking about them?
 - a. Working memory
 - b. Long-term memory
 - c. Voluntary memory
 - d. Muscle memory
3. The brain's ability to reshape itself and form new connections when learning new skills is called neuroplasticity.
 - a. True
 - b. False
4. What part of the brain is known as the "mini-brain" and helps your muscles coordinate movements and maintain balance?
 - a. The frontal lobe
 - b. The motor cortex
 - c. The cerebellum
 - d. The cerebrum
5. Which area of the brain serves as a "gatekeeper" to decide which movements to allow and which to block?
 - a. The cerebrum
 - b. The basal ganglia
 - c. The medulla
 - d. The hippocampus

6. In what lobe of the brain is the motor cortex located, which plays an important role in executing voluntary movements?
- a. The frontal lobe
 - b. The temporal lobe
 - c. The parietal lobe
 - d. The occipital lobe
7. Aerobic exercise (like walking, running, swimming, etc.) has positive effects on the brain and can improve your mood.
- a. True
 - b. False
8. Neurons in the brain are most active for learning new skills during what stage of life?
- a. Adulthood
 - b. Childhood and teenage years
9. It is impossible for older people to learn new physical skills like dancing because their neurons are less active.
- a. True
 - b. False
10. About how many neurons does your brain have?
- a. about 8 million
 - b. about 80 million
 - c. about 80 billion
 - d. about 80 trillion

Answer Key

1. A. Voluntary
2. D. Muscle memory
3. A. True
4. C. The cerebellum
5. B. The basal ganglia
6. A. The frontal lobe
7. A. True
8. B. Childhood and Teenage years
9. B. False (It's possible but it may take them longer)
10. C. About 80 billion