NEW LEARNING BY BRAIN REGION LIST

The parts of your brain that you use will grow, and the parts of your brain that you do not use atrophy, or shrink. This provides guidance on how to exercise the brain. Just doing crossword puzzles or Sudoku is not going to give you the full benefit you want. That’s like going to the gym, doing right bicep curls and then leaving. Here are some ideas for doing “whole brain combination workouts.”

Prefrontal Cortex (PFC) Exercises:

- Language games – such as Scrabble (if you memorize the Scrabble dictionary, you will crush your friends at the game), Boggle, Words with Friends
- Crossword puzzles
- Speech and debate classes in college
- Strategy games – such as chess
- Tetris (also works parietal and occipital lobes) – after just three minutes, it can help decrease cravings for drugs (alcohol, nicotine, caffeine), food and drink and activities (sex, exercise, gaming)
- Prayer and meditation – may be the most powerful prefrontal cortex booster of all. I have published several studies on meditation, and it reliably activates the prefrontal cortex. It helps you have better focus and executive function, judgment and impulse control, so you can make more thoughtful and moral decisions. In a study of meditative prayer, my friend and colleague Andrew Newberg, M.D., a neuroscientist at Thomas Jefferson University, found increased blood flow to the PFC. The Franciscan nuns performed a practice called “centering prayer,” which requires that an individual focus attention on a phrase from the Bible or a prayer over a period of time with the goal of “opening themselves to being in the presence of God.”
- Weight training and aerobic activity (fast walking) – when combined, these activities increased executive function—which encompasses complex thought processes, including reasoning, planning, problem-solving and multitasking—in dementia patients!

Temporal Lobe Exercises:

- Super Mario 3D World – but not 2D Angry Birds, for enhanced hippocampal function
- Intensive learning – such as medical or law school, increased hippocampal size after just 14 weeks
- Memorization of poetry and prose – increased hippocampal size
- Memory and mnemonic training diagram
- Learning to play new musical instruments – involves PFC, parietal lobes and cerebellum
- Physical exercise – increases the hippocampus, so learn a new sport while you exercise
Parietal Lobe Exercises:
- Math games – like Sudoku
- Juggling – involves PFC, temporal lobes (hippocampus), occipital lobes and cerebellum
- Golf, even for novices – forty hours of training increases gray matter in the parietal and occipital lobes
- Dance – including the tango, even for those with Parkinson’s disease
- Learning to read and play music
- Map reading – without a GPS device

Basal Ganglia Exercises
- Balancing
- Synchronizing arm and leg movements
- Manipulating props – like ropes and balls, but not from aerobic exercise

Cerebellum Exercises
- Coordination games – like table tennis (also involves PFC), dancing (learn new dance steps), yoga, tai chi
- Basketball

The list of ways to stimulate your brain with new learning is likely to be endless. When you choose, follow these guidelines: Each one should be challenging, new and something you love.
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