

# Portfolio Handout 14 - Physical Exercise for Brain Health

**Physical exercise is not only important for your body's health- it also helps your brain stay sharp.**

Your brain is no different than rest of the muscles in your body--you either use it or you lose it. You utilize the gym to stimulate the growth of muscle cells, just as you use a **brain fitness program** to increase connections in your brain. But you can actually get an additional brain boost by donning your sneakers and hitting the gym. The benefits of physical exercise, especially aerobic exercise, have positive effects on brain function on multiple fronts, ranging from the molecular to behavioral level. According to [a study done by the Department of Exercise Science at the University of Georgia](#), even briefly exercising for 20 minutes facilitates information processing and memory functions.

Exercise affects the brain on multiple fronts. It increases heart rate, which pumps more oxygen to the brain. It also aids the bodily release of a plethora of hormones, all of which participate in aiding and providing a nourishing environment for the growth of brain cells.

Exercise stimulates the brain plasticity by stimulating growth of new connections between cells in a wide array of important cortical areas of the brain. [Recent research from UCLA](#) demonstrated that exercise increased growth factors in the brain—making it easier for the brain to grow new neuronal connections.

From a behavioral perspective, the same antidepressant-like effects associated with "runner's high" found in humans is associated with a drop in stress hormones. **A study from Stockholm** showed that the antidepressant effect of running was also associated with more cell growth in the hippocampus, an area of the brain responsible for learning and memory.

The Golden Duo: Mental and Physical Exercise

The usage of physical exercise in conjunction with **brain training** increases your chances of increasing cognitive functions within parameters, including time of exercise and style of exercise. Interestingly, differences between exercise styles, such as opting for cycling over running, is associated with an enhanced brain function during and after working out. Ballroom dancing, an activity with both physical and mental demands has had a higher impact on cognitive functioning over exercise or mental tasks alone, indicating that the best brain health workouts involve those that integrate different parts of the brain such as coordination, rhythm, and strategy.

Tips for Choosing The Right Physical Exercise

- In general, anything that is good for your heart is great for your brain.
- Aerobic exercise is great for body and brain: not only does it improve brain function, but it also acts as a "first aid kit" on damaged brain cells.
- Exercising in the morning before going to work not only spikes brain activity and prepares you for mental stresses for the rest of the day, but also produces increases retention of new information, and better reaction to complex situations.
- When looking to change up your work out, look for an activity that incorporates coordination along with cardiovascular exercise, such as a dance class.
- If you like crunching time at the gym alone, opt for circuit work outs, which both quickly spike your heart rate, but also constantly redirect your attention.
- Hitting a wall or mentally exhausted? Try rebooting with a few jumping jacks for your [brain improvement](#) exercises.

Information Review -

According to the University of Georgia how many minutes of exercise will help the brain?

Name two exercise effects on the brain.

Where could you find out more about brain plasticity? Ask your teacher if you're not sure.

What do the best brain workouts involve?

Source BrainHQ - <http://www.brainhq.com/brain-resources/everyday-brain-fitness/physical-exercise>