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Exercise to Increase Brain Function

By Kent Pegg

Several studies conducted over the past few years have shown that regular exercise increases brain function and cognitive ability. In fact, exercise is now being called the best strategy to increase brain power.

Exercise, both cardiovascular and light to moderate weight training, increases the size of the arteries. This allows greater blood flow which helps increase mental ability.

More blood flow also leads to increased neurogenesis, the brains ability to make new neurons, and increased neuroplasticity, the brains ability to reinvent itself. This makes the brain more functional and capable of holding and processing more data.

Exercise also increases brain cell growth in the hippocampus. Located in the medial temporal lobe of the brain, the hippocampus is essential for memory formation and is important for spatial navigation and relational memory.

Initial studies in animals showed that fit animals have bigger hippocampi and better spatial memory. Now, studies have shown the same to be true for humans. The larger the hippocampus, the more tissue and, therefore, better spatial memory.

Other studies show that fit people have the least variation in their IQ as they age. In other words, given two people the same age and with the same IQ, if one stays more fit than the other, that person will have greater cognitive ability as they age. Some studies suggest that regular exercise can actually increase your IQ by as much as 10 to 15 points.

Additional research has shown that fit adults have increased neural activity in parts of the brain that involve concentration and attention. They also have reduced activity in areas of the brain that are sensitive to behavioral conflict and distraction. This means that fit individuals have better ability to maintain concentration and are less vulnerable to external distraction.

Exercise is also proven to be highly effective at reducing the risk of developing some age related mental impairments like Alzheimer's and dementia. One study shows that people who exercised just three times a week for thirty minutes were less likely to develop Alzheimer's despite being genetically predisposed to the disease.

One published study in the medical journal, *Neurology*, showed that less fit people with early Alzheimer's had four times more brain shrinkage compared to normal adults than those with early Alzheimer's who were physically fit.

Clearly more studies are needed to determine what type of exercise and how much exercise is optimum for increase brain function, but, given the new information, it is obvious that there is a direct correlation between exercise and healthy brain function.

So if you didn't have enough reasons to exercise, you now know that by exercising you'll not only have a healthier body but you'll also have a healthier mind.

Kent Pegg is a certified personal trainer and the owner of the Los Alamos Fitness Center. If you have any questions about the information or exercises in this article you can call him at 662-5232.