

## How to Build a Better Brain

The brain is an amazing organ. It is the central processing system in the body that interprets, communicates and executes vital functions and processes. It is responsible for language, memory, decision-making, emotions and bodily functions; including temperature, blood pressure, heart rate and breathing. With so many important vital functions, maintaining the health of our brain truly is, a no-brainer.

It was once believed that when we reached the age of physical maturity that our brain stopped making new tissue. According to this theory, age related diseases would cause neurons to atrophy and die, leaving us all to succumb to dementia. Thankfully science has demonstrated that the brain is a dynamic organ that has the ability to heal, make new neurons, and reorganize to build new neural pathways.

A healthy brain has a 100 billion highly specialized neurons designed to transmit messages within the body. When we learn a new skill we create new neural pathways, the more we develop our skill the faster the message travels along this pathway. When we stop practicing the skill, the speed in which the message travels can slow down, or even stop. Synaptic pruning occurs when the brain atrophies in areas that are not regularly used. In other words, use it or lose it! By training our brain and keeping the mind active we can prevent atrophy even as we age.

When we focus on a new challenge we are pensive, methodical, and above all mindful; an important part of maintaining a healthy brain, as mindfulness has been shown to reduce stress. Chronic stress impacts cognitive function, alters the structure of brains cells, and increases the risk for dementia. While we need a little stress in our daily lives, the body can not differentiate between a perceived threat, and a

physical threat. Left unmanaged, chronic stress ages the brain, reduces gray matter, and makes it more difficult to manage stressful situations in the future. The act of mindfulness can help to redirect your outlook by observing your thoughts and controlling your emotions so that they do not trigger a stress response.

In addition to being mindful, physical activity reduces stress while promoting the production of new neural pathways. Physical activity boosts blood flow to the brain, and speeds up the connections between brain cells that are responsible for learning. Studies with college students have shown that vigorous physical exercise such as running for 30 minutes led to faster reaction times and vocabulary learning, and aging studies have demonstrated a reduction in cognitive decline with regular physical activity which includes brisk walking.

When it comes to brain health managing stressful situations, stimulating your brain by learning new skills and challenging your body with regular physical activity are the best ways to build a better brain.

#### Sources:

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