

“It is exercise alone that supports the spirit, and keeps the mind in vigor.” Cicero - 65 BC

Your Brain Needs You to Exercise

The Latest Scientific Evidence

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We all know that aerobic exercise is good for the body — it builds muscles and strengthens the heart and lungs. What if exercising were just as crucial for building and conditioning the brain? Well, it turns out that exercise has a profound impact on our cognitive abilities and on our mental health. In fact, aerobic exercise may be one of the best treatments for depression, anxiety, stress, and a host of other mental health problems.

Exercise increases the body's levels of serotonin, norepinephrine and dopamine — which are neurotransmitters that have a significant impact on our thoughts and emotions. Research has shown that insufficient serotonin has been associated with depression. Less commonly understood, however, is that when we are stressed out, there is an erosion in the connections between the cells in the brain; depression can actually shrink certain areas of the brain. So, how does exercise promote a healthy brain?

It is now known that our brains are actually plastic. In other words, rather than being hardwired for learning, they can be rewired — that is we

can actually grow new brain cells. And exercise has a profound impact on that rewiring. According to the psychiatrist, John Ratey, author of the book, *Spark: The Revolutionary New Science of Exercise and the Brain*, exercise improves the brain's ability to learn on three levels. First, it improves alertness, attention and motivation. Second, exercise prepares and encourages nerve cells to bind to one another, which is the way, on a cellular level, we take in new information. And third, exercise encourages the development of new nerve cells from stem cells in the hippocampus (an area of the brain that is important for learning).

Coping Better with Stress

Exercise is also an important factor in helping to prevent the damaging effects of chronic stress from taking hold in the body. Dr. Ratey points out that exercise helps cellular repair mechanisms in the body, keeps cortisol in check and increases levels of key neurotransmitters that regulate our mood, focus and motivation. Beyond helping to keep the ill effects of stress away, exercise also can actually reverse the negative effects of chronic

stress. Dr. Ratey notes that research has shown that when rats that have been chronically stressed are exercised, that activity causes their hippocampus to grow back to its pre-stressed and pre-shriveled state.

As you exercise regularly, you also gain a sense of mastery and self-confidence. You can observe yourself managing your stress level better and become aware of your improved ability to cope. This increases your psychological health as well.

Reducing Your Anxiety

Anxiety is a natural reaction to a threat and the physical symptoms include feeling anything from tense, jittery, and short of breath to the more extreme of having a racing heart, and at times chest pains. While anxiety is a natural response to fear, when we worry frequently with no real threat and that worrying affects our daily functioning — then that's an unhealthy level of anxiety. The fact that aerobic activity works to lower levels of anxiety is now well established. It has been found that physical activity calms the body and when the body is calm, the brain is less likely to worry. In addition, exercise provides a distraction for the mind, putting it on something else rather than worry. It also reduces muscle tension which can be a chronic problem for those who are chronically anxious.

Reducing Depression

According to Dr. Ratey, exercise counteracts depression at almost every level. He points out that in Britain, doctors now use exercise as a first-line treatment for depression. Research has shown that regular exercise influences the same chemicals that antidepressants do and has a clear impact on improving mood.

However, exercise may be even more important for prevention than it is for the treatment of depression, according to Dr. Ratey. One of the first symptoms of depression he points out is sleep disturbance — either you can't get up or you can't get to sleep or both. This often causes inertia — a loss of energy and then often interest in things. Exercise helps to break this vicious cycle by getting us moving again. This increases our overall level of energy and vitality. When we see ourselves moving again. That in itself is an achievement and proof that we can do something to help ourselves.

Dr. Ratey's book details the ways that exercise can also help with attention deficit disorder, addiction, hormonal changes and aging. He repeatedly outlines the scientific research that shows that exercise is the single most powerful tool we have to optimize our brain function. Walking, running, biking, swimming — all have a positive impact on our mental and physical health. We were made to move and our body and mind respond to exercise quickly. Regular exercise can make the difference between a calm and focused mind and a hassled and inattentive one. Do your brain and your body a favor and exercise regularly. It's the best medicine you can give yourself.

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