

Doctors Explain How Hiking Actually Changes Our Brains

By Alanna Ketler, Collective Evolution

While it may seem obvious that a good hike through a forest or up a mountain can cleanse your mind, body, and soul, science is now discovering that hiking can actually change your brain... for the better!

Hiking in Nature Can Stop Negative, Obsessive Thoughts

Aside from the almost instant feeling of calm and contentment that accompanies time outdoors, hiking in nature can reduce rumination. Many of us often find ourselves consumed by negative thoughts, which takes us out of the enjoyment of the moment at best and leads us down a path to depression and anxiety at worst. But a recent study published in *Proceedings of the National Academy of Sciences* found that spending time in nature decreases these obsessive, negative thoughts by a significant margin.

To conduct this study, researchers compared the reported rumination of participants who hiked through either an urban or a natural environment. They found that those who walked for 90 minutes in a natural environment reported lower levels of rumination and they also had reduced neural activity in the subgenual prefrontal cortex, an area of the brain related to mental illness. Those who walked through the urban environment, however, did not report decreased rumination.

The researchers noted that increased urbanization closely correlates with increased instances of depression and other mental illness. Taking the time to regularly remove ourselves from urban settings and spend more time in nature can greatly benefit our psychological (and physical) well-being.

Hiking While Disconnected From Technology Boosts Creative Problem Solving

A study conducted by psychologists Ruth Ann Atchley and David L. Strayer found that creative problem solving can be drastically improved by both disconnecting from technology and reconnecting with nature. Participants in this study went backpacking through nature for about four days, during which time they were not allowed to use any

technology whatsoever. They were asked to perform tasks requiring creative thinking and complex problem solving, and researchers found that performance on problem solving tasks improved by 50% for those who took part in this tech-free hiking excursion.

They also noted that both technology and urban noise are incredibly disruptive, constantly demanding our attention and preventing us from focusing, all of which can be taxing to our cognitive functions. A nice long hike, sans technology, can reduce mental fatigue, soothe the mind, and boost creative thinking.

Hiking Outdoors Can Improve ADHD in Children

Attention Deficit Hyperactivity Disorder (ADHD) is becoming more and more common among children. Children who have ADHD have a difficult time with impulse control and staying focused, get distracted easily, and exhibit excessive hyperactivity.

While raising children who have ADHD can be difficult for parents, the usual solution — opting for prescription medication — may be doing more harm than good, particularly when natural solutions can work just as well. A study conducted by Frances E Kup, PhD, and Andrea Faber Taylor, PhD, found that exposing children with ADHD to “green outdoor activities” reduces symptoms significantly. The results of this study suggest nature exposure can benefit anyone who has a difficult time paying attention and/or exhibits impulsive behaviour.

Hiking In Nature Is Great Exercise and Therefore Boosts Brainpower

We already know that exercise is fantastic for our overall well-being. Hiking is an excellent way to burn between 400–700 calories per hour, depending on your size and the hike difficulty, and it is easier on the joints than other activities like running. It has also been proven that people who exercise outside are more likely to keep at it and stick to their programs, making hiking an excellent choice for those wishing to become more active on a regular basis.

Researchers from the University of British Columbia found that aerobic exercise increases hippocampal volume — the part of the brain associated with spatial and episodic memory — in women over the age of 70. Such exercise not only reduces memory loss, but helps prevent it as well. Researchers also found that it can lower stress and anxiety, boost self esteem, and release endorphins. Many people take medication to solve each and every one of these issues, but the solution to these ills may be a lot simpler than you think!

How Can You Begin Hiking?

Luckily, hiking is one of the easiest and least expensive sports to get involved in, and it can have great benefits for the whole family, including grandma! Start out small and test your abilities. Do what works for you; if that means just walking through trails in a park, that's fine. Any exercise outdoors is better than none. You can easily find maps of trails around your home online, and there are plenty of smartphone apps to map them out, too. I recommend turning off your signal and your phone while hiking though, so you can reap the most benefits of the hike (though it may be wise to at least carry it with you in case of emergency).

Make sure you have some good sturdy hiking shoes, a hat, and a water bottle, and be sure to layer your clothing so you can take things on or off easily as you warm up and cool down. You may want to consider using trekking poles as well, which can increase your speed and take some of the pressure off your knees. Now, can you just do one thing for me?

Go take a hike!