

5 Mind-Blowing Benefits of Exercise

Think exercise is all about toned abs and weight loss? It also makes you happier and smarter

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Posted: June 30, 2010

Maybe you exercise to tone your thighs, build your biceps, or flatten your belly. Or maybe you work out to ward off the big killers like [heart disease](#), [diabetes](#), and [cancer](#). But how about sweating to improve your mind? "Exercise is the single best thing you can do for your brain in terms of mood, memory, and learning," says Harvard Medical School psychiatrist John Ratey, author of the book, *Spark: The Revolutionary New Science of Exercise and the Brain*. "Even 10 minutes of activity changes your brain." If you need a little extra incentive to lace up those sneakers, here are five ways that exercise can enhance your brainpower:

1. It reverses the detrimental effects of stress. Jumping on the treadmill or cross trainer for 30 minutes can be an instant way to blow off tension by boosting levels of "soothing" brain chemicals like serotonin, dopamine, and norepinephrine. What's fascinating, though, is that exercise may actually work on a cellular level to reverse stress's toll on our aging process, according to a June study from the University of California at San Francisco. The researchers found that stressed-out women who exercised vigorously for an average of 45 minutes over a three-day period had cells that showed fewer signs of aging compared to women who were stressed and not active. Working out also helps keep us from ruminating "by altering blood flow to those areas in the brain involved in triggering us to relive these stressful thoughts again and again," says study coauthor Elissa Epel, an associate professor of psychiatry at UCSF.

2. It lifts depression. Research suggests that burning off 350 calories three times a week through sustained, sweat-inducing activity can reduce symptoms of depression about as effectively as antidepressants. That may be because exercise has been found to stimulate the growth of neurons in certain brain regions damaged during depression. What's more, animal studies have found that getting active boosts the production of brain molecules that improve connections between nerve cells, thereby acting as a natural antidepressant.

3. It improves learning. Exercise increases the level of brain chemicals called growth factors that help make new brain cells and establish new connections between brain cells to help us learn. Interestingly, complicated activities, like playing tennis or taking a dance class, provide the biggest brain boost. "You're challenging your brain even more when you have to think about coordination," explains Ratey. "Like muscles, you have to stress your brain cells to get them to grow." Complicated activities also improve our capacity to learn by enhancing our attention and concentration skills, according to German researchers who found that high school students scored better on high-attention tasks after doing 10 minutes of a complicated fitness routine compared to 10 minutes of regular activity. (Those who hadn't exercised at all scored the worst.)

4. It builds self-esteem and improves body image. You don't need to radically change your body shape to get a confidence surge from exercise. Studies suggest that simply seeing fitness improvements, like running a faster mile or lifting more weight than before, can improve your self-esteem and body image.

5. It leaves you feeling euphoric. Yes, that "runner's high" really does exist if you're willing to shift into high-intensity mode. Ratey recommends sprint bursts through interval training. Run, bike, or swim as fast as you can for 30 to 40 seconds and then reduce your speed to a gentle pace for five minutes before sprinting again. Repeat four times for a total of five sprints. "You'll feel really sparkly for the rest of the day."