Physical activity may be good for focus. Plus, it’s an inexpensive, self-prescribed, and accessible alternative ADHD treatment for both adults and children.

"Think of exercise as medication," says John Ratey, M.D., an associate clinical professor of psychiatry at Harvard Medical School. “For a very small handful of people with attention deficit hyperactivity disorder (ADHD ADD), it may actually be a replacement for stimulants, but, for most, it’s complementary - something they should absolutely do, along with taking meds, to help increase attention and improve mood.”

While most of us focus on exercise as a way to trim our waistlines, the better news is that routine physical activity firms up the brain - making it a simple, alternative ADHD treatment.

“Exercise turns on the attention system, the so-called executive functions - sequencing, working memory, prioritizing, inhibiting, and sustaining attention,” says Ratey, author of the forthcoming Spark: The Revolutionary New Science of Exercise and the Brain (Little, Brown). “On a practical level, it causes kids to be less impulsive, which makes them more primed to learn.”

The latest news about exercise is that it helps kids push through past failures and attack things they didn’t succeed at before. “The refrain of many ADHD kids is, ‘No matter what I do, I’m going to fail,’” says Ratey. “Rat studies show that exercise reduces learned helplessness. In fact, if you’re aerobically fit, the less likely you are to learn helplessness.”

So how, exactly, does exercise deliver these benefits to the ADHD brain? When you walk, run, or do a set of jumping jacks or pushups, your brain releases several important chemicals.

Endorphins, for one, hormone-like compounds that regulate mood, pleasure, and pain. That same burst of activity also elevates the brain’s dopamine, norepinephrine, and serotonin levels. These brain chemicals affect focus and attention, which are in short supply in those with ADHD.

“When you increase dopamine levels, you increase the attention system’s ability to be regular and consistent, which has many good effects,” explains Ratey, like reducing the craving for new stimuli and increasing alertness.
Effect of sunlight exposure on cognitive function among depressed and non-depressed participants

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2728098/

A lack of sunlight is associated with reduced cognitive function among depressed people. Researchers writing in BioMed Central's open access journal Environmental Health used weather data from NASA satellites to measure sunlight exposure across the United States and linked this information to the prevalence of cognitive impairment in depressed people.

Shia Kent, from the University of Alabama at Birmingham, led a team of US researchers who used cross-sectional data from 14,474 people in the NIH-NINDS-funded REGARDS study, a longitudinal study investigating stroke incidence and risk factors, to study associations between depression, cognitive function and sunlight. He said, "We found that among participants with depression, low exposure to sunlight was associated with a significantly higher predicted probability of cognitive impairment. This relationship remained significant after adjustment for season. This new finding that weather may not only affect mood, but also cognition, has significant implications for the treatment of depression, particularly seasonal affective disorder".

Kent and his colleagues speculate that the physiological mechanisms that give rise to seasonal depression may also be involved in sunlight's effect on cognitive function in the context of depressive symptoms. Cognitive function was assessed by measurement of short-term recall and temporal orientation. As well as regulating the hormones serotonin and melatonin, light has been shown to also affect brain blood flow, which has in turn been linked with cognitive functions. The researchers write, "Discovering the environment's impact on cognitive functioning within the context of seasonal disorders may lead not only to better understanding of the disorders, but also to the development of targeted interventions to enhance everyday functioning and quality of life".

Kickball - Wikipedia definition

Kickball is a playground game and competitive league game, similar to baseball, invented in the United States circa 1942. Kickball is also known as soccer-base or soccer-baseball.

Kickball is a playground game and competitive league game, similar to baseball, invented in the United States circa 1942. Kickball is also known as soccer-base or soccer-baseball. American World War II correspondent Ernie Pyle reported it being played by U.S. soldiers during the Tunisia Campaign, 1942-1943.

The game is typically played on a softball diamond with a 10- to 16-inch (250- to 400-mm) inflated rubber ball. As in baseball/softball, the game uses 3 bases and a "home plate."

Rules generally follow baseball/softball rules, with the exception that the ball is kicked rather than struck with a bat. The pitcher rolls the ball towards the catcher, the "batter" kicks it with his/her foot, then runs to first base, becoming a runner.

A runner is out if any one of the following conditions are met:
• If the ball is caught in the air without touching the ground first, then the batter is out (a fly out).
• In the case of a fly out, any runner already on base who attempts to advance before the ball is caught may themselves be counted out if the ball is returned to the base they were on before the ball was kicked.
• A defensive player with the ball touches the base ahead of a runner who is forced to go to that base, because of an advancing runner behind him (a force out).
• A defensive player touches the runner directly with the ball while holding it (a tag out).

Most versions also allow for balls and strikes, with a strike defined as any pitch which crosses the plate below the knees of the batter (and which is thus reasonably kickable), though each league may define balls and strikes differently. As with baseball, a fixed number of balls defines a "walk" (usually 4, though sometimes only 3), for which the batter gets a free trip to first base, and a fixed number of strikes (usually 3, though sometimes 2) will get a batter an "out".

Foul balls (those kicked outside of the line through home plate and either first or third base) may be handled in several ways, depending on local rules.