Could Exercise Be as Effective as Medicine for Children With ADHD?

by YVONNE BANKS

ADHD and Exercise – How Exercise May Help Improve ADHD Symptoms

It used to be that attention deficit hyperactivity disorder (ADHD) was a disorder that affected children. However, we now recognize that it affects people of all ages – which has led to medicating people of all ages with stimulants.

While I believe that pharmacotherapy has its place in treating disease, I also think that using alternative therapies – such as exercise – can be beneficial when used together.

That being said, today we will discuss the benefit of exercise for people living with ADHD. There is ample research that indicates that exercise is beneficial when used in conjunction with medications that your physician may have prescribed.

The Research

Physical activity may be just as effective as medicine for treating ADHD in children, new research suggests.

A recent study out of Michigan State University and the University of Vermont showed that aerobic activity (an activity that raises the heart rate) before school helped young children with symptoms of ADHD to become more attentive and less moody throughout the day.

Exercise also improved the children's academic skills. Short bursts of physical activity during the day helped them to better focus on their studies.

There are still many questions that further research is needed to answer. The exact reason why ADHD children benefit from the exercise was not clear, though it may be the extra blood circulation to the brain helping cognitive thinking and ability to focus.

Students in the study who didn't have ADHD also showed improvements after the activity sessions. But while the physical activity helped everyone focus better, researchers saw the biggest improvement in those with ADHD.

Studies Saw an Improvement in Attention Span and Mood

The growing body of evidence suggests that exercise can be considered an additional "medication."

Dr. John Ratey, an associate clinical professor of psychiatry at Harvard Medical School, notes that exercise is a complimentary "medication" for people with ADHD – "something they should absolutely do, along with taking meds, to help increase attention and improve mood."

Dr. Ratey notes that for someone with ADHD, "Exercise turns on the attention system, the so-called executive

functions — sequencing, working memory, prioritizing, inhibiting, and sustaining attention."

The evidence also points to exercise being beneficial for children as well. Dr. Betsy Hoza, a professor of psychology at the University of Vermont, studied children with ADHD at an elementary school. She noted that the children, aged kindergarten to second grade, had improved attention span and mood with as little as 30 minutes of moderate to vigorous activity per day.

Other Studies on ADHD and Exercise

Some other studies have also found exercise to be hugely beneficial to children with ADHD.

A study involving children in kindergarten through grade two found around 30 minutes of aerobic exercise for 12 weeks produced marked improvements in all the students' attention and mood, children with ADHD included. The sedentary groups did not fare as well.

A program called ABC for Fitness was part of a 2010 report about how exercise helped children with ADHD. It was evaluated by noting how much medication was needed by each child after exercise.

Five elementary schools participated; three used the exercise program, and the other two did not. The findings showed that in the school's where children did activities like jumping in place and squats there was a one-third decline in ADHD medications used by its students. The schools not using exercise had only a minute decrease.

Another research study at the University of Illinois evaluated what exercising on a treadmill does for a child's cognition and attention span. Children aged eight to 10 years old spent 20 minutes either reading or using the treadmill before taking tests to measure their attention, math, and reading skills.

The test scores were improved in the children who exercised. Within the group that exercised, the children with ADHD scored better on a test that measured self-correction as compared to the ADHD children who read.

How Does Exercise Help Promote Concentration?

You may be wondering, "How the heck is a daily walk or run going to help me concentrate?" Well, good question! It is all a matter of pathophysiology.

Exercise promotes the release of hormones from the brain. For example, endorphins are released. Endorphins are a hormone-like substance that promotes happiness, reduces pain, and regulates the mood.

In addition, dopamine, serotonin, and norepinephrine are all released during exercise; these hormones are all thought to be in short supply when you have ADHD. When these are increased, you may have an improved attention span.

Also, exercise that requires concentration can "tax" the attention span. This is very good when you have ADHD. These types of exercises include gymnastics, dance, and tae kwon do.

What Kind of Exercise Is Beneficial?

According to researchers – the best type of exercise is the type of exercise that you enjoy!

Running is great for some people, but not everyone has the stamina (or the desire!) to keep up a running routine. A walking routine is more reasonable for most people – as little as 30 minutes of walking per day can improve focus and improve mood.

What about kids, who may not enjoy a walking or running routine? Dr. Ratey and Dr. Hoza have the following tips:

- **Investigate the activity that you plan to enroll your child in.** Some children won't do well in organized

sports because they have a difficult time following rules and commands.

- **Ensure that your child's school does not discipline him or her by keeping him or her inside during recess.** Instead, ask the teacher to discipline your child by having him or her run errands – a way for him or her get their energy out.
- **Do not ban your child from athletics if he or she misbehaves or has poor academic performance.** Find another way to discipline your child but remember that activity is important for your child's ADHD.

For both children and adults, a minimum of 30 minutes of exercise per day is recommended. This exercise should be part of your daily routine – no exceptions!

Yoga and ADHD

Another great practice to add to your everyday life is yoga. Yoga asanas (or the postures) can improve the symptoms of ADHD because the act of doing yoga helps oxygenate the brain, as we're constantly working on our breath with yoga.

According to *Do You Yoga,* a reputable website for yoga practitioners, "Children and adults who suffer from ADHD often find themselves unable to connect their bodies and their minds, and yoga allows for precisely that connection to occur. The main goals are to quiet the mind and develop concentration."

To back-up this claim, a research study performed in India found that children with ADHD with a weekly yoga practice had a significant reduction in both teacher and parent ratings of behavior – 46 percent and 92 percent respectively.

The Bottom Line…

There is an established link between the benefit of exercise and ADHD symptoms.

Adding exercise to your daily routine can be thought of as adding an additional "medication" but should not be a replacement for your other medication(s) unless stated by your physician. Try a vigorous daily exercise, and add yoga a day or two per week for an additional benefit!