

ADHD Research Studies with Powerful, Practical Insights



ADHD (Attention Deficit Hyperactivity Disorder) affects children, adolescents and adults. Symptoms include difficulties controlling impulses and temper, maintaining concentration, sitting still, waiting or paying attention for longer periods.

ADHD research is ever growing. We know that ADHD is related to impairments in the executive functions of the brain – the ability to think and plan ahead, impulse control, organisation, and staying with a task through to completion. It has nothing to do with intelligence or personality. People with ADHD can be as intelligent, charming, capable and likeable as anyone. It's also not about 'bad behaviour'. Kids with ADHD want to do the right thing. They want to be able to sit quietly, be still and do as they're asked, but their brains won't let them.

The more that research is able to add to our understanding of ADHD, the greater our capacity to provide more effective forms of treatment and support. Here are some important practical insights.

The ADHD Research.

1. Let them move! (It's good for them.)

People with ADHD tend to move, a lot, and we're now discovering that there's a very good reason for this – movement aids their cognitive function. Those who move more intensely perform better on cognitively demanding tasks that demand greater attention.

In [a study](#) of pre-teens and teenagers with ADHD, researchers at the University of California found that greater movement – both in terms of intensity and frequency – was correlated with significantly better cognitive performance.

A [second study](#) from the University of Florida found similar results, demonstrating that excessive movement plays a critical role in the way people with ADHD remember information and process complex cognitive tasks. There is something about that excessive movement that enhances their working memory – the important brain system that temporarily stores and manages the information needed to perform complex cognitive functions such as learning, reasoning and comprehending.

This adds to previous research by the study's author which found that children with ADHD showed excessive movement *only when* they were using the brain's executive functions, particularly working memory. This challenges previous beliefs that

excessive movement was always there in children with ADHD. It's not always there, only when they need it to be to maximize their cognitive function.

2. Stopping kids with ADHD from moving is detrimental.

Traditionally, interventions have aimed to decrease hyperactivity, but this undermines their capacity to perform and achieve well.

Children with ADHD need to be able to move to maintain alertness and to maximise cognitive function. In contrast, when children without ADHD move during cognitive tasks, their performance is worse.

[This research](#) strongly suggests that it's detrimental to try to keep ADHD kids still, particularly in the classroom. If we want them to learn, which we do – they are bright, creative and capable – we need to find a way to let them move. This doesn't mean letting them run around the classroom, but rather letting them do what they need to, provided it's not intrusive. Feet tapping, leg swinging, squirming in their seat – let them go. Research is telling us that the bulk of students with ADHD will perform better at exams, homework and class work if the, say, are allowed to work while sitting on activity balls or exercise bikes.

Of course, this has to be measured with the disruptiveness to the rest of the class, but the more a balance is able to be achieved between maximizing opportunities for people with ADHD to move, while at the same time minimizing the chance of distraction to the rest of the class, this will allow people with ADHD the opportunity to participate and achieve on a more level playing field as more with their peers.

3. Omega 3 and 6 improves symptoms.

35% of children and adolescents who are diagnosed with ADHD have a subtype called ADD – inattention without hyperactivity. [Research](#) has found that for these children Omega 3 and 6 supplements improve symptoms.

4. Inability to recognise angry facial expressions.

[Researchers](#) have found a difference between the way children with ADHD and without ADHD respond to angry facial expressions. When children were shown happy faces, there was a measurable response in the brains of those children with ADHD and those without ADHD. There was a difference though, between the two groups of when they were shown angry faces. Unlike their non-ADHD peers, children with ADHD did not show any neural response when they were shown faces with angry expressions.

Recognition of emotion is important to the establishment and maintenance of social relationships. The inability of children with ADHD to identify when someone is angry may be the reason they tend to struggle with peer relationships. That's the bad news. The good news is that by being aware of this deficit, support can be tailored towards this to increase their capacity to respond more effectively in social situations. Try

working towards increasing their awareness around the way people change – in facial expression, voice, body language etc when they become angry. Role play might be one way to do this.

5. Aerobic exercise before school can ease ADHD symptoms.

Aerobic exercise before school can help to ease the symptoms of ADHD in the classroom and at home. We know that children generally show improved brain function and better maths and reading skills following physical activity. In a [study](#) of 200 students ranging from kindergarten to second grade, half the group participated in moderate to vigorous physical activity each day before school while the other half completed more sedentary classroom based activities. All students showed improvements, but with children who showed early symptoms of ADHD, those who participated in the exercise group showed a wider range of improvements than those who were in the sedentary group.

6. Playing outdoors in natural green settings reduces symptoms.

Children with ADHD who regularly play outdoors in natural settings where there are lots of trees and grass have [milder symptoms](#) than those who play inside or in built outdoor environments. This is in line with previous research that has found that even for people without ADHD, brief exposure to green outdoors improves concentration and impulse control. Children who were high in hyperactivity (ADHD rather than ADD) benefitted more if they played in an environment that was green and open, such as a soccer field, or an expansive lawn, than if it was just green, such as a green space with plenty of trees or a built setting, indoors or outdoors.

Parenting a Child with ADHD.

As with any child, parenting a child with ADHD will have it's great days, it's challenging days and lots of days in between. Over time, a child with ADHD will increasingly be able to step back and think about whether or not a course of action or a behaviour is a good idea, but this will take time. Here are some things to try in the meantime. (And if you're already doing some of them or all of them, well it's always good to know you're on the right track.):

- Decide what you will ignore and what you won't accept. Nobody is perfect and one of the greatest gifts we can give our kids is showing them that they don't have to be. One way to do this is by tolerating or ignoring the things they do that don't really do any harm.
- Be gentle with yourself. If you lose your temper now and then, have the odd day that's a parenting disaster, or get it wrong sometimes, you won't break your child forever. Adults aren't perfect either.
- Have clear, consistent rules so everyone knows where they stand.
- Have a predictable routine, but be flexible enough to bend a little when it's needed.
- Whenever you can, let them move – and if it's in a green, open space, even better.

- Connect them to as many things as you can – special places, things they love to do, pets, nature, the family, rituals (e.g. a family bike ride on a Sunday/ walking the dog with you on a Wednesday). Most importantly, make sure they're connected to you – they just want to be your hero too, remember- eat meals with them, talk to them, read to them (they're never too old for that).
- Play with them – let them take the lead, make suggestions and sometimes decide the rules. Play is the opposite of doing as you're told and is a way for them to learn about themselves and experiment with the way they are in the world and in relationships. By playing with you, they can learn what works and what doesn't in a gentle, loving environment and they can take that learning into their own peer relationships.
- Provide opportunities for them to achieve mastery and recognition. It doesn't matter what it is – if it's something they can be successful at, and recognise their ability to do something well, it will do amazing things for their confidence and self esteem.

ADHD has its challenges, but all kids do. With ADHD, the challenges are just more obvious. Like anything, if it's managed well over time it can be an asset and kids who are diagnosed and supported will go on to be superstars. There's no reason for them not to be.

ADHD has been likened to having a Ferrari for a brain. It's fast, powerful and in many situations, when it's handled effectively, it will be a winner. The problem is that this Ferrari engine has feet through the floor for breaks. Not being able to go slow, stop or pause when you need to can cause a bit of trouble, but with the right support, knowledge and treatment, and given time, children ADHD can thrive.