FREE GUIDE · ADHD

ADHD explained: how the ADHD brain works, and what helps

ADHD isn't a lack of effort. Here's what is going on in the brain, why it so often gets misread, and the practical changes, therapy and treatment that help.

"If you'd just try harder." Most people with ADHD have heard some version of that, usually many times. The trouble is, trying harder doesn't work very well when the part of your brain that does the trying is running on fewer resources. This guide explains what ADHD is, what is going on in the brain, and what actually helps.

What is ADHD?

Attention deficit hyperactivity disorder (ADHD) is a lifelong neurodevelopmental condition. You are born with it, and the signs usually show in childhood, although many people, especially girls and women, aren't recognised until much later. It involves persistent patterns of inattention, hyperactivity and impulsivity that get in the way of daily life.

Over time, ADHD can affect learning, work, relationships and confidence, and it often brings anxiety or low mood along with it.

Three presentations

- **Mainly inattentive:** difficulty focusing, following instructions, getting organised and sustaining attention; careless mistakes; not seeming to listen; avoiding tasks that need sustained mental effort; losing things; being easily distracted; forgetfulness.
- **Mainly hyperactive-impulsive:** fidgeting, difficulty staying seated, running or climbing when it isn't appropriate, talking a lot, interrupting, finding it hard to wait, and struggling to do things quietly.
- **Combined:** a mix of both.

Not one kind of attention, but three

- **Selective attention:** focusing on one thing and filtering out the rest. Hard in a noisy office or a busy classroom.
- **Sustained attention:** keeping focus over time. Long tasks and projects tend to stall.
- **Divided attention:** juggling several things at once and switching between them.

What is going on in the brain

The manager is short of resources

The front of the brain does a lot of the managing: planning, organising, holding back impulses, and steering attention where you want it to go. These are called executive functions. In ADHD, some of these frontal areas tend to be less active, may mature more slowly, and connect differently with the rest of the brain. Children with ADHD can be slower to develop some skills and may seem less mature than their peers.

The result is a manager with fewer resources. It is harder to switch attention on when you need to, and once it is on something interesting, it can be just as hard to switch it off. That is where hyperfocus comes from.

The reward system works differently

Dopamine is a chemical messenger involved in reward, motivation and learning. In ADHD the dopamine system works differently, so tasks that don't offer an immediate reward can feel almost impossible to start or finish. Homework, paperwork, washing up. Novelty, on the other hand, pulls hard. That is why people with ADHD often start many projects and finish few: once the novelty wears off, so does the motivation.

It can also pull towards anything that gives a quick, strong reward, which can mean sensation seeking or risk taking, and a higher risk of problems with substances, driving or gambling later in life.

A different body clock

The stress and arousal system (the HPA axis) can work differently in ADHD too. Many people with ADHD are most alert later in the day or in the evening, find it hard to fall asleep, and struggle in the mornings: hard to wake, slow to get going, often late. This can also add to emotional reactivity and stress.

Emotions and impulses

The same short-staffed manager has to regulate emotions and behaviour. So people with ADHD may react quickly and strongly, act on impulse, and perform inconsistently from one day to the next. Your brain isn't broken; it is running on a tighter budget.

The story people tell themselves

Other people can't see the brain, only the behaviour. So ADHD often gets read as laziness, lack of effort or not caring. Years of that feedback leave a mark. Many people with ADHD grow up feeling inadequate or "not as good" as others, and their confidence, self-esteem and social ease take the hit. Later on, social anxiety and avoidance can follow.

To cope, many people learn to **mask**: hiding their difficulties to fit in. Masking is exhausting, and it means the signs get missed, especially in girls, whose ADHD often doesn't look like the stereotype. When the real problem stays hidden, people develop other ways of coping and other mental health problems, and treatment that only targets those symptoms often doesn't get very far.

That is why understanding ADHD matters so much. When you know why your brain does what it does, the story can change from "what's wrong with me?" to "how does my brain work, and how do I work with it?"

Fidgeting is often a tool, not a problem

Many people with ADHD focus better when part of them is busy: fiddling with something, moving, or having

quiet music on in the background. Fidgeting can also feel calming. A small selection of quiet, non-distracting fidget objects (a hair band, an eraser, a smooth pebble) can make it easier to listen in class or sit through a meeting.

What helps

Look after the budget

- **Sleep** is where your brain restores its resources. Good sleep helps focus, memory, emotional control and impulsivity. The NHS has practical tips for better sleep.
- **Food:** regular, balanced meals with protein, fruit and vegetables help keep energy steady and avoid the dips that make focus harder. Go easy on sugary and processed foods. Omega-3 (from oily fish or flaxseed) may help some people. A dietitian can help if you'd like a plan.
- **Caffeine** cuts both ways. It can sharpen focus for some people, a bit like stimulant medication, but it can also bring jitteriness and anxiety and wreck your sleep. Notice how it affects you.
- **Exercise** increases blood flow to the brain and boosts chemical messengers involved in attention and mood. It also helps sleep and stress, and it is a good outlet for restless energy.
- **Mindfulness** is attention training. With practice it helps you notice where your attention has gone and bring it back, and gives you a fraction more space between impulse and action.

Build external hooks

Don't rely on a busy brain to remember. Put the structure outside your head:

- Lists, reminders and alarms.
- Prepare the night before: pack your bag, lay out your clothes.
- Keep your space organised so things are easy to find and there is less to distract you.
- Build routines, so fewer things need a decision.
- Limit screens. They're designed to be stimulating, which makes ordinary tasks feel even duller by comparison.

Therapy

Good therapy for ADHD has three parts:

1. **Changing the environment** to play to your strengths and work around your weaknesses, so fewer things are competing for the same limited resources.
2. **Learning skills and strategies** to manage symptoms. CBT and mindfulness are both useful here.
3. **Understanding the deeper story:** how ADHD has shaped the way you see yourself, and the coping patterns you developed along the way.

Medication

Medication can help regulate brain activity and reduce the core symptoms of ADHD. Stimulant medicines increase dopamine and noradrenaline, which help with attention, focus and impulse control. Non-stimulant

medicines work in other ways and can be an option for people who don't get on with stimulants. Medication has side effects and must be prescribed by a specialist, usually a psychiatrist. It doesn't teach skills, but it can give the manager enough resources to learn and use them.

Other support

Behavioural approaches, parent training and school-based programmes help too. They work the same way as everything else here: they put structure outside the person's head, so the manager has less to hold.

Your rights in the UK

- **Education:** under the Equality Act 2010, ADHD can count as a disability, and schools must make reasonable adjustments, such as extra time, support with learning, or a quiet space for exams. The SEND Code of Practice sets out how schools and local authorities should identify and support children with special educational needs, including through SEN support and, where needed, an education, health and care plan (EHCP). See GOV.UK: children with SEND.
- **Work:** the Equality Act also applies at work. Employers must make reasonable adjustments, such as flexible hours, extra breaks, assistive technology or a quieter workspace. See GOV.UK: reasonable adjustments.
- **Healthcare:** the NHS provides ADHD assessment and treatment, including specialist clinics, psychiatric support, medication and therapy.

Further help

- NHS: ADHD: symptoms, diagnosis and treatment.
- NICE guideline NG87: how ADHD should be diagnosed and managed in the UK.
- ADHD Foundation: UK neurodiversity charity.
- ADHD UK: information and support, including on EHCPs.
- YoungMinds: ADHD and mental health, for young people.
- Nip in the Bud: short films and fact sheets for parents and teachers.
- ADDitude: articles and strategies (US-based).

Written by Dr Monica Berntsen, HCPC-registered Consultant Psychologist and Neuropsychologist. This guide is for general information and isn't a substitute for individual assessment or treatment.

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