ADHD • A Pianist's Guide

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Introduction

ADHD, or Attention Deficit Hyperactivity Disorder, has become a hot topic of discussion in recent years, the apparent explosion of both child and adult diagnoses much commented on in the media and society at large.

This article has been cowritten with my wife Louise, who has three decades clinical experience working with children, and latterly adults, who have ADHD. She is now an advanced practitioner at ADHD 360, a leading private ADHD diagnosis and treatment clinic. We gratefully acknowledge that the Clinical Director has peer-reviewed this article prior to its publication here.

For my part, I have lived with this condition for a lifetime, only belatedly recognised and formally diagnosed in my fifties. ADHD has had a huge impact on my piano journey.

Our shared aim is to provide pianists and educators with a unique, relevant, and practical perspective which combines Louise's clinical expertise with my personal experience, and which specifically addresses the challenges those with ADHD face in the practice room, piano lesson and at live events.

The article which follows addresses many common questions, explaining what ADHD is, its causes, history, the signs and symptoms. We then go on to apply this to piano practice, lessons and performance, offering strategies to help those with ADHD and their teachers. Finally, Louise outlines the process of diagnosis and available medications.

What is ADHD?

ADHD is a biological condition that affects neurotransmission in the brain and is linked to an imbalance in the chemicals, noradrenaline and dopamine. Researchers have noticed that the prefrontal and parietal cortex, which are heavily involved in processes like forward planning, self-control, and emotional reactions, are thinner than usual in the ADHD brain. The development of the brain's 'white matter' also appears to be affected.

Although reporting varies around the world, ADHD is estimated to affect around 5% of the global population. Symptoms present as two categories of behavioural problems:

- hyperactivity and impulsiveness
- inattentiveness (difficulty concentrating and focusing)

Many people with ADHD have a combined presentation of both these, but with age the hyperactive and impulsive behaviours tend to mellow, while inattention and organisational problems tend to linger in adulthood.

Because it's harder to detect inattention in adults than hyperactivity in children, ADHD that goes unrecognized in childhood often goes unnoticed later in life. Compounding this, adults with ADHD tend to present with mental health issues such as depression, anxiety, and substance abuse, so are frequently misdiagnosed.

A spectrum of behavioural characteristics typifies those with ADHD, but manifest differently and in varying degrees from one individual to another:

Impulsiveness

A poor regulation of behaviour, often leading to bad decision-making, oppositional behaviours, and problems in the home, school, and workplace.

Overactivity

A restlessness, hyper energy, with difficulty either settling into a task, or relaxing during spare time.

Disorganisation

An inability to be in the right place, at the right time, with the right equipment. Forgetful, messy, and poor at planning ahead.

Inattentiveness

A lack of focus, flitting between various tasks and completing few, quickly becoming bored and distracted.

Poor Coordination

Problems with both fine motor (colouring, handwriting, tying shoelaces) and gross motor skills (running, climbing, catching a ball). Accident prone.

Rejection Sensitivity Dysphoria

Poor self-esteem, highly sensitive to minor criticism, prone to intense negative emotions, mood swings, anxiety, and depression.

Social Clumsiness

Lack of confidence, masked by trying too hard to be popular, interrupting and talking over others, poor listening skills, and an awkwardness adjusting in group settings.

Associated Conditions

The presence of ADHD greatly increases the coexistence of associated (or 'comorbid') conditions. These frequently include:

- Learning Disabilities (Dyslexia, Dyscalculia and Dyspraxia)
- Autistic Spectrum Condition (ASC, formerly ASD)
- Tics and Tourette's syndrome
- Obsessive Compulsive Disorder (OCD)
- Oppositional Defiant Disorder (ODD)
- Conduct Disorder (CD)
- Bipolar Disorder

Positives to celebrate

Along with these challenges, there are some positives:

- those with ADHD are often creative
- able to hyper-focus on activities when interest is aroused
- able to think outside the box
- willing to take risks, spontaneous and flexible.

Some even talk about ADHD being their 'superpower'.

This description by Edward M. Hallowell, MD, and John Ratey, MD, from their book *ADHD 2.0* (2021) neatly summarises the paradox:

"ADHD is a term that describes a way of being in the world. It is neither entirely a disorder nor entirely an asset. It is an array of traits specific to a unique kind of mind. It can become a distinct advantage or an abiding curse, depending on how a person manages it."

What causes ADHD?

ADHD is believed to result from a combination of **genetic** and **environmental** factors and is considered to be highly hereditary, with an estimated heritability of up to 80%. In essence, genetics play a primary role in ADHD, making it predominantly a result of nature rather than nurture.

It is thought that prenatal biological risks, foetal alcohol damage, or birth difficulties can sometimes have an impact. Rarely, ADHD may be caused by a single event, such as a traumatic brain injury, exposure to biohazards during pregnancy, or extreme environmental deprivation early in life.

To give a personal example, neurodiversity featured in Andrew's family. Furthermore, his mother was seriously injured in a car accident late during her pregnancy with him. These factors represent possible causes of Andrew's ADHD.

ADHD is not linked to intelligence.

A poor school report is not an indicator of the condition. However, there is often a disconnect between a child's presented ability and actual academic achievement. The condition is sometimes accompanied by other forms of neurodiversity, including specific learning disabilities.

Diet is not considered a causal factor in ADHD.

Certain foods may however exacerbate symptoms. Personalised advice about this may sometimes be given in a clinical context.

Parenting is not to blame for ADHD behaviours.

Although statistics show that ADHD children have a greater chance of coming from a dysfunctional home setting, this is likely to be because the parents themselves have ADHD, or are struggling with the stress of bringing up children with the condition.

History and Controversy

ADHD was first described by the English paediatrician George Still in 1902, who was far ahead of his time in identifying it as a chronic biological condition. However, many alternative and erroneous ideas were popularised in the ensuing decades.

After the great flu epidemic of 1918-19, which killed more than 20 million and left many others with encephalitis (inflammation of the brain), ADHD was mistakenly thought to be a consequence of brain damage.

A chance experiment in 1937 proved the effectiveness of stimulants as a medication. Nevertheless, the treatment of ADHD was repeatedly held back by forces opposed to accepting that human behaviour can have a medical, rather than moral, foundation.

From proposing novel diets, to blaming parenting and schooling, public opinion was swayed time and again by the media, religious groups, social engineers, and skeptics.

Steadily, medication gained wider acceptance, and by the end of the twentieth century, researchers began to conclusively map the areas of brain dysfunction associated with ADHD using PET and MRI scanning techniques.

In recent years, there has been an explosion of interest in ADHD, not least because so many adults have lived with the condition for their whole lives, undiagnosed and untreated because of the anti-scientific misinformation and public confusion which prevailed for so long.

This awful legacy has led to a public health crisis in our time. It is presently reported that here in the UK there is currently an eight year waiting list for a diagnosis via the NHS, although private diagnosis is available more quickly, including for NHS patients exercising their <u>right to choose</u>.

What are the signs of ADHD?

To understand how ADHD might impact a piano learner, player or teacher, it is useful to understand the more general signs.

Below, we have listed 18 typical signs of ADHD, which have been adapted from the <u>adult self-report scale</u> (ASRS 1.1) used in clinical practice:

- Difficulty completing tasks
- Poor organisation skills
- Forgetting appointments or obligations
- Putting off tasks that require planning
- Fidgeting when having to sit for an extended time
- Compulsion to be active (as if driven by a motor)
- Carelessness when working on a difficult or boring project
- Difficulty paying attention when doing repetitive tasks
- An inability to retain focus when listening to others
- A tendency to lose things at home, school or work
- Being prone to distraction by activity and noise
- A tendency to stand up or unexpectedly move around in the middle of classes or meetings
- A general restlessness
- Difficulty relaxing and unwinding
- Talking too much in social situations
- Interrupting and finishing other peoples' sentences
- Difficulty waiting when expected to take turns or queue
- Disturbing or interrupting others when they are clearly busy

A similar assessment tool is used in the diagnosis of ADHD in children. Called the SNAP-IV, this includes 26 questions. to be rated by teachers and parents. For reference, you can download the SNAP-IV here.

While it is normal for people to exhibit some of these signs and symptoms, those with ADHD will experience **most** of them at a moderate to severe level, and on a **daily** basis.

As previously noted, in children the signs of hyperactivity are often more marked and obvious than in adults. Consideration must of course be given to age-appropriate behaviour. For example, restlessness manifests differently in the six-year-old child in a classroom than it does in a middle-aged professional at work.

Adults often mask signs of ADHD. They may have experienced prejudice, disadvantage, a lack of understanding and support. They will have developed behaviours that enable them to cope with their neurodiversity. Their struggles and medical needs are, however, no less important.

A clinical diagnosis of ADHD is made when a person passes a threshold in their experience of these symptoms which is deemed to have a continuing and debilitating impact on their daily lives, and which is indicative of associated biological dysfunction.

Struggles at the piano

Having considered these signs and symptoms, let's focus on the challenges they can pose for piano players, students, and teachers. Recognising these difficulties is crucial for fostering understanding and communication and is an essential first step in addressing them.

The following lists provide examples of challenges experienced by individuals with ADHD in learning, playing, teaching, and performing.

IN THE PRACTICE ROOM

- Difficulty managing time and 'forgetting' to practise
- · Lack of focus and routine when practicing
- Being distracted and not completing practice activities
- Underestimating the time needed for practice
- Putting off practice until later
- · Getting up from the piano and moving around
- Inattention to technical details (such as consistent fingering)
- Losing sheet music, notebook, and other equipment
- Being frequently distracted by other activities and sounds
- Always wanting to start new pieces before completing current work

IN PIANO LESSONS

- Chatting, changing the subject, or asking unrelated questions during an activity
- Forgetting to bring the right music/materials to a lesson
- Missing or arriving at the wrong time for lessons
- Difficulty sitting still or fidgeting during lessons
- Standing up and moving around without reason
- Lack of focus and scattered energy in lessons
- Interrupting the teacher during instruction
- Zoning out during challenging or boring tasks
- Difficulty listening to the teacher and retaining information
- Leaving personal belongings behind when departing the lesson
- Making added demands on the teacher's attention between lessons

WHEN PERFORMING AND ATTENDING EVENTS

- Difficulty learning pieces to a performance standard
- Unreliability in attending events or performances
- Difficulty sitting still when listening to other performers at events
- Procrastinating concert planning until the last moment
- Prone to distraction from audience noise or wandering thoughts
- Panicking about minor details at a venue
- Excessive post-mortem after performing or attending a concert
- Over-exuberant when socialising at performance events
- All this leads to excessive performance anxiety

We might wonder that anyone with ADHD could successfully learn, teach, or perform at the piano. Andrew recalls a decisive moment when, due to experiencing these struggles, he chose to step away from classical performing (although he has subsequently continued to perform in less formal contexts).

We must again remember the positives. Piano players with ADHD may, when interest is aroused, develop a 'hyper-focus'. They may well be highly creative, inventive, able to find their own flexible solutions and approach. They may well excel at interpreting, and creating music that sets them apart from their neurotypical peers.

Piano education strategies

The best way to help learners with ADHD is to understand their challenges and offer personalized support. Below are some practical strategies that may be helpful. Inevitably, much of this advice is equally useful when teaching neurotypical students.

Where a student is taking stimulant medicines, it's important to schedule piano practice and lessons when the **medication** is most effective. Some may need short-acting top-up doses for extracurricular activities, but this should be discussed with the prescribing clinician.

Because those with ADHD so often struggle with **self-esteem**, all lessons should begin with a warm welcome, personal interest, and positive affirmation. This helps students feel secure in the relationship, and safe in the lesson environment.

Effective **communication** is a key element of all good teaching, but extra care may be needed with ADHD learners. Make sure the learner knows they can ask questions or seek assistance when they need it, as otherwise they may not ask.

Where appropriate and possible, maintain **eye contact** and use questioning to check the learner is focused and processing the information. Bear in mind that some with ADHD listen more attentively when they are fiddling with something else, rather than looking at you, however.

When giving **instructions**, keep them short and precise, and consider asking the learner to repeat them back to you. For more detailed explanations, package the information into smaller steps and easily manageable chunks.

Rote teaching is generally ineffective and even detrimental for students with ADHD because it relies on the focused repetition and memorisation that ADHD brains struggle with, due to difficulties with attention, working memory, and executive functions. Learners will also be distracted by minor creative differences between one demonstration and the next.

The use of **mnemonics** as a memory tool to support learning is frequently recommended in the ADHD literature. Encourage learners to make up their own mnemonics as appropriate.

The teacher should always be aware of the learner's **focus**, adjusting the approach when boredom or distraction arise. This can involve redirecting the focus back to the activity or switching to a different, complementary one.

ADHD learners welcome a range of **activities** in the lesson, including physical activities away from the piano such as **Qigong stretches** and in the case of younger students, age-appropriate musical games.

Paul Harris's <u>Practice Starters</u> cards are effective with all age groups. They offer a novel and enjoyable way of introducing fresh activities and positive distraction without switching away from our main musical learning objectives or broader lesson focus.

Establish clear **boundaries**, while maintaining a kind, affirming approach. It is generally best to ignore minor lapses in behaviour, distraction techniques, tics, fidgeting, and isolated inappropriate comments.

Avoid criticising personal **organisational weaknesses**; instead, offer relevant and manageable support where you can (for example, an adult learner might value a message to remind them of their lesson time, and what they need to bring).

When teaching children with ADHD, keep in touch with **caregivers** to ensure that everyone understands and shares expectations, assigned work, and progress. Talk about the support system and available routines for home practice.

Those with ADHD may need help planning practice into their **routine**. Wall charts, practice notebooks, and worksheets can all be recommended. Ask learners/carers to keep a record of practice, including any questions that arise.

All players need to know how to **structure their practice** sessions. Lesson time should be spent going over content and mechanics of how to practise. Andrew's book <u>How to Practise Music</u> offers significant support, and the clear, bullet-point structure will especially appeal to those who, like the author, have ADHD.

Method books and an **exam syllabus** can offer welcome structure but be aware that as engagement and hyper-focus develop, the player with ADHD is likely to want to divert from prescribed content, and should be allowed the freedom to do so.

Practical grade exams can be encouraged where the learner expresses their interest but should not be forced. It is useful for an examiner to be told whenever a candidate is neurodiverse.

Digital performance grades may not be suitable due to distractions; fleeting lapses in concentration might lead to the need for repeated recording and result in frustration. Having said that, a neurodiverse student of Andrew's recently submitted an ABRSM Grade 8 video and received 144 marks, which surely offers encouragement for others.

Look out for deep **engagement** when it arises and encourage music and learning activities that stimulate special interest. If progress is sporadic (as it may be), use positive phases of engagement to identify areas of interest, and guide any planning.

Above all, always be ready to offer **solutions** to the challenges that arise. Teachers should frequently remind themselves of the challenges faced by those with ADHD, as listed above.

Diagnosis and treatment

The assessment, diagnosis, treatment and available medications for ADHD vary from one country to another. The advice that follows is based on current UK practice.

A child under the age of 14 with potential ADHD symptoms is usually referred to the relevant NHS service for an assessment; the route of referral varies depending on the area in which they reside. For adults, some areas have an NHS service, or contract provision from an external supplier. There is also the option of paying privately.

From the age of 14, any patient can use the <u>right to choose</u> route, requesting a private referral via their GP. This often mitigates the long waiting lists currently in the NHS backlog.

ASSESSMENT AND DIAGNOSIS

The process for children is as follows.

Parents and teachers are usually asked to complete a symptom checking tool (such as **the SNAP-IV** rating scale). This secondary evidence can alternatively be provided by family, friends, grandparents, or extra curricula tutor (including a piano teacher). Symptoms need to have been present before the age of 12.

From age 6, a QB check or test may also be required; this is a quantitative data collection process looking at symptoms via an activity on the computer, which measures attention span over a 15-minute period.

There will then be an interview with a clinician, who may use an assessment tool or carry out a semi structured interview with the child and parents/legal guardians. Whether the assessment is carried out via the NHS or a private organisation, the process will be similar in content.

The process for adults is as follows.

An adult does not need secondary evidence from external sources, but as with children will need to give their own evidence of symptoms prior to the age of 12 years. An <u>ASRS</u> symptom checker (ASRS 1.1) will be required to identify potential ADHD symptoms.

A QB check or test may also be required. For adults, this measures attention span over a 20-minute period.

This will be followed by an assessment meeting with a clinician, who will follow a similar process to that used with children, but who will want information about childhood as well as current symptoms.

TYPES OF MEDICATION

Following a positive diagnosis, the first line of treatment recommended by the NICE (National Institute for Clinical Excellence) guidelines is medication.

All medications prescribed for ADHD have been rigorously tested, and have repeatedly, routinely, and consistently found to be safe. However, as with any medication, some patients may experience side effects.

After diagnosis, a clinician will regularly discuss and monitor medication, and will over a period of several months titrate dosage until a stable regimen is established. Subsequently, it is usually the role of the GP to continue prescribing the medication.

There are two main categories of medication licensed in the UK for use in the treatment of ADHD. They are **stimulant** and **non-stimulant** medications. Neither offers a cure, but both potentially mitigate symptoms, allowing the individual to function more effectively on a daily basis.

There are two types of **stimulant** medication: methylphenidate-based stimulants and amphetamine-based stimulants. In their natural form they will only last in the body for four hours, but pharmaceutical companies have developed ways to make them remain in the body longer. Some can be effective for 12 hours. 85% of people respond well to stimulant medications.

Non-stimulant medications are used where there are contraindications for stimulants, such as another health condition, or intolerable side-effects from stimulant medication.

There are two non-stimulants, Atomoxetine and Guanfacine. These take a few months to become fully effective as they accumulate in the body. Only 50% of people find good symptom-management with them, but when effective, non-stimulants manage symptoms for 24 hours a day.

Closing Thoughts

In 1971, Andrew begun nursery school. After a few weeks, his teacher had a quiet word with his mother, expressing concern about his fidgeting, bodily rocking, and general distractedness.

This proved to be the first and last time that any teacher referenced and raised the possibility of neurodiversity. Andrew's mother dismissed the teacher's concerns as rudeness; they were never mentioned again except as an example of uninvited teacher interference.

Happily, much has changed. With a further half century of scientific research, medical experience, and an increasingly educated public, most people now understand that the signs and symptoms of ADHD are a medical issue, not a moral failure. Stigma is finally giving way to support.

It is our hope that having shared the latest information and advice in this lengthy article, we have further contributed to the process of ensuring that those with ADHD are understood and supported within piano education.

Further Reading and Support

Dr. Christopher Green & Dr. Kit Chase: *Understanding ADHD: A parents guide to Attention Deficit Hyperactivity Disorder in children*, <u>available here</u>.

Edward M. Hallowell, MD, and John J. Ratey, MD: ADHD 2.0, available here.

Peter Hill: The Parents' Guide to ADHD Medicines, available here.

Harvey C. Parker PhD has written several titles, aimed at schools, teachers, parents and those with ADHD, <u>available here</u>.

ADHD 360 publish a wide and informative range of free articles here.

For more information about 'right-to-choose' referrals, private diagnosis and treatment from ADHD 360, <u>visit their website</u> here.