



Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

Attention deficit hyperactivity disorder (ADHD)

It is common for children to be highly active, especially at younger ages. In most cases, this is normal behaviour and they will gradually grow out of it. However, for some children, there could be an underlying difficulty, such as attention deficit hyperactivity disorder (ADHD). This information sheet from Great Ormond Street Hospital (GOSH) explains about ADHD and where to get help.

Core symptoms of ADHD are difficulty concentrating, hyperactivity, and acting impulsively (such as doing things without thinking through the consequences). Some children may present with difficulties with one or more of these core symptoms.

ADHD is a neurodevelopmental disorder and refers to a pattern of behaviour that affects a child in most situations, is evident from an early age and can persist into adolescence and adulthood. The condition often becomes apparent when a child starts school and teachers may notice that a child finds it hard to sit still, struggles to pay attention, or blurts out answers in class.

ADHD can have a big impact on school, peer relationships, self-esteem and family life without appropriate treatment.

What causes ADHD?

There are many theories about what causes ADHD.

It tends to run in families suggesting a genetic risk. However, the inheritance is likely to be complex and there is no one gene that causes ADHD.

There are also likely to be environmental factors that increase the risk of a child developing ADHD if they have a genetic predisposition.

There may also be structural brain differences or differences in the actions of certain chemicals in the brain (neurotransmitters).

Previous theories about diet causing hyperactivity are not supported by recent research. However maintaining a balanced diet, good nutrition and exercise is important.

Boys are more likely than girls to be diagnosed with ADHD. However, it is thought that girls may be underrepresented in referrals to ADHD services and ADHD can go unrecognised in girls. There are several possible reasons for why this might be. One theory is that girls tend to present with more inattentive symptoms than hyperactivity (although not always the case) and therefore are not noticed or seen as a problem. The impact of ADHD on girls however, particularly if ADHD is missed, can be significant. Without appropriate treatment, young people with ADHD are at increased risk of developing anti-social behaviour, learning and social difficulties and emotional difficulties.



Approximately 60 to 80 per cent of children with ADHD will have at least one other condition; such as a social communication disorder, considerable language, reading (dyslexia) or motor (dyspraxia) difficulties. Children with ADHD often have learning challenges and perform poorly on tasks that measure executive function, which are a group of behaviours that guide behaviour (such as thinking before doing, planning, organisation and so on). Children with ADHD can vary in their performance on learning tasks from one situation to another and there are several theories as to why this might be; with one such theory suggesting a general impairment in regulation. Young people and parents also report variability in symptoms depending on the child/young person's interest in an activity or whether there are rewards.

How is ADHD diagnosed?

There are no specific tests used to diagnose ADHD. The diagnosis is made by a qualified healthcare professional with training and expertise in ADHD (such as a Paediatrician, Psychiatrist or Clinical Psychologist). Assessment often involves: taking a detailed developmental and psychosocial history, observation of the child and use of standardised questionnaires, sometimes psychological tests, and wherever possible consideration of the child/young person's view of their symptoms and the impact of these on their daily life.

It is important to rule out other conditions that can look like ADHD and it is therefore important to have a professional assessment to check for these, which may involve a broader group of professionals such as Speech and Language Therapists, Clinical Psychologists and Occupational Therapists.

A diagnosis of ADHD can be considered but will not usually be confirmed until a child is around six years old and starts school but can also be noted later as challenges are sometimes more evident for children with inattention in secondary school. The input of teachers as observers in a structured school

environment is crucial and it is good practice for teachers' observations to be incorporated into an assessment.

Professionals may also carry out a school observation as part of the assessment to see how the child behaves both in the classroom and playground settings.

There are some standards for diagnosing ADHD, agreed internationally. One or both of the following core symptoms should be present in multiple settings (at home and at school). They are:

Inattention

A child or young person with inattention symptoms would find it difficult to pay attention to detail or makes silly mistakes when working and playing; they may not finish work or find it difficult to sustain attention for long periods; and they may often lose their belongings and be forgetful.

Hyperactivity and Impulsivity

A child or young person who is hyperactive and impulsive tends to be on the go and rarely sits down quietly or when they do sit they tend to fidget a lot. They may have trouble waiting their turn and will interrupt others conversation or play. They can also talk excessively.

Symptoms should be present before age 12 years, present in two or more settings, (such as at home, school or work; with friends or relatives; in other activities) and there is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning.

A child suspected of having ADHD should be observed with other children of a similar developmental age.

If the child seems to be showing more behavioural difficulties than the others, ask the following questions:

- Does the child have a shorter attention span than other children of the same developmental age? For instance, while a story is being read does the child leave before the end while the others stay and listen?
- Is the child always restless, fidgety, on the



go and out of their seat at mealtimes? Do the school give similar reports?

- Is the child very impatient and unable to wait their turn in a queue or game?
- Is the child very excitable and impulsive? Does the child suddenly do things such as darting into the road without thinking about whether it is safe?

If the answer to these questions is yes, and these are having an impact on the child's life consult the child's family doctor (GP), who can refer them to a local specialist for further assessment.

How is ADHD treated?

With appropriate intervention, children with ADHD can lead normal lives.

The main treatments are:

Group based parent training/ education programmes

This is to help parents learn specific skills to manage behaviour and many parents benefit from the support they get from meeting other parents living with a child or young person with ADHD.

Group or individual psychological therapy

Cognitive behavioural therapy (CBT) and/or social skills training (SST) for children and young people which target social skills with peers, problem solving, self-control, listening skills and expressing and managing feelings can be helpful.

Medicines

One type of medicine which can be prescribed for ADHD is called methylphenidate (brand name Ritalin®). This has been proven to be effective in managing symptoms of ADHD.

There are other related medicines that also work well, such as dexamphetamine or atomoxetine. These medications should only be prescribed by a specialist following thorough assessment, and require regular monitoring to check for improvements in symptoms and avoid any side-effects.

Other approaches

Organisational skills

Another way to help manage symptoms is organisation. This might include having a set routine which can make a difference to how a child or young person with ADHD copes with everyday life.

As part of this, clear boundaries should be set so everyone knows what behaviour is expected. Any instructions to the child must be very clear. Give concrete instructions rather than abstract ones. For example, say 'put the toys in the box and put the books on the shelf, please' rather than 'tidy your room, please'. For older children, they may need advice and support on organising their belongings and schoolwork.

Reward schemes for appropriate behaviour can also be very successful (such as using sticker charts).

Learning support and adaptations to classroom environment

Children and young people with ADHD may struggle at school due to their symptoms and may feel 'left behind' by their classmates. In these cases learning support can be arranged.

Arranging learning support with the school through an Individual Education Plan can make a huge difference. It is best to discuss this with the class teacher or Special Education Needs and Disabilities Coordinator (SENDCO) at the school.

Some adaptations to the physical environment, particularly in the classroom can be helpful. A few examples include:

- Seating a child with ADHD in a place that has limited distractions, and in a quiet environment
- Frequent movement breaks
- Providing stimulating activities to capture interest
- Keeping instructions concise and clear
- Breaking down tasks into a series of small steps
- Providing frequent positive feedback

There is some evidence that exercise can help reduce symptoms and impairments commonly



seen in ADHD. Other research is looking into the effects of mindfulness training for attention difficulties seen in ADHD.

There is no cure for ADHD but the above interventions can help a young person to manage their symptoms.

What happens next?

Living with someone who has ADHD can be exhausting. Parents often say that they feel worn out just from making sure a child with ADHD does not get into trouble.

Going out and about might be difficult if the child is constantly 'on the go' and does not understand the 'rules' that come with social occasions. Siblings may also find it hard if much attention is focussed on their brother or sister, and as they grow older, might feel embarrassed by their behaviour.

All these feelings are normal. It is important to remember that the child or young person is not necessarily behaving badly on purpose.

For children with ADHD, getting through school can be problematic. They may get into trouble if their condition is not fully understood, and their symptoms prevent them being able to learn effectively. This can have long-term consequences, so the earlier the condition is recognised the better.

ADHD is best viewed as a chronic neurodevelopmental disorder – a child will need the right treatment and support to ensure they are able to make the most of their education and life in the long-term.

Symptoms of ADHD change with developmental maturity, a preschool child may present as excessively active across most situations, and an adolescent may be more fidgety than frequently getting up and down from their seat for example. Attention span can increase with maturity although the impact of attention deficits on school or family life may continue.

While some children's symptoms may decrease overtime, and they may no longer meet diagnostic criteria for the disorder, for other children their symptoms and the impact of these on their lives can persist into adulthood. It is estimated that ADHD can persist in approximately 2-5 per cent of cases and many people will continue to require strategies to manage their symptoms.

Further information and support

- The National Institute for Health and Care Excellence provides national guidance and advice to improve health and social care. There are NICE guidelines on ADHD online at www.nice.org.uk/guidance/cg72

There are a number of books on helping a child with ADHD available to buy or borrow from your local library:

- Cathy Laver-Bradbury (2010) *Step by step help for children with ADHD: a self-help manual for parents*. Jessica Kingsley Publishers ISBN 1 849 050 708
- Joanne Steer and Kate Horstmann (2009) *Helping kids and teens with ADHD in school: a workbook for classroom support and managing transitions*. Jessica Kingsley Publishers ISBN 1 843 106 639
- Susan Yarney (2013) *Can I tell you about ADHD? A guide for friends, family and professionals*. Jessica Kingsley Publishers ISBN 1 849 053 596

The Attention Deficit Disorder Information and Support Service (ADDISS) offers information and support on ADHD and related learning and behaviour disorders. Call them on 020 8952 2800 or visit their website at www.addiss.co.uk