ADHD is a common condition that mainly affects behaviour. Children with this condition show persistent restlessness, impulsiveness and/or inattention. It is usually diagnosed in children but can be present in adults. The diagnosis is made after a detailed assessment.

Treatment includes parent training programmes, and sometimes medication.
What is Attention Deficit Hyperactivity Disorder?
Attention Deficit Hyperactivity Disorder (ADHD) is also known as attention deficit disorder (ADD) and hyperkinetic disorder. It is a common condition that mainly affects a child’s behaviour. There may also be problems with the child’s intellectual, social and psychological development as a result of the behaviour.

What are the symptoms of ADHD?
Children with ADHD show persistent restlessness, impulsiveness and/or inattention. These features are seen in more than one setting, for example, at school and at home.

They are also seen in more than one activity, for example in schoolwork and in relationships. They occur at a level greater than expected for their age and cause significant disruption to the child’s daily life.

There are three sub-types of ADHD:

- **Hyperactive-impulsive sub-type.** Some features of this type of ADHD are that a child may fidget a lot, run around in inappropriate situations, have difficulty playing quietly, and may talk excessively. They may interrupt others and have trouble waiting in line.

- **Inattention sub-type.** In this subtype, a child may have trouble concentrating and paying attention, may make careless mistakes, may not listen or follow through on instructions and may be easily distracted. They may also be forgetful in daily activities, lose essential items such as school books or toys, and have trouble organising activities.

- **Combined sub-type.** If a child has this sub-type, they have features of both of the other sub-types.

Children with ADHD are also more likely than average to have other problems such as anxiety and depression, conduct disorders and co-ordination difficulties.
What causes ADHD?
The cause of ADHD is not known. It is thought that there may be subtle changes in parts of the brain which control impulses and concentration. Although the main cause of ADHD is not known, various factors are thought to increase the risk of a child developing ADHD.

These include:

- **Genetics.**
  Genes are passed onto a child from each parent. Our genes determine how our body functions, what we look like and sometimes what diseases we will get.

  Some studies have shown that certain genes are related to ADHD. A child may therefore be more likely to have ADHD if there is another family member such as mother, father, brother or sister with ADHD.

- **Antenatal problems.**
  If a mother drinks alcohol, smokes or takes heroin while she is pregnant, this may increase the risk of the child developing ADHD.

- **Obstetric problems.**
  This means problems that occur when a baby is born such as a difficult labour causing lack of oxygen to the brain. Babies with very low birth weight are also more likely to develop ADHD.

- **Severe deprivation.**
  If a child is severely neglected early in life, this may make ADHD more likely. Factors in a child’s upbringing such as poor parenting, watching a lot of TV or videos, family stress, etc, do not cause ADHD.

  However, such factors may make the behaviour of a child with ADHD worse.

How common is ADHD?
ADHD affects at least 5 in 100 children in the UK. Some studies suggest even more children than this are affected. It is three to four times more common in boys than in girls.
How is ADHD diagnosed?
There is no simple test to diagnose ADHD.

If your child’s teacher or doctor suspect that your child may have ADHD, they may suggest that you and your child attend a programme to help improve your child’s behaviour. If this is not effective or if the condition is severe, they may refer your child to a specialist team for assessment.

The assessment may involve a discussion with you and your child as well as a physical examination. The specialist may ask for a report from the school and may even want to observe your child doing certain tasks.

You and your child may also see a nurse or other health care professionals for further testing and assessment.

There are a few aims of this assessment. These include:

• To confirm whether your child definitely has ADHD.

• To make sure that there are no other reasons that explain your child’s behaviour such as a hearing difficulty, epilepsy or thyroid problems.

• To identify any other problems your child may have such as anxiety, low self esteem or a learning difficulty.

For a doctor to make a firm diagnosis of ADHD, there are strict criteria that need to be fulfilled. For example, the symptoms of inattention and/or hyperactivity and impulsivity need to be present for at least six months.

They also need to be causing problems in your child’s life as well as being different from what would be expected for their age. They also must have started to occur before age seven, and be present in more than one setting (for example, at home and at school).

What are the treatment options?
The treatments recommended depend on how severe the condition is as well as the age of the child. Ideally, treatment should involve a team of professionals who are experienced and trained specifically in ADHD and may include a doctor, teacher, nurse, social worker, occupational therapist, mental health care professional or psychologist.

Treatments include drug and non-drug treatments.
Non-drug treatments for ADHD
Generally, for pre-school children or for older children with mild to moderate ADHD, the first step is usually for you (parent or guardian) to be referred to a parent training programme.

Sometimes your child will also be referred for a group treatment programme aimed at improving behaviour.

The parent programme may include such things as:

• Learning skills to manage and reduce problem behaviour.

• Learning more effective ways to communicate with your child.

• Helping you to understand your child’s emotions and behaviours.

Your child’s school teacher may be invited to be involved in the treatment process.

They may be able to use certain techniques in the classroom to help your child learn and function better. Family therapy may also be helpful.

In more severe ADHD, or where the above treatments have not succeeded, medication is usually recommended.

Drug treatments for ADHD
There are three main drugs licensed for the treatment of ADHD in the UK. Methylphenidate (trade name of Ritalin®) is the most commonly used drug. Atomoxetine and dexamfetamine are other drugs that may also be used.

How effective is drug treatment?
The drugs used for ADHD have been used for many years and in many children with good effect. A number of studies have shown that drug treatment with or without intensive behavioural training programs is more effective than behavioural training programs alone.

How does the methylphenidate work?
Methylphenidate is a type of stimulant drug. It works by increasing the amount of a brain chemical called dopamine in certain parts of the brain.

The parts that it works on are responsible for self control and attention. Increasing the amount of dopamine in these areas of the brain stimulates them to work better. This then helps to focus your child’s attention and improve concentration.
How do I give methylphenidate to my child?
Usually, your child will start on a low dose such as 5mg three times a day and will be carefully monitored for side effects. This dose will be increased gradually to a maximum of 20 mg three times daily according to how well it is working and whether side effects occur.

The most common side effects to look out for with methylphenidate are insomnia (difficulty with sleep), loss of appetite and weight loss.

Once the total daily dose has been determined, it may be possible for your child to switch to a once daily long acting version of methylphenidate.

When your child is on medication, they should be reviewed every six months to check that the dose is working and that there are minimal side effects. It is recommended that the doctor also check your child’s height, weight and blood pressure.

It is good for this review to include feedback from those who are in regular contact with your child such as teachers, family members and other carers.

How quickly does methylphenidate work?
The short acting methylphenidate begins working within about 20 minutes and lasts for 3-4 hours. The longer acting version takes longer to start working but lasts for about 12 hours and gives a more stable level of drug in the bloodstream throughout the day. It may take several weeks to see the full benefit of medication.

How long will my child be on medication?
Most children will need to continue medication through high school. Once children become teenagers, some doctors will recommend a trial off the medication each year. This is to make sure that medication is still necessary.

If the use of methylphenidate causes unacceptable side effects or is not effective, the two other drugs mentioned above may be used.

Dexamfetamine is another stimulant and atomoxetine is a different type of drug that works on a chemical called noradrenaline in the brain.

There are other drugs that may be used for ADHD but these are usually only recommended if the above drugs are not effective.
Are the drugs safe?
The use of drugs to treat ADHD is controversial. This is mostly because some people are worried about their effectiveness as well as the possibility of side effects.

Also, there is the possibility of the drugs being misused or abused. However, the recent guidelines from the National Institute for Health and Clinical Excellence (NICE) advise that they are still useful and important in the treatment of severe ADHD and in milder forms when other treatments have not been effective.

The drugs do not seem to have an addictive potential when used in children. There are reports of the drugs being abused in teenagers and adults. However, it is likely that the risk of substance abuse with street drugs such as cocaine in someone with untreated ADHD is greater than the risk of abuse of the prescribed drugs.

The controversy is largely unfounded because both scientific studies and years of experience have shown that these drugs are generally safe and effective.

What about diet?
Dietary changes for the treatment of ADHD have been widely used for many years.

They take the form of:
- Supplements with substances thought to be lacking. For example, fatty acids such as omega 3 and omega 6, and/or:
  - Cutting out foods thought to be harmful. For example, foods containing artificial colouring and other additives.

The subject of diet and its relationship to behaviour, hyperactivity and ADHD is controversial. An editorial in the British Medical Journal by Kemp in 2008 (reference at the end), and the subsequent correspondence, gives a flavour of the issues and controversies.

It suggests that there is enough evidence to recommend more research into diet treatments for ADHD.
However, the NICE guideline published in 2008 came to the conclusion that there is no evidence that dietary changes can help children with ADHD, but that “assessment of ADHD should include asking about foods or drinks that appear to influence their hyperactive behaviour. If there is a clear link, healthcare professionals should advise parents or carers to keep a diary of food and drinks taken and ADHD behaviour. If the diary supports a relationship between specific foods and drinks and behaviour, then referral to a dietitian should be offered.”

So, in short, diet probably does not cause ADHD and a change in diet may not help in many cases. However, there may be some cases where children do respond to a change in diet or are negatively affected by certain foods or additives.

If you notice that a particular ingredient or food makes your child’s behaviour worse, then take a note of it and discuss this further with your doctor or a dietician. See the ‘further help and information’ section for support groups that can provide more information on diet.

**Is there anything else available for older children or adults?**

In older children, there may be some benefit gained from psychological treatment such as cognitive behavioural therapy (CBT) or social skills training.

These techniques aim to teach your child more about why they act and react the way that they do. They also give them strategies to use to help them to improve their behaviour and daily functioning.

In adults, medication is recommended as part of a comprehensive treatment programme.

This should also include psychological treatment, advice on behaviour management and assistance with education and employment.
What is the prognosis (outlook)?
Up to 8 in 10 children with ADHD will continue to experience symptoms into their teenage years. This decreases to about 5 in 10 who continue to have some symptoms into adulthood. With age, the symptoms may alter. For example, a child who was always restless may feel a lot of inner tension as an adult. It is also likely that the symptoms will reduce in severity and cause less disruption over time.

Children with ADHD are more likely than average to have other problems as adults such as unemployment, relationship difficulties, substance misuse and crime.

However, treatment aimed at improving behaviour at an early age aims to reduce the long term impact of the condition.

Further help and information
ADDISS (Attention Deficit Disorder Information and Support Service)
PO Box 340, Edgware, Middlesex HA8 9HL
Telephone 020 8952 2800
www.addiss.co.uk

Hyperactive Children’s Support Group
Telephone 012 4353 9966
www.hacsg.org.uk
This group is a leading proponent of a dietary approach to the problem of hyperactivity.
References

Attention deficit hyperactivity disorder (ADHD), NICE Clinical Guideline (September 2008); Attention deficit hyperactivity disorder: Diagnosis and management of ADHD in children, young people and adults

Evidence-based guidelines for management of attention-deficit/hyperactivity disorder in adolescents in transition to adult services and in adults, British Association for Psychopharmacology (2006)


Kemp A; Food additives and hyperactivity. BMJ. 2008 May 24;336(7654):1144.


Inspire Mental Health works with and for people with mental illness to ensure they live healthy, productive lives and are supported to achieve their full potential within all aspects of their lives. We provide a range of supported accommodation including floating support that supports over 400 people per year. Day opportunities and recovery focused services are provided to over 1000 people per year and our advocacy services touch the lives of thousands every year.

We also provide a range of community support services for people over 60 leaving hospital or who have become socially isolated to help them reintegrate into society.

We provide support to people with Personality Disorders, who self-harm and who are in prison. We also provide support to young mothers struggling with parenting and their mental wellbeing.

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