

# 1

## What is ADHD?

### Key points

- ◆ ADHD is not a new disorder. It was first described in 1902.
- ◆ It is one of the most common conditions in childhood, affecting as many as 5% of school-aged children.
- ◆ It occurs in two very different forms: one that is mainly a learning difficulty and another that mainly affects behaviour.

### A tale of two children

Dear Doctor

Martine is now 13 years old and we are concerned about her school progress. She is well-behaved and does not get into any trouble at school, or at home, and this is why we have left it so long before seeking help.

Martine's reports have always been full of comments such as 'Martine needs to concentrate more'; 'Martine has good potential if she were not so easily distracted'.

Martine is a vague, dreamy sort of child. Often when you talk to her she seems to be in a world of her own. One teacher thought she may be hard of hearing, but we had this tested and her hearing is perfect.

When you give her an instruction with more than three parts, she loses track of what she has to do. Yesterday I asked her to go to her room and take the sheets off her bed and put them in the wash. Ten minutes later I went to her room to find her sitting on her bed. She genuinely did not remember what I had asked her to do.

Her memory seems so inconsistent. She can tell you in detail about what happened years ago. Last week she surprised us by recognizing someone in a photo whom she had not seen for years—and telling us all about her visit to this person's house very accurately. Yet today she cannot remember the spelling list she knew yesterday.

She is terribly disorganized. She is always losing things. She has to phone her friend most afternoons to find out what homework she is supposed to do.

She is also clumsy. She is a terrible fidget—some bit of her is always squirming when she should be sitting still.

But her greatest difficulty is in concentrating on schoolwork. She sits down to her homework with the best of intentions, but she can't seem to persist with it. She is up and down at her desk and unless I sit with her nothing gets done. Even then it is a constant battle, so that the whole family is upset. Getting her to complete assignments for school is impossible unless I do almost the whole thing for her. Her poor concentration is a problem at school as well. Her teachers complain that, when all the other children have their eyes glued to their work, Martine is gazing out the window. Her work is often incomplete.

Martine says that she would like to become a teacher when she is an adult. We feel she is a clever girl but, if she continues like this, we can't see her achieving anything. Do you think you could help her?

Dear Doctor

I am writing this letter to you before the appointment because I always find it difficult to remember what I wanted to say when I am sitting in front of a doctor.

We are desperate about David (age 7 years)—you are our last resort! We have been to numerous doctors, psychologists, and psychiatrists already. They all make us feel that we are the cause of David's problem. We are tired of being analysed—we just want help.

David has been difficult from the moment he was born. The first two of our children were easy babies, but David was irritable from the very beginning. He hardly slept as an infant. He walked earlier than our other two, and from the time he took his first steps, at 9 months, he has been on the go. As a toddler he was into everything and had to be watched all the time. We tried him on a 'hyperactivity diet', but it did not help. Now that he is older, he is not as active, but he still never seems to tire, except when he is sick. I feel guilty admitting that it is only when he is ill that I enjoy having him at home.

He is like a walking disaster. He takes risks all the time; he has broken his leg twice and has numerous scars. He acts without stopping to think of the consequences, and he never seems to learn from his mistakes.

He won't do as he is told and if we try to discipline him he becomes abusive and even aggressive. We have tried 'timeout' (putting him in his room, when disobedient, to cool down), but he destroys his room so it is just not worth it. On two occasions he jumped out of his bedroom window and ran away.

Living with David is like walking on eggshells. The slightest frustration sets him off into a rage. But sometimes he will be aggressive for no apparent reason. For example, yesterday his brother was sitting watching television and David came into the room, walked up to him and kicked him—out of the blue! He seemed sorry after he had done it, but I can't understand why he does things like that.

Each morning I wake up and get out of bed with a feeling of trepidation waiting to see what kind of a mood he is in, and what sort of a day we can expect. But even if he is in a good mood, it can change quite suddenly as the least thing sets him off.

School has been a disaster for David. After the first week his teacher called me in to tell me he was impossible to teach. He wanders about the classroom; he calls out in class; he is noisy and he disrupts other children; his books are terribly messy; his work is never completed. The worst thing is that he is very rude to the teachers. He is easily affronted and takes any attempt to discipline him as a personal insult. He always seems to be getting punished, but it does not help. Earlier this term he was suspended from school for a week for swearing at a teacher. I had to take time off work to stay with him, but I think he actually enjoyed the punishment.

He does not get on with the other children in the playground. He is very bossy with them and is not prepared to compromise. He has now earned a reputation as a bully, and is ostracized by the other children. He seems to get into punch-ups every day. I am sure he starts most of these. He will take on children who are older and larger than himself, so he often comes off second-best. He was suspended from school for a week last term for punching a boy. The punishment made no difference to David—he was in a fight on his first day back!

I don't want you to think that David is always bad. He can be sweet and loving, and often he shows he is genuinely sorry for what he has done. But it never lasts for long—with David, trouble is always around the corner. Most worrying to us now is that David seems to be becoming depressed about his difficulties. Over the last month he has started saying that he is 'dumb'. He often says, 'Mummy, I don't know what is wrong with me'. Twice he has said that he wants to kill himself. We are terribly worried.

**Table 1.1** Profiles of the two types of ADHD

	Inattentive type	Hyperactive–impulsive type
<b>Age of onset:</b>	Later (primary or high school)	Early (nursery or primary school)
<b>Boy to girl ratio:</b>	Boys and girls in equal numbers	Boys outnumber girls
<b>Major difficulty:</b>	Academic performance	Behaviour
<b>Common descriptions:</b>	‘Quiet under-achiever’ ‘Dreamy’	‘Acts without thinking’ ‘Can’t sit still’

Martine and David both came to see me. My assessments showed that they both had attention-deficit/hyperactivity disorder (ADHD) and they were both greatly helped by treatment for this condition.

Martine has the form called ‘inattentive’ type of ADHD\*, while David has the form we call the ‘hyperactive–impulsive’ type of ADHD. The conditions are very different, yet they are related to one another. They are like two sides of the same coin. The profiles of the two types are outlined in Table 1.1.

Many children with ADHD have a combination of the two types: significant difficulties with concentration combined with over-activity and/or impulsivity. This is known as ‘combined’ type of ADHD.

In none of the three forms is the condition the parents’ fault. Rather, it results from insufficient quantities of certain chemical messengers in the child’s brain. The medicines used to treat all types of ADHD act by restoring these chemical messengers to more normal levels and so enable the child to behave and learn like other children. Careful diagnosis is essential to be certain that the child’s difficulties are caused by ADHD, and not by some other problem that may require different treatment.

The diagnosis, causes, and treatment of ADHD are discussed in the following chapters.

## Overview of the features of ADHD

All children with ADHD have some features of the condition; few will have all. While some children with the hyperactive–impulsive form of ADHD will have hyperactivity and impulsivity, some will have only hyperactivity, while others will have only impulsivity. The hyphen between hyperactive and impulsive in this type stands for ‘and/or’.

\* In the past, the hyperactive–impulsive form was known as ‘ADHD’ and the inattentive form as ‘ADD’, but since 1994 this terminology is no longer used. See ‘Historical background’.



The features of all types of ADHD are listed in Table 1.2 and are outlined below. It should be noted that a child without ADHD might have some of the features described below, but a child with ADHD experiences significantly greater difficulties in affected areas of development than the average child of the same age.

## Features of the inattentive type of ADHD

### Poor concentration

Children with ADHD cannot concentrate with the same ease as other children of the same age. The attentional mechanisms in their brains are inefficient. This means that they have great difficulty concentrating on tedious tasks, such as schoolwork, which greatly test these mechanisms. Their work often contains many careless errors and shows lack of precision and attention to detail.

These children have particular difficulties maintaining attention in a setting, such as a classroom, where there are many distractions. They do better in a one-to-one situation.

Children with ADHD usually have far greater difficulty concentrating on things they have to listen to, rather than things they have to look at. They have such difficulty listening that they can appear to have a hearing problem.

In milder cases, children will be able to maintain attention for highly motivating and interactive activities, such as video games, and may be able to concentrate on tedious tasks, such as schoolwork, for short periods. However, their inefficient concentrating mechanisms soon fatigue and their attention falters. The work of such children may be full of good beginnings and poor endings. They may be able to manage relatively well in the first part of the school day,

**Table 1.2** Features of ADHD

Inattentive type	Hyperactive-impulsive type	May be present in either type (both types)
Poor concentration	Impulsivity	Performance inconsistency
Task impersistence	Over-activity	Low self-esteem
Disorganization	Noisiness	Poor working memory
Forgetfulness		Poor incentival motivation
		Social clumsiness
		Learning difficulties
		Clumsiness
		Inflexibility
		Insatiability
		Defiant behaviour
		Sleep problems



but their performance usually falls off markedly in the second half. When they return from school they may be very tired and emotionally drained from the great effort of focusing in class.

Concentrating on schoolwork may be so effortful for the child that he may be unusually reluctant to start work. Such children procrastinate far more than their peers when they have work assignments, homework, or revision to do.

Children with severe ADHD may have difficulty staying on any task for very long, and may be unable to sit and watch a movie or play a game they enjoy. Such children may constantly flit from one activity to another.

Poor concentration in children with ADHD is described in more detail in the next chapter.

### **Task impersistence**

A common complaint is that children with ADHD do not complete tasks.

At home parents find that they need to supervise their children more closely than do other parents with children of the same age. Simple chores, like getting dressed in the morning, take a long time. Parents often report that ‘Nothing would get done if I were not on my child’s back all the time’.

These children often forget what they are asked to do. Their parents may find them staring into space, or doing something quite different.

Impersistence is a particular problem with schoolwork, as children with ADHD often do not finish their set work. They may gaze out of the window, do something else, or start disrupting other children. As they get into high school and examinations become more important, this impersistence can seriously affect academic results, as children with ADHD may not complete their examination papers within the allocated time.

### **Disorganization**

Children with ADHD find it very difficult to follow sequences without a great deal of supervision. When such supervision is not available, they become muddled and disorganized.

### **Forgetfulness**

‘An excellent memory for what happened last year, but he cannot remember what happened yesterday’ is a common description of the child with ADHD. Many know their multiplication or spelling list immediately after it has been taught, but cannot recall it the next day. Surprisingly, they often remember in great detail events that happened a long time ago.

Such children may have difficulty following an instruction with more than one part, becoming distracted or lost midway through carrying it out. They are often very absent-minded—homework is forgotten at school, pens are misplaced, and possessions lost.

## Features of the hyperactive–impulsive type of ADHD

### Impulsivity

Children with the impulsive type of ADHD have great difficulty stopping to think before they act. (As Dennis the Menace said, ‘By the time I think about it, I have done it!’.) Children with this form of ADHD often do the first thing that comes into their heads: they will blurt out answers in class; they may say tactless things; they may take many risks; they have tremendous difficulty waiting their turn. They are the sort of children who may run out in front of a car without looking first.

Because of this impulsivity they do not learn from their mistakes. The problem is not necessarily that children with ADHD do not know the correct thing to do. They will often be able to explain in great detail what they should have done. They may also be quick to notice when others break the rules that they themselves do not obey. Nor is the problem that they do not want to do the right thing. They may be very upset and apologetic after the event. Their difficulty is in their lack of self-control.

The mechanisms that control behaviour in the brain seem to be unreliable in the child with ADHD. ADHD is a problem of performance, not of knowledge. As Dr Russell Barclay, one of the foremost experts on this condition, put it: ‘ADHD is not a matter of not knowing what to do, but of not being able to do what you know.’

Impulsivity in children with ADHD is discussed further in Chapter 3.

### Over-activity

Some children with ADHD are continually on the go. They may be so restless as to seem to be ‘driven by a motor’. Such a child often cannot remain seated, even for a few moments. He may wander around the classroom and the teacher may have great difficulty keeping him on his seat. Even when seated, some part of him may always be squirming.

In the past, such over-activity (also known as ‘hyperactivity’) was considered an essential feature of ADHD. We now know that, while most children with ADHD are more fidgety or restless than other children when carefully observed, many children with ADHD are not over-active.

Even those who are very active when young may become less active than their peers as they get older—a transformation that has been described as changing from being a ‘flipper’ to a ‘flopper’ (in the sense of continually flopping down in front of the TV).

Over-activity in ADHD is discussed in Chapter 4.

## Noisiness

Children with the hyperactive–impulsive type of ADHD are often boisterous and loud. They find it difficult to engage in activities quietly. Some talk excessively, driving other family members to distraction.

Some children have a habit of making all manner of repetitive noises that sound like an animal or a motor. They may be quiet for a short time if reprimanded, but the noises return, often without the child being aware that he is making them.

## Features that may be present in either type of ADHD

### Performance inconsistency

All children show some inconsistency in their performance, but this is particularly marked in children with ADHD. With a tremendous amount of effort, children with ADHD can sometimes concentrate or manage to stop and think before acting like other children, but they cannot maintain this effort most of the time.

It is this performance inconsistency that has so confused observers and led to many children with ADHD being labelled as ‘lazy’ or ‘naughty’. Those who do not understand the nature of ADHD think that, because a child performs appropriately on certain occasions, he is simply not trying hard enough when he fails. In the words of one psychiatrist: ‘A child with ADHD does well once and we hold that against him for the rest of his school career!’

Some situations make it easier for the child with ADHD. The child may do well with close supervision in a one-to-one setting, in a novel situation, or with someone he or she is afraid of. Even in these situations, improved performance will not last and the old difficulties resurface.

### Low self-esteem

Children with ADHD are very hard on themselves. They may say negative things about themselves such as ‘I am dumb’. They may cry easily and be easily offended. They may feel dissatisfied with themselves even when they succeed. For example, a child with ADHD who hit a cricket ball with great power complained that his father had bowled it too ‘softly’ to him. Some children with ADHD who have low self-esteem may hide this behind bravado, bragging about themselves and putting down others as a way of managing their inferiority complex.

Poor self-esteem in ADHD and the different types of behaviour it may give rise to are discussed in Chapter 7.

### Poor working memory

The memory difficulties of children with ADHD are not confined to the forgetfulness described earlier in this chapter. A type of short-term memory known as ‘working memory’ may also be impaired in children with ADHD.



The brain's working memory holds thoughts like a series of pictures pinned on a board, or a plan sketched on a notepad. These can be referred to in order to aid understanding and to guide decision-making.

A child with ADHD who has a poor working memory will experience great difficulty keeping any set of instructions or sequenced information in his mind. He will, therefore, find it difficult to plan ahead. He will also experience difficulty following the plot when reading a book, or even when writing a story of his own.

Many of the learning difficulties experienced by children with ADHD that affect skills such as reading comprehension, sequencing, and written expression are due to impairments in working memory.

In addition, some of the behavioural problems seen in this condition, such as lack of foresight and failure to learn from experience, are also due, in part, to problems with working memory. Poor working memory makes it difficult for the child to guide his behaviour by 'self-talk', the inner monologue that we use to keep us on track.

### Poor incentival motivation

'Incentival motivation' refers to the ability to work for future rewards. As children grow older they have to defer gratification and be prepared to work for some future reward. Children with ADHD find it very difficult to sacrifice for a deferred reward. For example, they find it difficult to put in regular hours of study for something as intangible as good marks on a report card at the end of the year. They are very easily diverted from such study by the immediate gratification offered by watching TV or playing video games. This difficulty is a fundamental problem for many children with ADHD.

### Social clumsiness

Children with ADHD often have difficulties reading social situations. They are often 'socially tone deaf'. They do not mean harm, but have a tendency to say very tactless things without realizing the effect they are having. They seem to have difficulty predicting the consequences of their actions and responding appropriately to the occasion. They may 'come on too strong'. These children often do not pick up the same cues as other children of the same age. They often do not read facial expressions and may be oblivious to whether someone is angry or upset with them. Because they fail to develop the same degree of reserve as normal children, they may behave in front of others in ways that are not appropriate for children their age.

Although such abnormal behaviour may be apparent to all who meet the child, the people who are most likely to notice are the child's peers. With them, the child with ADHD often sticks out like a sore thumb. Typically such children have little or no insight into how differently they are perceived. They do not



seem to be able to learn the skills that are required to mix with others. They often become loners, or play with children younger or older than themselves. With younger children, they blend in because of their immaturity. With older children, more allowances are made for their inappropriate behaviour.

Social clumsiness in children with ADHD is further described in Chapter 8.

### Learning difficulties

All children with ADHD under-achieve academically. Most children with ADHD will have difficulties in primary school with skills such as reading, spelling, and mathematics. Many have very untidy handwriting. Other common areas of difficulty are in reading comprehension and written expression.

Some children with mild ADHD may do well during primary school. However, during high school such children often start to fall behind, as greater skills in concentration and organization are required.

Learning difficulties in ADHD are described in Chapter 5.

### Clumsiness

While some children with ADHD are excellent athletes, most are poorly coordinated. Catching a small ball and writing neatly are skills that many children with ADHD find extremely difficult. Many have low muscle tone (slight floppiness) when younger and have a poorly coordinated running style.

### Inflexibility

Children with ADHD are often very literal, and ‘black and white’ in their understanding of the world around them. They find it difficult to compromise. As a result, parents often find themselves in conflict with their child over many issues.

‘Every discussion is an argument’ is a phrase parents often use to describe their child’s behaviour. Once the child with ADHD takes up an attitude to something, it is often almost impossible to get him or her to change. Children with ADHD may become very fixated on certain rules and follow these rigidly. They have difficulty understanding when such rules can be reasonably bent.

### Insatiability

Children with ADHD may be insatiable in their activities, not knowing when to stop, the way another child of their age would. This may be seen when they become over-excited in play and cannot calm down again when it is time to be serious. Instead they become more and more excited and non-compliant. They may even become excessively defiant and provocative despite reasonable requests to calm down.

They may show their insatiability by never being satisfied with any treat and in nagging for more and more things they want. This difficulty is related to



problems that these children have with delaying gratification—they find it very difficult to wait for a reward or treat. Many parents find this insatiability the hardest part of ADHD to manage; they are worn down by their child's constant nagging, which can last for hours, or even days, on end.

### Defiant behaviour

Many children with ADHD, particularly those with the hyperactive-impulsive type, have great difficulty obeying reasonable rules and regulations. When asked to do something by an authority figure, they may refuse or even become abusive. Punishment often does not help. Children with ADHD with defiant behaviour are very hard to discipline. As they get older they may get into problems with stealing, fire lighting, and other anti-social behaviour.

Defiant behaviour is described further in Chapter 6.

### Sleep problems

Many children with ADHD have difficulty falling asleep and are up until late at night. They often complain that their minds are too active. Once asleep they may be restless—their beds often look like a battlefield the next morning. Others may so exhaust themselves with their over-activity during the day that they fall asleep and sleep very soundly. Many children with ADHD persist with bed-wetting later than other children. Night terrors, sleepwalking, and bed-wetting are all more common in children with ADHD.

### Associated (co-morbid) conditions

There are a number of conditions that are more common in individuals with ADHD than in the general population. The tendency of a condition to co-exist with another is known as 'co-morbidity'. This comes from the medical term 'morbidity', which relates to the proportion of people having a particular disorder (not to be confused with the term 'mortality', which refers to the proportion of people dying from a condition).

The co-morbid conditions associated with ADHD are listed in Table 1.3.

A child with ADHD may have more than one co-morbid condition. For example, a child with ADHD can have anxiety and conduct disorder in addition to ADHD. While co-morbid conditions are more common in individuals with ADHD, most individuals with ADHD will not develop a co-morbid condition.

Parents who have a child with ADHD, who has a particular co-morbid condition, can find out more about the disorder by referring to the relevant section of this book. Tic disorder is discussed in Section 2 of Chapter 4. Dyslexia is described in Chapter 5. Oppositional disorder and conduct disorder are described in Chapter 6. A description of Asperger disorder can be found at the end of Chapter 8. Depression, anxiety disorder, obsessive-compulsive disorder, and bipolar disorder are dealt with in Chapter 9. The reason why co-morbid



**Table 1.3** Co-morbidity: conditions that are more common in individuals with ADHD

Tic disorder
Dyslexia
Oppositional disorder
Conduct disorder
Asperger disorder
Depression
Anxiety disorder
Obsessive–compulsive disorder
Bipolar disorder

disorders occur more commonly in individuals with ADHD is discussed in Chapter 10.

### How common is ADHD?

ADHD is one of the most common conditions in childhood, affecting as many as 5% of school-aged children. It affects about three times as many boys as girls and occurs in all ethnic groups.

It seems that the predominance of boys in the overall number is due to their over-representation in the hyperactive–impulsive group. In the inattentive group, there are as many affected girls as boys.

The hyperactive–impulsive type is three times more common in boys in the community, yet many clinics see six times as many boys with this type. It seems that boys with the hyperactive–impulsive type are far more likely to be noticed than girls with this type. Despite the predominance of boys, the hyperactive–impulsive type can be just as severe in an affected girl as in a boy.

### When does ADHD start?

Although the difficulties in both types of ADHD are present from birth, problems generally do not become apparent until later in childhood.

In children with the hyperactive–impulsive type, the behavioural problems are often apparent from infancy. Such children are generally difficult babies and active, challenging toddlers. The child’s teacher may complain that he is not managing in the classroom and playground from the earliest school years.

In children with a milder form of this type of ADHD, the child may manage in primary school without much difficulty but, with the onset of puberty and the greater demands of high school, problems often emerge.

Children with the inattentive type of ADHD generally experience difficulties with schoolwork when the work becomes more demanding. While some do develop reading and writing delays in primary school, many manage well until late primary or early high school. High school requires skills in self-organization, sustained concentration, proficient written expression, and self-direction that these children often do not possess.

## Historical background

ADHD is not a new condition. The first description of children with the disorder was by an English physician, Dr George Still, in 1902. He described 20 children in his practice with impaired concentration and over-activity. He recognized that this was not due to any fault in their upbringing. Dr Still did not give the condition a name.

Interest in the condition was rekindled after an encephalitis epidemic in the USA in 1917–18. Many children acquired a form of encephalitis that left them with attention difficulties, over-activity, and impulsivity. In such children, the encephalitis virus had damaged parts of the brain that are impaired in children with ADHD, and hence their problems were similar.

Since that time, ADHD has become the most studied developmental disorder in childhood. A number of name changes attest to the rapid evolution in our understanding of this condition.

In the 1950s, attention was focused on children with hyperactivity and the term ‘hyperkinetic–impulse disorder’ was used. In the 1960s the term ‘minimal brain dysfunction’ was widely used for children with ADHD.

In the 1960s, attitudes to ADHD in the UK and the USA began to diverge. In the UK and other parts of Europe, the International Classification of Diseases of the World Health Organization was followed. At that time, this classification recognized only children with ‘hyperkinetic disorder’, a term applied to children with severe over-activity.

In North America, a different classification of disorders, the Diagnostic and Statistical Manual of the American Psychiatric Association, was followed. In the USA, largely due to the work of the Canadian psychologist, Virginia Douglas, impairment in concentration (i.e. attention), rather than over-activity, was seen as the fundamental deficit in this disorder. The term ‘attention deficit disorder’ (ADD) was then introduced in the USA for the condition. Both children with and those without hyperactivity were recognized as having ADD. Those with hyperactivity were considered to have ADD+H while those without were considered to have ADD–H.

In the late 1980s, the term ‘ADHD’ was introduced in the USA to describe those with the hyperactivity and/or impulsivity, while the term ‘ADD’ was reserved for those with poor concentration alone.

Since 1994 in the USA, the term ‘attention-deficit/hyperactivity disorder’ (abbreviated to either ‘AD/HD’ or ‘ADHD’) has been used to encompass the spectrum of children with all forms of the condition. The three subtypes ‘inattentive’, ‘hyperactive–impulsive’, and ‘combined’ were introduced at this time. It is this terminology, with the simpler abbreviation ‘ADHD’ rather than ‘AD/HD’, that is followed in this book.

Over the past two decades, attitudes to diagnosis and treatment in the UK and the rest of Europe have increasingly followed those in the USA. The 1990 update of the International Classification of Diseases (ICD-10) and the 1994 update of the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-IV) were very similar in their criteria for diagnosis of the condition.

Further landmarks in this convergence of views included the recommendations published by the National Institute of Clinical Excellence (NICE) in the UK in November 2000 and the International Consensus Statement on ADHD published in January 2002. The role of NICE is to provide patients, health professionals, and the public with ‘authoritative, robust, and reliable guidance’ on current best practice in health issues. Their approach was consistent with US practice. The International Consensus Statement was issued by over 90 of the world’s leading scientists, researchers, and clinicians treating ADHD from 12 countries including the USA and the UK. It reflected the unanimity of views across the Atlantic.

All English-speaking countries now use the same terminology, criteria for diagnosis, and treatment protocols. No matter where they live, children with ADHD and their families benefit from the huge amount of research undertaken in centres all over the world, as well as from the wide range of literature, videos, and equipment directed at helping parents and teachers assist children with ADHD.

With the realization that a proportion of children with ADHD continue to have difficulties throughout adulthood, an increasing amount of research and support is now also being directed to residual ADHD in adults.

## Myths

### **ADHD is not a real medical condition.**

ADHD is recognized as a medical condition by the vast majority of health professionals, health organizations, and all disease classification systems internationally.

**ADHD only affects boys.**

Boys and girls are affected equally, but the condition is often missed in girls.

**A child who is not over-active or badly behaved, or who can concentrate on computer games, cannot have ADHD.**

Many children with ADHD are not over-active and are well-behaved. They can also often concentrate on computer games and certain other activities, because these involve an area of the brain that is not affected by the condition.

**ADHD is the result of bad parenting.**

ADHD is caused by a deficiency of certain chemical messengers in the brain. It is predominantly genetic rather than environmental in origin.

**Children always grow out of ADHD.**

In a proportion of children, the condition persists through adulthood.

**Children with ADHD who are treated with medicine are more likely to abuse drugs when they are older.**

This is the opposite of the truth. Children with ADHD who are treated with medication are significantly less likely to abuse drugs later than those who are not.