

Attention Deficit Hyperactivity Disorder (ADHD)

Understanding Treatment Options



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building the
mental wellbeing
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generation

What is attention deficit hyperactivity disorder (ADHD)?

ADHD is not a mental health problem. It is a common neurodevelopmental difference that makes it difficult to pay attention. You might also notice that you act impulsively and feel hyperactive. This can affect your daily life from a young age and for some people will continue to affect them as an adult.

ADHD is usually diagnosed when children are in primary school and often it might be your parents, carers or teachers who notice that you're having difficulties. However, some people experience ADHD from an early age but aren't diagnosed until they are teenagers or adults. Girls, teenagers and high achievers can all find it more difficult to receive an ADHD diagnosis. People experience ADHD in different ways, so you might feel that either difficulties with attention or feeling hyperactive have a bigger impact.

There are some other difficulties which are more common for people with ADHD, including:

- Anxiety disorders
- Oppositional defiant disorder or conduct disorder
- Autism
- Learning difficulties
- Tics
- Attachment difficulties
- Sleep problems

How can I get help?

Before you are offered an assessment for ADHD you might be asked to do other things first, such as an assessment for a learning difficulty. This is because there can be other reasons why you might find it difficult to pay attention. For example, extra support at school might help with some of the behaviours that can look like ADHD and some types of support for your parents or carers could also help with your attention difficulties.

If you're at school, then either you or your parents or carers can talk to your teacher or your school's Special Educational Needs Co-Ordinator (SENCO) about how you are managing at school, whether you have any concerns and what help you might need at school. Often your school might be able to refer you to an ADHD service, but you could also see your GP about a referral (although they might still need information from your school).

Planning your support

Your professional will think about a range of factors which might be contributing to your ADHD and suggest support options which address these factors. These could include biological factors and treatments (such as medication or whether any physical health conditions you might have are affecting your ADHD), psychological factors and social factors.

Your support plan should:

- be specific to how your ADHD affects you
- include how your ADHD support will work
- include support for any other physical or mental health problems you might have
- include any support you might need at school or college
- include any support you might need at home
- take into account your and your parents or carers (if appropriate) preferences

After you have been given a diagnosis of ADHD, your professional should talk with you (and your parents or carers, if appropriate) about how ADHD could affect your life. This discussion should become part of your shared support plan, and could include:

- the positive effects of a diagnosis, such as improving your understanding of yourself, identifying and building on your strengths, and making it easier for you to access services
- the possible negative effects of a diagnosis, such as stigma and other people not being able to see past your ADHD diagnosis
- that people with ADHD are more likely to act impulsively
- how making changes to your routines could reduce how much your ADHD affects you (also called environmental modifications)
- anything that would help you at school or college
- how ADHD could affect your relationships with family and friends
- how your ADHD and support with ADHD could affect any other mental or physical health conditions you have
- that people with ADHD can be more likely to misuse drugs or use medication in a way that has not been recommended by their doctor
- how ADHD could affect you driving a car

Your mental health professional should also talk to you and your parents or carers about support groups and voluntary organisations, helpful websites and sources of support in education and employment.

The information you are given should be easily understandable and should contain explanations of clinical terms. Your professional should discuss this information with you and give you a written copy.

How should decisions about my support happen?

Your professional should explain your different support options and involve you in planning and making decisions about your support. Your involvement in decision-making, and how much your parents, carers or other people who you are close to are involved, should reflect your age and your ability to make these decisions. You and the professionals supporting you should have regular discussions where you review the decisions you have made and how you and your parents or carers want to be involved in planning your support. It is especially important to talk about this when you are moving from one service to another.

Before starting any type of support, your mental health professional should talk with you about:

- your choices and preferences
- any worries you have
- any other physical or mental health conditions you might have
- how to stick to your support plan
- the benefits and risks of your support options
- the benefits of a healthy lifestyle and exercise

Your professional should give you a plan which explains all the support you need. They should ask your permission to share this plan with your family, school, social workers and other professionals who support you.

Environmental modifications

Environmental modifications are changes to places where you spend time that could reduce the effects of ADHD on your everyday life. Your mental health professional should discuss possible environmental modifications with you after they have given you information about ADHD. These could include:

- changing seating arrangements at school
- changing the brightness of the lights
- reducing noise
- finding a way to reduce things that distract you
- support from teaching assistants

Changing things around you could help to minimise distractions and make it easier to keep focused on school work. These changes will be different for each person and should be based on your individual needs.

Support for your family

Even before you have a diagnosis, if your behaviour and/or attention problems are making family life difficult, your parents or carers may be offered a place on a support group focused on ADHD.

To help support your family, professionals should talk with your parents or carers about how they are feeling, and discuss any worries. Your parents or carers might need support with your daily routines, such as going to school or managing your ADHD support. Your professional can give them advice on positive communication, helping you to have a good daily structure and setting clear rules.

The wellbeing of your parents or carers is important, and your professional should encourage them to ask for an assessment of their personal, social and mental health needs, and to join any self-help or support groups that they might find useful.

Transitions between services

When you leave school, your ADHD professional should see how you are doing, and decide whether you need to continue having support for ADHD. If you do, then your ADHD professional should arrange your transition from CAMHS or Child Health Services to adult ADHD services, which should be finished by the time you are 18 years old. There aren't well developed adult ADHD services in all parts of the country so in some areas your ADHD treatment will be passed back to your GP.

This can be a worrying time, and to help it go smoothly your professional should work with you to plan your transition to adult services. You should get clear information about what to expect from adult services. It can also be helpful for your CAMHS or Child Health professionals to talk to professionals in adult services before you transition.

After moving to adult services you should have another assessment. This should include finding out about how you are managing employment or education and your personal and social wellbeing, as well as how you are coping with any other conditions.

You may also transition to another CAMHS service (e.g. if you move house). If this happens, your professional should work with you to make sure that your care can continue smoothly, and that your new service has all the information they need.

Information for young people, parents and carers



Strong evidence

Your parents or carers should be offered information and support, which might be in a group with other parents and carers.

Information sessions should ideally involve both of your parents or carers. Over one or two sessions the professional will give you and/or your parents or carers information on the causes and impact of ADHD and advice on how to support you. These sessions will be different depending on your age and any areas where you particularly need support. For example, information sessions for parents and carers of younger children will include more information on how ADHD might affect you at school and any adjustments you might need, while information sessions for older children and young people might include more information on supporting you with finding a job, driving and risky behaviours more common at that age.

You and your parents or carers will be asked whether you agree for your professional to contact your school, college or university to explain:

- your ADHD diagnosis
- how it can affect life at school or college
- whether you will need to take any medication at school
- that any other physical or mental health conditions you might have are different from ADHD and might need different adjustments
- your treatment plan and special educational needs, including advice on reasonable adjustments and environmental modifications
- that feedback from them can be useful for you and your healthcare professionals

This contact with schools should also happen if you change schools, or move from school to college or university, or if your ADHD symptoms change.

If you have another physical or mental health condition, your professional should ask for your consent to contact the other professionals who support you to explain your ADHD diagnosis, treatment plan and how the symptoms could affect your behaviour and treatment.

Parent training programmes



Strong evidence

If you have ADHD, your parents or carers could be offered a place on a parent training and education programme. This will help your parents or carers to support you with your attention and some of the difficulties with behaviour that can be

caused by feeling hyperactive and impulsive. For example, your parents or carers might learn about different ways of communicating and fun activities to help improve your attention.

Your parents or carers might also be offered a parent training programme if you might have ADHD, but don't have a diagnosis yet. For some children and young people, the support strategies their parents or carers learn during the programme helps enough so that extra treatment isn't needed.

Parent training programmes usually involve your parents or carers attending groups of around 10 to 12 people who all have children of a similar age. The programmes usually include 10 to 16 sessions, lasting up to 2 hours each. Your parents or carers could be offered individual parent-training programmes if they can't attend group sessions.

Being offered a parent training programme doesn't mean that your parents have done anything wrong. The sessions aim to teach parents and carers about how to support you and help them to feel confident that they are doing things that will help you and help your relationship with your parents or carers.

If you have symptoms of oppositional defiant disorder or conduct disorder as well as ADHD, your parents or carers should be offered a parent training programme specific to conduct disorders, as well as group support for ADHD.

Medication



Strong evidence

Taking medication will not cure your ADHD. It might help you to concentrate better, be less impulsive, feel calmer and make it easier to learn at school, college, university or at your work. You should only be offered medication if your ADHD symptoms are causing you a lot of problems and the support offered to your parents or carers and making changes to your environment have not helped.

Before offering you medication, your professional should talk with you and your parents or carers about:

- the benefits and risks of psychological support and medication
- the benefits of a healthy lifestyle and exercise
- your views, preferences and any worries you have about taking medication
- how any other physical or mental health conditions you might have could affect your treatment choices
- the importance of sticking to a treatment, and things that might make sticking to treatment more difficult

You should be encouraged to share how you feel, and your preferences and concerns should be part of your treatment plan. If you are able to make your own decisions about your treatment then you will be able to decide whether you would like to take medication for your ADHD. You can still involve your parents or carers in this decision if you would like to and your professional should explain that you can change your mind about the medication at any time.

What should happen before the medication is started?

Before you start any medication, you and your health professional should talk to see how you are. This is sometimes called an assessment and should include:

- making sure that you still need medication
- any other physical or mental health conditions you have
- how things are at school (your professional might ask for a report from your school so they can see whether the medication helps with your learning)
- any difficulties you're having with behaviour
- how things are at home
- whether you need help to use the medication properly
- your care needs

Some ADHD services use something called a QB test. This is a short activity on a computer that can measure how well you can pay attention, how impulsive you are and how much you move or fidget. This can be helpful to understand whether you have ADHD and to keep track of whether your medication is helping.

Your professional might also ask about any other medication you take and your general health, like how your heart is working, your blood pressure, and check your medical history, height and weight.

If you are at risk of having heart problems or if your blood pressure is high, you should be referred to a heart specialist before starting ADHD medication.

Which medications are prescribed for ADHD?

Medication for ADHD can only be started by an ADHD specialist, for example a psychiatrist, nurse prescriber or a paediatrician.

There are 5 types of medicine licensed for the treatment of ADHD:

- methylphenidate
- lisdexamfetamine
- dexamfetamine
- atomoxetine

- guanfacine

Some medications need to be taken every day, but some can be taken just on school days. If you need to take medication during the school day then a member of school staff will keep your medication in a safe place and give you the medication when you need it. Sometimes your professional might suggest that you take a break from the medication to see how you are and whether you still need to take it.

If you are prescribed one of these medication options, you will probably be given a small dose at first which might then gradually increase depending on how much the medication is helping.

Methylphenidate

Methylphenidate is the most commonly used medication for ADHD and should be offered as your first medication option. Methylphenidate can help ADHD symptoms by increasing activity in parts of the brain which control attention and behaviour.

This medication can be taken as either immediate-release tablets, where the effects last about 4 hours (small doses taken 2 to 3 times a day) or as modified-release tablets where the effects last 6-12 hours depending on the brand (these are taken once a day in the morning, with the dose released throughout the day). Some people take methylphenidate on school days only.

Common side effects of methylphenidate include:

- a small increase in blood pressure and heart rate
- loss of appetite, which can lead to weight loss or poor weight gain and growth problems
- headaches
- stomach aches
- feeling aggressive, irritable, depressed, anxious or tense

If methylphenidate is not effective, lisdexamfetamine (another stimulant) might be suggested.

Lisdexamfetamine

Your professional might suggest lisdexamfetamine if you've had a 6 week trial of methylphenidate, but your ADHD symptoms did not improve enough for you to continue.

It works by stimulating certain parts of the brain and can improve concentration, help focus attention and reduce impulsive behaviour.

Lisdexamfetamine comes in capsules, taken once a day. Some people take lisdexamfetamine on school days only.

Common side effects of lisdexamfetamine include:

- decreased appetite, which can lead to weight loss or poor weight gain
- aggression
- drowsiness
- dizziness
- headaches
- diarrhoea
- nausea and vomiting

Dexamfetamine

Your professional might suggest dexamfetamine if your ADHD symptoms improved while you were taking lisdexamfetamine, but you could not tolerate its longer-lasting side effects. Dexamfetamine is a stimulant medication licensed to treat hyperactivity in children over 5 years old, but its effect lasts for a shorter amount of time than lisdexamfetamine. However, there is a greater potential for misuse than with other types of medications, and so dexamfetamine is unlikely to be the first medication offered to you.

Dexamfetamine is usually taken as a tablet 2 to 4 times a day, although a liquid option is also available. Some people take dexamfetamine on school days only.

Common side effects of dexamfetamine include:

- decreased appetite
- mood swings
- agitation and aggression
- dizziness
- headaches
- diarrhoea
- nausea and vomiting

Atomoxetine

Atomoxetine works differently from other ADHD medication. It's a selective noradrenaline reuptake inhibitor (SNRI), which means it increases the amount of a chemical in the brain called noradrenaline. This chemical passes messages between brain cells, and increasing it can help with concentration and controlling impulses.

Your professional might suggest atomoxetine if it's not possible for you to take methylphenidate, lisdexamfetamine or dexamfetamine. This might be because you have other health problems which means that you can't take stimulant medication or because you have had problems with side-effects from these medications. Atomoxetine comes in capsules and is usually taken once or twice everyday.

Common side effects of atomoxetine include:

- a small increase in blood pressure and heart rate
- nausea and vomiting
- stomach aches
- trouble sleeping
- dizziness
- headaches
- irritability

Atomoxetine has been linked to some more rare but serious side effects that are important to look out for, including suicidal thoughts and liver damage. Your professional will be able to give you more information about these if you start to take atomoxetine.

Guanfacine

Your professional might suggest guanfacine if it's not possible for you to take methylphenidate or lisdexamfetamine. This might be because you have other health problems which means that you can't take stimulant medication or because you have had problems with side-effects from these medications. Guanfacine is usually taken as a tablet once a day, in the morning or evening and needs to be taken everyday. As well as helping to improve attention, guanfacine can also reduce blood pressure.

Common side effects include:

- tiredness or fatigue
- headache

- abdominal pain
- dry mouth

If atomoxetine or guanfacine are not effective, your professional should obtain a second opinion or refer you to a specialist service.

Other medications

There are other medications which are much less commonly used to treat ADHD. They are unlicensed for treatment of ADHD and NICE recommend they should only be prescribed with advice from a specialist ADHD service. In practice this means a second opinion from a psychiatrist or paediatrician who is a specialist in treating ADHD.

Clonidine is a medication originally developed to treat high blood pressure that can be helpful if you have:

- tics as well as ADHD
- sleep problems that haven't been helped by other interventions
- sleep problems that are being caused by stimulant medication

Atypical antipsychotic medications (such as risperidone and aripiprazole) are sometimes prescribed in addition to stimulants if you have ADHD and feelings of aggression, rage or irritability that have not responded to psychological interventions (or if psychological interventions have not been possible).

There is little research evidence for this type of medication and there are concerns that stimulant and antipsychotic might not be helpful when taken together.

Monitoring medication effects

When you have just started taking medication your appointments will usually take place more frequently. This will involve regular monitoring of your ADHD symptoms and side effects, and your medication dose might be adjusted to find a level where your ADHD symptoms are reduced but any negative effects are manageable.

Once you have found the right dose you will still have appointments with your ADHD professional every 6-12 months to monitor whether your ADHD symptoms are improving and whether you are experiencing any negative effects. In between these appointments your GP or pharmacist might need to monitor your growth, heart rate, blood pressure and any side effects of the medication. If you experience any problems with the medication then you will usually go back for an appointment with the ADHD professional.

Dietary changes



Strong evidence

Your ADHD professional should talk with you and your parents or carers about the importance of good nutrition. This is particularly important if you are taking a medication that is affecting your appetite.

Your professional should also ask about whether there is a link between any particular foods and your ADHD symptoms. You might be asked to keep a diary of what you have eaten and your ADHD symptoms to see if there is a link between the two. If there is, you should be offered a referral to a dietitian, who might suggest making changes to what you eat and drink.

Dietary changes which have little evidence to support them include fatty acid supplements (usually fish oil based). They can contribute to a balanced diet, but taking too much could have negative health effects.

There isn't any evidence that food and drinks containing artificial colours or additives cause ADHD or that cutting these foods and drinks out of your diet is an effective treatment for ADHD.

You may also hear about "few foods" diets, but there is no evidence for the long-term effectiveness of these as a treatment for ADHD. However, these diet can be a risk for nutritional deficiencies.

Cognitive behavioural therapy (CBT)



Some evidence

You might be offered cognitive behavioural therapy (CBT) if you are still having significant problems because of your ADHD symptoms while taking medication.

CBT takes place individually and usually involves sessions with a professional once each week.

CBT should try to help you with:

- improving your social skills
- solving problems
- improving your self-control
- building your active listening skills
- managing and expressing your feelings

Coaching

Emerging evidence

Coaching for ADHD is a relatively new intervention that involves individual sessions with a professional trained in coaching techniques. The sessions will look at practical interventions that specifically target your ADHD symptoms. For example, these interventions could include planning, time management, goal setting, organization and problem solving.

Although usually offered to adults, some coaching programmes have also been offered for teenagers with ADHD. ADHD coaching tends to be used alongside medication for ADHD rather than instead of medication.

There is little research evidence on coaching as an intervention for ADHD in young people, although there have been a few studies in adults with ADHD which found promising results.

Attention, memory and cognitive training

Insufficient evidence

Attention, memory and cognitive training aims to support and improve how the brain does specific tasks. The training will usually use games or tasks to help you build skills such as focusing, maintaining attention and keeping things in memory. There are different programmes which vary in how the training is delivered, but most are based on weekly or twice weekly sessions for a number of weeks.

There have been a small number of studies in children with ADHD that show there might be some benefits, but currently it isn't generally recommended as a treatment.

Neurofeedback

Insufficient evidence

It is thought that people with ADHD have differences in the electrical activity of the brain, specifically in areas that control attention and impulsivity. The theory behind neurofeedback as a treatment for ADHD is that it might be possible to train someone to control their brain's electrical activity. This is done by measuring the brain's electrical activity using an electro-encephalogram (where removable electrodes are placed on the head) while completing a simple task. This can give feedback on the brain's electrical activity and teach ways to control it. A typical course of neurofeedback can involve 40 or more sessions.

Studies of neurofeedback on ADHD have shown mixed results and it is not generally available as a treatment in the UK.

Relaxation techniques

Insufficient evidence

Relaxation training aims to help people feel calmer. This could be through methods such as breathing techniques, visualisation exercises or muscle relaxation. While it is not a specific treatment for ADHD and does not treat symptoms of ADHD, there is some evidence that children and young people with ADHD may benefit from learning relaxation techniques.

Sleep interventions

Insufficient evidence

Problems sleeping are common in children and young people with ADHD and some ADHD medications can affect sleep. Poor sleep can impact your ability to concentrate and function in school and affect your family life. Addressing any sleep problems should be part of an ADHD support plan, although interventions to improve sleep are not a specific treatment for ADHD.

Programmes to improve sleep usually involve looking at:

- your bedtime routine
- avoiding stimulating foods, drinks and activities in the evenings which might make falling asleep and staying asleep more difficult
- making sure that your bedroom will help you sleep (e.g. it's not too warm or too cold and there's not too much light)
- looking at what happens when you wake up and whether this is helpful or unhelpful for your sleep problems

If other ways to improve your sleep don't work then your ADHD specialist might prescribe melatonin. This is a sleep hormone and can be helpful if you find it difficult to fall asleep.

Exercise

Insufficient evidence

Getting enough exercise is important for everyone's overall health. As your ADHD is likely to make you feel hyperactive, finding time to exercise during the day might be helpful, particularly after you've been sitting down for a long time.

There has been a small amount of research looking at whether exercise might be an effective treatment for ADHD. While this research has found that by itself exercise doesn't improve ADHD symptoms and so isn't recommended instead of other types of support, it can be helpful for general health.

Play-based therapies

Insufficient evidence

Play therapy aims to help you understand confusing feelings and events. It might also help you to express things which are difficult to put into words and communicate better with the people close to you. Play therapy tends to be used with younger children. It is not a specific treatment for ADHD and does not target ADHD symptoms specifically, but may be suggested if you have other difficulties as well as ADHD.

Ecotherapy

Insufficient evidence

Ecotherapy interventions take place outside and involve a connection with nature. They can include a range of activities from gardening to talking therapies that take place outside. While spending time outside in natural surroundings can help with overall health, ecotherapies don't have enough evidence to be recommended as a specific treatment for ADHD.