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## Attention deficit hyperactivity disorder - therapies

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### Summary

- Attention deficit hyperactivity disorder (ADHD) is a behavioural and developmental disorder that starts in childhood.
  - Treatment for ADHD may include medication, educational programs, behavioural management, psychological counselling and family support.
  - About one in every hundred Australian children takes medication to manage ADHD symptoms.
  - There is little evidence to support the theory that ADHD is caused or provoked by certain foods, including food additives.
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Attention deficit hyperactivity disorder (ADHD) is a condition that affects a young child's behaviour and learning. Children with ADHD often have difficulty concentrating (are easily distracted), and are impulsive and overactive.

All young children have a limited attention span and sometimes do things without thinking. But only a few of these children have ADHD.

Treatment for ADHD is complex and needs to be tailored to each child.

Treatment using medication is fast and controls the signs of ADHD, but using medication alone is not usually the best treatment for a person with ADHD. Non-medication therapies are often combined with medication therapies to treat ADHD.

Treatment may include medication, educational programs, behavioural management, psychological counselling and family support.

### Medication for ADHD

Stimulant medications (such as dexamphetamine and methylphenidate) are the most commonly used medications for ADHD. They act on the neurotransmitters (brain chemicals) that release the chemical dopamine. Greater amounts of dopamine can help to curb the hyperactive and impulsive behaviours typical of a child with ADHD.

Dexamphetamine and methylphenidate are similar but different in their chemical makeup and effects, so a child may benefit more from one of these medications than the other.

Different types of medication for ADHD include:

- short-acting (immediate release, or IR) forms of stimulants that last about three hours (including Ritalin and Dexamphetamine)
- long-acting forms (including Ritalin LA that lasts six to eight hours, Concerta that lasts ten to twelve hours, and Vyvanse which lasts more than 12 hours).

A child will feel the calming effect of these medications within about half an hour of taking them. Non-stimulant medications (like Strattera and Intuniv) may also be used to treat ADHD behaviours,

### Dosage for ADHD medications

Any changes to medications should always be supervised by the prescribing doctor. They may need to adjust the dosage and timing for an individual child to get the best control of ADHD symptoms while minimising possible side effects. For both dexamphetamine and methylphenidate, the dosage may be gradually increased over three or four weeks, using half tablets if necessary.

The doctor may stop the medication if the child shows no improvement at the end of four weeks. The other medication can then be trialled in a similar way. If the medication works, the doctor may increase the dose as the

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child grows.

### **Side effects of medication for ADHD**

The main short-term side effects of stimulants are poor weight gain and decreased appetite. Some others include:

- sleeping problems, such as delayed sleep onset
- headache
- drowsiness
- stomach pains
- nausea and vomiting
- dry mouth
- high blood pressure
- tachycardia (increased heart rate)
- emotional changes such as irritability, depression, nervousness or anxiety
- hallucinations (seeing or hearing things that are not really there) or psychotic symptoms (major mental illness)
- development or worsening of tics (repeated, uncontrolled movement of a muscle, often in the face).

### **Follow-up treatment**

A child who is taking medication to relieve their ADHD symptoms should see their health professional regularly (about every three months). These check-ups include:

- a thorough physical examination to check for side effects such as high blood pressure
- a review of the child's behaviours to see if the ADHD symptoms remain improved.

### **Other medications for ADHD**

Other medications are sometimes prescribed to manage co-occurring problems, such as sleep (melatonin, clonidine) or anxiety (SSRIs).

### **Non-medication therapies for ADHD**

The program for managing ADHD needs to be tailored to the individual child. Some therapies are more useful for controlling anger, while others are better for treating impulsivity.

Generally, the range of non-medication therapies used for ADHD can include:

- educational interventions
- behaviour modification
- cognitive therapy
- anger management
- social training
- individual and family counselling

### **Behaviour modification for ADHD**

Research has shown that behaviour modification therapies are more successful when the child has an active role in deciding on the program, its goals and incentives. Therapies that aim to change behaviour by punishment alone generally do not work. The key is to reward the child for good behaviour. A goal of family engagement is to lower stress and expressed emotion, and certainly to stop any violence or aggression.

### **Cognitive therapy and ADHD**

Cognitive therapy aims to help the child to better manage 'thinking skills', such as problem solving and self-control. Activities can include role playing and working out in advance how to handle particular situations.

The child learns to think through the possible consequences of an action before performing it. For example, the first self-instruction could be 'Stop!' followed by 'What is the problem?' and 'What would be the best plan to solve

the problem?' Cognitive therapy may be helpful for children who are impulsive.

### **Anger management and ADHD**

Impulsive children who are quick to anger can benefit from support to monitor and regulate their mood. The child learns how to recognise the signs of their growing frustration and learns a range of coping skills designed to defuse their aggression. They also learn relaxation techniques and stress management skills.

### **Social training and ADHD**

A child with ADHD may be unpopular with their peers (children of the same age) if they are aggressive or lack social skills. Being bullied, ignored or teased by peers can contribute to low self-esteem.

Social training can teach your child how to interact with others in a proper and satisfying way. Role playing may be an appropriate strategy.

Your child may learn basic social skills such as:

- different ways of starting a conversation
- the importance of holding eye contact when speaking
- listening skills
- how to play cooperatively with others.

### **Family counselling and ADHD**

Family counselling aims to help the other members of the household understand and cope better with the child's behaviour. For family counselling to work, everyone in the family needs to understand ADHD is not caused by them but rather their actions can modify the impact of ADHD.

Reading books about ADHD and joining an ADHD support group can help. For example, parents may learn different management techniques (such as 'time out') and how to balance punishments and rewards. Communication skills and anger management techniques are also useful. Assistance is also available through local or community organisations and ADHD Australia.

### **Diet and ADHD**

There is little evidence that ADHD is caused or made worse by certain foods (such as food additives). Some studies have found that small numbers of children with ADHD may benefit slightly from dietary changes, but experts do not recommend changes to diet as a routine part of therapy.

A 2011 study showed that almost two thirds of young children with ADHD show improvements in their behaviour when following a restricted hypoallergenic elimination diet. The researchers investigated individual hypersensitivities to certain foods, rather than focusing on a single preservative or additive. Reintroducing these potentially troublesome foods (which were different for each child) resulted in increased ADHD symptoms in almost two thirds of the children who responded to the restricted diet.

Talk with your doctor or a dietitian before changing your child's diet to help with ADHD.

### **Alternative therapies**

There are various alternative therapies that claim to help children who have ADHD. In many cases, the claims have not been proven.

Some controversial and unproven alternative therapies for ADHD include:

- treatment for allergies – some people believe that allergies cause ADHD. Suggested treatments include homeopathic remedies and special diets
- vision training – with coloured eyeglasses
- vitamin supplements – typically, large doses of vitamins are recommended. Fish oils with omega-3 fatty acids have recently received special attention, because there is some evidence that children with ADHD have low omega-3 levels. Increasing omega-3 levels may improve behaviour in some children, but not all studies show

such improvements.

### Where to get help

- Your **GP (doctor)**
- **Paediatrician**
- **ADHD Australia**
- **The ADHD Centre (NSW) and Helpline Tel. (02) 9889 5977**

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