

## ADHD – Stimulant medication

Attention Deficit Hyperactivity Disorder (ADHD) is a developmental problem which results in poor concentration and control of impulses. It can affect children's learning and social skills and also family functioning. See other KHI factsheets on ADHD.

### Medication treatment

The single most effective treatment for the symptoms of ADHD is stimulant medication. Stimulants have been used more than 50 years, and became standard treatment for children with ADHD in the 1980s. Approximately 1–2 children in every 100 are prescribed stimulant medication.

The stimulants available in Australia are methylphenidate and dexamphetamine, with similar actions and side effects. Another type of medication called atomoxetine (Strattera) has also become available recently to treat the symptoms of ADHD.

### How do stimulants work?

Stimulants act on the parts of the brain involved in self-control. This helps focus attention, and may also help filter out unnecessary information. Stimulant medication is probably the most highly researched of any medication prescribed for children. They greatly improve concentration, impulse control and overactivity in about 8 children in every 10 with ADHD.

### What types of stimulants are available?

The short-acting forms of stimulants (eg. Ritalin 10, Attenta, dexamphetamine), the two long-acting forms (Ritalin LA and Concerta) and atomoxetine (Strattera) are available in Australia on the government Pharmaceutical Benefits Scheme (PBS), and the cost is the usual prescription fee or health care card holder fee.

The short acting forms last 3–4 hours. Ritalin LA lasts 6–8 hours and Concerta 10–12 hours.

In Australia stimulant medication can only be prescribed by paediatricians, child psychiatrists or neurologists (sometimes GPs in certain situations). These medications are regulated – which means the prescribing doctor needs to apply for a permit from the state health department.

### Side effects

The main side effects of stimulants are decreased appetite and poor weight gain.

Less common side effects include stomach aches, headaches and dizziness and difficulty falling asleep. Occasionally a child treated with stimulant medication becomes irritable, withdrawn or highly emotional.

If side effects occur with stimulant medication, they are usually seen soon after starting and can often be managed by changing the dose or timing of the medication. If more intense side effects occur the medication can be stopped without needing to taper off the dose. Many children have no side effects at all.

The stimulants are not addictive in the doses used to treat ADHD. Studies have shown that children with ADHD treated with stimulant medication are less likely to have problems with drug abuse in their teenage years than children who are not treated, probably because they are more settled and less likely to take risks.

It is possible that stimulants may have a minor effect on some children's growth, so this needs to be monitored. In practice it is rarely a problem.

No other long-term effects have been identified.

## **Effects on the blood pressure and heart**

Stimulant medication may cause a very small increase in both heart rate and blood pressure in both children and adults. This is extremely unlikely to cause any problems for children with normal hearts. In certain situations children may require a heart evaluation before starting stimulant medication:

- Children with a known heart or blood vessel abnormality
- Family history of sudden unexplained death under 40 years of age
- Family history of heart muscle or heart rhythm problems

## **Monitoring**

Children taking stimulant medication should be monitored by their treating doctor. This should happen regularly in the early phase of treatment, and at least every six months while the child is taking stimulants. Height, weight, heart rate and blood pressure in particular should be checked.

## **Non-medication treatments**

Medications are only one part of a treatment package for children with ADHD. Other treatments include behaviour modification, classroom strategies to improve concentration and learning, and sometimes individual or family counselling.

## **Key points to remember**

- Stimulants have been used by children with ADHD for more than 50 years. About 1–2 of every 100 Australian children are taking stimulant medication.
- Any side effects from stimulant medication can usually be controlled with changes to the dose and strength.
- Children still need to see the prescribing doctor at least every six months.

- Stimulant medication is just one part of treatment for ADHD. Behaviour modification, classroom strategies and sometimes counseling is also needed.

## For more information

- Factsheets:
  - [ADHD – an overview](#)
  - [ADHD – ways to help children with ADHD](#)
  - [Fish oils – what the research says](#)

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Last Updated 31-Mar-2009. Authorised by: [Susan Jury](#). Enquiries: [Judith Smith](#).

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