

ATTENTION-DEFICIT HYPERACTIVITY DISORDER

Attention-deficit hyperactivity disorder, more commonly referred to by the initials ADHD, is a neurobehavioral syndrome primarily characterized by attentional problems and/or hyperactivity.

ADHD can affect both children and adults: ADHD is the most commonly diagnosed psychiatric disorder in children, affecting about 3 to 5% of children globally with symptoms starting before seven years of age, with 30%-50% of those individuals diagnosed in childhood continuing to have symptoms into adulthood. Here I shall be focusing exclusively on childhood ADHD.

Epidemiology

ADHD's global prevalence is estimated at 3-5% in people under the age of 19. There is, however, significant geographical variability, with rates in North America and Western Europe higher than those for Africa and the Middle East.

Rates of ADHD diagnosis and treatment have increased in both the UK and the USA since the 1970s. In the UK an estimated 0.5% children had ADHD in the 1970s, as compared with 3% treated for the disorder in the late 1990s.

Prevalence also varies according to gender, at a reported rate of 3.6% for male children and less than 1% for female children in the UK according to figures available for 2003.

Symptoms

Inattention and hyperactivity are the key behaviours of ADHD. To be diagnosed with the disorder, a child must have symptoms for 6 or more months and to a degree that is greater than other children of the same age.

There are two main types of childhood ADHD depending upon the main symptoms: predominantly inattentive type and predominantly hyperactive-impulsive type:

1. Predominantly inattentive type symptoms include:

- Having difficulty focusing on one thing
- Becoming bored with a task after only a few minutes unless doing something enjoyable
- Having trouble completing or turning in homework, often losing things needed to complete tasks
- Seeming not to listen when spoken to
- Daydreaming, becoming easily confused and moving slowly
- Having difficulty processing information as quickly and accurately as others
- Struggling to follow instructions.

2. Predominantly hyperactive-impulsive type symptoms include:

- Fidgeting and having difficulty sitting still
- Talking non-stop
- Being constantly in motion, running around and touching or playing with anything in sight
- Having difficulty carrying out quiet tasks or activities.

ADHD and other medical conditions

ADHD may be accompanied by other disorders, with two thirds of children affected by ADHD also suffering from any of the following co-existing conditions:

- Oppositional defiant disorder (35%) and conduct disorder (26%) characterized by anti-social behaviours such as stubbornness, aggression, frequent temper tantrums, deceitfulness, lying, or stealing.
- Mood disorders. Boys diagnosed with the combined subtype have been shown likely to suffer from a mood disorder.
- Bipolar disorder. As many as 25% of children with ADHD have bipolar disorder. Children with this combination may demonstrate more aggression and behavioural problems than those with ADHD alone.
- Anxiety disorder, which has been found to be common in girls diagnosed with the inattentive subtype of ADHD.
- Borderline personality disorder, associated with ADHD in 70% of cases.
- Obsessive-compulsive disorder. OCD is believed to share a genetic component with ADHD and shares many of its characteristics.

Management

Methods of treatment often involve some combination of behaviour modification, life-style changes, counselling, and medication. A recent study found that medical management and behavioural treatment is the most effective ADHD management strategy, followed by medication alone, and then behavioural treatment.

Stimulants are the most commonly prescribed medications for ADHD. The most common stimulant medications are the chain substituted amphetamine methylphenidate, dextroamphetamine, mixed amphetamine salts, dextromethamphetamine and lisdexamfetamine. An analysis of clinical trials found that about 70% of children improve after being treated with stimulants in the short term. However, although under medical supervision stimulant medications are considered safe, the use of stimulant medications for the treatment of ADHD has generated controversy because of undesirable side effects and uncertain long term effects.

As an alternative to stimulant medication, atypical antipsychotic drug use is rising among ADHD children, although once again side effects are an issue, including weight gain, gynecomastia, dysphoria, heart rhythm problems, diabetes and the possibility of tardive dyskinesia.

Another non-stimulant drug that has been used to treat ADHD is the analeptic drug, modafinil. There have been double-blind trials that have demonstrated the efficacy of modafinil, however there are risks of serious side effects such as skin reactions and modafinil is not recommended for use in children.