



## Adult ADHD

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Patients with ADHD have problems with **attention, impulsivity** and **hyperactivity** (or some combination of the three). In the 1960s, the established view was that ADHD symptoms waned in late adolescence. However, some studies published since then have suggested the persistence of symptoms into young adulthood.

Studies of adult ADHD in America suggest that 4% of adults may have ADHD. As children with ADHD grow up, two-thirds may have persistent symptoms into young adulthood (although the number meeting full ADHD diagnostic criteria declines rapidly by age 25). There is controversy regarding the significance of these persisting symptoms – some researchers argue that they cause significant impairment and should be treated.

### Diagnosis and Clinical Features

There are two main diagnostic classification systems which can be used: DSM-IV has criteria for ADHD. ICD-10 has criteria for hyperkinetic disorder (HKD – a more severe form of ADHD with both inattention and hyperkinetic/impulsivity symptoms).

DSM-IV characterises three subtypes of ADHD: inattention type, hyperactivity/impulsivity type and combined type. Symptoms must be present for 6 months, be disruptive and present in two or more settings (e.g. home/work) and have an onset before age 7.

As children with ADHD grow up, their problems change. In adolescence they may engage in high-risk activities (smoking, illicit drug use, unprotected sex) and have relationship problems. In adulthood hyperactivity tends to decline but inattention symptoms are more likely to persist and cause problems. These problems include keeping jobs, marital problems, driving accidents, illicit drug misuse and criminal activities.

ADHD is frequently co-morbid with other disorders: in adulthood these include mood disorders (depression, bipolar disorder), anxiety disorders, personality disorder (impulsive), alcohol and substance disorders.

### Neurobiology

ADHD is a highly genetic disorder. Parents and siblings of ADHD children are on average 4-5 times more likely to have the disorder than the general population. It appears to involve abnormal functioning in monoamine (dopamine/norepinephrine) pathways. Some 'ADHD genes' probably control dopamine and norepinephrine pathway proteins.

There are environmental associations of ADHD including maternal smoking and alcohol use, pregnancy complications, and socio-economic deprivation. Environmental factors may interact with genetic factors in causing ADHD.

Neuroimaging studies have found changes consistent with neurodevelopmental abnormalities in frontostriatal neural circuits and altered activity in sub-cortical dopamine pathways.

In neuropsychological studies, people with ADHD have a deficit in 'behavioural inhibition'. This causes impairments in the higher cognitive functions required for attention and impulse control. ADHD drugs may act via dopamine or norepinephrine pathways to correct this deficit.

### **Assessment**

The assessment includes the usual psychiatric history supplemented by questions focussed on ADHD symptoms and ADHD risk factors.

This is supplemented by information from examination, informants, rating scales, investigations and (if necessary) neuropsychology. Information about a patient's childhood from parents and school reports may assist in establishing the presence of childhood ADHD. Common rating scales used to assess adult ADHD include: CAARS-SR, CAARS-O, WURS, ADD.

### **Treatment**

Many patients find diagnosis helpful and education and self-help techniques may be sufficient to manage their difficulties. Support groups and books offer a wide range of advice about managing adult ADHD.

In adults, there is evidence for efficacy for methylphenidate, dexamfetamine and atomoxetine. However, prescribing is off-label and drug treatment should not be initiated if diagnosis is uncertain or benefit is unlikely.

Psychological interventions for adult ADHD have been developed which are:

- modular
- cognitive-behaviour therapy-based
- skills-based.

For example, the Young-Bramham Programme has core modules on inattention/memory, time management, problem solving and impulsivity. It has optional modules such as: social relationships, anger, anxiety and sleep problems.

### **Service issues**

There are uncertainties regarding the persistence of symptoms into adulthood and the long-term benefits and risks of pharmacological treatments. These provide challenges for clinicians and commissioners of services.

Management issues include the allocation of resources between primary and secondary care and the organisation of ADHD assessment clinics.

Clinicians need to be aware of current guidelines for adult ADHD management and conscious of the risks and benefits of prescribing for ADHD.