Orygen
The National Centre of Excellence in Youth Mental Health

Fact sheet
For clinical and non-clinical professionals who work with young people

Attention deficit hyperactivity disorder (ADHD) and youth mental health

Although usually diagnosed in children, attention deficit hyperactivity disorder (ADHD) is often a chronic condition that continues throughout life. As adolescents and young adults (aged 12–25 years old) develop, they may be exposed to increasingly complex tasks and environments that are likely to affect the manifestation and treatment of their ADHD.

This fact sheet provides an overview of what ADHD is, how it presents in young people, commonly occurring comorbidities and effective treatment options and considerations available for young people.

What is attention deficit hyperactivity disorder (ADHD)?

Attention deficit hyperactivity disorder (ADHD) is a complex neurodevelopmental disorder that has two components. They are:

1. **Attention deficit:** this is an inability to *focus*. Often people with attention deficit are able to understand perfectly well, but can't absorb information due to problems with memory, organisation, focus and persistence.[1]
2. **Hyperactivity/impulsivity:** this involves difficulty controlling *impulses*. People with ADHD are often restless, fidgety and overactive. They are also impulsive and will often act on thoughts and feelings without thinking about it first. This can be physical, such as a child dashing across a road in front of a car; verbal, such as saying something inappropriate in the middle of a conversation; or, cognitive, such as making an important decision before they have enough information.[1] In older adolescents and adults, this component of ADHD may manifest a little differently. For example, hyperactivity may manifest more commonly as inner restlessness, and impulsivity as impatience, sensation-seeking and excessive spending.[2]

ADHD can present with or without the hyperactivity component.[3] It is diagnosed when strong, pervasive and persistent patterns of attention deficit and/or hyperactivity/impulsivity are present prior to the age of 12 and are an impairment in at least two settings (e.g. home, school, higher education, work, etc.)[1] ADHD is estimated to affect 5% of children and is thought to persist into adulthood in about half of the cases.[1,3]

ADHD and young people

In the past, ADHD was considered to be a childhood disorder. It has more recently become recognised as persisting into adolescence, and over the last 15 years ADHD has been accepted to persist into adulthood. Due to the relative recency of its recognition as persistent beyond childhood, there is less research on ADHD in adolescents and adults. Estimates of the rate of persistence from childhood to adulthood vary widely from at least 15% to as high as 90% depending of the diagnostic criteria used.

When ADHD does persist beyond childhood, it can result in complicated challenges such as financial stress, suicidal behaviours and addictions.[2,4-9] There is also evidence to suggest that even when ADHD is deemed to be in full remission, it is often associated with problems in adulthood including mood disorders and other psychiatric comorbidities, poor social skills, financial difficulties and education problems.[10-14]

Differences in how ADHD presents in children, adolescents and adults

ADHD presents in different ways after childhood, reflecting the change in life tasks with increasing age. The table below outlines a number of typical examples of differences in how ADHD may present in children, adolescents and adults.[1,4,15]

Children	Adolescents	Adults
Avoids doing classwork or homework	Difficulty completing homework/assignments	Avoids preparing reports, filling out forms, reviewing lengthy papers
Messy locker or school bag	Difficulty sustaining attention to reading	Difficulty reading or completing paperwork
Easily distracted by surroundings	Messy desk, bedroom	Messy desk, home space/s
Often forgets to do chores, run errands	Easily distracted by unrelated thoughts	Easily distracted by unrelated thoughts
Often loses school materials, jumpers, etc.	Forgetful	Often forgets to return calls, pay bills, keep appointments
Difficulty carrying out sequences of instructions	Often loses wallet, keys, phone, etc.	Often loses wallet, keys, phone, etc.
Difficulty listening	Poor time management; works twice as hard for half as much	Appears scattered
Butts into conversations, games or activities	Poor academic performance	Poor time management; works twice as hard for half as much
Difficulty playing or working quietly	Appears unmotivated	Difficulty concentrating
Squirms and fidgets	Inattentive in class	Intrudes upon, or takes over tasks that others are doing
Excessive running or climbing	Overly social in class	Inner feeling of restlessness
Often described as always 'on the go'	Fidgets when seated	Drums fingers, taps foot, flips pens
Blurts out answers in class	Talks excessively	Tendency to engage in active jobs and activities
	Truancy	Tendency to impulsively take risks
	Tendency to engage in active jobs and activities	Makes impulsive decisions
	Tendency to impulsively take risks	Tendency to drive too fast
	Often irritable	Often irritable
	Easily overwhelmed	Easily overwhelmed
	High levels of conflict with peers and family	

Co-occurring mental illness and ADHD in young people

Young people with ADHD experience the same range of mental illnesses as those in the general population, but at a much higher rate.[16] This may be due to shared genetic influences across disorders or because the symptoms of ADHD lead to secondary psychological distress.[17] For example, inattention at work may result in poorer performance, which may lead to perceived repeated failure and result in depression; or, difficulty controlling impulses may cause problems in social or professional situations, which could lead to anxiety.

Estimates of comorbidities in the youth ADHD population are scant, but based on studies of university students and adults it is likely that more than half of young people with ADHD have psychiatric comorbidities (compared to 11% in the general population), with up to one third having two or more comorbidities (compared to 4% in the general population).[16,18] The more severe the ADHD, the more likely it is that comorbidities will be present.[17]

ADHD comorbidity rates and increased risk factors

Compared to those without ADHD, it is estimated that adolescents and adults with ADHD are:[8,9,11,16,19-21]

- 4–6 times more likely to have conduct disorder
- 4–7 times more likely to develop antisocial personality disorder
- 8.4 times more likely to have a depressive disorder
- nearly 11 times more likely to have an anxiety disorder
- 8.7 times more likely to have trauma and stressor-related disorders (e.g. adjustment disorder)
- nearly 25 times more likely to have a learning disorder
- 1.5–3 times more likely to have a substance misuse disorder (possibly more so in males than females)
- 3.6 times more likely to be problem gamblers
- nearly 4 times more likely to attempt suicide
- 6.5 times more likely to make multiple suicide attempts.

Diagnosing ADHD and mental illness in young people

The diagnosis of comorbid mental illnesses in young people with ADHD is complicated by the fact that ADHD shares overlapping symptoms with many common psychiatric comorbidities.[22,23] Core ADHD symptoms—such as emotional instability, concentration difficulties and physical overactivity—can be key indicators of depression, anxiety or substance misuse.[17,22,23] This means that a diagnosis of ADHD can mask the presence of comorbid mental illnesses and vice versa. It is also possible that previously undiagnosed or late-onset ADHD is less overt in adolescents and adults due to the use of compensating skills they have developed to cope with their difficulties.[22] In this case, secondary psychiatric comorbidities (e.g. depression) may be the reason for presentation to a clinician, and there is a risk of ADHD being missed.[22] It is important that healthcare providers are aware of the likelihood of psychiatric comorbidities accompanying an ADHD diagnosis and vice versa, and are equipped to recognise and treat them where they arise.

Identifying ADHD and psychiatric comorbidities in young people

When someone presents with a mental illness that has overlapping symptoms with ADHD (e.g. inattention, distractibility):[22]

- Ascertain whether these are longstanding problems and determine the approximate length of time that the young person has been experiencing them (e.g. six months or 10-20 years?)
- Ask what the person was like as a child in the classroom if the issues appear to have been longstanding.
- Consider using a formal screening tool if a young person's responses indicate that ADHD is a possibility—e.g. the Swanson, Nolan, and Pelham (SNAP) – IV Rating Scale[24] or the Adult ADHD Self-Report Scale (ASRS)[25]—to determine whether an ADHD diagnosis is warranted before commencing a treatment plan.

When someone presents with ADHD, ensure that they are screened for comorbid mental illnesses before commencing a treatment plan.

Treating ADHD and mental illness in young people

Environmental modifications and psychoeducation are first line interventions for treating comorbid ADHD and mental illness in young people. This section covers the importance of these interventions and provides some examples.

Environmental modifications

Environmental modification and psychoeducation are recommended as the first interventions for young people with ADHD.[12] Environmental modifications are made on the basis of an assessment of the young person's needs in order to minimise the impact of the young person's ADHD on their everyday activities and overall functioning. It is important to consider environmental factors in each phase and place of a young person's life, especially when these change (e.g. when there is a transition from school to work or university). Examples of environmental modifications to reduce the impact of ADHD include:

- changes to lighting and noise
- reducing distractions
- structuring activities and breaks
- using written instructions and repetition.

Psychoeducation

Psychoeducation is the provision of information and advice about mental illness—in this case ADHD. Psychoeducation empowers young people and families to play an active role in decision-making about management of the condition. Psychoeducation has been found to benefit people by improving treatment adherence, satisfaction and functional outcomes.

Medication

Consider medication if ADHD symptoms in more than one area of functioning (e.g. relationships or education) persist after environmental modifications, psychoeducation and support for young people and families has been delivered.[12] Careful baseline assessment and expert medication management is required to maximise the benefits of these treatments. Psychosocial treatments, in particular cognitive behavioural therapy (CBT), can be offered as adjunctive treatments, but the evidence for these treatments is still emerging.

Psychiatric comorbidities

Where psychiatric comorbidities are present, they need to be considered in treatment planning.[12,17,26] Further complicating things, ADHD itself can affect the treatment of comorbid mental illnesses. Evidence suggests that people with ADHD do not always respond to the standard treatments of mental illnesses as effectively as the general population.[27,28] Just as it is important to ensure that comorbid mental illnesses are recognised and accurately diagnosed in young people with ADHD, it is also important to ensure treatment for these is tailored to an individual's situation.

Issues in pharmacological treatment of ADHD in young people

Where psychiatric comorbidities are present, it can be challenging to decide priorities in treatment. In general, it is recommended that whichever condition is causing the highest level of impairment should be treated first, although there are exceptions to this.

Prioritising psychiatric comorbidities

For severe mood disorders where suicidality is an issue, it is recommended that the mood disorder is given the highest priority and residual ADHD symptoms treated later. Mood stabilisation in bipolar disorder is also essential to effective treatment of comorbid ADHD. Similarly, with substance use disorders involving the use of stimulants or intravenous use, it is recommended that these be addressed before ADHD.[18] Where substance use problems are less severe, treating ADHD can help people manage substance use better.

Prioritising ADHD treatment

Where there is not a pre-existing medication regime that should be maintained, it may be important to prioritise ADHD treatment. For example, in a case where the symptoms of premorbid ADHD has contributed to the development and exacerbation of depression, treating depression with medication is unlikely to help unless the premorbid ADHD is treated first.[22]

Polypharmacy

In practice, overlapping symptoms can make it difficult to ascertain what is causing the highest level of impairment in these situations. It is important that the appropriate amount of time and energy is dedicated to this in order to avoid unnecessary polypharmacy. Effective treatment of the condition that is causing the highest level of impairment can sometimes result in reduced symptoms of other conditions. Where this is not the case, and polypharmacy is considered to be of benefit, take a holistic, coordinated approach in which good rationale for all medications is

developed and both therapeutic and side effects are monitored and systematically reviewed. Close collaboration, communication, and coordination between all health professionals involved in the young person's care is required to ensure that medication use is carefully managed.

Psychosocial treatment for ADHD in young people

Psychological therapies—such as behaviour therapy, CBT, dialectical behaviour therapy (DBT), family therapy, acceptance and commitment therapy (ACT) and general counselling—can be helpful for mental health issues in young people with ADHD. When tailoring psychotherapy to treat someone with ADHD, there are some considerations and adaptations that may help.

Lifestyle interventions

Lifestyle interventions that encompass diet, sleep, exercise, daily routines and minimising substance use are important components of mental health and are relevant and effective for people with ADHD and mental illness. Poor diet, substance use, social isolation, sleep problems and physical inactivity are often issues for those with ADHD.[20,29-32] Interventions to address these factors need to form part of treatment goals and plans.

Tailoring psychosocial treatments for young people with ADHD

While there is currently no standard psychosocial treatment specifically for ADHD in young people,[4,33] there is evidence to suggest that including certain elements in tailored psychosocial treatments for young people with ADHD may help optimise outcomes. These elements include:[4,33-35]

- providing psychoeducation about ADHD
- using structured (vs unstructured) therapy sessions
- incorporating concrete skills training, including organisation and time management, emotion regulation, coping, and resilience
- incorporating lifestyle interventions
- identifying and working towards a few attainable, concrete goals at a time in collaboration with the young person.

Further information

What is the evidence for psychosocial interventions for young people with attention deficit hyperactivity disorder (ADHD)? – Orygen

ADHD Australia – information and resources

Raising Children: attention deficit hyperactivity disorder (ADHD) – information and resources

Australian ADHD Professionals Association (AADPA) – association of inter-disciplinary professionals in Australia and New Zealand dedicated to working towards improved life outcomes for people with ADHD

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