

# WHAT IS ADHD ?

Attention Deficit Hyperactivity Disorder (ADHD) is a complex neurodevelopmental disorder which affects a person's ability to exert age-appropriate self-control.<sup>1</sup> It is characterised by persistent patterns of inattentive, impulsive, and sometimes hyperactive behaviour,<sup>2</sup> and is frequently accompanied by emotional regulation challenges.<sup>3</sup>

People with ADHD have little control over these behaviours as they stem from underlying neurological differences.<sup>1</sup> They arise due to an impaired ability to inhibit and regulate attention, behaviour and emotions; to reliably recall information in the moment; to plan and problem solve; to self-reflect and self-monitor; and to self-soothe.<sup>1,4</sup>

ADHD can cause significant functional disability throughout the lifespan and in all areas of life, and without appropriate intervention can lead to significantly unfavourable outcomes.<sup>5</sup> However, with evidence-based treatment and support, people with ADHD can embrace their strengths and interests, learn to manage their challenges and live a full and rewarding life.

## Causes


Genetic studies, including family, twin and adoption studies, show ADHD is a highly heritable disorder.<sup>7,8</sup> No single ADHD gene appears responsible for causing ADHD. Instead, research suggests it is likely to result from number of interacting genes.<sup>7,8</sup> Expression of these genes is thought to result in alterations in brain structure, neurochemical composition and availability, and brain connectivity and function.<sup>1</sup>

There are a number of environmental risk factors that may also contribute to the development of ADHD including maternal smoking and alcohol intake during pregnancy, premature birth and low birth weight.<sup>1,6,9</sup>

## Executive functions

ADHD affects a person's ability to self-regulate. The mental processes people rely on to self-regulate are called executive functions.<sup>1</sup>

The executive functions enable a person to control their thoughts, words, actions and emotions. They



ADHD is the most common mental disorder in children and adolescents in Australia. It affects approximately 281,200 children and adolescents (aged 0-19) and approximately 533,300 adults (aged 20+).<sup>6</sup>

## Prevalence

More than three-quarters of children diagnosed with ADHD continue to experience the symptoms of their ADHD in adulthood.<sup>1,6</sup>

ADHD does not discriminate. It affects males and females of all IQ levels and from all socio-economic and cultural backgrounds.<sup>1</sup>

In Australia ADHD is currently under-diagnosed, particularly in girls and in the adult population.<sup>6</sup>

There is no evidence that ADHD is caused by poor parenting, watching too much TV, eating sugar, family stress or traumatic experiences.<sup>6</sup> It is also untrue that children with ADHD are simply 'naughty children'.

also assist them to perceive and manage time, and to direct and manage their behaviour over time. For example, the executive functions enable a person to concentrate and pay attention, to inhibit their instinctual or habitual responses, to recall and evaluate information, to consider the consequences that may result from implementing an idea, and to wilfully adjust and direct their behaviour. They also enable a person to self-reflect, to self-motivate, to delay gratification, to achieve their goals, to successfully navigate social situations, and to moderate their emotions in line with societal expectations.<sup>4</sup>

Executive functioning abilities are thought to develop sequentially, one skill building atop the next, starting at around age 2 and reaching full development at around age 30. Children with ADHD lag significantly behind in the development of their executive functions – by approximately

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30% or 3-6 years.<sup>8,10</sup> Additionally, as they mature the majority of these children tend to only develop approximately 75-80% of the executive functioning capacity of their neurotypical peers and thus will continue to lag behind indefinitely.<sup>8</sup>

## Symptoms

ADHD symptoms tend to present early in childhood, and must be present before the age of 12 in order for a person to qualify for an ADHD diagnosis.<sup>2</sup>

According to the Diagnostic and Statistics Manual of Mental Disorders (DSM-5), ADHD can present in three ways.<sup>2</sup>

### 1 Predominantly inattentive symptoms

People with inattentive symptoms tend to:

- struggle to focus and concentrate on information or tasks they find boring or tedious
- experience mind-wandering and be frequently interrupted by unrelated thoughts
- be easily distracted by external stimuli
- miss instructions or relevant information
- have trouble remembering information
- struggle to pay close attention to detail and make careless mistakes
- fail to finish tasks or to achieve their goals
- lose items
- avoid or seem reluctant to engage in task requiring sustained effort.

### 2 Predominantly hyperactive-impulsive symptoms

People with hyperactive-impulsive symptoms tend to:

- fidget, tap objects, restlessly wiggle legs and generally move around more than others
- talk excessively, blurt out answers or interrupt others. Children may also make loud noises or narrate their actions
- respond quickly to situations without anticipating the consequences (i.e. make rash decisions or rush in without waiting to hear all of the instructions)
- impatiently badger their parent, partner, friends etc. when they want something
- find boredom intolerable, constantly seek stimulation
- participates in more risk taking or dangerous behaviour
- choose a smaller reward now rather than postpone gratification in order to receive a larger, more significant reward later.

### 3 Combined symptoms

People with combined symptoms tend to display both inattentive and hyperactive-impulsive symptoms.

The ADHD symptoms people can experience may vary from person to person and can change throughout a person's lifespan.<sup>6</sup>

## Emotional dysregulation

People with ADHD often have difficulty regulating their emotions.

For example they may:

- experience emotional lability (rapid, often exaggerated changes in mood)
- display their emotions more intensely
- become easily excitable
- be quick to anger and become verbally or physically aggressive
- focus on the more negative aspects of a task or situation
- report increased psychological distress from their emotional experience.<sup>3</sup>

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## Situation variability

The executive function challenges and associated symptoms people with ADHD experience can vary depending upon the level of interest they have in a task, the timeliness of the reward they may receive and how familiar they are with a given situation.<sup>1,4</sup> For example, a person with ADHD may struggle to start or to complete a task if the reward for their effort is delayed or if they feel the task or situation is boring or tedious. If, on the contrary, there is an immediate reward or positive reinforcement, or the situation is new, interesting and positively challenging, they will often find starting and completing the task much easier.<sup>4</sup>

However, if a person with ADHD finds a task intensely interesting they may become hyperfocused (so intensely fixated on the task that they become over-absorbed in it). When hyperfocused, they may struggle to disengage their focus and to redirect their attention away from the task or topic that is holding their interest in order to attend to more pressing or important tasks.<sup>4</sup>

Fatigue (tiredness) and time of the day can also impact on the executive function capacity and symptom severity people with ADHD.<sup>1</sup>

## Risks of undiagnosed and poorly treated ADHD

Without appropriate diagnoses, treatment and support, people with ADHD experience symptoms which can have a profoundly negative effect on their lives. For example, people with the disorder may struggle to learn, achieve academically, behave appropriately, meet classroom/workplace expectations, navigate social situations and maintain friendships.<sup>1,4</sup> They may constantly find themselves on the receiving end of disciplinary, academic and social repercussions and as a result develop a poor sense of self, begin to feel like a failure, start to predict future failure and give up, or develop oppositional and defiant behaviour.<sup>1,4</sup>

Children with poorly treated ADHD have been shown to have an increased likelihood of developing anti-social behaviour, anxiety and depression, alcohol and substance abuse issues and eating disorders in adulthood as well as other adverse long-term health outcomes which can reduce life expectancy.<sup>1,5,6</sup> Adults with poorly treated ADHD are at higher risk of relationship, workplace and financial difficulties. Additionally, they are at higher risk of relationship breakdown, divorce, driving infringements, criminality, injury, self-harm and suicide.<sup>1,5,6</sup>

## Strengths

It is important to remember people with ADHD also have incredible strengths that need to be harnessed. For example, research suggests people with ADHD are often:

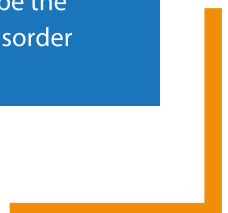
- curious
- creative
- imaginative
- innovative
- inventive
- great at brainstorming and thinking outside the box.<sup>11,12,13,14</sup>

Additionally, the research suggests people with ADHD tend to do well in environments that are stimulating, challenging, busy, fast paced, intrinsically motivating, full of novelty and requiring multitasking.<sup>14</sup>

Parents, partners and friends often report the people in their lives with ADHD tend to be:

- loving
- energetic
- spontaneous
- enthusiastic
- adventurous
- loyal
- honest
- genuine
- resilient
- determined
- lots of fun.<sup>4</sup>

ADD or Attention Deficit Disorder is an outdated term that was once used to describe the inattentive form of ADHD. ADHD is now considered to be the correct name of the disorder irrespective of a person's predominant traits.



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## Diagnosis

ADHD is diagnosed using criteria outlined in the DSM-5. To be diagnosed with ADHD the symptoms of inattention and/or hyperactivity and impulsivity:

- need to be excessive for the developmental age of the individual
- need to be present before the age of 12
- must have persisted for longer than 6 months
- must contribute to impairment across multiple settings i.e. home, school, childcare, work, etc.<sup>2</sup>

## What to do if you suspect you or your child has ADHD

If you suspect you or your child might have ADHD, please make an appointment to see your general practitioner (GP). Your GP will carry out an initial assessment and if they also suspect ADHD, they will complete the necessary referral to a specialist who can diagnose the disorder, such as a psychiatrist, developmental paediatrician or psychologist.

Unfortunately, there is a lot of stigma and misinformation in the community surrounding ADHD. Please do not let it get in the way of you seeking expert assistance for yourself or for your child. Everyone with ADHD deserves to develop in a healthy manner, reach their full potential, contribute to society in meaningful ways, feel good about themselves and thrive.

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This factsheet is intended as general information and should not replace professional advice. Please consult with your physician or other qualified health care professional if you have any concerns.

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