Stuart Passmore is a psychologist in private practice, with extensive experience in working with individuals, couples and families. Stuart specialises in parenting children with behavioural disorders and non-compliant behaviour. He also specialises in the treatment of post-traumatic stress disorder (PTSD). When Stuart is not in the office, he is busy writing a series on evidenced-based parenting or spending time with his wife and children.

THE ADHD HANDBOOK

Stuart Passmore

BSc (Psych.), Honours (Psych.), Cert. Psych. Counsel.

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Thank you to my wife and children for the blessing that you are.

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CHAPTER 1

Defining attention deficit hyperactivity disorder (ADHD)

A child receiving a diagnosis of attention deficit hyperactivity disorder (ADHD) is often very difficult for the parents and it can be even harder to come to terms with. After what seems to be a lengthy assessment process, that final diagnosis can be met with hurt, anger, disappointment and even self-blame. In my experience, parents often feel scared, vulnerable and very confused and have lots of questions that need to be answered about the assessment process and the results. 'What is ADHD, how did it start, is it something we did or didn't do, can it be fixed, how is it fixed, does our child have to take medication, and will he have to take medication for the rest of his life?' are just some of the most common questions asked by parents.

Attention deficit hyperactivity disorder is defined as a neurodevelopmental disorder that begins to show signs and symptoms in young children. According to the *Diagnostic and Statistical Manual of Mental Disorders* (or the DSM), which provides the standard criteria for the classification of mental disorders for mental health professionals, symptoms of ADHD can be visible in the kindergarten-aged child. Often there will be certain behaviours that alert the kindergarten teacher, schoolteacher or the parents that something about the child's behaviour is not quite right, or as some people say, 'not quite normal'. ADHD has three core symptoms — inattention, hyperactivity and impulsivity — and these are revealed by a number of different behaviours the child constantly engages in. The DSM also categorises ADHD into three types based on these core symptoms:

1. **ADHD, Combined Type:** both inattention and hyperactivity–impulsivity.
2. **ADHD, Predominantly Inattentive Type:** inattention, but not enough (at least six out of nine) hyperactivity–impulsivity symptoms.
3. **ADHD, Predominantly Hyperactive–Impulsive Type:** hyperactivity–impulsivity, but not enough (at least six out of nine) inattention symptoms.

CASE STUDY

A ten-year-old boy was referred to my clinic by his school as his teacher was quite concerned with his behaviour and she believed he had ADHD. The first time I met the boy I invited him to sit down and have a chat with me. He could only sit in the chair for maybe a couple of minutes at a time (and that was stretching it!). He constantly got out of his chair to investigate my bookshelf; he kept on pulling out a number of books at a time to read the title, but without completely reading one title he would grab for another book. He investigated the window blinds and pulled them up and down and up and down, then while he was still pulling the window blinds up and down he saw someone had left their pushbike outside and he was more than happy to go and ride it for them. He played with the tissue box on the desk, the phone, the pens, and the permanent whiteboard markers (which he offered to use to draw me a picture on the office wall). When he did sit down he was fidgety, he wildly swung his legs back and forth, and he constantly changed topics. When I asked him a question, he would try to answer it, but then get sidetracked by something else in the office he hadn't investigated yet and so he never quite finished answering the question. But he was never short of a word or a topic to talk about. And all this happened in the first 10 minutes of meeting him.

The three core symptoms of ADHD

INATTENTION

As you read through this book you will discover that ADHD is not a simple disorder but a complex one that has quite a few problems associated with it. Inattention is one of the core symptoms of ADHD and is evident in a number of different places, such as at school and at home. But ADHD is not the same as a child being distracted or daydreaming for a few minutes. Children struggling with ADHD fail to pay close attention to details and tend to make 'silly' or careless mistakes with their schoolwork and chores at home. Their schoolwork usually has pretty messy handwriting and the work often appears as though the child really hasn't put much effort into completing it. This is because the child has such enormous difficulties maintaining their attention for more than a few minutes in almost any environment or activity, including playtime. This obviously makes it extremely difficult to maintain attention long enough to complete almost any task to a satisfactory level. I have often heard parents say 'he just doesn't listen' or 'he's always in another world', 'he's just lazy' or 'he doesn't care about his schoolwork'. This is mostly because of the difficulty in keeping their attention or sustaining attention for any length of time.

One of the biggest problems for children with ADHD trying to do their schoolwork is their inability to complete one task before they move onto the next. You can begin to understand why children (and adults) might be labelled as 'naughty' and 'lazy' because they often don't follow through with requests or instructions from their parents, teachers or bosses. Also, they consistently fail to complete most tasks such as homework to a satisfactory level. Children with ADHD will consistently put off their chores and their homework because of how easily they are distracted by almost anything. It seems that almost any noise or event that most people ignore with ease are major distractions for the child with ADHD. Then there's the forgetfulness. Children and adults with ADHD tend to be very forgetful with virtually all of their responsibilities, such as taking their homework to school or forgetting to take their lunch to work or missing important appointments. And

imagine how inattention might interfere with social or personal relationships. For instance, inattention could be expressed by constant changes in conversation topics, or not listening to the person speaking to you, not paying attention to the conversation, not waiting for your turn to talk, and failing to follow the rules during game play. Imagine the difficulties an adult with ADHD would experience in the workforce trying to complete one task at a time. In fact, failing to complete tasks due to inattention is one of the behaviours that is considered when making a diagnosis.

Children (and adults) with ADHD experience quite a lot of difficulty organising tasks and activities and if the task requires a lot of attention, the child typically responds as though that task or activity is unpleasant, and they try to avoid it. The child's desk at school is constantly in a state of chaos with their pens, paper and books scattered everywhere, or lost somewhere or even damaged. It begins to make sense that these children try to avoid activities, such as homework, that require sustained concentration. You may even begin to understand why these children develop an intense dislike for certain activities and try to avoid them. Again, when it comes to diagnosing ADHD, avoidance is taken into account, but with ADHD the avoidance must be *directly related* to the child's inability to pay attention.

HYPERACTIVITY

The hyperactive symptoms of ADHD are generally pretty obvious to the onlooker as the child constantly fidgets and squirms in their seat. It's as if they just can't sit still. They twist and itch and shrug their shoulders, get up and down from their chair, or appear to have enough energy to run a marathon or climb Mt Everest and always at the most inappropriate moment. Actually, this is one of the most defining characteristics of the hyperactive symptoms. The child with ADHD tends to talk a million miles an hour and obviously finds it very difficult to sit quietly and play. The thing to remember here, though, is that the hyperactivity may differ with age and the child's developmental level. As such, the DSM warns that an ADHD diagnosis in young children should be made cautiously. The young child, such as the toddler or kindergarten-aged child, with ADHD displays behaviours that are very, very different to children the same age. For instance, one father described his hyperactive son as 'he's like a steam train, he just keeps on going and going. He's into everything. You pull him away from one thing and he's straight into something else'. Other parents have described feeling awkward when their young one jumps up and down on a friend's furniture or constantly runs through their house. At bedtime or at kindergarten these little ones aren't very good at sitting still long enough to listen to a story and they don't do very well participating in quiet activities.

Some parents reading this book might think this description is almost describing their school-aged child. Well, that's because the school-aged child can display similar behaviours. School-aged children might experience some difficulty remaining in their seat, as they do tend to get up and down from their chair or they might squirm about in their seat. But the behaviours aren't nearly as frequent or with the same intensity as with the child with ADHD.

IMPULSIVITY

The impulsiveness of ADHD makes it look as if the child is impatient, or that they just can't wait their turn to respond to a question. Their answers seem to burst out even before you have finished asking the question and as they can't seem to wait for their turn so they just keep on interrupting people. They talk before being invited to, they certainly don't seem to be listening to anything you or anybody else says, and they tend to try to talk with you when the moment is untimely. In addition, they seem to just grab from others whatever they like, get into things they are not allowed to touch, and as one father stated, 'he constantly makes a nuisance of himself'. Unfortunately, because of this aspect of ADHD, childhood (and even adult) accidents seem to be fairly common. Things are knocked over and broken or the child may even grab a hot pot on the stove and get burned. The problem of the child getting hurt from being involved in dangerous activities is quite real. To make matters worse, such children rarely if at all consider there could be serious consequences for their actions. It can get to a point where the impulsivity can cause problems with friends and family and

in some cases even in sporting clubs because little Johnny won't keep quiet long enough for the coach to provide his instruction without being constantly interrupted. In fact, impaired peer relationships or peer rejection, neglect and poor friendship stability is common in children with ADHD. Generally, this is because the child with ADHD has obvious problems in their abilities to engage in positive social interactions and tends to be more aggressive than children of the same age. The bottom line is that children with ADHD tend to be more disliked by other children. The impulsivity interferes with school-based learning with a common complaint from teachers being 'he just doesn't stop talking, he constantly interrupts me, and he's a constant distraction to all the other kids in the classroom'.

Unfortunately, peer relationships are not the only relationships that experience a great deal of pressure. For children and adolescents with ADHD, family conflict is fairly common. Such family conflict can increase, particularly as the teenager consistently fails to accept responsibility for their negative behaviours or for not finishing things like their chores. This is because children and adolescents with ADHD are far less likely to comply with requests, they are more pessimistic, and less able to sustain compliance than children and adolescents without ADHD. It also seems that parents cannot trust their child to be at home on their own for fear the child or adolescent will not obey their rules. It is fairly well known that interactions between children with ADHD and their family members can be very negative. So it's not surprising that parents of children with ADHD report significantly greater problems in the family, which also produces stress in their parenting efforts compared to parents of children without ADHD.

It seems one of the most frustrating and embarrassing aspects of ADHD is that the attention deficits along with the hyperactive behaviours are not limited to just the home. It can be seen in multiple places such as school, the grandparents' place, a friend's place and just about anywhere else you can think of. However, the DSM states that it is unusual for a child or adolescent to exhibit the same level of problems with the same intensity across all settings or even within the same settings all the time. The symptoms typically get worse when the child has to maintain sustained concentration or is in situations that aren't terribly appealing or don't offer something unique. So sitting in the same classroom day after day, listening to the same teacher hour after hour teaching the same thing would hardly be described as appealing or stimulating for the child with ADHD, nor would sitting quietly in the nursing home visiting Grandma. This would be equally true of completing homework or pretty much any chore that doesn't offer unique changes.

There are a number of other observed behavioural difficulties associated with ADHD that also depend on the child's age and developmental stage. For example, your child may seemingly become frustrated very quickly and over 'little things'. We call this low frustration tolerance. There may be temper tantrums, or explosive behaviour, wanting to be the boss at home or with friends, or during playtime. Some parents have reported that their child seems to be totally inflexible and frequently demands their needs or their desires are met. The parents are also aware that their child seems to feel down or sad and has very low self-esteem. Some parents have suggested they feel their child's own sense of worth is taking a pounding. Possibly one of the more difficult aspects of this disorder is the hurt and frustration these children feel at being rejected by their peers.

Children with ADHD usually struggle academically and really don't place too much value in education. Many parents have described the nightmarish interactions that often occur when it comes to getting their child to actually sit down and do some homework and then trying to deal with the conflict that follows. Then there is facing the frustrated teacher who again informs you that your child has not submitted any homework for the past month and that if this keeps up your child will have to repeat the year. It stands to reason that children with ADHD may leave school early and because of their poorer academic achievements they may have significantly reduced employment opportunities.

If you and others around you don't know what is going on with your child, you can begin to believe you have a child who is just being lazy or naughty, who rejects responsibility at every turn and who is simply being rebellious. Consequently, family relationships and particularly

the parent–child relationship are often strained. You battle each night to get your child to do any homework and even then it is rushed and messy and you know the teacher will complain about it and his poor behaviour in class — again! And one thing that tends to bother you the most is that your child really doesn't seem to have many friends, if any at all, and is rarely invited to birthday parties or only has a few of his classmates turn up to his. Eventually the schoolteacher tells you to get your child tested for ADHD and it really knocks you when after all the assessments are complete you are told he has ADHD. Your mind shoots back to all those media reports that show 'horrible' kids on a rampage, which question the use of medication and even suggest that ADHD is only a modern phenomenon. Understandably you begin to wonder if ADHD is real and whether or not it is a modern-day phenomenon.

CHAPTER 2

The history of ADHD

How long has ADHD been around? Is it a new phenomenon or has it been a problem in societies for some time? With the growing interest by the media and its frequent coverage of ADHD, it seems as though it might be a fairly 'new' disorder. But is that really the case? Some researchers and authors have suggested that the professional literature has a number of case reports that indicate ADHD was recognised as early as the 19th century. Other authors have reported that the non-professional field has described ADHD as a modern disorder that has particularly resulted from varied influences at the end of the 20th century. However, a simple search of the scientific or psychiatric literature from the 19th century yields a great number of case reports indicating the existence of this syndrome at that time.

Historically, in the 1930s and 1940s, some of the behaviours currently associated with ADHD, such as restlessness and inattentiveness, were then referred to as minimal brain dysfunction (MBD) that was due to brain damage as a result of an injury to the frontal lobe. However, as researchers started focusing more and more on understanding ADHD, such theories began to lose ground and were eventually recognised as inaccurate as the research results failed to provide support for MBD. At times it seems that many people questioned the very existence of attention deficit hyperactivity disorder (ADHD), rather implying that it is only a modern condition. Other arguments seem to be fuelled by media reports of the escalating rates with which ADHD is diagnosed across the world, with a tendency to either suggest or infer it is little more than a conspiracy between doctors and drug companies to make

millions of dollars from prescribing drugs to children. Still questions remain, however, over the 'realness' of ADHD and whether or not it is a legitimate diagnosable disorder, and if it is real, is it just a modern phenomenon, and if it isn't, then how long has it been around for?

The name 'attention deficit hyperactivity disorder' and the abbreviated term ADHD are, indeed, modern. In fact, some authors have suggested that the term 'attention deficit hyperactivity disorder' was first used in the revised third edition of the *Diagnostic and Statistical Manual of Mental Disorders* published by the American Psychiatric Association in 1987. However, we need to be careful not to get hung up on the use of terms, as in this instance the term itself is irrelevant as it has little bearing on the question of whether or not the condition is real, or how long the condition has been around. This is simply because the symptoms of ADHD have been noted and recorded for much longer than most people are aware of. In fact, as you read this chapter you will see that the symptoms associated with ADHD have been observed for more than two centuries. Simply stated, the modern condition referred to as attention deficit hyperactivity disorder has its origins dating as far back as the 18th century, yet was described under different names (for example, simple hyperexcitability, minimal brain dysfunction, hyperkinetic disorder, attention deficit disorder).

There is evidence that ADHD symptoms in children were first noticed in the 1800s and were, in fact, documented by Dr Heinrich Hoffmann in his well-known poem, *The Story of Fidgety Philip*. There does, however, appear to be some differences of opinion as to exactly when Dr Hoffmann wrote the poem. Some have suggested the poem was written in 1863, while others have proposed 1844 and still others submit it was written in 1848. While it appears there is little consensus on the exact date the poem was written, there is agreement it was written in the middle of the 1800s and has astounding similarities to 'modern' ADHD symptoms in children. Have a read and see what you think.

***The Story of Fidgety Philip* by Heinrich Hoffmann**

'Let me see if Philip can
Be a little gentleman;
Let me see if he is able
To sit still for once at table':
Thus Papa bade Phil behave
And Mamma looked very grave.
But fidgety Phil,
He won't sit still;
He wriggles,
And giggles,
And then, I declare,
Swings backwards and forwards,
And tilts up his chair,
Just like any rocking horse —
'Philip! I am getting cross!'

See the naughty, restless child
Growing still more rude and wild,
Till his chair falls over quite.
Philip screams with all his might,
Catches at the cloth, but then
That makes matters worse again.
Down upon the ground they fall
Glasses, plates, knives, forks, and all.
How Mamma did fret and frown,
When she saw them tumbling down!
And Papa made such a face!
Philip is in sad disgrace.

Where is Philip, where is he?
Fairly covered up you see!
Cloth and all are lying on him;
He has pulled down all upon him.

What a terrible to-do!
Dishes, glasses, snapt in two!
Here a knife, and there a fork!
Philip, this is cruel work.
Table all so bare, and ah!
Poor Papa, and poor Mamma
Look quite cross, and wonder how
They shall have their dinner now.

While it has been argued that Hoffmann's poem refers to a child with ADHD, there are others who have also written on the subject. What is considered to be one of the earliest written accounts of ADHD dates back to 1798 in the writings of physician, Dr Alexander Crichton. In his book, *Mental Restlessness*, Dr Crichton is argued to have been the first to note and document ADHD symptoms of the inattentive subtype in children. Crichton defined the condition as 'the incapacity of attending with a necessary constancy to any one object' or, to put it another way, these children appeared to have a heightened distractibility and an inability to maintain attention for any longer than a minute or two. Crichton's focus turned to the age of the individual, as he suggested that children may well have been born with the condition. Interestingly, he also noticed these children were likely to encounter problems at school:

> *When born with a person it becomes evident at a very early period of life, and has a very bad effect, inasmuch as it renders him incapable of attending with constancy to any one object of education. But it seldom is in so great a degree as totally to impede all instruction; and what is very fortunate, it is generally diminished with age.*

For Crichton this was not just a theory, he was able to provide examples of just how debilitating this condition can be:

> *Every impression seems to agitate the person, and gives him or her an unnatural degree of mental restlessness. People walking up and down the room, a slight noise in the same, the moving [of] a table, the shutting [of] a door suddenly, a slight excess of heat or cold, too much light, or too little light, all destroy constant attention in such patients, inasmuch as it is easily excited by every expression. The barking of dogs, an ill-tuned organ, or the scolding of women, are sufficient to distract patients of this description to such a degree, as almost approaches to the nature of delirium.*

John Haslam in his book, *Observations on Madness and Melancholy*, described the case of a young boy who, from the age of two, was:

> *Mischievous and uncontrollable … a creature of volition and a terror of the family … he had limited attention span, being only attracted by 'fits and starts'. He had been several times to school and was the hopeless pupil of many masters, distinguished for their patience and rigid discipline.*

Now while there were potentially a number of other behaviours that would have an experienced clinician considering a comorbid diagnosis (discussed later in Chapter 6) with ADHD, it seems fairly clear this boy demonstrated ADHD symptoms. In 1870, the British Parliament passed the *Education Act* that made it compulsory for children to attend school. It has been suggested that it was this compulsory school attendance that brought to light the extent to which ADHD symptoms of inattention and hyperactivity were prevalent among children rather than it being little more than extremes of normal childhood behaviour. Perhaps as a consequence of the prevalence rate of ADHD symptoms being observed and being reported in schools, the medical profession gradually became more and more involved.

While there are a number of references to ADHD symptoms recorded throughout history, the psychiatric literature tends to credit the paediatrician George Still as the first person to formally account for the hyperactive symptoms of ADHD in children. In 1902, Still presented a series of papers to the Royal College of Physicians in

London about certain behaviours of children he had observed. During his presentation, Still provided his audience with examples from as many as 43 different children he had observed displaying what he referred to as insufficient 'moral control'. According to Still, the children were exhibiting behaviours that included restlessness, problems with sustained attention, and difficulties with self-regulation:

> *Another boy, aged six years, with marked moral defect was unable to keep his attention even to a game for more than a very short time, and as might be expected, the failure of attention was very noticeable at school, with the result that in some cases the child was backward in school attainments, although in manner and ordinary conversation he appeared as bright and intelligent as any child could be.*

Still also noted the children could be aggressive, defiant, and were resistant to discipline. They were described as having poor impulse control, and did not learn from the consequences of their behaviour. These behaviours or deficits in moral control were typically first displayed in the early school years and were more likely to be evident in boys with far greater frequency than in girls. The descriptions are remarkably close to what we refer to today as attention deficit hyperactivity disorder.

In 1913, Robert Stein recorded his theory of ADHD as being 'children saturated with insanity while still in the womb' with 'badly built minds' and a 'kind of partial moral dementia'. Stein noted these children seemed to present with persistent disruptive behaviour problems that again were evident during the early school years. Interestingly, Stein noted that these children not only struggled academically but also had difficulty making and maintaining social relationships. Another author suggested that the children Stein referred to would most likely fulfil the criteria for a diagnosis of ADHD today. He further suggested that Stein's reference to 'badly built minds' could well compare to the current neurobiological findings that are implicated in the disorder.

Medical references of ADHD were published in the British journal, *The Lancet* in 1902 and 1904, and in the *Journal of the American Medical Association* in 1921. According to one author, the behaviours of inattentiveness, distractibility, overactivity and impulsiveness were considered to be a result of head injuries that occurred due to a complication of a viral infection known as encephalitis. Encephalitis is the swelling of a person's brain, which has two common causes: either an infection invading the brain or the immune system mistakenly attacking the brain. Encephalitis was said to have occurred in 1918 because of an influenza epidemic following World War I. Following the encephalitis epidemic, the distractibility and overactivity of children was later described as 'organic drivenness' and was said to be the result of damage to the child's brainstem. Since then the disorder we now know as ADHD went under a number of different names in the medical profession over the course of history, beginning in 1922 with the term 'postencephalitic behaviour disorder', which was later changed in 1947 to the 'brain-injured child'. In 1963 it was changed again and replaced with the term 'perceptually handicapped child', and in 1966 was changed again to 'minimal brain injury'.

In 1968 when the American Psychiatric Association released the second edition of the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-II), the focus on ADHD had changed and attention was directed toward the hyperactive symptoms. The DSM-II provided a categorisation of the symptoms of overactivity, restlessness and inattention and named the condition the hyperkinetic reaction of children. However, there remained continued debate about the obvious differences in the expression of symptoms in some children. For instance, it was well documented that some children with this condition were hyperactive and impulsive, while other children were simply inattentive and were nothing like their hyperactive and impulsive peers. In 1980, the American Psychiatric Association published the third edition of the DSM (DSM-III), with an attempt to address these two apparent incompatible states of the same condition. The term 'hyperkinetic reaction of childhood' was replaced with a new category called 'attention deficit disorder' (ADD). This new category recognised the two different types of the condition (now called a disorder) by classifying the two distinct types as ADD with hyperactivity and ADD

without hyperactivity. However, in 1987, when the DSM was revised again (DSM-III-R), the lack of research support for the two types found the disorder being regarded as a single categorical disorder, and it was not until the fourth edition of the DSM that the disorder was classified as attention-deficit/hyperactivity disorder.

As you can see, ADHD or, more appropriately, ADHD symptoms have a long history, one that extends well beyond the current controversies to a time when little was gained by concocting stories or making up disorders of childhood for financial gain by global drug companies. It is also interesting to note that professionals of different fields — from educators to philosophers to the medical field, including doctors, psychiatrists and paediatricians — have all attempted to understand the condition by developing and testing theories as to the underlying causes of children *without moral control* from as early as the 1700s. If ADHD has been with us for potentially hundreds of years, how come there seems to be so much controversy today surrounding whether it is a real disorder or not? Well, part of the problem could be the way it is diagnosed, who does the diagnosis, and the myths that we encounter almost on a daily basis.

CHAPTER 3

The myths and facts of ADHD

It is completely understandable that members of the public are totally confused about ADHD or even doubt the existence of ADHD as a real behavioural disorder. There appears to be a number of solid arguments against the existence of ADHD, including the contention it is simply a term used to describe normal childhood behaviour that has now been labelled as deviant and non-conformative. Others maintain that ADHD is nothing more than an elaborate scheme devised by powerful drug companies to make bigger profits through the sale of their medications. Certainly, in recent times, there has been an occasion where a high-profile professional was found to have been accepting money from drug companies and the implication has been one of bribery and deception — for the critics such a revelation is a goldmine. For them this one individual is the personification of their argument that doctors and paediatricians are on the drug companies' payroll and accept all sorts of benefits just to prescribe their medications. It is true that corruption has the potential to develop where there is big money involved. However, such an argument says nothing of the existence of the disorder itself but really speaks of the individual accepting such gratuities. To argue that a professional taking a bribe is the evidence needed to disprove the existence of ADHD is akin to suggesting that evolution is an untruth and a worldwide conspiracy because there is a lack of evidence of any animals found in archaeological digs in the transformative stage (for example, ape to man, whale to cow).

However, there are people with genuine concerns that simply cannot be ignored who call into question the validity of ADHD as a real disorder and the way in which it is diagnosed. For instance, one critic has argued:

> *Behaviours that were once considered normal range are now currently defined as pathological by those with a vested interest in promoting the widespread use of psychotropic drugs in child and adolescent populations. (Stolzer, 2007)*

This critic began her argument with a very brief historical account of ADHD in America. Apparently ADHD did not exist at all in America in the 1950s, but by 1970 some 2000 children had been diagnosed as hyperactive and by 2006, 8 to 10 million American children had received a diagnosis of ADHD. The critic further argued against ADHD by stating:

> *What was once an unheard of 'psychiatric disorder' is now commonplace in America. Millions of American children are diagnosed with a mythical disease, and the vast majority of these children are prescribed dangerous and addictive drugs in order to control normal-range, historically documented child behaviours. (Stolzer, 2007)*

This critic suggested that American children, particularly boys, were disproportionately diagnosed with ADHD as compared to the rest of the world and asked the question: 'Why has this disease not been recorded across time [or] across cultures?' It would appear this critic is not a student of history or such a question would not have been raised. You may recall from the previous chapter that ADHD has been a recognised disorder for hundreds of years with documented symptoms — a fact this critic appeared to neglect in her historical accounts. Furthermore, ADHD is, in fact, recognised and diagnosed across the world and in many, many cultures, not just in Western societies.

With the current advances in neuro-imaging, scientists today are able to explore deep regions of the brain and their functions that were completely unknown in the 1950s, let alone some 200 years ago. The neurology of ADHD is covered in depth in this book. When you read Chapter 4 you will begin to understand why professionals all over the world refer to ADHD as a neurological disorder. In fact, the growing evidence from the accumulating research from around the globe is so overwhelming that hundreds of professionals signed a consensus statement outlining their concern over the few individuals who continue to cast doubt on the existence of ADHD as a real disorder. The International Consensus Statement on ADHD states:

> *We cannot overemphasise the point that, as a matter of science, the notion that ADHD does not exist is simply wrong. All major medical associations and government health agencies recognize ADHD as a genuine disorder because the scientific evidence indicating it is so overwhelming.*
>
> *... The central psychological deficits in those with ADHD have now been linked through numerous studies using various scientific methods to several specific brain regions (the frontal lobe, its connections to the basal ganglia, and their relationship to the central aspects of the cerebellum). Most neurological studies find that as a group those with ADHD have less brain electrical activity and show less reactivity to stimulation in one or more of these regions. And neuro-imaging studies of groups of those with ADHD also demonstrate relatively smaller areas of brain matter and less metabolic activity of this brain matter than is the case in control groups [children without ADHD] used in these studies.*
>
> *... Occasional coverage of the disorder casts the story in the form of a sporting event with evenly matched competitors. The views of a handful of nonexpert doctors [or those that have not received medical or psychiatric training] that ADHD does not exist are contrasted against mainstream scientific views that it does, as if both views had equal merit. Such attempts at balance give the public the impression that there is substantial scientific disagreement over whether ADHD is a real medical condition. In fact, there is no such disagreement — at least no more so than there is over whether smoking causes cancer, for example, or whether a virus causes HIV/AIDS. (Barkley, 2002).*

The author picks up on an important point here when he notes that it appears media coverage of ADHD pits the non-believing professional against the scientific world to infer or even suggest that perhaps the medical and psychiatric world really aren't too sure whether ADHD exists or not. In fact, as the author states, this could not be further from the truth. But it is interesting to note how sometimes certain professionals are not even consulted when a story about ADHD is going to air. For instance, a current affairs program in Australia recently aired the story of a woman who was reported to have three children with ADHD. They did the typical camera shots of the children at their worst and then approached a 'professional' for his opinion. Here's what he said:

> *Worldwide the numbers of children diagnosed each year with ADHD is mysteriously growing ... [Naturopath and osteopath says there's help beyond medication. He believes a clean diet can turn little lives around. The camera turns to the naturopath/ osteopath.] She can start by taking the sugars away and the gluten products away. She'll see a change in the children, I'll guarantee it.*

The author of the International Consensus Statement on ADHD was very much aware of such media reports when he further stated:

> *To publish stories that ADHD is a fictitious disorder or merely a conflict between today's Huckleberry Finns and their caregivers is tantamount to declaring the Earth flat, the laws of gravity debatable, and the periodic table in chemistry a fraud. ADHD should be depicted in the media as realistically and accurately as it is depicted in science — as a valid disorder having varied and substantial adverse impact on those who may suffer from it through no fault of their own or their parents and teachers.*

It would be fair to say the author of this consensus takes ADHD very seriously, so much so he approached leading professionals all over the world to sign it. To list the number of people who included their name would take some time, as there are 86 signatories on the consensus. The range of such individuals includes professors of clinical psychiatry, psychology, neurology, paediatric psychopharmacology, physiology, social behaviour and clinical paediatrics. These professors and associate professors are positioned in departments of psychiatry, neurology, paediatrics, cognitive neuroscience, clinical neuropsychology, the clinical training of psychologists, child and adolescent psychiatry, child behaviour programs, colleges of physicians and surgeons, substance abuse research departments, children's national medical centres and preventative and social medicines just to name a few. And they come from the United States, United Kingdom, Israel, Sweden, Canada, England, Australia, New Zealand, Puerto Rico, the Netherlands and Norway. If ADHD really is a myth, it is now a worldwide conspiracy. It really is hard to imagine that such an impressive list of professionals from all different departments of mental and physical health from all over the world would be caught up in such a conspiracy. Let's take a look at some of the most common myths concerning the causes of ADHD.

Myth 1: ADHD is only a Western phenomenon

It is a fact that ADHD is a disorder causing a lot of concern in Western societies, but is it limited to Western cultures only or do other countries have the same or similar rates of ADHD? It appears some proponents of this myth like to argue that the United States, for instance, has the greatest number of children diagnosed with ADHD as compared to the rest of the world and that this number is growing every year. On the surface this is one of the better arguments, as it sounds quite convincing. After all, when we watch media reports covering the prevalence of ADHD and the ever-growing rate, we never seem to hear about any culture other than our own or some other Western country. Nevertheless, it is well documented that ADHD is not just an American problem; in fact it doesn't even appear to be restricted to just Western countries either.

However, the question of whether or not ADHD is a Western phenomenon has been raised and has prompted numerous investigations

to answer this question. As a result of this research, there have been a number of factors identified that would explain the apparent differences in ADHD rates across the different cultures. A number of investigators set out to test whether or not ADHD was truly an American epidemic and whether or not ADHD was prevalent in both Western and non-Western countries across the world. They also wanted to know whether the prevalence rates of ADHD in US children were similar to children in other countries around the world. Some of the key questions they set out to answer were:

- Is ADHD common to children worldwide?
- Is ADHD common to a large number of races and societies?
- Are the apparent differences in prevalence rates between countries due to confusion regarding its diagnosis?

This last question is really quite important as differences in prevalence rates across countries may partly lie in the fact that different cultures have different diagnostic criteria and/or different names that all appear to be essentially describing the common symptoms of ADHD. It seems there are cross-cultural differences in the way in which ADHD is assessed, as well as the name by which it is referred to.

The investigators reminded us of the history of ADHD and the different names it has been known under (for example, minimal brain dysfunction and organic brain dysfunction). Other terms such as hyperkinetic disorder (HKD) and 'deficits in attention, motor control and perception' (DAMP) are still used today. For instance, the United Kingdom and a number of other European countries use the term HKD, while Scandinavia refers to ADHD as DAMP. Equally, while some countries use the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), other countries use the *International Classification of Diseases* (ICD). While there are some minor differences in the diagnostic criteria between the two manuals, it is recognised they are describing the same disorder.

The investigators reviewed 50 studies of ADHD that only used the criteria as set out in the DSM-IV to diagnose the disorder. Of the 50 studies, only twenty were conducted in the United States, while the remaining 30 were conducted in other countries. The results of these studies revealed that the prevalence of ADHD in other countries was the same as or similar to that in the United States. A further nine studies were excluded from the review as they had been conducted in countries that included Hong Kong, Germany, France, India, the USA, the UK, Sweden, Canada, and China because they used a slightly different criteria set from the International Classification of Diseases version 10 (ICD-10) in their diagnostic procedure. The ICD is still measuring ADHD, just under a different name.

Other investigators have also suggested that the prevalence rate for ADHD is the same in many other countries as it is in the United States; that the apparent disparity in rates between various countries has been primarily attributed to the way in which ADHD is diagnosed across the globe (DSM versus ICD). It has also been found that studies on ADHD conducted outside the United States were almost predictably similar with those conducted within the United States. Furthermore, it has been found that the patterns of adaptive impairments, neuropsychological deficits, ADHD prevalence within family members, genetic influence, and functional and molecular imaging findings, along with response to medication, were all strikingly similar to the US. It has also been pointed out that there is a lack of studies coming out of developing countries, which suggested that ADHD might in fact have higher rates in certain countries due to some of the severe social risk factors found in those countries.

One possible example of this was provided by some other researchers who compared the prevalence rates of ADHD symptoms in a sample of 600 Ukrainian children between the ages of ten and twelve years to 443 North American children of the same age. The researchers found that the ADHD prevalence rate for the Ukrainian children was 19.8 per cent compared to 9.7 per cent for the US children. The Ukrainian children were at the time living within 30 kilometres of the Chernobyl nuclear power plant. They had been evacuated to Kiev where they stayed for ten years after their evacuation. The researchers suggested that they were unaware as to why the prevalence of ADHD for this group of children was so high. It was noted that one possible explanation for such high

rates of ADHD might be due to the environmental adversity of the Chernobyl disaster under which the children were living and the fact that they had also been evacuated from their homes and community. However, the researchers suggested that no firm conclusions could be drawn about this until it had been properly researched.

Myth 2: Drug companies made up the term ADHD just so they could increase their profits

There are a number of variations on this myth but they all seem to come back to a central point of drug companies trying to increase their profits. One such variation implicates doctors (and therefore paediatricians and child psychiatrists) as being part of a worldwide conspiracy to only prescribe medications from certain pharmaceutical companies because they get 'kick-backs' from that company. Unfortunately there have been isolated cases where a trusted individual has sold out ethically, professionally and morally in favour of the almighty dollar. But when you take into account the prevalence rates of ADHD across the world there are tens, if not hundreds of thousands of doctors, paediatricians and child psychiatrists who are being accused of accepting bribes. This is just a ridiculous argument. Another variation of this myth is that there is really no effective treatment that works for ADHD. Evidence from around the world suggests that medication is the frontline therapy or first choice of therapy for ADHD. However, there are also a number of effective non-medicinal therapies available. Such therapies include behavioural interventions, school classroom interventions, cognitive behavioural therapy, and parent management training to name just a few. Chapter 8 outlines all the different alternative therapies.

Myth 3: The medications they use for ADHD are dangerous

Again this issue is covered in a lot of detail in Chapter 8. However, before leaving this myth there is just one point that is very important to remember. It is true that some children may experience side effects while taking ADHD medication, but it is equally true that people react differently to different drugs. Some people even have a reaction to or experience side effects from non-prescription medications such as paracetamol. There are a lot of factors a psychiatrist or paediatrician must take into account before placing a child on medication for ADHD. In the hands of a competent practitioner the child will be monitored carefully and, if required, the dose can or will be adjusted or the medication itself will be changed. For more information see Chapter 7, which covers ADHD medications.

Myth 4: Giving stimulant medication to children puts the child at risk of becoming a drug user or an addict later in life

Yes, it is true that medication for ADHD is a controlled substance and in most countries is restricted and requires a prescription to allow the patient access to the medication. However, according to the professional research that has studied this issue, as it currently stands there is no evidence to suggest there is a relationship between children being prescribed medication for ADHD and later substance use and/or abuse. While stimulant medication can have abuse potential, stimulants are not addictive if they are used as directed by your paediatrician. This means that children and adults can stop taking the medication with little difficulty if taken as prescribed. Stimulants can become addictive if taken for the wrong reason, such as consuming excessive amounts to get a high because of the mood-elevating effects or to stay awake. Using stimulants for these purposes increases the risk of addiction. It is for these reasons that stimulant medication is *not* recommended for individuals who have a history of drug abuse.

The issue at hand is the possible confusion between ADHD and substance abuse and the comorbid conditions commonly found in people with ADHD. Just to be clear: there has been no causal relationship found between ADHD and later substance use or abuse. Investigations have found that, according to the majority of studies, delinquent behaviour is associated with substance use and abuse. There have been some studies

that have found where ADHD is comorbid with conduct disorder there is a greater risk of substance abuse. The end result of this research suggested that individuals with both ADHD and conduct disorder were at higher risk of using tobacco products, alcohol, marijuana and 'other street drugs'. This research also found that individuals with ADHD and conduct disorder were more at risk of developing a dependence on marijuana and other hard drugs.

Researchers have also examined the results of longitudinal studies for substance abuse potential. Longitudinal studies typically require a research project that has been designed to involve and follow a group of participants over a number of years. The researchers will continue to follow the participants and collect all relevant data to their research design at certain time intervals such as when the child turns eight, ten and twelve years of age and so on. Such research designs are a vital component in the field of mental health as the results can inform us of such benefits as:

- The most successful forms of treatment.
- Whether or not the symptoms of a disorder change over time.
- How a disorder might affect an individual's personal, social and professional life.
- Whether or not the disorder might predispose an individual to more adverse life conditions compared to people without the disorder.

Such longitudinal studies follow groups of children who have been diagnosed with ADHD in childhood through to adulthood in an attempt to determine how the disorder might affect them as adults. According to the investigators, the results of such studies initially indicated a very poor outcome as there had been significant increases in substance abuse, trouble with the law, and the individuals experienced difficult relationships and problems with employment. However, when the results were examined a little more closely it was found that generally the groups could be divided in two: those with ADHD only and those with ADHD plus conduct disorder. It was found the individuals with ADHD plus conduct disorder had the poor outcomes, with significant increases in substance abuse, problems with the law, difficult relationships and problems with employment. On the other hand the outcome for those with ADHD only was not terribly different from individuals without ADHD. The investigators suggested this has been a consistent pattern in many studies for the last 50 years.

Myth 5: If ADHD does exist it disappears in adolescence and is very rare in adulthood

This myth has been around for quite some time, and for a number of years even a lot of professionals were unsure if adults could really have ADHD. This was because it was thought that by the time the individual reached adolescence, they had all but outgrown the disorder. However, today it is readily recognised from longitudinal studies that ADHD exists into adulthood. One longitudinal study investigating whether the symptoms of ADHD decline with age followed a large group of children with the disorder over a four-year period. The results indicated that about 72 per cent of the children still displayed enough ADHD symptoms to have received a diagnosis at twenty years of age. The researchers concluded, 'our results also indicate that a majority of subjects continue to struggle with a substantial number of ADHD symptoms and high levels of dysfunction … by the age of 20'. This myth is dealt with in more detail in Chapter 10.

Myth 6: ADHD is a result of bad parenting

This myth has been circulating since the days of Noah and surprisingly it is still a popular one. While it may not be true, in a way it makes sense. If you believe that ADHD is nothing more than a child misbehaving, the logical conclusion is to point the finger of blame at the parents. Obviously, if the parents had just bothered to control their child and put some boundaries in place the kid wouldn't be misbehaving. However, the fact is that parenting, whether good or bad, *does not* cause ADHD. So to all the parents out there who believe that somehow, in some way, you are responsible for your child developing ADHD because of some

failure in your parenting skills, you can relax. ADHD *is not* caused by parenting styles. When you read Chapter 4 on the causes of ADHD, you will see that ADHD is a neurological disorder. But, and it is a big BUT, certain parenting practices are known to increase the frequency and the intensity of the presentation of certain ADHD symptoms. This is one of the reasons why parent management training is usually a very helpful tool for parents dealing with their ADHD child. The issue of parenting is discussed further in Chapter 8 on alternative therapies for ADHD.

Myth 7: Diet causes ADHD

Before we begin looking at diet as a potential cause of ADHD, we need to understand that a child's diet *can* have a negative impact on their behaviour. However, it is not typically in the sensationalist fashion that many might have us believe. There appear to be two separate issues at the core of this argument that have somehow merged into one big misunderstanding. As will be discussed below, the idea that diet causes ADHD has not received any scientific support. It is true that children can have reactions to some foods or that the child may have chemical sensitivities and it is these reactions that have been found to have a negative impact on the child's behaviour. This does not, however, mean the food or the chemical has *caused* ADHD.

That diet causes ADHD is a really popular myth and has many proponents who are very happy to argue that all a parent need do is change the child's diet and their child will be cured of ADHD, or that there will be amazing changes to their behaviour. Just as an interesting exercise, Google the phrase 'ADHD and diet' and see just how many hits are listed — you will be surprised. On that one phrase alone there are about 18,000,000 hits. Of course, not all of those sites are suggesting that diet causes ADHD; there are sites that refute the myth. However, the point is that ADHD and diet is currently a hot topic of debate for many people from all walks of life.

The argument of diet influencing a child's behaviour can be dated back to the 1970s with the release of the popular Feingold diet. Dr Benjamin Feingold argued that food additives such as azo dye food colours and naturally occurring salicylates (salicylates are a compound found in some medications such as aspirin and are naturally occurring in some foods) and preservatives found in certain foods were fundamentally responsible for a child's hyperactive behaviour. Feingold claimed that placing children on a strict diet would treat the disorder and without any documented evidence he also claimed he had around a 50 per cent success rate with hyperactive children who had been placed on the diet. And, yes, it is true there have been a handful of studies that reported improvement in a child's behaviour following Feingold's strict diet. However, it appears not all is as it seems. The improvements were noted in only a small number of children who appeared to have allergic reactions to certain food additives. Decades of independent research have produced no support for Feingold's claim. In fact, the results of systematic studies have shown what appears to be the exact opposite; that is, placing a child on a strict diet is ineffective and such a diet does not seem to alter the core symptoms of ADHD such as inattention, hyperactivity and impulsivity. Furthermore, it seems that the Feingold diet has regularly failed to receive any consistent scientific support since its inception. In spite of all this evidence (or the lack thereof), many people still choose to place their child with ADHD on a strict diet. In 2005 a couple of researchers surveyed parents of children with ADHD. Surprisingly, they found that the majority of parents they surveyed had placed their child on a strict diet. The second most common approach was to place the child on a vitamin/mineral diet.

That diet may have a negative impact on a child's behaviour is a separate issue all together. To be a little more precise, that a child might be intolerant to certain food additives that can influence a child's behaviour has had support from scientific research all over the world. One paediatric neurologist in America reported the results of a huge study conducted in the UK, where 18,000 people participated in the study. The results of the study indicated that 7 per cent of the participants reported having a reaction to a food additive. In this study, the boys had higher rates of behavioural and mood changes compared to the girls. This same paediatrician described a second study conducted at the Royal Children's Hospital, Victoria, Australia, where 25 per cent

of the children involved in the study were identified as the most likely to have a reaction to additives. In a study of 200 hyperactive children, 150 noted a change in their behaviour when placed on a diet free of synthetic colourings. Other investigations have found that a child's attention problems were not evident following the consumption of food colourings, but severe irritability, restlessness and sleeping problems were found to be the common complaints.

There are many, many other myths regarding diet just about everywhere one looks. To provide an exhaustive list of such myths is not worth the time it would take. However, just to give you an idea of how extensive the diet myths are, here is a small list of foods and food products that are said to *cause* ADHD: dairy products and animal products in general because they reportedly contain hormones, pesticides and antibiotics and, of course, the animal itself is said to be diseased; caffeine; sweets and sugar; processed food and fast food; MSG and foods that contain food preservatives, food dyes and 'other' chemicals; white bread; white rice; and peanut butter.

Such a list is not necessarily a bad thing as, within reason, it may promote a healthy diet not just for the child but for the family in general to reduce their intake of such foods. And any parent who permits their child to consume caffeine drinks (for example, energy drinks, coffee and frequent consumption of Coca Cola) really should recognise this is just not a healthy option.

Myth 8: Sugar causes ADHD

Not so long ago I was interviewing an adult female at my clinic who was really quite concerned about her friend's five-year-old child who reportedly had ADHD. The woman was seeking ways in which she might help support her friend with an ADHD child. Of course, one of the first questions asked of this lady was, 'What makes you think the child has ADHD?' The woman responded indignantly, 'I know she has ADHD and it was caused by the amount of sugar in her diet'. According to this woman, the child was not yet at school and would therefore spend her days at home with her mum. The mother was a very social woman who would often have friends visit during the day and they would sit at the kitchen table drinking coffee. The kitchen table was where the mother kept a bowl of white sugar. Apparently the child would frequently help herself to a teaspoon of sugar throughout the day as she pleased and, according to the woman, within minutes the child would be running around the house almost uncontrollably. As disturbing as this report is, it is most likely inaccurate as there is currently no evidence to suggest that sugar causes ADHD. In fact, it has been shown that certain sugar products do not even affect the behaviour of a child with ADHD.

One doctor reported on the results of sixteen published studies conducted by Vanderbilt University on the effects of sucrose on the behaviour and cognitions of children with ADHD. According to the doctor, the studies 'failed to demonstrate a significant adverse effect in the group as a whole … NutraSweet (aspartame) used as a control was considered to have no adverse effect on behaviour or cognition'. Other investigators have reported that even when aspartame consumption was more than 10 times the usual level, it still had no adverse effect on the cognitive or behavioural functioning of children with ADHD. It seems fairly clear that sugar does not cause ADHD, but please be aware of the effects sugary products do have on a child's health in general. If sugary products are not kept in check they can bring on other health-related problems.

There are so many myths about the causes of ADHD that we could just about devote an entire book to them. Most of these myths are plain ridiculous (for example, fluorescent lighting, tar and pitch, soaps and detergents, yeast and insect repellents and, of course, poor teaching and poor parenting are all on the list) and do not deserve the effort it would require to write them down. It seems everywhere we go someone has an opinion or a conspiracy theory to 'prove' ADHD is not a real disorder. Some of these myths sound incredibly believable, like the myths of poor parenting or diet causing ADHD, yet there is no real evidence to support these claims. So, is there a cause for ADHD, and if there is, what is it? The next chapter answers these questions at length.