PART ONE

Getting to Know ADHD

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What Is ADHD?

ADHD is real. It exists, and it is a brain disorder. ADHD appears in varying degrees of severity as do most disorders or illnesses. However, it need not impose any permanent limitations on anyone who has it. ADHD can be managed and treated, and although they cannot be "cured" in the classic sense of the term, individuals with ADHD who are correctly diagnosed and treated can be just as successful in school, work, and in social and recreational settings as they could be without ADHD. In fact, many people find that ADHD leads them to discover and apply personal strengths to make them even more successful in life! However, a great deal of misinformation and non-truths about the reality of ADHD as a disorder exist.

In preparing to write this work and out of curiosity about what information is available to the public, we Googled the simple term "ADHD" and received over 15,000,000 hits. (Googling just the one medicine name "Ritalin" produced another 500,000-plus hits.) That is a huge amount. We sampled several hundred of the sites located, and were not at all surprised to see extreme positions represented and great diversity in the quality and type of information available. Websites that discuss ADHD are no different from most other web-based information.

The simultaneous blessing and curse of the Internet is that anyone can put up a website professing expertise and presenting opinion as knowledge. The many websites we visited ranged from those providing clear guidance and information to the public (such as medical schools, government agencies, the National Institutes of Health, and well-known scientific or professional societies such as the American Medical Association) to others providing clear and trustworthy information for mental health professionals (such as professional clinics, private and community health providers), to other sites sponsored by organizations that appear to believe ADHD is a fraud being imposed upon unsuspecting parents. We found sites developed by individuals with a self-proclaimed diagnosis of ADHD, including blogs about the impact of ADHD on their lives and a variety of treatment approaches, some rather miraculous in their claims. Other sites profess the ability to diagnose ADHD accurately in "two minutes or less."

The controversies and complications in understanding ADHD at both the child and the adult levels are quickly recognized in such a web search; however, though it is often said the most important questions is whether ADHD is real or not, the real "hot button" issue is the use of stimulant medication with children. Many myths exist regarding ADHD (see Table 1.1). The use of medication (particularly in children) evokes emotion in many and has even led to conspiracy theories—one being that the professional organizations and the large drug companies (sometimes derisively referred to as "big pharma") have joined together to create the "myth" of the existence of ADHD as a moneymaking scheme. While a wide range of views on the topic is expected on public forums, it may surprise you to learn that some disagreement also occurs in the professional realm as well, although one might not expect to find such a range of views and representations among professional mental health practitioners and agencies.

Table 1.1: Myths and Facts.

Myth	Fact
Children are hyperactive because their parents do not make them behave.	Parenting styles do not cause hyperactivity.
Children outgrow ADHD. Adults cannot have ADHD.	ADHD lasts a lifetime for some individuals.
Teachers just want children medicated so that they do not have to do their job.	ADHD is a biological disorder with primary symptoms of inattention, hyperactivity, and impulsivity.
Hyperactivity is just "boys being boys."	
Doctors prescribe medication for ADHD just to make money.	
ADHD was created by drug companies to sell medication.	
Children and adolescents use ADHD as an excuse to not do work at school.	
Children and adolescents do not have ADHD; they are just lazy.	
Parents just want to say that their children have ADHD so that they can get accommodations at school.	
All you have to do is tell a physician that your child has ADHD to get some medication.	Physicians have an ethical and legal obligation to only prescribe medication as indicated.
Girls cannot have ADHD.	Girls are less frequently diagnosed, but can have ADHD.
Giving your child medication can cause them to use illegal drugs as adolescents.	Adolescents with ADHD are at an increased risk of illegal substance use, but this is due to impulsivity and risk-taking behavior, not because they have had prescribed medication.
Children with ADHD never grow up to be successful adults.	Many successful adults have ADHD.

Most if not every professional organization uses web-based communication forums. The authors of this text are members of many professional organizations of psychologists, physicians, other health care providers, teachers, and those in related professional specialties. In these organizations' communication forums such as listservs, chat rooms, and blogs, we also see tirades aimed at the pharmaceutical industry for perpetuating "the myth of ADHD." Comments are made chastising psychologists and physicians for continuing to diagnose this disorder and propagating this myth among the lay population. These declamations seem to correspond with or immediately follow newspaper articles regarding the conduct of drug companies, publicity surrounding some tragedy of a young person being treated with medication for mood or behavior, a story about incompetent diagnosis, or even coverage of research on the diagnosis and intervention of ADHD.

A few school districts have been "caught" providing biased and non-scientifically based information as well. Just several years ago, one public school district sent home a letter to all parents in the district criticizing the use of psychopharmacological treatments with children (specifically for ADHD and autism) and recommending that parents not follow the recommendations of their pediatricians, psychiatrists, or psychologists. This letter accused these professionals of "falsely labeling youth with the psychiatric diagnosis of ADHD" and placing children (anyone under 18 years of age) on medication as a means of intervention; however, the letter includes no real discussion or qualification of the issues. We would direct readers to the wealth of objective scientific literature regarding the etiology and treatment of ADHD in children, and we ask that those who hold the belief a priori that ADHD is a disorder created by drug companies and mental health professionals for profit try to approach this research literature with an open mind. We find no conclusion other than that ADHD is a real disorder that, when unrecognized, untreated,

or mistreated, has severe consequences for many individuals; and, though not in every case, for many (about 30–40%), it is a lifelong experience.

The U.S. Surgeon General, the American Medical Association, the American Psychiatric Association, the American Academy of Child and Adolescent Psychiatry, the American Psychological Association, and the American Academy of Pediatrics, among others, all recognize ADHD as a real disorder and one that necessitates accurate diagnosis and treatment by appropriately licensed, certified, and trained professionals. In 2002 more than 85 leading scientists from around the world who study childhood psychopathology issued a consensus statement on ADHD as well, concluding that it was indeed a real disorder. Their statement first emphasizes that ADHD does exist worldwide, and not just in western societies (as some critics claim in support of it being a made-up disorder). Just as we have concluded that ADHD is real from our own review and our own peer-reviewed scientific work in the behavioral and brain sciences, these scientists from around the world concluded: "We cannot overemphasize the point that, as a matter of science, the notion that ADHD does not exist is simply wrong. All of the major medical associations and government health agencies recognize ADHD as a genuine disorder because the scientific evidence indicating it is so overwhelming."[1] You can read this brief but sensible, direct consensus statement at: http://www.russellbarkley.org/adhd-consensus.htm. You will also see on Dr. Barkley's website, where this page appears, a list of links to good sources about ADHD. We respect and recommend these sources.

LEGITIMATE CONCERNS EXIST

Nevertheless, legitimate concerns about ADHD diagnosis do exist, just as they do with any mental health disorder, and should not be dismissed by professionals in practice or by those who

research this disorder. In the case of any disorder requiring medication, the potential for abuse is present. For example, college students may seek stimulant medication to help them study or student scholarship athletes may find temporary benefits to their endurance and focus in medications prescribed to individuals with ADHD. In addition, some individuals who may not have appropriate symptoms seek a diagnosis for other gain, such as to receive ADA accommodations at work or disability qualifications for supplemental income or educational support, to improve their ability to work night shifts, or simply to concentrate better or work longer hours on the job. Such behavior is abhorrent at all levels and does much damage.

In addition, ADHD may be overdiagnosed or incorrectly diagnosed, creating controversy in the minds of the public and in a very small group of medical and mental health professionals. We propose that the public controversies over ADHD largely stem from inadequate diagnosis and misdiagnosis of ADHD, especially in children who actually have other disorders that should be treated differently, but which on the surface look a lot like ADHD.

In this book, you will find factual information about ADHD: what it is and what it is not; how it is best treated and managed; why it is so often incorrectly diagnosed; how diagnosis should be made; the controversies of diagnosis and treatment; solving the learning and social problems of individuals with ADHD; and how ADHD is seen under the Americans with Disabilities Act (ADA) and section 504 of the Vocational Rehabilitation Amendments of 1973, which grant individuals with ADHD certain rights.

WHAT YOU WILL FIND IN THIS BOOK

In the chapters to follow, we will address truths and issues in understandable terms from the standpoint of a neuropsycholo-

gist, a teacher, and a counselor. We will talk about the symptoms, identification, and suspected causes of ADHD. We will describe strategies and treatments that can help you cope with the challenges associated with ADHD, tap into the creativity and energy that often comes with ADHD, and achieve success. Educational issues and problems encountered in the classroom and how these can be addressed are dealt with in detail, in addition to issues related to work, vocational training, and employment. These aspects of the lives of persons with ADHD are especially important due to their impact on successful pursuit of life, liberty, and happiness, including relationships with others and creating a loving family, but also because the symptoms of ADHD are the most notable in more structured settings like schools, classrooms, and workplaces. We want to help you sort through the myriad of opinions and controversies about ADHD and the unscientific information. We use real-life illustrations and stories throughout the book. Unlike some of the information you may have learned from a textbook or gathered from the Internet, this book will provide factual and trustworthy information with concrete examples to make the information clear and enjoyable to read.

ADHD AND YOU

We appreciate the importance you place on the topic of ADHD. Your interest may be personal or professional. Perhaps you or someone you care about has a diagnosis of ADHD. Perhaps you suspect that a friend, family member, or even you yourself may have ADHD. You might be a professional who works with individuals with ADHD such as a counselor, teacher, or doctor and you would like to know more about the disorder and strategies to help such people have successful lives.

If your interest is personal, you may be one of the 3–6% of individuals in the United States diagnosed with ADHD or suspected of having ADHD, or you may have a child, spouse,

friend, or colleague with the disorder or with symptoms of the disorder. Rest assured that ADHD is a common but livable disorder. An ADHD diagnosis does not equate with a diagnosis of failure; indeed, individuals who show symptoms of ADHD can ultimately achieve greatness as many have. Famous people like Terry Bradshaw (quarterback), Paul Orfalea (founder of Kinko's), Ty Pennington (host of *Extreme Makeover: Home Edition* as well as a noted philanthropist), Woody Harrelson (actor), and countless others have publicly acknowledged their ADHD diagnoses. This book is designed to take you from wherever you are now—whether you suspect ADHD in yourself or others or simply desire to understand ADHD—to learning about ADHD and beyond. You will master skills to make you more effective in your life or in fostering the lives of those you love who may have ADHD.

From the Teacher

Why is it important to understand that ADHD is real? When my students have a "name" for ADHD they seem to no longer wonder why they struggle in ways their peers do not. Although you might think that a diagnosis would make a child feel bad—I haven't seen it work that way. Instead, a light and a spark returns to a child who previously appeared to be losing self-confidence. The child will say things like "that is my ADHD" or "I am like this because I have ADHD." The "name" gives a reason to a child who has been trying so hard to do what a teacher asks and has been unsuccessful. Now they know "why" and that "why" seems to bring relief.

WHAT IS ADHD?

We have established that ADHD is real, but what is it? ADHD is defined as a neurobiological, or brain-based disorder related to the self-regulation of behavior. ADHD is characterized by hyperactivity, inattention, distractibility, and impulsivity that affects the cognitive, academic, behavioral, social, and developmental functioning of children, adolescents, and adults.[2] In the following sections we characterize ADHD as: (1) associated with deficits in self-regulation, hyper-

activity, inattention, and impulsivity; (2) consisting of four subtypes; (3) a diagnosable condition consisting of six decisions; (4) biological; and (5) a common behavioral disorder for children, adolescents, and adults.

ADHD is associated with deficits in self-regulation, hyperactivity, inattention, distractibility, and impulsivity (see Table 1.2).

Table 1.2: Some Definitions You Will Want to Keep in Mind.

Term	Definition
Self-regulation	The exercise of control over our voluntary actions and behavior including impulse control, directing attention, delaying gratification, raising and lowering our level of voluntary arousal, and controlling our mood. In practicing self-regulation, the executive system of the brain mediates our thoughts and actions and decides which should be expressed to the outside world.
Hyperactivity	Behaving at an excessive rate relative to what is required in the current circumstances. Excessive restlessness and movement in general are quite common expressions of hyperactivity. Usually hyperactivity refers to behavior observable by others but at times can refer to hyperactive thought patterns, (having too many ideas too quickly).
Inattention	Difficulty or an absence of the ability to direct attention or regard to a desired object or event in your immediate environment; also, difficulty determining that attention is required or best directed to a particular object or event.
Distractibility	An inability to resist moving attention from one object or event to another too rapidly and inappropriately, to the extent that it disrupts concentration; being constantly drawn to attend to many different competing objects or events in the immediate vicinity and being unable to discern which are the most important.
Impulsivity	Classically, impulsivity reflects acting overtly without giving due consideration or thought to the consequences of the act. Simply put, acting (including speaking) without thinking. You may have heard the comment in reference to an inappropriate quip, "He put his mouth in gear before his brain." This would represent impulsivity.

Self-regulation is a major task of what is called the executive system of the brain, and its failure to function properly is the key to understanding ADHD. The brain is quite an energetic organ, constantly generating thoughts and potential actions; the executive system is largely responsible for evaluating the appropriateness of these potential behaviors for the immediate circumstances and mediating expression of these thoughts and actions.

From the Counselor

Understanding the reality of ADHD helps *everyone* assist individuals with ADHD to lead successful lives. The controversy that surrounds the issue only prolongs the beginning of treatment. I have listened to parents, teachers, and other professionals debate the issue at length. Should the child be on medication? Should the child be given modifications for assignments? Should the child be "taught" to do things, such as organize his materials, when other children do not receive the same instruction? These debates only hurt the child or adolescent by lengthening the amount of time that the individual goes without treatment and needed supports.

The brain regulates behavior in many ways. Most prominent in the executive system is the process of monitoring and controlling our immediate actions, sometimes based on what we have learned in the past about good decision making, and sometimes from the immediate feedback we receive from the world around us—much like the filter that keeps adults from saying things out loud in situations where children might blurt out what they are thinking. Children with poor self-regulation disrupt an entire classroom. They are often impulsive, hypersensitive to transitions, and tend to overreact to minor challenges or stressors. Self-regulation is the brain activity that keeps mature adults from grabbing at a plate of cookies that passes by, an option that young children seldom exercise in such an instance. You have seen many young children who simply cannot wait for something they want—it is always now, now, now—and when denied by others they respond emo-

tionally and do not modulate or self-regulate their emotional responses.

Sometimes **hyperactivity** is also present. If you are a parent of a young child with ADHD, you are probably very familiar with hyperactivity. Individuals with ADHD who are hyperactive constantly appear to be restless, demonstrating this through such activities as pencil tapping or jumpiness, or simply have an overabundance of energy. Clinicians often note that the parents of ADHD children make such comments as "It seems like he is driven by an engine that is always running."

People with ADHD may have extreme difficulty with **inattention** or focusing on one task or may even be so **distractible** and **inattentive** to the demands of their environment that they work on the wrong tasks.

Not everyone with ADHD acts just the same way. Most persons with ADHD have problems with self-regulation, hyperactivity, inattention, distractibility, and impulsivity. However, the prominence or degree of each of these issues varies greatly from person to person and also tends to shift with age. For example, although impulsivity is common to nearly everyone with ADHD, children are more likely than adults (and boys more so than girls) to be hyperactive, whereas adults are more likely to have issues controlling attention. Because not everyone has the same symptoms, ADHD is divided into four subtypes according to which symptoms are most prominent. We will examine these four subtypes in the following section.

ADHD Consists of Four Subtypes

Because every individual is unique, ADHD can look and behave a little or a lot differently for each person. Not every person with ADHD will have every symptom, nor will any symptom be present to an equal degree with others. In fact, ADHD is not just one disorder. There are actually four subtypes of ADHD. Each

helps us recognize and understand the specific behaviors related to ADHD that are demonstrated by the individual, although nearly all persons with ADHD will have problems of varying degrees with inattention, hyperactivity, and impulse control (see Table 1.3). Getting the diagnosis right is crucial to getting the treatment right! How this is accomplished is the topic of Chapter Four.

Table 1.3: Types of ADHD.

ADHD-Combined type or ADHD-C	Individuals with ADHD-C demonstrate behaviors associated with both hyperactivity and inattention-impulsivity
ADHD-Predominantly Inattentive or ADHD-PI	Individuals with ADHD-PI have problems accentuated by inattention.
ADHD-Predominantly Hyperactive-Impulsive or ADHD PH-I	Individuals with ADHD-PHI have the most difficulties with hyperactive and impulsive behaviors.
ADHD-Not Otherwise Specified or ADHD-NOS	Physicians, psychologists, and psychiatrists assign a diagnosis of ADHD-NOS when individuals have "prominent symptoms of inattention or hyperactivity-impulsivity that do not meet criteria for ADHD."[3] Basically, this category is used when the diagnosing clinician is absolutely convinced that although an insufficient number of the diagnostic criteria are present, ADHD is present, and the severity of the existing symptoms are extraordinary and warrant a diagnosis.

ADHD Is a Diagnosable Condition Involving Six Decisions

People who diagnose ADHD are typically medical doctors or clinically trained psychologists. A parent, teacher, or school counselor cannot diagnose mental disorders, but they do provide important information. When a diagnosis of ADHD (or any

other mental disorder) is being considered, the most common practice in the United States is to follow the diagnostic criteria prescribed by the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (known most often by its acronym, DSM),[4] the "bible" reference work for mental health providers. The doctor diagnosing ADHD makes several decisions related to the diagnostic criteria prescribed by the most recent edition of the DSM, known as the DSM-IV-TR.[5] Figure 1.1 provides an overview of these six decisions, but we will not go into details of the diagnostic process here as Chapter Four covers each in depth.

ADHD Is Biological

ADHD is a result of the person's biological makeup, just like red hair or physical stature. Strategies cannot be used to "change" biology, but the symptoms can be improved by various strategies, skills, interventions, or by other means, such as medication. Adults, children, and adolescents with ADHD who lose keys or forget to turn in homework are not lazy, obstinate, or disobedient; they have ADHD, a medical disorder. For these individuals, it is not a matter of will—it is not true that "he could pay attention if he wanted to," or that "she can sit still and listen if she would just make up her mind to do so." It may appear that during certain tasks the attention span is fine. Actually the ADHD brain is structurally (biologically) different and will operate differently than a "typical" brain without additional assistance.

The idea of a biological basis for ADHD problem behaviors is sometimes challenging for people to accept in part because ADHD behavior can look a lot like ordinary problem behavior that people learn to overcome or that is regarded as a lack of will or discipline. For example, when a child receives a diagnosis of ADHD one parent may feel relief at finally "understanding" the

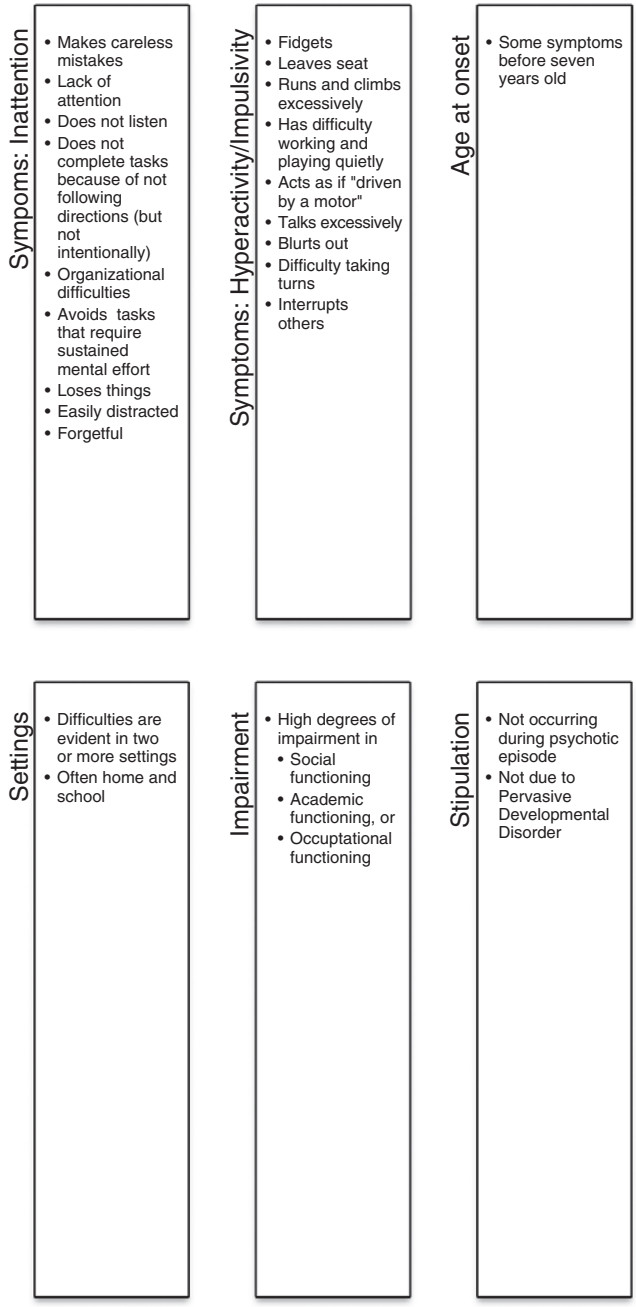

Figure 1.1. ADHD Diagnosis Requires Six Decisions

problem, yet the other is irritated by what is perceived as a "crutch label" for not trying or not having enough discipline. The second parent may look around and see other children who "control" themselves and be frustrated that his or her child is not exhibiting self-control and now has an "excuse" not to learn to do so. This fundamental misunderstanding about what ADHD is and what it means for learning and development and intervention greatly affects how successfully the disorder is handled. It is not uncommon for individuals with little knowledge of ADHD to sometimes misinterpret or misrepresent the disorder. ADHD is not an excuse for problem behavior and the diagnosis is not a crutch. A diagnosis provides information about treatment options and how to improve behavior problems most effectively and efficiently. For example a child who "hits" out of impulsivity requires different treatment from a child who "hits" because he or she has been taught that hitting is OK. More on interventions will be addressed in Chapters Five through Nine.

With the idea that "knowledge is power," let's move on toward understanding more about ADHD. The greater the level of understanding, the more you will possess skills and strategies for successful living with ADHD. If you would like to read more about the biological basis for ADHD, we suggest you check out any of the following technical or medical articles or solid sources written in terminology intended for those without professional training in clinical diagnosis or the neurosciences.

ADHD Is a Common Behavioral Disorder for Children, Adolescents, and Adults

ADHD is one of the most common mental health disorders of childhood. The DSM-IV-TR reports that 3–5% of children in the United States have ADHD.[6] The Centers for Disease Control report that the prevalence of ADHD (the number of children and adults with the condition) ranges from 5% to 10% across

Table 1.4: Medical and Nonmedical Articles Explaining the Biological Nature of ADHD.

Medical Articles	Nonmedical articles
Hale, Loo, Zaidel, Hanada, Macion, & Smalley. (2009). Rethinking a right hemisphere deficit in ADHD. *Journal of Attention Disorders, 13,* pp. 3–17.	ADHD.org.nz. The Neurobiology of ADHD http://www.adhd.org.nz /neuro1.html
Arnsten, A.F. (2009). Toward a new understanding of Attention-Deficit Hyperactivity Disorder. *CNS Drugs, 23 Suppl 1,* pp. 33–41.	Ellison, K. (September 22, 2009). Brain scans link ADHD to biological flaw tied to motivation, *The Washington Post*. http://www .washingtonpost.com/wp-dyn /content/article/2009/09/21 /AR2009092103100.html
Curatolo, P., Paloscia, C., D'Agati, E., Moavero, R., & Pasini, A. (2009). The neurobiology of attention-deficit/hyperactivity disorder. *European Journal of Paediatric Neurology, 13,* pp. 299–304.	*ADHD and the Brain* YouTube video, AnswersMedia, LLC http://www.youtube.com /watch?v=u82nzTzL7To

the United States. In a class of 20, at least one student, such as Joey, would have ADHD (see Figure 1.2). In addition, ADHD continues into adulthood for about half of all people.[7] In a workplace meeting of forty adults (see Figure 1.3), at least one person would be expected to have enough symptoms to be diagnosed with ADHD.

HISTORY OF ADHD

ADHD is not a new or even a modern disorder—what is new is its formal recognition and the development of effective treatments. It has been described in individuals throughout history. We often find that studying some of this history is helpful in

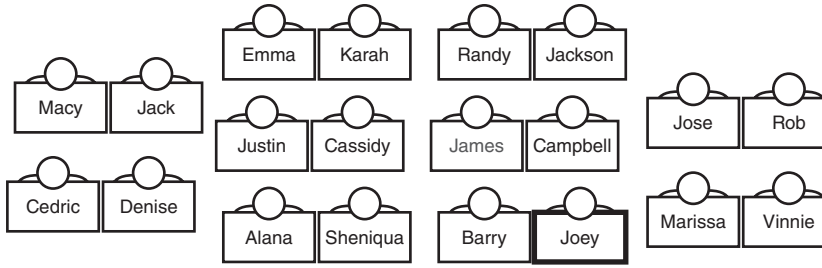

Figure 1.2. Three to Six Percent of the School-Age Population Have ADHD

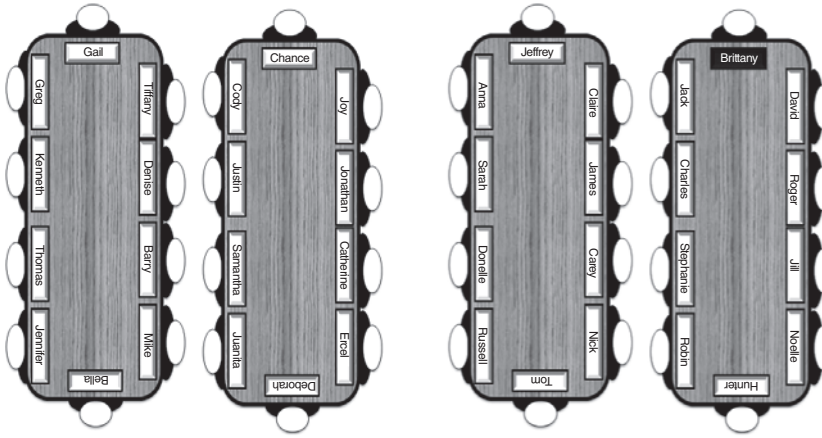

Figure 1.3. ADHD in Adults Is Common but Not as Frequent as in Childhood

learning about the disorder, but also we also understand if you choose to read ahead and skip over these details!

The Earliest Mention of Behaviors Similar to ADHD

So when did psychologists, psychiatrists, and researchers first begin talking about individuals with behaviors similar to the previous examples? Interestingly, descriptions of individuals who demonstrated behaviors closely associated with ADHD can be

found centuries ago. For instance, in 1865, Heinrich Hoffmann, a physician in Germany, wrote the following nursery rhyme about Philip, which provides comic relief and understanding for many parents of children with ADHD today. You will note that Philip's behavior and Philip's father's reaction to his behavior over a hundred years ago is very similar to child behaviors and parent reactions seen today.

The Story of Fidgety Philip

"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 spoke, in earnest tone,
The father to his son;
And the mother looked very grave
To see Philip so misbehave.
But Philip he did not mind
His father who was so kind.
He wriggled
And giggled,
And then, I declare,
Swung backward and forward
And tilted 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, bread, 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 cover'd up, you see!
Cloth and all are lying on him;
He has pull'd down all upon him!
What a terrible to-do!
Dishes, glasses, snapt in two!
Here a knife, and there a fork!
Philip, this is naughty work.
Table all so bare, and ah!
Poor Papa and poor Mamma
Look quite cross, and wonder how
They shall make their dinner now.

—Heinrich Hoffman

First Scientific Credit Given

Scientific credit for the first serious attention paid to ADHD is given to Drs. George Still and Alfred Tredgold. In 1902, Dr. Still described 43 children in his clinical practice who had serious problems with sustained attention. Dr. Still described problems with: passionateness, spitefulness-cruelty, jealousy, lawlessness, dishonesty, wanton mischievousness-destructiveness, shamelessness-immodesty, sexual immorality, and viciousness—descriptions very similar to those previously identified in this chapter using more current language. Dr. Still believed that these children displayed behaviour that represented a major "defect in

moral control" and that was chronic in most cases. Much as researchers do today, Dr. Still noted a greater proportion of males than females (3:1) in his sample, and he observed that the disorder appeared in most cases before 8 years of age. However, in the early 1900s—and on through the 1950s—common consensus was that problem child behavior was a result of poor parenting, and no mental health condition similar to ADHD was included in the first edition of the DSM in 1952.

First Research Evidence

In 1958 the first research grant on the use of medication with childhood mental health disorders was awarded to Dr. Leon Eisenberg who recruited an instructor in pediatrics and medical psychology, Keith Conners, to collaborate. Dr. Conners's research confirmed the positive effects of methylphenidate (Ritalin) and in 1961, Ritalin was approved by the Food and Drug Administration (FDA) for use in children with behavior disorders.

In the 1960s and 1970s, amid a flurry of discussion focusing on poor parenting as the cause of hyperactivity in children, research in the field began to flourish. Dr. Virginia Douglas argued that the impact of deficits in sustained attention and impulse control were as important as symptoms of hyperactivity on the functioning of children. During this time period, Dr. Paul Wender, a research psychiatrist for the National Institute of Mental Health (NIMH), described Minimal Brain Dysfunction (MBD), the term for ADHD at the time, as characterized by six deficit areas: motor behavior; attentional and perceptual-cognitive functioning; learning; impulse control; interpersonal relations; and emotions. In 1971, Dr. Wender hypothesized that the likely cause of Minimal Brain Dysfunction (MBD), the name for behaviors associated with ADHD at the time, were neurotransmitter (for example, dopamine, norepinephrine) deficiencies in the brain. In 1973, building on Dr. Wender's hypothesis,

Dr. Mortimer Gross suggested that medications known to increase the levels of norepinephrine in the brain might also be of benefit to individuals with MBD. In 1978, ADHD was first included in the DSM-II and named Hyperkinetic Reaction of Childhood.

Advanced Research Technologies

The 1980s and 1990s brought increased research technology, new medication use, and two new editions of the DSM. Solid research began to establish the possible causes of ADHD as genetics and brain abnormalities. Advanced research technologies provided the means for investigating brain activity of individuals with ADHD. The role of dopamine and norepinephrine deficiencies in individuals with ADHD was confirmed and studies revealed "patterns of underactivity in the prefrontal area" of the brain.[8] At the same time, medication designed for use with depression and anxiety—which affect similar neurotransmitter systems—began to be used to decrease the symptoms of ADHD.

In the third edition of the DSM,[9] the name was changed to Attention-Deficit Disorder as three separate disorders: Attention-Deficit Disorder (ADD) with hyperactivity; ADD without hyperactivity; and ADD residual type. In the DSM-III-R,[10] the name was once again changed to Attention-Deficit Hyperactivity Disorder as one disorder with four subtypes: ADHD combined type; ADHD predominantly inattentive type; ADHD predominantly hyperactive-impulsive; and ADHD not otherwise specified. In addition, adult ADHD was first recognized in the DSM-III. Unfortunately, the term ADD has stuck in the minds of many and although its use is archaic and discontinued in the official nomenclature with the 1987 revision of the DSM, one sees and hears reference to it often in the lay press, among parents, and even in some professional resources.

ADD or ADHD?

In previous years, ADHD was divided into different subtypes, one of which was called simply ADD, or Attention-Deficit Disorder. However, research revealed that even those with ADD also had problems with other aspects of ADHD including hyperactivity and impulsivity, just to a lesser degree. The diagnostic term ADD was then dropped from all official nomenclature in the mid-1990s. ADD is now an archaic term in the profession though still popular in the lay press and on many lay websites.

TO SUM UP

Is it real? Experts in the field have established substantial quantities of evidence to support the reality of ADHD. Both behavior and brain structures are different in individuals with ADHD and in those without ADHD. ADHD is an identifiable medical condition and not simply "bad" behavior or a mythological creation by physicians or corporations to sell medication to children. ADHD can be reliably identified using proper diagnostic materials and criteria and ADHD can be managed and treated to ensure maximum success in school and life.

However, the media and others often may exploit the sensationalized topic of medicating children or the idea of mythological and nonexistent disorders and thus the "truth" about ADHD remains controversial. Some of this confusion comes from the reality that almost everyone experiences "ADHD symptoms" at some time or another. However, the chronic nature and degree to which the symptoms interfere with daily functioning is the defining difference. Temporary or passing inattention and/or hyperactivity is markedly different from the debilitating disorder that interferes with successful life functioning. Recognizing

that ADHD is an actual condition helps us in determining effective and efficient treatment and helps individuals with ADHD in moving forward to overcome their challenges.

WHAT'S NEXT?

In the next chapter, we will further explore the nature of ADHD, specifically behaviors associated with ADHD, disorders often comorbid with ADHD, and functional impairment.