

## **A Guide for Professionals**

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**ADD - ADHD**  
Attention Deficit *Hyperactivity* Disorder

**A Guide**  
*for*  
**[ Professionals ]**

*ADD-ADHD Support in Cyprus would like to thank  
all of the parents, teachers, doctors and specialists around the world  
who work everyday to raise ADD-ADHD awareness.*

*You're our inspiration.*

*We'd also like to thank all the ADD-ADHD Support members  
and partners who have volunteered so much of their time  
and energy to sustain ADD-ADHD Support  
and make this booklet and all of our work in Cyprus possible.*

*Susan J. Chrysostomou  
President & Founder*

**Our association offers:**

- **Lectures**
- **Seminars**
- **Support Groups**
- **Guidance/Coaching**
- **Advocacy**

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## **Table of Contents**

<b>1. Understanding AD/ HD</b>	<b>4</b>
<b>2. Primary Characteristics of AD/ HD</b>	<b>4</b>
> 2.1 Inattention	
> 2.2 Impulsivity	
> 2.3 Hyperactivity	
<b>3. Incidence</b>	<b>7</b>
<b>4. Development</b>	<b>8</b>
<b>5. Aetiology</b>	<b>9</b>
<b>6. Comorbidity</b>	<b>10</b>
> 6.1 Learning Disabilities	
> 6.2 Autism and Asperger syndrome	
> 6.3 Tourette Syndrome	
> 6.4 Speech & Language Development	
> 6.5 Motor Impairments	
> 6.6 Behavioural Disorder	
> 6.7 Social Difficulties	
> 6.8 Emotional Problems	
<b>7. Diagnosis</b>	<b>12</b>
<b>8. Managing and Treating AD/HD</b>	<b>13</b>
> 8.1 School	
> 8.2 Home	
> 8.3 Medication	
> 8.4 Other Therapies	
<b>Conclusion</b>	<b>19</b>

## 1. Understanding AD/ HD

Attention Deficit/Hyperactivity Disorder (AD/HD) refers to a cluster of behaviours that make a child underachieve for their intellect and/or 'under-behave' both at school and at home. The term Attention Deficit /Hyperactivity Disorder originates from the 4th Edition of the Diagnostic & Statistical Manual of the American Psychiatric Association (DSMIV). According to the American Psychiatric Association (APA)(1994), the insertion of a slash between the letters AD/HD is to indicate that some children suffer only from having attention difficulties (referred to as Predominantly Inattentive Type) others from only having hyperactivity and impulsiveness (referred to as Hyperactive-Impulsive Type) and others from both kinds of problems (referred to as Combined Type). AD/HD is not a new condition; it was proposed as a distinct medical condition by an English paediatrician, George Still, in 1902, to describe children who had difficulty sustaining their attention, were often resistant to discipline, showed difficulty to restrain their behaviour, had poor emotional control and whose level of hyperactivity was such that it interfered with their daily functioning (Myttas, 2001). AD/HD can have a significant impact on the life of the person with the disorder and his/her family.

## 2. Primary Characteristics of AD/ HD

Children with AD/HD are all unique individuals. Although they have certain behaviours in common, the frequency and severity of their symptoms vary (O'Regan, 2002).

### 2.1 Inattention:

Attention Deficit Disorder, as the name implies, is an impairment of attention. Attention can be measured in two ways: focused attention and sustained attention. Focused or selective attention requires a child, for example, to point to a specific letter or number. Sustained attention requires a child to stay with a task for a length of time (Alban-Metcalfe & Alban-Metcalfe, 2001). Children with ADD or ADHD have difficulty with sustained attention, which is also known as attention span. Therefore, children with ADD or ADHD have trouble persisting in routine tasks for extended amounts of time. Such tasks may include completing school assignments, reading lengthy books, listening and following

directions or even doing housework. Due to their inability to maintain their attention toward an activity or task, they will often not complete it, do it poorly or even find excuses to avoid it altogether. It is very common for children with ADD or ADHD to get bored with activities more quickly than the rest of their classmates. As a result, while the rest of the class is busy working, they are often the ones searching the classroom for something more rewarding, stimulating and active to do, ignoring the task at hand (Barkley, 1992). Teachers and parents repeatedly describe this lack of sustained concentration with phrases such as:

- is easily bored,
- daydreams,
- has problems finishing and starting work,
- is easily distracted,
- often misplaces things,
- flits from one incomplete activity to another,
- is always off task, or seems to be lost,
- appears not to listen and
- forgets instructions easily.

(Barkley, 1992; O'Regan, 2002)

One sub-group of inattentive children are those diagnosed with ADD without hyperactivity (AD/HD Inattentive Type). It is considered to be a distinct entity from ADHD and more related to a learning difficulty (Myttas, 2001). In comparison, with children with AD/HD combined type, they have greater difficulties with memory and are cognitively slower, performing poorly in tests that require perceptual motor-speed. Teachers and parents describe them as sluggish, anxious and daydreamers. However, they tend to have better relationships with their peers as they are less disruptive and aggressive (Alban-Metcalfe & Alban-Metcalfe, 2001).

### 2.2 Impulsivity:

Another characteristic of ADHD is impulsivity. These children have difficulty in restraining their behaviour or controlling their impulses. Children with ADHD speak and act without thinking; they do whatever comes to mind without second thoughts. This explains why children with ADHD have a high accident rate. The difficulty they have in suppressing impulse, failing to pause to consider the situation and the consequences that follow, is demonstrated in a variety of ways including difficulty in waiting their turn, demanding instant pleasure and poor emotional control (Barkley, 1992).

In the classroom, it is not uncommon for ADHD children to blurt out answers to questions without raising their hand, cut across conversations and talk over others. They often take 'short cuts' in their school work, make careless errors throughout their assignments or leave them incomplete (Alban-Metcalf & Alban-Metcalf, 2001; Flick, 1998; O'Regan, 2002). In the playground, their behaviour towards their classmates can be problematic. For example in a football game, they may want to be in control of the ball throughout the game creating conflict with their peers by not taking turns with the ball or abiding by the rules of the game.

Children with ADHD often demand to have things immediately and cannot take 'no' or 'later' for an answer. A negative response to a request may lead to a sudden outburst or tantrum. An illustration of this would be a child asking to play with their scooter during a family party. When the parents politely deny, promising that he can play with the scooter for the whole next day (a long term larger reward) the child bursts into tears and becomes verbally aggressive. These behaviours often make some ADHD children known by all, but liked by none (Barkley, 1992; Myttas, 2001). Comments of teachers and parents describing the above behaviours include:

- is volatile
- answers before the question is completed
- lacks self-control
- easily gets upset
- is loud
- has no patience
- is frequently in trouble
- is not disciplined- spoiled, and
- dominates his peers

(Barkley, 1992; O'Regan, 2002)

### 2.3 Hyperactivity:

A third characteristic of ADHD is excessive movement or hyperactivity. These children are full of energy, moving about far more than other children of their age (Barkley, 1992; Myttas, 2001; Knivsberg, Reichelt, & Nodland, 1999). Such behaviours include fidgeting, fiddling, touching things constantly, talking, running and climbing excessively. In the classroom they are the children that are often missing from their chairs without permission or playing with things on their desk. For example, they may tap their ruler in a rhythm or spin their rubber. They

tend to make extraneous vocal noises and move their arms and legs or sway their body while working. The child with ADHD has great difficulty controlling their energy or level of activity to conform to the school's demands. For example, they may have trouble sitting quietly to read a book or complete a worksheet (Flick, 1998). Further, many have poor sleeping patterns; many parents report that their ADHD child sleeps only 4-5 hours per day and is full of energy upon waking. Parents and teachers often describe these behaviours as:

- is always on the go
- is always out of his seat sharpening his pencil or looking for a ruler
- is always making funny noises
- is constantly fiddling with something
- is always distracting others
- is non-stop talking
- is restless, and
- is never tired

(Barkley, 1992; O'Regan, 2002)

It is important to note that having one or two of the above characteristics does not indicate AD/HD. It is not uncommon, for children or adults to behave in some of these ways some of the time. However, the difference between those with AD/HD and those without is the degree and extent of these behaviours. If these behaviours interfere with several aspects of one's life, creating such difficulty to the individual that it prevents him/her from functioning effectively, he or she may have AD/HD (O'Regan, 2002). AD/HD behaviours can sometimes be the result of other conditions, so a complete medical evaluation must always be conducted prior to diagnosis (Barkley, 1992; Myttas, 2001; Knivsberg, Reichelt, & Nodland, 1999; Greenbaum & Markel, 2001).

## 3. Incidence

The incidence of ADHD varies depending on the criteria used for diagnosis. In the UK the estimate is around 5% of school-aged children (ADDISS, 2004). Similarly, American figures are 3-5% of the childhood population. This means there will be one or two children with ADHD in every class (O'Regan, 2002). ADD is even less common; it is estimated around 1% of the child population and it is most common in girls. Researches have identified AD/HD in all social classes and in every nation and culture they have studied. However, its prevalence varies

across countries, depending on the diagnostic criteria, methods of assessments and national practises (Myttas, 2001).

According to medical guidelines the condition is much more common in males than in females. The ratio of boys to girls diagnosed with ADHD is at least 4:1. (ADDISS, 2004; O'Regan, 2002). However, this may have to do with referral bias. More boys than girls tend to be referred to the clinics because boys are typically more aggressive and create more havoc in the classroom than girls. This suggests that girls, who are generally less disruptive, may not be properly diagnosed and, in turn, not given the correct treatment (Barkley, 1992; Myttas, 2001; ADDISS, 2004).

## 4. Development

AD/HD symptoms seem to be present at an early age. Some of the inattentive or hyperactive-impulsive symptoms present themselves before seven years of age. Although some children with AD/HD may have been quiet and easy babies, others may have been noisy, restless infants. Many parents have reported that their infants were light sleepers and as a result, they had to pace up and down the hall way or drive around the neighbourhood for hours till their child fell asleep. Even though their infants slept for only a few hours, they woke up as fresh and active as ever. As toddlers many mothers reported they had unpredictable behaviour such as rapid changes in mood and were mischievous e.g. hurting themselves (falling off the garden tree) or hurting others (pushing a child off the swing so they can have a turn) (Myttas, 2001; Flick, 1998).

At nursery and pre-school, ADHD children become even more active and restless. For many, it is hard to sit at story-time and remain on task during group activities. Some can even be disruptive and show anti-social behaviour to their peers, particularly in the playground where they often dominate other children. At home, these children wind up their siblings and are always in trouble. On the other hand, the children that are 'ADHD Inattentive Type' also tend to stand out in the class. These children are slow to complete activities and seem lost and dreamy. However, these children are fairly well behaved in school settings (Myttas, 2001).

During the early years, these behaviours may not be taken seriously by many teachers and parents. Because all children must learn how to behave in acceptable ways, these behaviours may not differ dramatically from those of

other children of the same age. Further, school teachers may be puzzled due to the inconsistencies of their behaviour. Some days the child may be attentive to a task and finish all their work, while other days, or even in the next hour, he/she may seem to 'be in a fog' or become disruptive. They appear inconsistent when, for example, they perform well at school work when closely supervised, but not when taught within a group (O'Regan, 2002).

As ADHD children get older and work becomes more demanding, they are required to sustain attention, limit their activity level and comply with school rules. Their struggle gradually becomes more and more obvious (O'Regan, 2002; Barkley, 1992; Flick, 1998).

Research suggests that AD/HD is not only confined to childhood years, between 50-65% of children will carry some of the symptoms into their adult life. Adults with AD/HD show a higher incidence of problems relating to achievement and vocational issues. Even though some of the symptoms persist into adulthood, individuals with AD/HD can live a successful life provided that accommodations are made for their disability in daily living situations. Early identification is crucial and multimodal treatment reduces the severity of their AD/HD problems into adulthood (Wodrich, 1994; Barkley, 1992).

## 5. Aetiology

Current scientific consensus shows that AD/HD is principally a genetic, inherited medical condition. In other words, a number of families have a parent or close relative who has similar symptoms. A parent may show more frequent and severe symptoms than the child and this may occur the other way round (Alban-Metcalf & Alban-Metcalf, 2001). Twin studies suggest a 90% concordance rate in mono-zygotic twins. This means that if one identical twin has ADHD there is a 90% chance that the other twin is also affected (Myttas, 2001; ADDISS, 2004; Knivsberg, Reichelt, & Nodland, 1999). Further, if there is one child that has ADHD in the family, there is a 30-40% chance that other siblings may also have the disorder (ADDISS, 2004). Most neurological studies show that individuals with AD/HD compared with those without AD/HD have 'under-active' parts of the brain under specific test conditions. Imaging studies such as Magnetic Resonance Imaging (MRI) have shown that there is less brain activity, particularly in the frontal lobe of the brain. Studies have shown decreased amounts of blood flow to the striatum and orbital prefrontal brain regions of AD/HD children.

Decreased blood flow is seen more in the right hemisphere than the left. Diminished blood flow in these underactive brain centres is caused by reduced brain activity. These areas of the brain are known to be important in behaviour inhibition, attention and incentive learning. In rare circumstances AD/HD arises without a genetic predisposition. Such cases include children exposed to significant neurological injuries such as environmental toxins, alcohol or drug abuse during pregnancy and also very low birth weight (Barkley, 1992; Flick, 1998; Myttas, 2001; ADDISS, 2004; Knivsberg, Reichelt, & Nodland, 1999).

It is important to remember that AD/HD is not caused by poor parenting or dysfunctional families. This is not, however, to deny that environmental factors affect the extent to which the symptoms are manifested in a given child (Barkley, 1992; Flick, 1998; Myttas, 2001; ADDISS, 2004).

Food additives are also being blamed from time to time as a potential cause of hyperactivity and learning disabilities. However, research has been unable to support this claim. Although, individuals showed a slight increase in activity level or inattentiveness when consuming these substances it was later found that the behaviours were instigated due to allergic responses by a specific additive that in turn caused discomfort to the individual and resulted in the observable symptoms. There has been no evidence that suggests that normal children acquire AD/HD when they consume such substances or that these substances make their behaviour considerably worse (Pumfrey & Reason, 1995; Barkley, 1992).

## 6. Comorbidity

In addition to the primary problems described above it is not uncommon for children with AD/HD to have a variety of other difficulties. These associated problems that exist in conjunction with AD/HD are known as 'co-morbid' (Knivsberg, Reichelt, & Nodland, 1999; Barkley, 1992). According to Myttas over 50% of AD/HD individuals will have one or more of the following conditions:

### 6.1 Learning Disabilities

Children with AD/HD are more likely than children without AD/HD to be affected in at least one type of learning difficulty such as reading, spelling, written language (particularly, in getting ideas down on paper), numeracy, short-term memory and organisational skills (Knivsberg, Reichelt, & Nodland, 1999; Barkley, 1992).

### 6.2 Autism and Asperger syndrome

The concept of the autistic 'spectrum' reflects that autism rarely occurs in isolation. Asperger syndrome (high functioning autism) often occurs in combination with other learning difficulties such as AD/HD (Shields, 1999).

### 6.3 Tourette Syndrome

AD/HD is often associated with Tourette Syndrome. This involves a combination of motor or vocal tics (quick involuntary twitch like movements involving groups of muscles that occur repeatedly). Some children with AD/HD blink their eyes or nod repeatedly while others may have vocal tics such as coughing or throat clearing (Flick, 1998).

### 6.4 Speech & Language Development

There is no consistent evidence that shows there is a link between AD/HD and delay in the onset of talking. However, there is evidence that children with AD/HD tend to have difficulties with expressive language (the ability to speak fluently and naturally) rather than receptive language (the ability to absorb language). In expressive language some ADHD children have difficulty in speaking in grammatically correct language as well as the ability to think of and say a specific known word (Alban-Metcalfe & Alban-Metcalfe, 2001).

### 6.5 Motor Impairments

The child with AD/HD may seem clumsy in executing certain manual functions, such as cutting with a scissor and finding the buttonhole and then putting the button through. The reason is that he/she has significant difficulty with fine motor skills. They can also have difficulty with gross motor skills; motor co-ordination of the big muscle groups that are used during sports such as catching or kicking a ball. These supposedly 'fun' activities can be very difficult for an AD/HD child (O'Regan, 2002).

### 6.6 Behavioural Disorders

Research shows that there is a higher risk for children with AD/HD to develop Oppositional Defiant Disorder and Conduct Disorder. Oppositional Defiant Disorder expresses itself through open defiance, typically to adult authorities and unusual levels of anger and touchiness. Conduct Disorder involves highly aggressive acts of violence such as physically hurting others or animals and breaking into houses (O'Regan, 2002; Barkley, 1992; Flick, 1998).

## 6.7 Social Difficulties

AD/HD children often misjudge social situations and have difficulty reading social cues. They can be loud and act silly in crowds. They tend to be demanding and dominate their peers. They often become aggressive and stubborn without meaning to, making them unpopular with the people they associate with (Myttas, 2001).

## 6.8 Emotional Problems

AD/HD children often have poor self-concept, are moody and constantly complaining that they are bored, yet will not initiate an activity. AD/HD children are more likely to have an anxiety or neurotic disorder. Some children with AD/HD have been reported to suffer from depression characterised by mood swings lasting over weeks or months (Alban-Metcalf & Alban-Metcalf, 2001; Flick, 1998).

## 7. Diagnosis

In order to ensure an accurate diagnosis of AD/HD, a joint approach between clinical and educational professionals is vital. There are guidelines used internationally by highly trained clinicians (child and adolescent psychiatrists, neurologists or paediatricians) to diagnose children with AD/HD (Knivsberg, Reichelt, & Nodland, 1999; ADDISS, 2004). Such medical guidelines detail the criteria for diagnosis. In the UK, clinicians use the World Health Organisation's ICD-10 (International Statistical Classification of Diseases and Related Health Problems). In America, clinicians use the American Psychiatric Association DSM-IV (The Diagnostic and Statistical Manual of Mental Disorders (ADDISS, 2004; Myttas, 2001). Initially clinicians will obtain a comprehensive developmental history followed by an assessment of current behavioural characteristics of the child by parents and teachers. This is usually followed by a neurological examination. When professionals look for indicators of AD/HD, they exclude behaviours or conditions that could be misconstrued as AD/HD. They must distinguish between AD/HD and other conditions, and also determine the primary condition sorting out what may be secondary or tertiary (co-morbid) conditions. Psychometric tests conducted by clinical or educational psychologists may also be required (Flick, 1998; ADDISS, 2004). Due to other problems that may co-exist with AD/HD as mentioned above, diagnosis can be problematic. Therefore, clinicians must monitor the symptoms and responses to treatment very carefully (Thomson, 2000).

## 8. Managing and Treating AD/HD

Managing AD/HD is not simply about diagnosing the disorder and treating it with a single therapy. Managing AD/HD can be a very difficult and demanding process especially when it involves comorbid conditions. It therefore requires input from a range of different resources to ensure it is effectively managed. This may involve the:

- **School**
- **Home**
- **Medication**
- **Other therapies**

(Weiss & Jain, 2000; Burcham, Carlson & Milich, 1993)

### 8.1 School

The issue of integration/inclusion has had a huge impact on the developments in thinking and practice in the education of pupils with special educational needs both in Cyprus and overseas (Ministry of Education & Culture, 1999). Inclusive education has been given support by the 1989 United Nations Convention on the Rights of the Child and the 1993 United Nations Rules on the Equalisation of Opportunities for Persons with Disabilities (Ainscow, 1998). Further impetus was given by the Salamanca Statement and Framework for Action (Farrell, 2001).

### Teacher Training and knowledge of AD/HD

The notion of inclusive education<sup>1</sup> means that teachers must now seek for ways to instruct all pupils in the classroom (Brownlee & Carrington, 2000). Every child has an individual pattern of strengths and weaknesses and therefore teachers should aim to the best of their ability to find ways of providing appropriate access to the curriculum for every child irrespective of ability. However, to ensure this is successfully achieved teacher programmes should not only have compulsory special needs taught modules but also require the students to experience special/inclusive education in practice (Garner, 2000; Garner, 1994; Brownlee & Carrington, 2000).

Further, schools should provide in-service training for their staff to further staff expertise and knowledge of special needs and to equip them with a range of teaching strategies that enable them to identify and deliver an effective education to these pupils.



## Teachers can help children with AD/HD in the class by providing:

### ► Individual Education Plan

After the child's strengths and weaknesses have been determined, it is essential that an individual education plan (IEP) is designed by skilled members of staff using relevant reports (e.g. an assessment by an educational psychologist) and teacher and parent input. An IEP should include the nature of the child's learning difficulty, the targets to address these difficulties including the strategies, resources and time-scale for them to be achieved. IEPs may include targets that involve: spelling, reading comprehension, maths, study skills, etc. The IEP is essential as it has clear, specific, relevant and achievable educational targets. These targets provide a focus for the teacher, shared common goals for all staff involved, motivation to increase parental and child involvement, and a monitoring system. IEPs also establish a procedure for raising attainment for all pupils (Todd, Castle & Blamires 1998).

### ► Sensible Seating

By being placed in a position with as little distraction as possible (away from windows and hallways) is essential. It is preferable that AD/HD children be near the teacher, without feeling as though they are being punished. Children with AD/HD require more specific and more frequent feedback on their work performance; it is much easier for the teacher to provide frequent feedback when they are placed in the front. It is essential that children with AD/HD sit between two or three quiet pupils. Students with AD/HD tend to do well in small group work such as completing projects.

### ► Structure

Children with AD/HD respond better in an environment that is highly structured because the child knows what is expected of them and that they are being closely monitored. A visual representation of the day's schedule will enable a pupil to function better and more independently. Such environments help them to pick up cues and re-direct themselves to a task or activity when they lose their attention. This in turn builds organisational skills. The child needs to be informed prior to any changes that might be required during the school programme as they find it difficult to cope. Letting them know in advance enables them to plan out what to do. Children with AD/HD tend to get into more trouble during times with little structure or supervision (Rief, 1993).

### ► Written back up

Written backup for verbal directions, such as notes on the board and individual

daily checklists, enables pupils with AD/HD to keep focused and on task. Many children with AD/HD have a tendency to be visual learners, so verbal instruction with written back up aids comprehension.

### ► Listening

Children with AD/HD benefit from clear and short instructions. Emphasising key words in listening activities is essential. Further, AD/HD children should be encouraged to repeat task requirements back to the teacher, preferably in their own words to ensure they have a clear understanding of what is expected of them to do.

### ► Visual backup

As pupils with AD/HD have greater difficulty in following verbal instructions it is essential that they are provided with visual backup to enable them to follow the lesson. A multi-sensory teaching environment is ideal and includes alternative presentation means such as videos, pictures, and overhead projectors. Further hands on activities, like experiments, are even better. Teachers need to be interesting themselves, using dramatic gestures and varying their tone of voice. (Miller, 2004).

### ► Rewards

Praise and rewards need to be of high frequency; rewarding the child in a way that the gratification will be immediate is vital with AD/HD children. Small and immediate rewards are more effective than long-term or delayed rewards. 'Catch the pupil being good.' Look out for the moment that the child is on task or succeeding an assigned activity and be prepared to reward him/her at that particular moment by saying things like, 'I like the way you are raising your hand to ask me something.' Rewards should include social praise (e.g. a verbal praise), treats (e.g. a piece of chocolate) and privileges (e.g. extra time on the computer). Teachers should develop a reward menu that is in agreement with the pupil and rotated frequently to maintain his/her enthusiasm to achieve. Further, rewards should not be elaborate as children with AD/HD are easily distracted (Flick, 1998; Rief, 1993).

### ► Timing

Children with AD/HD tend to be more forgetful than those without AD/HD. Therefore, it is essential to provide immediate feedback for both rewards or sanctions to be effective. A couple of hours later the child may have forgotten what he/she has done to deserve such positive/negative treatment.

### ➤ **Social skills**

If the child has difficulty with social skills and appropriate behaviour, it is essential to analyse what skills are lacking and coach or teach the child these skills. For example, teach the child to organise a game by explaining the rules.

### ➤ **Rules**

Rules and boundaries in behaviour need to be clearly set out. They should be posted on the classroom walls. The teacher needs to be firmly in control of the class, whilst being sympathetic and warm. Difficult interactions with pupils should involve direct eye-contact with a short calm response. If a child is not on task it is best to say 'Get back to page 5 of your math book,' rather than say 'get on with your work.' Ignore minor, inappropriate behaviour such as swaying of his left arm whilst writing and concentrate on the positive desirable outcome that is he is working towards completing his math assignment.

### ➤ **Modifying School Work**

Give pupils manageable amounts of work. Initially tasks should be broken down into small steps. In this way you are ensuring the pupil does not feel 'overwhelmed' and anxious. If he/she succeeds in completing short assignments then the length and complexity of tasks should gradually increase. Furthermore, teachers should avoid repetitive tasks.

### ➤ **Positive Directions**

Phrases such as 'How many times have I asked you to show me your book!' should be replaced with 'Can you please show me your maths book'. Always say things as if you are giving them for the first time, in a calm and polite manner. Children with AD/HD respond best when being told what to do, rather than being told what not to do. Being told 'don't do....' can put ideas into the child's head or may just leave the child wondering what he should be doing instead.

### ➤ **Building Self-Esteem**

There is substantial evidence demonstrating that a pupil's level of achievement is affected enormously by how the child feels about him/herself. Self-esteem is positively correlated with achievement. Many children with AD/HD have a very poor self-image as they do not achieve often in comparison with their peers. As a result they often feel like failures and/or incompetent. Teachers and parents, however, have the power to improve a child's self-esteem. They can achieve this by praising every effort made; giving them opportunities to take on responsibilities (assigning them to be a school prefect); encouraging them to be

the spotlight in an activity that they are good at such as swimming, art work and encouraging them to help others in areas that they feel confident (Fiore, Becker & Nero, 1993; Miller, 2004, Alban-Metcalf & Alban-Metcalf, 2001).

### ➤ **Homework**

Developing a reward system for homework completion in liaison with the teacher is recommended, as completing tasks independently can be very difficult for a child with AD/HD. Teachers need to ask children with AD/HD to check in their school bags for their homework. They often do not submit their homework even though they have done it because they did not pay attention when asked to turn it in. Teachers should allow children with AD/HD to present knowledge through tape and the computer processor if it helps them to better sequence or concentrate their ideas (Pentecost, 2000; Greenbaum & Markel, 2001).

### ➤ **Home school links**

Teachers should work in partnership with parents for effective and consistent programmes to be followed both at school and home. Therefore there must be an open line of communication between the two for the benefit of the child. Teachers should inform parents frequently on their child's progress and difficulties (Greenbaum & Markel, 2001; Flick, 1998).

For further information on how to successfully teach children with AD/HD please see the 'ADD-ADHD: A Guide for Teachers'.

## **8.2 Home**

Successfully parenting a child with AD/HD requires special expertise. The first step requires parents to understand the nature of their child's AD/HD. Secondly it is essential that parents learn to distinguish which behaviours the child is unable to control and when their child is unwilling to control their behaviour. Differentiating the above behaviours makes life easier at home and elsewhere. Parents will know when bad behaviour is, a function of AD/HD and when it is simply naughtiness. This in turn 'allows' the parents to constructively develop their child's weak areas (Pentecost, 2000; Greenbaum & Markel, 2001; Flick, 1998). For further information on home behaviour management please see the 'ADD-ADHD: A Guide for Parents'.

### 8.3 Medication

The use of medication for treating AD/HD is not new; it began over 50 years ago. Stimulant medication was first used in 1937, however, it was used to a larger degree starting in around 1957 when methylphenidate (Ritalin) was approved. Controversy still exists regarding the use of medication for the treatment of AD/HD symptoms; some consider these drugs are addictive and dangerous while others argue that the social and educational advantages of medication outweigh any disadvantages (Flick, 1998).

For many children with AD/HD, medication is an important part of treatment. Medication seeks to enhance normal brain function, treating the core symptoms of inattention, hyperactivity and impulsivity by correcting brain dysfunction. This in turn increases enthusiasm to learn, maintains self-esteem and improves interpersonal relationships making home and school a secure and nurturing environment (Alban-Metcalfe & Alban-Metcalfe, 2001; Flick, 1998; O'Regan, 2002).

Stimulants are quick acting, beginning to work in about ½ hour and are effective for about 4 hours. These are usually given in two to three doses a day. Other types of medications can last for 12 hours requiring a once a day dose. It is suggested that medication is only taken during school hours, as this is the time that student needs to be focused. However, if there are persistent problems in behaviour medication could be given throughout the week (Greenbaum & Markel, 2001).

According to research children who are treated with stimulants have improved in academic performance; concentration; self-esteem; working memory; aggression and forming better peer relationships (O'Regan, 2002; Alban-Metcalfe & Alban-Metcalfe, 2001).

Side effects are infrequent and can usually be avoided. The most common side-effects include: stunted growth; itchy skin; sleeplessness; reduction in appetite; abdominal pain/headaches; sleep difficulties; rebound effects when the medication wears off at the end of the day, such as increase hyperactivity; and tics which may be controlled by additional medication (Jones, 2000; Alban-Metcalfe & Alban-Metcalfe, 2001).

According to Alban-Metcalfe & Alban-Metcalfe (2001), there is no evidence that indicates addiction to, or substance abuse of stimulant medication by AD/HD individuals.

Medication should not be considered as bringing about a cure but rather as controlling a dysfunction. Medication should be considered as part of an effective treatment in combination with educational programmes, behaviour modification and counselling strategies (Alban-Metcalfe & Alban-Metcalfe, 2001; Flick, 1998; O'Regan, 2002).

### 8.4 Other Therapies

Families with children with AD/HD are likely to suffer from ongoing stress that is beyond the realm of normal day to day experience. It is therefore essential that AD/HD is viewed in the context of the family. Family therapy addresses the impact of AD/HD on all family members; parents, siblings and the child with AD/HD. Educating and treating all members of the family system promotes family wellness (Wodrich, 1994; Flick, 1998).

Where children with AD/HD have other associated problems, co-morbid disorders such as impaired motor co-ordination, occupational therapy assessment is required to identify specific types of exercises and instructions to improve these problems. Similarly speech and language therapy may be required to help children with AD/HD that are late in the onset of talking and have other difficulties in speech (O'Regan, 2002).

## Conclusion

A combination of strategies is required if optimal management of the disorder is to be achieved. This includes collaborative work between healthcare professionals, educational professionals and the parents of children with AD/HD.

#### Reference:

1. The Special Education Department in Cyprus supports the notion of inclusive education. "More efforts have to be made for developing the inclusive school (school for all) where child centred approaches are more appropriate for the satisfaction of the needs of all children, including those with special needs" (Ministry of Education & Culture, 1996 p.58).

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