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ATTENTION DEFICIT HYPERACTIVITY DISORDER

Contents

INTRODUCTION

Attention Deficit Hyperactivity Disorder (abbreviated as ADHD) is the subject of this information packet. This material is intended to be used as a summary or overview, while also giving ideas about where to obtain more information for your child, family member, or yourself. This overview is written with the parent in mind but may also be useful for adolescents, teachers, counselors, doctors, and other adults who have questions regarding ADHD. The materials reflect my perspective based on experience, training and includes information I have gathered from many newsletters, support groups, medical and psychological journals, textbooks, information books, families and patients. At the outset, I would like to give credit and thanks to all of these sources.

THE DIAGNOSIS

Attention Deficit Hyperactivity Disorder has been given many different names over the years. This has reflected the understanding and perspective of clinicians at those times.
Currently, Attention Deficit Hyperactivity Disorder is divided into three subtypes:

1) **ADHD Inattentive Type**

Primary symptoms are related to attention difficulties. Hyperactivity (physical) and impulsivity are not significant. Commonly referred to as ADD.

2) **ADHD Hyperactive/Impulsive Type**

Primary symptoms are physical hyperactivity and impulse control problems, rather than attention span difficulties

3) **ADHD Combined Type**

Both symptoms of inattention and hyperactivity/impulsivity are prominent.

We also include a **two more subtypes called ADHD Other Specified or Unspecified** or, as I often call it, Atypical ADHD. This subtype refers to patients with less typical ADHD symptoms who often have even clearer and perhaps more severe organic/biologic symptoms such as more Autism, brain damage, intellectual disability, seizure disorder (epilepsy), or other significant associated medical conditions.

DIFFERENTIAL DIAGNOSIS

The concept of differential diagnosis refers to considering the different conditions that may cause the same set of problems or symptoms (behaviors, physical findings, etc.) that may look like but not actually be ADHD. In other words, it is important to always think about what else may cause this set of behaviors that are referred to as ADHD, besides ADHD. Certain medical or neurologic or other psychiatric conditions, such as hyperthyroidism, medication side-effects, anxiety disorders, post-traumatic stress, depression, and oppositional behaviors, may look like but not actually be ADHD.

ADHD may have other medical or psychiatric or psychological conditions that accompany it (occur at the same time). These can include anxiety disorders, Tourette's Disorder (tics), depression, post traumatic stress difficulties, behavioral problems, learning difficulties, oppositional, conduct, and/ or substance use etc. The most common condition associated with ADHD is a learning disorder (about 50 percent, or half, of all persons with ADHD will also have a learning disorder).

DIAGNOSTIC CRITERIA

The DSM-5 (Diagnostic and Statistical Manual of mental disorders, Fifth edition, published by the American Psychiatric Association May 2013) is the official manual that provides a description of each mental disorder (psychiatric diagnosis) and provides a set of criteria (signs and symptoms which should be present to make the diagnosis). For ADHD, these diagnostic criteria are as follows:

A. Either (1) or (2):

(1) six (or more) of the following symptoms of **Inattention**
have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

(a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities

(b often has difficulty sustaining attention in tasks or play activities

(c) often does not seem to listen when spoken to directly

(d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)

(e) often has difficulty organizing tasks and activities

(f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)

(g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)

(h) is often easily distracted by extraneous stimuli

(i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

(a) often fidgets with hands or feet or squirms in seat
(b) often leaves seat in classroom or in other situations in which remaining seated is expected
(c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
(d) often has difficulty playing or engaging in leisure activities quietly
(e) is often "on the go" or often acts as if "driven by a motor"
(f) often talks excessively

Impulsivity

(g) often blurts out answers before questions have been completed
(h) often has difficulty awaiting turn
(i) often interrupts or intrudes on others (e.g., butts into conversations or games

B. Hyperactive-impulsive or inattentive symptoms that caused impairment were present before age twelve years (previous criteria required before 7 years old).
C. Impairment from the symptoms is present in two or more settings (e.g., at school, work, activities, with friends or relatives, and/or at home).
D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
E. The symptoms do not occur exclusively during the course Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, substance disorder, or a Personality Disorder).

UTAH CRITERIA FOR ADULT ADHD

I. CHILDHOOD CHARACTERISTICS

A history consistent with ADHD. The following are our diagnostic criteria for ADHD in childhood:

a) Narrow Criteria (DSM-IV)

That the individual meet DSM-IV criteria for ADHD in childhood.

b) Broad Criteria

Both characteristics 1 and 2, and at least one characteristic from 3 through 6.

1) Hyperactivity: More active than other children, unable to sit still, fidgetiness, restlessness, always on the go, talking excessively
2) Attention deficits: Sometimes described as having a "short attention span," distractibility, unable to finish school work
3) Behavior problems in school
4) Impulsivity
5) Over excitability
6) Temper outbursts

c) Parents' Rating Scale

(Conners Abbreviated Rating Scale) Although not necessary for diagnosis, a score of 12 or greater places the patient in the 95th percentile of childhood "hyperactivity".

II. ADULT CHARACTERISTICS

a) Motor Hyperactivity

Manifested by restlessness, inability to relax; "nervousness" (meaning inability to settle down-not anticipatory anxiety); inability to persist in sedentary activities (e.g., watching movies, TV, reading the newspaper) always on the go, dysphoric when inactive

b) Attention deficits

Manifested by an inability to keep one's mind on conversations; by distractibility (incapacity to filter out extraneous stimuli); by difficulty keeping one's mind on reading materials or tasks ("mind frequently somewhere else"); by frequent "forgetfulness"; by often losing or misplacing things; by forgetting appointments, plans, car keys, purse, etc.

c) Affective lability

Usually described as antedating adolescence and in some instances as far back as the patient can remember. Manifested by definite shifts from a normal mood to depression or mild euphoria or-more often-excitement; depression described as being "down," "bored" or "discontented"; anhedonia not present; mood shifts usually last hours to at most a few days and are present without significant physiological concomitants; mood shifts may occur spontaneously or be reactive

d) Hot temper, explosive short-lived out bursts

A hot temper, "short fuse," "low boiling point;" outburst usually followed by quickly calming down. Subjects report they may have transient loss of control and be frightened by their own behavior; easily provoked or constant irritability; temper problems interfere with personal relationships

e) Emotional overreactivity

Subjects cannot take ordinary stresses in stride and react excessively or inappropriately with depression, confusion, uncertainty, anxiety or anger; emotional responses interfere with appropriate problem-solving; experience repeated crises in dealing with routine life stresses; describing themselves as easily "hassled" or "stressed out"

f) Disorganization, inability to complete tasks

A lack of organization in performing on the job, running a household, or performing school work; tasks are frequently not completed; the subject switches from one task to another in haphazard fashion; disorganization in activities, problem solving, organizing time; "lack of stick-to-it-iveness"

g) Impulsivity

Minor manifestations include talking before thinking things through; interrupting others' conversations; impatience (e.g., while driving); impulse buying. Major manifestations may be similar to those seen in mania and antisocial personality disorder and include poor occupational performance; abrupt initiation or termination of relationships (e.g., multiple marriages, separations, divorces); excessive involvement in pleasurable activities without recognizing risks of painful consequences (e.g., buying sprees, foolish business investments, reckless driving). Subjects make decisions quickly and easily without reflection, often on the basis of insufficient information, to their own disadvantage; inability to delay acting without experiencing discomfort.

h) Associated features

Marital instability; academic and vocational success less than expected on the basis of intelligence and education; alcohol or drug abuse; atypical responses to psychoactive medication; family histories of ADHD in childhood; antisocial personality disorder

source: Wender, P.H.

SPECIFIC LEARNING DISORDERS

Please note the DSM-5 includes 3 types of learning disorders – Reading, Written Expression, and Mathematics (each with subtypes) specified and grouped under the umbrella of Specific Learning Disorder. These can occur with or without ADHD. Learning Disorders occur in at least half of all persons with Attention Deficit Hyperactivity Disorder. The most common learning disorder is in language (reading and writing) which is often referred to as Dyslexia. The second most common area of learning disorder is in arithmetic. This is a complex subject

but can be summarized as follows: Learning disorders may occur in the input phase (as information is received by a person's senses and brought into the brain for processing); or during the processing phase (as information received must be analyzed, categorized, or otherwise processed in the brain before the person can then put the information to use); or in the output phase (as information that has been received and processed is next being transmitted to others--such as by writing, speaking, using numbers, etc.). Learning disorders can occur in any one, two, or all three of these phases of handling information--intake, processing and output.

It is very important to remember that Learning Disability is basically a legal/educational label based on I.D.E.A. (the federal law governing Special Education) and Learning Disorder is a medical/psychiatric/psychological diagnosis. I use learning difficulty to indicate a learning problem that does not necessarily meet criteria for "Disorder" or "Disability." Each school district decides the threshold for labeling a child with a Learning Disability (or Emotional Disability, etc) and therefore providing special education services. It is thus possible for a child, adolescent, or adult to have a Learning difficulty or Disorder but not qualify for the label of Learning Disability. This is important in the area of eligibility for services. If eligible for special education an Individualized Educational Plan (I.E.P.) is developed by designated school staff along with family input/approval as a team.

In addition to the conditions above that can accompany ADHD, there are some conditions which are often complications (develop after and because of) ADHD. These can include oppositional defiant behaviors, conduct disorder, antisocial personality in adults, substance abuse, attachment (relationship) disorder, anxiety, and/or depression. Each of these also occur without ADHD.

MAKING THE DIAGNOSIS

As you can see from the above, ADHD is often diagnosed based on meeting at least the minimum criteria for ADHD from DSM-5. It is important to recognize additional perspectives and sources of information that are often very important in settling upon a diagnosis of ADHD. Psychological testing is often useful. The WISC (an IQ test - Wechsler Intelligence Scale for Children) and the Woodcock-Johnson (an achievement and learning styles test - WJ) or WIAT (Weschler Individual Achievement Test) are often very helpful in diagnosing ADHD and learning difficulties in children aged roughly five to sixteen. The WPPSI (Wechsler Preschool and Primary Scale of Intelligence) can be used before age six. The WAIS (Wechsler Adult Intelligence Scale) and also the Woodcock-Johnson can be used after age sixteen. Psychological testing is more difficult and less definitive before the age of five. Certain rating scales such as the Connors, Vanderbilt, or SNAP can also be very useful in clarifying the diagnosis. These scales can be used in both the home and school setting to help provide information as medicine is decided upon and adjusted. Continuous Performance Task Tests (CPT) using a computer, can also be used to help clarify the diagnosis of ADHD. Observation of the child or adolescent's behavior in school and non-school settings is often quite helpful. Family history is also very helpful.

Making the diagnosis for adults and preschoolers is more difficult. By reading the diagnostic criteria, you can see that many of the features are described in terms most relevant for elementary, middle school, and less so, high school age groups. For adults, past history and data regarding school experiences and testing is often crucial (along with current and past functioning and family history).

ADHD is most commonly diagnosed at roughly the age of eight, and is diagnosed up to four times more often in boys than in girls. In the past, ADHD has been primarily seen as a condition shown by prominent physical hyperactivity and impulse control problems. Although

this is now referred to as ADHD Hyperactive/Impulsive type, this type can and does occur in girls, although less often than in boys. The hyperactive/impulsive type of ADHD can occur in adolescents and adults but the hyperactivity usually lessens with age. Thus, many girls (and some boys) who primarily manifest inattentive symptoms are too often missed. It is especially important to not miss the quiet, passive "spaced out" siblings or other relatives (often female) of "hyperactive" boys who may actually have ADHD Inattentive Type. The actual frequency of ADHD of all types may well be closer to the same in both sexes.
ADHD is more difficult to diagnose in preschool age children. This is partly because at this young age a wider range of behavior is expectable. Attention span normally increases with age, as does impulse control and a lessening of physical hyperactivity. Additionally, certain parenting styles and cultural norms vary more markedly in this age group. However, ADHD, especially of the hyperactive impulsive type, can show up at the ages of three, four, five, and even occasionally before three. Medication treatment is often less helpful and is less researched in children under five or six. However, other interventions are often worthwhile. The diagnosis of ADHD will become clearer with time, with school involvement, and with the testing that becomes more possible with the elementary age group.

INCIDENCE/FREQUENCY
Five to ten percent of school age children have ADHD. The percentage drops in adolescence and drops further in adulthood.

FAMILY HISTORY
Attention Deficit Hyperactivity Disorder is a biologically based central nervous system abnormality that runs in families and is often inherited/genetic. Learning disorders also run in families.
Like many other medical and psychiatric conditions, ADHD can often be more clearly diagnosed when the family history is well known. It is not unusual for parents to come to treatment or bring other siblings or relatives to treatment having recognized ADHD in themselves or relatives only after their child was diagnosed with ADHD. Tourette's Disorder, and for that matter, depression, anxiety, substance abuse, Schizophrenia, Bipolar (manic-depression) Disorder, and other mental disorders run in families just like other medical disorders do.

PROGNOSIS, OUTCOME
ADHD can be mild, moderate or severe. Learning disorders may also be mild, moderate or severe. There may be associated conditions such as tics, depression, anxiety, learning difficulties, oppositional behaviors, substance misuse, or there may not. The significance of ADHD in a given youngster will depend upon many factors such as the severity of the disorder for that child, the youth's age, the effectiveness and choice of treatments used, etc. Also key is the ability of that youngster's family, school, and even that youngster's ability to adjust to his/her current developmental needs and to what is expected of him/her. In the past, ADHD children, adolescents and adults have been seen as "bad kids," "underachievers," "lazy," "unmotivated." While these behavioral difficulties can certainly occur with or without ADHD, it is often useful to evaluate these youngsters to ensure ADHD or learning difficulties are not being missed.
Children, adolescents and adults can have ADHD without having school performance or behavior suffer. Some youngsters who are bright and have ADHD will function at or even above grade level, despite the condition. Treatment may still assist these individuals in working closer to their potential. The inattentive type of ADHD is often not associated with the more disruptive behavioral problems that are more typical for the hyperactive impulsive

type ADHD. Thus, inattentive ADHD youngsters may not come to the awareness of teachers or their family and may quietly continue to perform well below their actual abilities without treatment.

Physical hyperactivity symptoms greatly lessen around puberty in about half of children with ADHD hyperactive type. Of those with continuing hyperactivity symptoms in adolescence, about half of these will no longer have hyperactivity symptoms in adulthood. Thus, only about 25 percent of hyperactive children will have physical hyperactivity symptoms in adulthood. However, the attention deficit and any associated learning difficulties or problems with distractibility will often linger into adulthood. Many people with ADHD will learn either with treatment or through "the school of hard knocks" to deal with these lingering symptoms reasonably well. However, treatment can be helpful in many of these adults.
Five to ten percent of school age children have ADHD. About one-quarter of persons with ADHD have later difficulties with Conduct Disorder (delinquency), or Antisocial Personality (adult criminal behavior), and/or substance abuse. Difficulties with job performance, driving, money manangement, relationships, depression, and/or anxiety may also occur.

BASIC MEDICAL PRINCIPLES
Every child, adolescent and adult being considered for the diagnosis of ADHD should have at some time a thorough medical history and physical examination by their physician. This may include hearing and vision tests, as well as screening laboratory tests. Evaluation by a psychiatrist, psychologist, developmental/behavioral pediatrician, or other therapists experienced in working with ADHD is important whenever ADHD is considered. Psychological and educational testing are often useful. An EKG or Echocardiogram may be wise if the patient has heart problems or family history includes arrhythmias or sudden cardiac death before the age of forty.
In the past, ADHD was seen as primarily a school related difficulty. With the fuller understanding that ADHD is a biologically based central nervous system dysfunction that is present 365 days a year, twenty-four hours a day, the four-point treatment plan for ADHD (see below) may be useful throughout the year for the full range of a person's activities. The use of a medication may thus be advisable every day of the year for many persons with ADHD (remember though that medicine is only one element of a four-point treatment plan and what treatment component is most important for any one person will vary). Some medicines (imipramine, Wellbutrin, guanfacine, Strattera, etc.) only work when given seven days per week. Stimulants (methylphenidate, Adderall, Vyvanse, Concerta, etc) can be given on only school days for those who only have need for medicine for school or whose appetite decrease is enough to cause concern about weight and even growth. The key is to individualize the treatment program to each youngster (or adult), family, and situation.

Medication follow-up appointments are needed to adjust dosage, change medications, and monitor both response and side-effect potential. Stimulant ADHD medicines require a handwritten prescription; no refills or call in refills are allowed. The question of whether or not there is still need to continue medicine should be asked at least yearly.
Many people feel that "sugar" increases "hyperactivity" in both youth who have and do not have ADHD. Research has not shown this effect. There is a similar lack of evidence that food dyes or food allergies cause or worsen ADHD. Nonetheless, a reasonable, if not strict, encouragement of a healthy, nutritious diet is a good idea for all. There are many "alternative treatments" for ADHD as there are for all areas of physical and mental/behavioral health. These have not been shown to be consistently reliable or helpful, but they typically do not interfere or conflict with the treatment plan suggested below. Fish oil Omega 3 fatty acids

may help hyperactivity somewhat. It is best to let your doctor/therapist know if there are other approaches you are trying.

INCOMPLETE TASKS and EXECUTIVE FUNCTION DISORDER

Disorganization and poor time management skills are a frequent feature of ADHD. Follow-through and carrying out plans successfully is often a problem for persons of all ages with ADHD. This frequently shows up in youngsters as not getting schoolwork/homework done or turned in. Such children and adolescents often suffer in their grades, not necessarily due to lack of understanding the material but rather due to failure to complete or turn in assignments. Most remarkable to me is the frequency with which ADHD children and adolescents may do (fully or partially) their assignments but fail to turn them in or lose them. When this occurs repeatedly, evaluation for ADHD is wise. In these situations, a plan should be considered which would draw upon the parents, school, and tutor/therapist (if present) to deal proactively with home/school communication regarding assignments and behavior, time management and task completion. This may be part of a 504 Accommodation plan. Similar trouble following multi-step directions or completing tasks is often seen in ADHD at all ages and settings (chores, home routines, sports, jobs, etc.). The ability to conceptualize a project, break it into its pieces, do each piece, bring them all together into a unified whole, and turn it in on time is known as executive function. This ability is performed by the frontal lobe of the brain's cortex (behind the forehead) and develops late in people with ADHD. This is an important area of organization skills to assist, develop, teach, and work on. Medicine does not directly help this but may partly assist indirectly.

TOURETTE'S DISORDER

Tourette's Disorder is also a biologically based central nervous system dysfunction that often (but not always) includes or starts with ADHD symptoms.

A diagnosis of Tourette's requires the presence of both motor (muscle movement) and vocal (sound) tics. A tic is a sudden rapid recurrent non-rhythmic, often repeated motor/muscle movement or vocalization/sound. The most common tics are usually eye-blinking and other facial or less often head, neck, or shoulder movements. Sounds may be throat-clearing, coughing, or other sounds described as "humming," "barking," "honking," etc. These are referred to as simple tics. Complex tics may include more involved patterns like touching, spitting, picking, and other behaviors. Tourette's Disorder can best be understood as a combination that must include motor and vocal tics, and often includes ADHD (which often has associated learning difficulties) and often include significant anxiety symptoms. The anxiety symptoms may include part or the full features of Obsessive-Compulsive Disorder (OCD). DSM 5 also gives the diagnostic criteria for Tourette's, OCD and other mental disorders.

The treatment of the ADHD of Tourette's is similar to the principles given below. However, stimulant medications (methylphenidate, Ritalin, Adderall, Vyvanse, Concerta) are less often given because of their tendency to increase or bring out tics. Decongestants can also increase tics. Otherwise, the four-point treatment plan is similar. Additional treatment interventions and specific medications for specific Tourette difficulties may also be needed (clonidine or guanfacine, Haldol, pimozide (Orap), risperidone for tics, an SSRI—citalopram, fluoxetine (Prozac), sertraline (Zoloft), or clomipramine (Anafranil) for anxiety/OCD, etc.).

TREATMENT

In general, a four-part plan for treatment of Attention Deficit Hyperactivity Disorder is recommended. The specific and key elements of this plan will vary in importance from person

to person. Not all individuals with ADHD will need all four elements of intervention (or even any at all), at any particular time during their life.

1) **Individual Therapy**
Self-esteem and impulse control are often the primary targets in working individually with someone with ADHD. Life overall, not just school or work, is often more difficult for those who have ADHD. They often are seen as or feel "dumb," "lazy" or "unmotivated" even when their intellectual abilities are average or above, because of the attention/distractibility problems or associated learning disorders. Their difficulties in school with their peers, families, and more frequently being in behavioral trouble or a cause of concern can lead to decreased self-esteem, discouragement, or associated depression. Alcohol or drugs can be abused, sometimes as "self-medication." Therapy practice to decrease impulsive behaviors, such as teaching "stop and think" techniques, using self-time-outs, problem-solving steps, etc., is often important. These "cognitive behavior" approaches attempt to teach skills the person with ADHD can use in whatever setting he/she needs it. The younger the age, the more important it is to work through the parents toward these goals. Therapists familiar with ADHD and able to work with the youngster, family and school can be invaluable.

2) **Family Therapy**
It is more difficult to parent a youngster with ADHD. Parents need support, respite (breaks), and education regarding ADHD and learning difficulties in order to be of greater help for their children. Certain parenting styles are more likely to be of help and others more likely to increase conflict, oppositional behaviors or difficulties with self-esteem, etc. Because of the genetic pattern, a parent may also have ADHD. There are a number of support groups and readings available to parents. It is often helpful for parents to understand the biologic/genetic basis of the disorder. The key is helping the youngster to cope with the world as it is, to be responsible for his/her actions, while also attempting to create a relatively supportive environment that is aware of the child's actual developmental level, limitations, and abilities. Youngsters with ADHD may have more difficulty going through the usual developmental stages and parents may need to provide and receive additional outside help and support.

3) **School/Work**
Children with ADHD often benefit from having educational testing often including WISC and Woodcock-Johnson testing at some point, often early, in their school career, either through the school or privately. As mentioned above, this helps with both making the diagnosis of ADHD and learning difficulties and guiding teaching strategies. This will help clarify whether the child qualifies for special education, 504 Accommodation, and if so, what services might be most helpful. The parents' involvement in this process is crucial. As mentioned above, setting up positive home-school communication, especially with homework and task completion and organization (Executive Function) issues is often helpful. 504 Accommodation provides a non-special education means for the school to make allowances and develop plans with the family to maximize the child's success. Children and adolescents with ADHD may qualify for this 504 accommodation. Families and school staff assist youth best when this work together is done as a team and not as opponents.

The transition from elementary to middle school and again from middle school to high school is often especially difficult for kids with ADHD. Do not take this transition lightly. At these times, the change from one classroom and teacher to several of each and to a setting of increasing freedom, increased distractions, decreased home and school communication, and decreasing structure can be disastrous for a youth with ADHD. Having one key school staff

person for the family to communicate with, rather than each of six or more teachers, is very helpful. At all ages, the suitability of a given teacher/youth match (see below), having an advocate at the school with whom the family can positively communicate, having an involved and knowledgeable family, having smaller and less distracting/less stimulating classrooms and having lower student to teacher ratios can each be quite helpful. Some private or charter schools or even home school situations can be very helpful in facilitating an environment more conducive to success.
In the absence of an ideal school setting (or even along with) adding a tutor who can help with certain difficult subjects, organization/time management skill development, communication between school and home is often helpful. A therapist knowledgeable about the needs of youngsters with ADHD can help greatly in some of these areas, as well. These ideas, perhaps along with individual and family treatment, can help at all ages and especially the often difficult change from elementary to middle and middle school to high school.
Some youngsters with ADHD and especially some of those with associated learning disorders may find going on to college or even completion of traditional high school problematic.

Youngsters (and adults) with ADHD often have other intellectual, nonverbal, mechanical, or performance skills and talents outside of those traditionally expected in college-bound youngsters, and may benefit greatly from participation in vocational training or other skill development in anticipation of work success. This is a ripe area for specific guidance counseling at and outside of school. Adults with ADHD should also consider the suitability of their work setting and adjustments they can make to increase success.

4) **Medication**
Medication is mentioned fourth in this four-part treatment plan because it is important not to get the idea that medication is the only treatment for Attention Deficit Hyperactivity Disorder. Medication is dramatically helpful for 25% of people with ADHD. 60-65% of the time medication is significantly but partially helpful, clearly worthwhile along with other elements of the treatment plan being also or even more crucial. Up to 15 percent of the time, medications are not helpful, side-effects outweigh benefits, medication is too inconvenient to continue, or medication is simply not needed. (See the attached medication summary chart.) Please refer to my medication charts and medical memo summary for medication, details, benefits, and possible side effects.

5) **Additional or Alternative Treatments**
Some youth with ADHD benefit from the exercise, self-esteem, and discipline taught in some martial arts programs. Many youth find regular informal or team exercise/sports very helpful for calming, releasing energy, etc., as well as fitness. Biofeedback (also known as Neurofeedback) may also be beneficial to enhance self-control.
Sensory integration treatment offered by Occupational or Physical Therapists may help some youth with coordination, tactile defensiveness or related sensory, motor, handwriting, or coordination difficulties.
A nutritious diet is always advisable. Excess intake of sweets (sucrose) in a "junk food" diet make most of us feel more irritable or labile. So far, controlled studies in peer reviewed broadly respected journals do **not** show clear benefit strictly from restricting sugar, food coloring, food additives, etc. Nonetheless, there may be exceptions.

Medicines do not work directly. They work on neurotransmitters made in sleep based on precursors from our food eaten the day before. Healthy foods and optimal sleep enhanced by exercise are the basic building blocks of health and mental health.

Vitamins, herbs, and other supplements are touted by some as effective treatments for ADHD. So far, studies in generally respected journals do not support these claims except perhaps to some degree for hyperactivity via Omega 3 fatty acids (fish oil). Although I do not typically prescribe supplements, I am happy to work with patients and families who do try such alternatives.

Extensive studies have shown that the neurologic processing problem of dyslexia does **not** lie in either the hearing or vision systems. Therapies that claim to work by correcting visual or hearing problems to treat dyslexia are not scientifically accepted. Dyslexia is a linguistic processing phonologic error in language areas of the brain.

HAVE YOU TRIED THESE INTERVENTIONS AND MODIFICATIONS?

ENVIRONMENT

€ Seating up front, close to teacher
€ Giving student extra workspace
€ Seating away from distractions (ie. the door, learning centers, noisy heaters/air conditioning units, high traffic areas)
€ Limiting visual distractions & clutter
€ Designing the room to accommodate different learning styles
€ Seating among well-focused students
€ Use of study carrels or privacy boards during seatwork and test-taking
€ Models and visual displays for student reference
€ Appropriate sized furniture

ORGANIZATION

€ Assignments always written on board / presented visually as well as given orally
€ Assignment calendar used daily - with teacher monitoring & expectation of usage
€ Teacher, aide, or student buddy to assist with recording of assignments
€ End of day clarification of assignments/reminder to students by teacher
€ End of day check by teacher/aide for expected books and materials to take home
€ Providing students with handouts that are already 3-hole punched
€ Student requirement to have notebook, dividers, plastic pouch with teacher checks
€ Color-coding books, notebooks, materials
€ 'Things to Do' list taped to desk
€ Breaking down long assignments into smaller increments
€ Limit the amount of materials/clutter on the student's desk

INCREASED COMMUNICATION & TEAMWORK

€ Daily or weekly home/school communication to be signed by parents (indicating behavior and work completion)
€ Increased phone contact with parents remembering to share positive observations as well as concerns
€ More frequent conferences/planning meetings with parents trying to build a partnership on behalf of student
€ Involving your site consultation/student study team
€ Buddy up with another teacher for discipline, team-teaching, joint activities
€ Let student know you are interested in helping him/her; dialogue with student about their needs, encourage open communication

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€ Let student know you are interested in helping him/her; dialogue with student about their needs, encourage open communication
€ More student participation in projects involving creative expression (ie. art, music, drama, dance)
€ Allowing and encouraging the use of computer, typewriter, word processor
€ Modified, shortened assignments
€ Accommodating written output difficulties by:
- note taking assistance
- allowing oral responses
- permitting student to dictate responses/someone else transcribes
- reducing written requirements
- allowing parents to initial homework after student has spent a specified amount of time on assignment
€ Extra one-to-one assistance (from teacher, aide, parent volunteer, cross-age tutor, student/peer buddy)
€ Have student repeat directions/instructions
€ Allow extra time for taking / completing tests
€ Alter type of examination (ie. true/false, short-answer, multiple choice, essay, demonstration, oral presentation, creative project)
€ Allow student to have tests read to time/her if needed
€ Provide student with color-coded, highlighted text
€ Provide student with outline or overview of lesson
€ Provide student with audio cassette of text
€ Use a variety of questioning techniques / allowing for more response opportunities
€ Allow student to use learning aids (ie. Franklin Speller, calculators, reading markers)
€ Provide handouts which are clean copies, easy to read
€ Have students read assignment in pairs

Rief, Sandra. How to Reach and Teach ADD/ADHD Children, Simon & Schuster
(from ChADD 7th Annual Congress)

CHOOSING A TEACHER FOR AN ADHD (including ADD) CHILD

Since children with ADHD receive most or all of their education in the regular classroom setting, the teaching style of classroom teachers is an important factor in the success of an ADHD child. Generally, principals make the decision about the placement of children in particular classrooms, but many principals are open to hearing the parent's requests, especially when those requests are based on the student's needs. Parents of ADHD children may wish to consult with the principal at the end of the school year concerning the placement of the child for the next year. During this meeting, the parents might want to discuss with the principal how their child reacts to various teaching techniques and styles. It is usually wise not to talk

about specific teachers, but instead to focus on the child's needs and the types of teaching strategies that work best. This information should help the principal decide which teacher on staff would be the most appropriate choice. In rural schools, where the child may have the same teacher for several years, the principal or lead teacher can sometimes work with the teacher to assist him or her in adjusting teaching techniques to better meet the needs of the ADHD student.
Children with ADHD vary greatly so it is difficult to generalize about the type of teacher who works best for them. However, there are some common characteristics of teachers who tend to serve ADHD children well, including the following:

€ An ability to provide structure in the classroom without being rigid
€ A willingness to ignore some irritating behaviors while concentrating on assisting a student with two or three necessary behavioral changes
€ A sense of humor
€ A tolerance for a wide range of abilities in the classroom
€ An ability to use a variety of teaching strategies
€ A belief in "second chances" or opportunities for students to redeem poor grades or earn additional credit
€ An ability to teach learning and organizational strategies along with academic content
€ A willingness to allow students several choices for how they
€ respond to an assignment (i.e., tape record a speech, build a model, draw a diagram, invent a game)
€ Generosity with praise and genuine interest in student
€ accomplishment, however, limited in scope
€ Self confidence
€ Firmness and consistency in discipline
€ A low-key approach to correction of behavior or classroom work.

On the other hand, students with ADHD generally do not do well with teachers who have these characteristics:
€ A commitment to invariably high standards for every activity in the classroom
€ A belief that most learning tasks can be accomplished in only one way
€ A habit of awarding zeros for work not completed or turned in on time
€ A tendency to change discipline approaches several times (i.e., go from a point system to student contracts and then to check marks on the board for misbehavior)
€ A tendency to withhold recess as a punishment
€ A tendency to react negatively to every infraction of classroom etiquette
€ An unwillingness to repeat directions more than once
€ A tendency to correct more often than to praise or validate
€ A tendency to admonish students in front of the whole class
€ A strong belief that Attention Deficit Disorder is not a "real" disabling condition
€ A strong preference for neatness
€ A concern for total control in the classroom

Not every teacher is going to be a perfect match for the child with ADHD, but as much as possible, it is helpful to try to place the student with ADHD in a classroom environment that provides both the structure and the flexibility that the child needs. Some advance planning with the principal is often the best way to assure that the classroom placement will be a success.