

Special Report on A.D.D. & Learning Challenges

Understanding Attention Deficit Disorder, its Diagnosis, Medications and their Side Affects, and an Effective Drug-Free Solution



Introduction

Sharper Minds® specializes in an essentially permanent drug-free solution for a variety of cognitive problems including Attention Deficit Disorder (ADD/ ADHD), dyslexia, learning disabilities, and more.

The methodology we use is a compilation of the best non-drug techniques used to treat ADD, ADHD, dyslexia and other learning challenges. Components of it have been developed, honed and successfully used on thousands of clients. Sharper Minds can provide effective guided therapy throughout the U.S. and Canada. Families wanting an evaluation or to begin training face-to-face are serviced via our Fort Worth, Texas location.

This special report was designed to provide the answers that many parents and professionals are looking for about ADD and its diagnosis, medications, their side affects and our program. For ease of reading, we have provided the information in Question and Answer format. If you are bottom-line-type person, just jump to the last section.

To reach us, call us toll free 1-866-HELP-A.D.D. (435-7233). We often are available 11 a.m. to 9 p.m. (Central time). Please leave a message if voicemail should pick up.

Understanding Attention Deficit Disorder and Medications

1. What is ADD ?
2. How does Sharper Minds define ADD?
3. What are the causes of ADD?
4. Why are researchers and doctors having a hard time defining and treating ADD?
5. Why are we seeing an epidemic of ADD?
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11. What are some common real-life behaviors that people call you about?
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1. What is ADD?

ADD or Attention Deficit Disorder is defined (according to Merriam-Webster Medical Dictionary) as "a syndrome of learning and behavioral problems that is not caused by any serious underlying physical or mental disorder and is characterized especially by difficulty in sustaining attention, by impulsive behavior (as is speaking out of turn) and unusually excessive activity."

ADD has been broadly defined by the American Psychiatric Association (APA) as any condition in which the degree to which a patient has trouble paying attention is greater than what is considered to be "normal". The APA has created a list of symptoms by which they suggest diagnosing the condition. According to their DSM IV diagnostic criteria, a diagnosis of ADHD (ADD) must meet the following guidelines:

The patient must often have either:

- six of these inattention symptoms:
- does not pay close attention to details or makes careless mistakes
- has difficulty sustaining attention in activities
- does not seem to listen when spoken to directly
- does not follow through on instructions and fails to finish duties
- has difficulty organizing tasks and activities
- avoids, dislikes, or is reluctant to do tasks requiring sustained mental effort.

- loses things necessary for tasks or activities
- is easily distracted
- is forgetful in daily activities

or six of the following hyperactivity or impulsiveness symptoms:

- fidgets with hands or feet or squirms in seat
- leaves seat in classroom or other times when remaining seated is expected
- inappropriately runs about or climbs excessively or, in older patients, feels restless
- has difficulty playing or taking part in leisure activities quietly
- is "on the go" or acts as if "driven by a motor"
- talks excessively
- blurts out answers before questions have been completed
- has difficulty awaiting turn
- interrupts or intrudes on others, such as butting into conversations or games

Generally, if a pre-teen child has 6 or more of the symptoms, then they are considered to be ADD. If a teen has 5 or more of the symptoms, they are considered to be ADD. If an adult has 4 or more of the symptoms, they may be considered to be ADD.

Being symptoms, naturally, there is a fair amount of subjectivity as to the severity in

Several symptoms of ADD are school environment driven.

displaying a symptom *vis* the intolerance or standards of the person (parent or teacher) who is exposed to the symptoms. **Symptomatically,**

nearly every two-year-old would automatically qualify as having ADD.

A Learning Disability (LD) is defined as "difficulty in learning a basic scholastic skill and especially reading, writing or arithmetic because of a psychological or organic disorder (as dyslexia or attention deficit disorder) that interferes with the learning process."

Dyslexia is defined as "a disturbance of the ability to read. Broadly: [a] disturbance of the ability to use language."

As you can see from the definitions given above, ADD and learning disabilities (to a

degree) are subjective diagnoses. By definition and in practical terms, they substantially overlap and are closely interrelated.

It should be noted that the symptoms listed in the APA's DSM-IV were created in part with the educational environment in mind. Note that a number of criteria are classroom behavior driven symptoms.

- “does not pay close attention to details or makes careless mistakes.
- “fidgets with hands or feet or squirms in seat.
- “leaves seat in classroom or other times when remaining seated is expected.
- “blurts out answers before questions have been completed.”

The National Institute of Mental Health (NIMH) states that “ADD frequently oc-

Various Types of Dyslexia Include:

- **Dysnemkinetic** (visual and memory related dyslexia) - Deficit in the ability to develop the necessary motor skills for writing symbols such as letters or numbers as the neural skills are not imprinted adequately in the memory of the brain.
- **Dysphonetic** (auditory dyslexia)- Deficit in the ability to correctly associate the sound of a given letter/letter combination and to differentiate between nuances of sounds.
- **Dyseidetic** - Deficit in the ability to recognize words as a whole and to pronounce them correctly.
- **Dysphoneidetic** - Deficit in the ability to correctly associate the sound of a given letter/letter combination within a word as a whole, and to pronounce them correctly.
- **Dysnemkinphonetic** - Deficit in the ability to develop the necessary motor skills for writing letters or numbers and in pronouncing the symbols correctly.
- **Dysnemkineidetic** - Deficit in the ability to develop the necessary motor skills for writing letters or numbers and in pronouncing the symbols correctly either by syllable or by the word in its entirety.
- **Dysnemkinphoneidetic** - Deficit in the ability to develop the necessary motor skills for writing letters or numbers and in pronouncing the symbols correctly either by syllable or by the word in its entirety.

curs in conjunction with other problems, such as depression and anxiety disorder, conduct disorder, drug abuse, or antisocial behavior." It is our opinion that often these are not only co-morbid factors, but can frequently be the RESULT of untreated and unaddressed neural wiring inadequacies manifesting as ADD, learning disabilities and dyslexia. In other words, the stress of cognitive dysfunctions creates a biochemical imbalance producing the co-morbid factors.

Medical insurance companies recognize ADD as a valid diagnosis and real condition and sometimes are willing to pay for treatment (generally the giving of psychostimulants). Unfortunately, most insurance companies are not willing to pay for treatment for a learning disability.

In reality the two conditions (ADD and learning disabilities) are so closely intertwined, (i.e. ~80% of children/adults that have ADD have learning or other cognitive problems), that for all intents and purposes, they are the same. In fact, based upon 15 years in this field, it is our conclusion that the Inattentive form of ADHD is really one or more of the forms of dyslexia.

But are the above broad definitions good ones? Does a symptomatic approach permit accurate diagnosis and treatment? If not, how should we define ADD so that we can truly diagnose the underlying conditions and thus treat it?

2. How does Sharper Minds define ADD?

We use two terms and definitions for ADD in our Centers. Firstly, we use the **generic** term ADD going along with the popular broad definition as mentioned in the previous section. However recognizing the inaccuracy of this term with its potential for misdiagnosis and treatment, we also use the term **True ADD**. True ADD we define as having an **irregular mental tempo** (i.e. the tempo at which the patient thinks or performs is erratic and irregular). There are bursts of thought with pauses or gaps during which distractions can slip in.

A simple, but not all encompassing test a parent can do at home is to place a sheet with the alphabet written out on it in front of their family member suspected of having ADD. Ask the child/adult to point to each letter, from Z to A (i.e. reverse order) and say the letters out loud. While they are reciting the letters in reverse order, the parent should record a series of hash marks in a line on a page, with the spaces between the hash marks denoting the interval between the family member saying the letters.

If the tempo with which they recite the letters is regular (Z... Y... X... W... V... U... T... S... R... Q... etc.), then it is unlikely that they have True ADD. They

probably have a problem with one or more other cognitive processes.

If the tempo is irregular, such as Z.... Y. .X .W.... V.... U..... T... S. R. Q... etc., then they either don't really know their alphabet (such as the case of a child in kindergarten or first grade), or they may have True ADD, which is usually in conjunction with other cognitive problems.

3. What are the causes of ADD-like behavior?

The symptoms such as impulsivity, distractibility, learning problems, trouble remembering and behavioral issues that are commonly labeled as ADD / ADHD can result from a variety of causes. **Study Table I on page 4, which is a fairly extensive list.**

The most common causes of ADD-like symptoms are lack of right-left brain integration, one or more of the various types of dyslexia and/or a significant problem with one or more of the key mental processes. Stanford University researchers in one report stated that there are 43 mental processes that a brain must have intact to function efficiently. Of these, 5 are the most critical. These include the ability to correctly discern and replicate:

1. Size
2. Shape
3. Position-in-space
4. Figure-ground, and
5. Directionality.

Of these, directionality is the most important. We'll look more at these processes later.

As should be evident, medications are not the answer for most of the aforementioned causes as well as those listed in the table.

In diagnosing ADD and its underlying cause(s), the diagnostic evaluation that one considers for a child or adult should do a thorough job of looking at the probability of many of the causes listed in the table. But it should especially focus in on the processes related to inadequate brain development. Anything else may be less than accurate or definitive.

Furthermore, it is important to ask an evaluating institute or professional, “If my child is diagnosed by your evaluation as having ADD, what kind of treatment or therapy do you offer?” If all they can offer is a drug-based solution, then they really don't have adequate resources to deal with your loved one and the evaluation will be primarily symptom-based. In other words, they don't go deep enough. Another question would be, “Of the children that you evaluate for ADD, how many do you diagnose with that condition?” If the answer is 100%, then the evaluating agency is not objective enough.

Let's look at why researchers and doctors are having a hard time defining and treating ADD.

4. Why are researchers and doctors having a hard time defining and treating ADD?

In an article entitled "Treatment of Attention Deficit Disorder Uncertain" carried by the Associated Press in November of 1998, the following quotes were made:



"Doctors still don't know the best way to treat or even diagnose attention deficit disorder in children even though more than a million children take powerful drugs to control their hyperactive behavior, according to the National Institutes of Health.

"Yet defining precisely what constitutes ADD is difficult, said Dr. Mark Vonnegut, a pediatrician and panel member from Quincy, Mass. 'The diagnosis is a mess,' Vonnegut said, 'but we all believe we are dealing with a serious core problem.' "

As you could tell from the table of potential causes, there are a myriad of causes of the behaviors and symptoms known as ADD. When one attempts to wrap them all in one all-encompassing definition with one common cause and one common treatment, one is predestined to failure. It would be like trying to find a common cause for all fevers. It's futile. Let's delve into this analogy a little deeper.

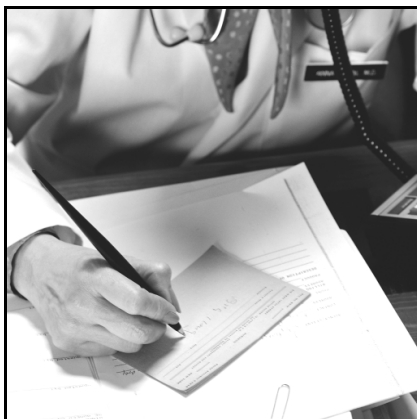
There are many causes of fever including, but not limited to

- Fever of unknown origin (requiring a systematic workup by the doctor)
- Infection – viral, bacterial, fungal
- Hormonal fluctuations – e.g. PMS, Menopause (hot flashes)

- Vascular/Collagen diseases – e.g. Sjorgren's disease
- Autoimmune illnesses – e.g. hypothyroidism, Gray's disease
- Head trauma – especially to the hypothalamus
- Malignancies – e.g. cancer
- Heat stroke
- Fictitious manifestations – such immediately after hot tub or warming blanket exposure, or smoking.

Each of these are naturally treated differently. They don't all neatly fit into one box. Sure, you can use aspirin, acetaminophen (Tylenol®), Advil® or another analgesic to reduce the temperature, but it still doesn't fix the real underlying cause. If you had chronic headaches, week-after-week, month-after-month, wouldn't you want to know the real cause, instead of just using Tylenol every day? Therefore the diagnostic process to determine the real cause of the fever is critical. Misdiagnosis can result in treatment with a less than desirable outcome.

Let's return to the subject of ADD. To do an adequate job of diagnosing the most likely cause(s) of ADD-like behavior takes time and a combination of tests. In the course of a busy medical practice, most doctors don't have the time nor the right combination of tests to do an adequate job. Subsequently, many simply observe the child for 5-10 minutes, ask the parent some questions, then pull out their pad and write out a prescription for Ritalin, Adderall, Dexedrine or other psychostimulant. If that doesn't work, they alter the dose or try another drug. They continue this cycle until the child's behavior is closer to what the parents or teachers want.



But is this procedure best? Are meds what are really best for the child? What if the child had auditory dyslexia more commonly known as Auditory Processing Disorder? What if the child had sensitivities or allergies to common foods such as wheat or dairy, beef or peanuts? What if there were neurotoxins irritating the brain causing hy-

peractive behavior? Is medicating the child the solution?

Are there better answers? Fortunately, the answer is YES!

5. Why are we seeing an epidemic of ADD?

One of the major reasons for the behaviors known as ADD is the lack of right-left brain integration. The two hemispheres of the brain must coordinate the signals sent by the eyes, the ears and the other senses. Absent good mental coordination, the person cannot perceive events as others do, and will often exhibit the symptoms known as ADD. Much of this coordination development of the brain hemispheres takes place during the first 12 months of life, especially as the child crawls, and then on as the child goes through the first 7 years of life.

Starting from the earliest precipitators:

- **Devolving Genetics.** Human knowledge is growing, but genetically, the gene pool is deteriorating, not evolving as evolutionists surmise. If a biological father carries the genes for dyslexia and the mom does not, the children are very likely to pick up on the father's genes and also have dyslexia and ditto if the mother has a dyslexia. In 70 to 80% of the families we see, genetics plays a predisposing role. That's one of the major reasons we recommend a whole-family approach.
- **Increased smoking, drinking and drug abuse among women.** This cause is likely the most common precipitator in adopted children. The "You've come a long way, Baby" slogan could really be effectively altered to be "You're hurting your baby, Baby." Smoking causes substantially lower oxygen content in the blood of the mom, and thus in the embryo or fetus. Smoking moms are literally suffocating their babies by exposing them to carbon monoxide in the smoke. Drugs and alcohol use, especially during the early months of pregnancy when most women aren't aware that they are even pregnant can cause enough damage to the developing fetal brain, that the child later will manifest the symptoms of ADD. The baby looks physically normal at delivery, often justifying to a rationalizing mom that she can continue to abuse drugs, use alcohol or smoke. She will often continue her behavior as she has additional children, only to have those babies also later manifest the symptoms of ADD. While we can substantially help these, they may take longer to get off of psychostimulants than others. Also if the father did drugs, smoked or

drank before impregnating the woman, his sperm may have been negatively altered, passing those deficiencies on to the baby.

- **Increased use of baby swings, walkers and playpens.** These can restrict a baby's movements and range of motion which are essential to good physical actions, especially crawling and thus neurological development. In general, these don't affect the majority of the population, but in those predis-

posed genetically, it can be a precipitator.

- **Encouraging a baby to walk too soon.** The longer the crawl time (with-in reason), the better for right-left brain coordination. It may be a bit of a status or ego booster for a parent to be able to state that one's baby walked at 8 months. Parents, however, should encourage babies to crawl until at least 11 months.
- **Increased emphasis on avoiding the**

sun. Sunshine is vital to proper Vitamin D levels. Yet to avoid skin cancer (a fairly low risk), most doctors recommend we use sunscreen and avoid the sun. These recommendations predominantly began around 1991, which is a significant correlative date as you will see in the next bulleted item. People work more in office buildings, cloistered and protected from the sun's healing rays and fresh air. Vitamin D levels are low in many people, esp.

Table I. Potential Causes of ADD and ADHD-like Behaviors

The symptoms such as impulsivity, distractibility, learning problems, trouble remembering, and behavioral issues that are commonly labeled as ADD / ADHD may result from a variety of causes. There may also be a combination of factors.

The Most Common Causes	Less Common Causes or Exacerbators	Least Common, Yet Possible Causes
<ul style="list-style-type: none"> • Lack of bilateral brain integration <ul style="list-style-type: none"> + Genetic predisposition related + Retained infantile reflexes, diminishing or skipping crawling phase of child's development + Excessively passive environment (little or no exercise or mental stimulation) + Sensory poor environment • One or more of the types of dyslexia <ul style="list-style-type: none"> + Auditory Dyslexia + Visual Dyslexia, Irlen Syndrome See text for additional types. • Problems with one or more of the key cognitive processes. The five most critical are size, shape, position-in-space, figure-ground and directionality. • Lack of ability to process, store and recall mental pictures • Irregular mental tempo (true ADD / ADHD) • Fetal Alcohol or Drug Syndrome • Thimerosal/Mercury toxicity – from injected childhood vaccinations (Thimerosal is an organomercurial used as a preservative) • Hypoxemia –lack of oxygen during pregnancy (tobacco related) or caused by trauma during delivery • Social stressors including domestic violence, divorce, marital instability, financial or family health challenges • Stimulants including caffeine and psychotropic medications • Mixed brain dominance 	<ul style="list-style-type: none"> • Food sensitivities or allergies to dairy products, eggs, meats, or wheat, a diet high in sugar or refined foods, or a vitamin or mineral deficiency • Unrealistic expectations of parents or teachers or other significant adults • Poor Parenting Styles including: overly controlling or inconsistent discipline, poorly defined and enforced rules, lack of adequate attention, fatherlessness, lack of accountable role modeling • Emotional trauma or abuse including abandonment, separation from parents, verbal abuse from classmates, friends, parents or teachers, death, severe illness or incapacity of a loved one, rejection • Personality conflicts with significant adults in life due to differences in brain quadrant, learning style, and extroversion/introversion preferences; or the speed of mental tempo • Behavior emulation of TV, movie or computer characters or misbehaving peers • Minor head trauma including sports injuries, concussions • Psychiatric disorders– depression, bi-polar, Obsessive-compulsive disorder (OCD), Post-traumatic stress disorder (PTSD), etc. 	<ul style="list-style-type: none"> • Physical Brain Trauma such as major head injury, stroke, surgery, meningitis • Physical or sexual abuse including rape • Infection-linked hyperactivity including bacteria, viruses, parasites and worms • Environmental Toxicity including solvents (glue sniffing), pesticides, exposure to heavy metals such as mercury (dental fillings), lead (lead paint flakes, tin/lead solder, hobbies or crafts or work clothes), manganese (petroleum products), cadmium (batteries) • Noxious gas exposure and /or poisoning from carbon monoxide, radon, or new house/school carpet / paint /vinyl outgassing or an overly insulated school or house (sick house/school syndrome) • Illicit drug use • Genetic syndromes including fragile X, Turners, muscular dystrophy, cystic fibrosis • Personal medical issues including asthma, diabetes, hypoglycemia, sickle cell anemia, thyroid disorders, seizures, uncorrected vision, hearing impairments, misalignment of the skull with the spine, Lyme Disease.

those with darker skin, which need more duration in the sunshine to produce the body's needed Vitamin D. Vitamin D levels in a pregnant woman are critical to the development of the infantile liver. Babies born during the winter months may have decreased liver function, are more likely to have higher bilirubin levels leading to jaundice in the newborn. Studies have shown that jaundice (and the weaker liver function) places the child at a high risk for cognitive disorders including ADHD, autism and learning disorders. Poor liver function also seems to correlate to a greater frequency of food allergies such as to gluten (a grain protein) and casein (a dairy protein) and a greater difficulty metabolizes possible toxins such as preservatives.

- Increased number of recommended vaccinations and thus exposure to the preservative in the vaccine.** Thimerosal (50% mercury) was for many years used as a preservative in many vaccinations administered from multi-dose vials. This is still true for most adult vaccines such as most flu vaccines. Quoting from the article *Deadly Immunity-the Link between Vaccines and Autism* by Robert F. Kennedy, Jr., "Since 1991, when the CDC and the FDA had recommended that three additional vaccines laced with the preservative be given to extremely young infants-in one case, within hours of birth-the estimated number of cases of autism had increased fifteenfold, from one in every 2,500 children to one in 166 children." (Update: The Centers for Disease Control (CDC) now says that 9 out of 1000 children may be dealing with autism. That's one out of every 111 children! *CDC Data "Autism Spectrum Disorders - Data & Statistics". May 13, 2010*) True ADHD is part of the Autistic Spectrum Disorder and thus would have a similar cause, albeit the results being a bit less severe than autism.
- Lack of physical activity in pre-school children, esp. that in the sun.** Studies show that the average child in the USA watches 6,000 hours of TV by the time he or she is 7 years old. TV is a brain suspender, a hypnotic, and not a brain stimulator. It takes PHYSICAL ACTION to create robust neural pathways (i.e. repetitive activity of the mind-muscle feedback system).
- Behavioral emulation.** Character behavior on TV, videos, the Internet and computer games, often violent and

immoral, becomes the mental pattern embedded in a child's mind. Thus the child will respond to his or her environment in accordance with the patterns he or she has seen depicted. Parents may not respond effectively, perpetuating the child's behavior. As a child enters school, he or she may continue the behavior, and as teachers are restricted by law in most states from using corporal discipline, the behavior continues.

- Busyness of parents.** Often as busy parents, our children often suffer attention deficit disorder, a deficit of attention by the parents. Often kids will act out just to get their busy parents' attention. Carol Cannon, clinical director of The Bridge, a treatment center for addictive disorders in Tennessee shared the startling fact that the children of workaholic parents manifest essentially identical symptoms as children of alcoholic parents. The first



is a "clean" addiction, while the second is an "unclean" addiction. But for kids, the results are the same. In alcoholism, the parents are absent emotionally, while in work-aholism the parents are absent physically (presence or time-wise). An interesting, but sad side note is that some studies have shown that the highest percentages of children on medications occur in the more affluent suburbs. Is this because the parents have greater access to conventional medical care and insurance, are too busy to want something more lasting in results, or is it because they are used to dealing with their problems with medications such as Prozac or Valium?

- Over-promotion of ADD as a mainstream condition.** There has been a dramatic increase in direct-to-consumer advertising and promotion to physicians since the mid-1990's. Total spending on pharmaceutical

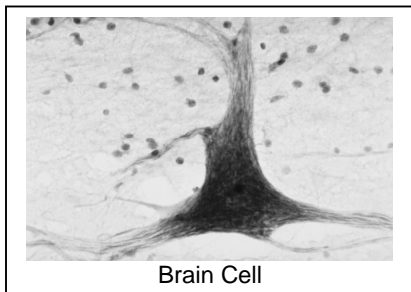
promotion in the USA grew from \$11.4 billion in 1996 to \$29.9 billion in 2005 and has flattened around that level [\$27 billion in 2012, \$28.8 billion in 2013. Data per CegeDim Strategic Data reports on *Pharmaceutical Promotional Spending*]. Another study co-authored by Marc-André Gagnon and Joel Lexchin showed that the pharmaceutical industry spent approximately \$61,000 in promotion per physician during 2004! Studies done ~20 years ago showed that 3-5 percent of school age children exhibit ADD-like behaviors. Given that there were about 70 million school age children at that time meant that ~4 million children exhibited the symptoms, a potentially huge market for pharmaceuticals. **Companies like Novartis (makers of Ritalin), and the makers of Dexedrine, Cylert, Adderall began heavily promoting psychostimulants as the treatment of choice for ADD.** "Grass-root" nonprofits such as C.H.A.D.D. were funded by the pharmaceutical companies with the inevitable result that they began to promote psychostimulants. The American Psychiatric Association (also funded in large part by the pharmaceutical companies) began to promote psychostimulants as the solution for ADD. With billions in revenues, hundreds of millions of dollars has been spent promoting awareness of ADD in the American society with the consequent over-promotion of psychostimulants. The sad, but inevitable result is

90% of the world market for Ritalin is in the United States of America.

that 90% of the world's market for Ritalin is in the USA. More recent reports suggest that 7-

10% of school-aged children have ADD. Is this to justify the medicating of additional youngsters? **And yet Methylphenidate (Ritalin, Concerta, Metadate, Focalin, etc.) has proven to be a carcinogen in a number of studies! In fact, in one small study done by the University of Texas in Houston and Galveston showed that 100% of children administered Methylphenidate, within 3 months of beginning treatment, developed chromosomal abnormalities consistent with long-term cancer risk! 100% is what I call a clue! Marketing, promotion of the benefits without adequate education of the drawbacks and side affects...it's a controversy very few wish to tackle.**

• **Schools and Teachers mandating psychostimulants** [this can be a political hot potato, but it is real - but please, we are not anti-schools. We empathize and work together with many wonderful teachers and



school psychologists who understand our program and what we offer. It's just lack of knowledge]. It is a sad, but real commentary that many (not all) schools are promoting psychostimulants as the fix-all for ADD-like behavior. If a child is misbehaving, rather than delving into what is taking place in the home, the mental development of the child, etc., many parents who have called us have stated how vigorously the school promoted medications as the fix for the child's behavior. These parents were often looked down on by the school staff for not being willing to medicate their children. In some states like Michigan (and at one time there was an effort in California for it to become law), the schools have the right to medicate a misbehaving / distractible child without the parents' permission or knowledge. In order to do so, of course, they have to place the label of ADD on the child, whether or not the child has True ADD, and whether or not the child may have one or more of the other causes of ADD-like behavior. An agent for the Drug Enforcement Agency was lamenting to our staff when we tested his child, how the very controlled substances that he conducts sting operations for, the school was trying to persuade him to put his child on. It just didn't make sense to him or us.

6. WHY are drugs commonly prescribed for ADD?

Years ago, it was discovered that when a hyperactive preadolescent child was placed on a psychostimulant, it helped them focus a bit better. While the exact nature of how it worked was not known, doctors began prescribing it as a "practical fix" for children that we now label as having ADD or ADHD.

We asked a prominent psychiatrist who was lecturing on the subject of ADD (who we shall leave unnamed) why he thought psychostimulants worked. He stated that he didn't really know. This is rather trouble-

some, for how can one predict the long-term side-effects without knowing the mechanism of operation?

Based upon our extensive study of medical journals and studies, it appears that the psychostimulants affect the hormones or chemicals of the mind, especially the levels of the two hormones known as dopamine and nor-epinephrine. Both of these play a role in the

rate or speed that a neuron (brain cell) can conduct an electrical charge to an adjacent

signal through the brain. Thus for children lacking certain nerves or neural pathways due to improper connections within the brain, this can give the appearance of improving cognitive function and thus behavior. This may seem quite beneficial, especially in the short run. But it might be likened to driving an car at 60 mph down the freeway with the transmission stuck in 2nd gear. The speed may be the same, but the revolutions of the engine is much too high for longevity and durability.

There seems to be a growing trend among psychiatrists that children with ADD grow up to become adults with ADD. They are taking the position that these individuals will need to take psychostimulants long term. We are of the opinion that children with dyslexia and/or cognitive dysfunctions, grow up to become adults with dyslexia and cognitive dysfunctions.

In addition to the aforementioned **cancer concerns**, there is growing concern that long-term usage of drugs which alter the dopamine and nor-epinephrine levels will increase the incidence of **early onset of Parkinson's disease and stroke**. It is anticipated that in the countries which have the highest usage of psychostimulants, (such as the USA), we will be seeing an increased frequency in these two degenerative diseases within 40-year olds who have been on these drugs for years. This would be in sharp contrast to the frequency in the general population where we see these diseases typically occurring in late 60's and 70-year olds.

Furthermore, there is evidence that just as these drugs often suppress physical growth, **they may cause brain cells to atrophy and impair proper neural development** (especially if given to toddlers and younger children). This is especially true of Adderall, the most popular ADHD medication. Adderall was originally designed to be an appetite suppressant and weight loss product. We have seen many children over the years come into our Centers who having been on Adderall for years, were markedly small for their chronological ages. A 13-year old looking like a 9-year old. An 11-year old looking like a 7-year old. It's just not right!

Two further examples: Our staff, after evaluating a teen child who was on a fairly lengthy list of drugs (which our doctor felt were incompatible) voiced their concerns to the family. They in turn shared their concerns with their psychiatrist. He downplayed their concern, saying that he'd been on those same drugs for years without harm. Two weeks later the psychiatrist had a massive stroke. He was in his 40s. In a second incident, a 40ish year old man was seen by our M.D. in an urgent care setting. She voiced her concern to the patient who

Table II. Common Medications Sample size: 2539 individuals	
16.4%	Ritalin® (methylphenidate). Mfr: Novartis of Germany.
15.8%	Concerta , Metadate, Focalin (forms of Methylphenidate)
Total 32.2%	
35.2%	Adderall® Combination of 4 amphetamines one of which is dextro-amphetamine sulfate (see Dexedrine). Been around since mid-70's and known as Obetrol prior to 4/94. Mfr: Richwood Pharmaceutical Company.
4.9%	Dexedrine® (dextro-amphetamine sulfate or "d-amphetamine") Mfr: SmithKline Beecham.
3.2%	Wellbutrin® (Bupropion hydrochloride) Primarily for use in fighting depression - Mfr: GlaxoWellcome.
4.7%	Strattera® - a non-stimulant is a norepinephrine reuptake inhibitor and is the first FDA approved medication for Adult ADD. Mfr: Eli Lilly.
19.9%	Other - Zoloft, Paxil, Risperdal, Tenex, Prozac, Clonidine, Depakote, Celexa, Effexor, Tegretol in order of being the most common

neuron. These psychostimulants (legal forms of "speed") can increase the apparent speed at which given cells can conduct a

was on psychostimulants for ADD. He ignored her warning, only to return within 2 months with a stroke. Coincidental?

7. What are the drugs commonly prescribed for ADD?

The most commonly prescribed drugs for the treatment of the symptoms of ADD, as well as the percentage of usages for which we've collected the data at our Centers are as listed in Table II.

These percentages are reflective of the cities in which we have or had our Centers and may not be representative of other cities or regions.

Fortunately, we see these drugs as optional with our program. Approximately 70% of the children that come to us on medications are off within 8-12 weeks of starting therapy. Another 20% are off within 6 months, another 5% by the end of the program. The last 5%, in addition to cognitive dysfunctions, are usually struggling with substantial external issues (food allergies, neurotoxins, abuse, neglect, ongoing trauma) that need to be addressed through other means such as counseling. However, without adequate cognitive therapy and development, the counseling may be rather ineffective.

8. Potential Adverse Affects of Psychostimulant Medications

Besides the long-term effects mentioned earlier, there may be short term side effects as well. See the table on the following page for a fairly extensive list of the most common side affects of psychotropic medication. Adderall contains Dexedrine and has similar properties to it.

In addition to the tabulated side affects, a number of parents report one or more of the following when their children are on these medications:

- a personality change
- a loss of a sparkle in the eyes,
- a "zombie-like" state,
- anxiety,
- depression,
- loss of weight,
- insomnia,
- facial tics (Tourette's syndrome)

Often an additional medication is prescribed for some of the above side-affects, the most common add-ons being antidepressants, such as Prozac or Paxil (this is called **medication stacking** and does not have the patient's best interest and long-term health in mind). Furthermore, the effect of most medications diminishes within 12-20 weeks as the body adapts to the medication. This usually requires adjusting the

dosage upward. The higher the dosage, the greater the potential for adverse affects.

Remember health is not a function of pharmaceuticals or medications taken, but of healthy choices and living a healthy lifestyle. Health does not come from medicative "band-aid" type solutions to symptoms, but by **addressing the causes** that lead to the symptoms.

Another valid and growing concern is the potential for abuse of the psychostimulants. Studies have shown that the pharmacological effects of methylphenidate and the amphetamines are virtually identical to cocaine when taken intra-nasally or intravenously. Parents, siblings, the children themselves and peers have been known to abuse a child's prescription to obtain a high. While the incidence is yet low, the rate of abuse is climbing rapidly. Several deaths have occurred, usually as the result of a car accident while the abuser is high.

9. Do medications really help academic performance for children and adults with ADD?

The National Institutes of Health in their study on ADD and psychostimulants completed in the fall of 1998 stated that while there may be some behavioral benefits from the use of psychostimulants, **there is**

NO long-term academic performance increase.

In other words, while there may be some short-term behavioral benefits, and academic performance may improve in the short term, over time (several years), the child's underlying cognitive problems becomes more apparent and academic performance slumps. Psychostimulants do NOT stimulate neural pathway growth or positive permanent changes.

The real dilemma is that while medications may have some benefit for a rather limited group of children, MOST children who are diagnosed as having ADD in reality have ADD-like symptoms that stem from causes OTHER than TRUE ADD! Medication will have limited if any academic performance improvement long term with children that really have these conditions. The real tragedy is that psychostimulants act as a mask or distraction from solving the real underlying cause of a child's behavioral and academic problems. Thus a child that has a treatable form of dyslexia or cognitive processing problem may instead be sidelined by well-meaning adults who dispense a common, but ineffective treatment.

10. Is there a cure for ADD?

Depending on the underlying cause, the answer fortunately is yes for most people and cases. But in order to do so, it is imperative to accurately diagnose the cause of the ADD-like symptoms and treat that cause.

If a child has a food allergy or sensitivity (more common than one would like to think), than treat that condition. If a child began manifesting ADD-like symptoms after getting his or her first mercury amalgam fillings (but was fine before), consider that he or she might be sensitive to mercury and get the fillings replaced with composite fillings. If a child stopped talking or began acting strangely after a vaccination, then do a thorough detoxification protocol (sauna, ionizing bath and detox clay – call for details as we offer a very effective and low cost detox protocol). If there was a recent trauma in the home such as a death, divorce, move or job change, and their misbehavior began occurring around the time of the event, address those issues with counseling, extra love and effort and parental discipline to bring stability back into the home.

If a child has cognitive issues, have them tested by someone who can definitively test for and diagnose various forms of dyslexia

"...health is not a function of pharmaceuticals or medications taken, but of healthy choices and living a healthy lifestyle. Health does not come from medicative "band-aid" type solutions to symptoms, but by addressing the causes that lead to the symptoms."

and True ADD. Test for auditory and visual dyslexia and discrimination skills problem. Do not assume that because the child has ADD-like symptoms, that they have ADD and thus should

be treated with psychostimulants. This would be analogous to treating a fever (see our earlier discussion) with aspirin rather than finding out and treating the real cause of the fever, be it pneumonia, a viral infection, or whatever.

11. What are some common behaviors that concerned parents call you about?

Usually the child appears to be bright to the parent or grandparent, but they often manifest some of the following outward behaviors or characteristics. The following list is quite extensive and each individual is different. Not all will apply.

- Is having trouble with reading, writing or spelling.
- May enjoy reading, but has trouble extracting the important points, or with spelling and writing.

Table III. Potential Adverse Affects of Psychostimulant Medications

Organ System	Adverse Affect *	Methylphenidate (Ritalin® & Concerta®)	Dextroamphetamine (Dexedrine®) [Adderall® is similar]	Pemoline (Cylert®)
Cardiovascular	Palpitations [irregular heart beat]	X	X	a
	Tachycardia [high heart rate]	X	X	
	Increase blood pressure	X	X	
Central Nervous System (CNS)	CNS stimulation [mind over stimulated]	X ^b	X ^b	X
	Psychosis [not in their right mind]	X	X ^c	X
	Dizziness	X	X	
	Insomnia [trouble sleeping]	X	X	X
	Headache	X	X	
	Nervousness	X	X	X
	Irritability	X	X	X
Tics and other abnormal involuntary movements	X	X	X	
Gastrointestinal	Anorexia [appetite suppressed]	X	X	X
	Nausea	X	X	X
	Vomiting	X	X	
	Stomachaches			X
	Stomach cramps or pain	X	X	
	Dry mouth	X	X	
Endocrine / metabolic	Weight loss	X ^c	X ^c	X ^c
	Growth suppression	X ^d	X ^d	e
Other	Leukopenia [low white blood cell count]	X ^f		X ^f
	Skin rash or hives		X	X
	Hypersensitivity reaction	X		
	Blurred vision	X ^f	X ^f	
	Jaundice [yellowish skin/eyes]	X ^f		X ^f
	Anemia [low iron/low red blood cells]	X ^f		X ^f
Elevated liver enzymes	X ^f		X ^f g	

***Table Notes**

a - Not at recommended doses.

c - With prolonged use.

e - Reported only in doses >4 mg/kg/day.

g - Rate of liver enzyme elevations originally reported at 2%, but the incidence reports over the last 10 years suggest a rate between .02% and .1% (Sal-lee FR, Nabulsi A, Sethuraman G, unpublished data, 1995)

b - CNS stimulation is excessive.

d - Growth rebound occurs after temporary discontinuation of drug.

f - Rare

Adapted from Calis KA, Grothe DR, Elia J. Attention-deficit hyperactivity disorder. *Clinical Pharmacology* 1990;9:632-642.

® symbol indicates a trademark registered by their respective holders. Notations in brackets [] were added.

- Is struggling in school across a range of subjects.
- Is struggling in most subjects except in “doing” subjects such as the arts or sports.
- Often is creative (nothing wrong with that).
- Is behind their peers by two or more grade levels, esp. in reading.
- Can’t stay on task.
- Difficulty focusing or sequencing.
- Difficulty organizing
- Poor follow-through, being easily distracted
- Often loses things.
- Difficulty waiting, sitting still and being quiet
- May interrupt or intrude on others, blurt or talk without listening
- May fail to pay attention to details, thus making careless mistakes
- Mind may blank under stress.
- Has difficulty with listening skills. May ask the speaker to frequently repeat what they said or just have a blank look on their face.
- Can’t remember simple instructions. Instructions seem to go in one ear and out the other.
- Can’t understand consequences. Punishment and rewards don’t seem to have much impact.
- Takes too long to do their homework; often hours are spent.
- Often doesn’t turn in their homework.
- May have trouble socially, is socially inept, intrudes into other children’s spaces; alternatively may be the class clown.
- Is prone to angry outbursts.
- Can’t stay in their seat at school.
- Can’t understand authority.
- Has trouble remembering which direction is left or right.

- Prefers learning by doing (hands on) as opposed to reading or listening.
- As the children get older and move into adolescence, they become more withdrawn, have more angry outbursts, lose motivation. Seems to have an “I don’t care attitude”.
- Lies, cheats or steals.
- May have speech impediments, but speech therapy didn’t work as effectively as hoped.
- May have hearing problems or auditory discrimination issues.
- May have had frequent ear infections as a child, tubes put in and/or suffered some hearing loss.
- May have eyesight problems and vision therapy didn’t work as effectively as hoped.
- Adults often have problems with holding down a job, staying on task, anger management problems, addictions, spelling problems, slow readers, trouble making decisions, sees things disproportionate to what they really are (i.e., blows things out of proportion), procrastinates, gets easily distracted, has trouble completing projects that they start, has trouble with directions.
- Teens who have had a history of mental processing inabilities may manifest them in behavioral issues and personality concerns including: anger, violence, depression, a poor self image, frustration and irritability, laziness, sullenness, poor choices in friends, stubbornness, tenseness, fear of new situations and being highly self-critical. They often feel overwhelmed, appear sad or unhappy and are easily tearful. They may escape by daydreaming and have begun some lying, stealing or drug use.

12. If left untreated, what is the typical progression that a young child with ADD takes as they get older?

Usually younger children really want to please. They want to get good grades. However, if mentally, they are not able to keep up with their peers or parental expectations, they will try for a time, but after years of trying, they start to give up.

We find that typically a child will try hard in school from 1st to 4th grade. Often their sheer innate intelligence will compensate for their learning disabilities / cognitive challenges and they may do okay in grades one and two, and then struggle by grades 3 and 4. Often they are put in special education in 3rd or 4th grade. Between the 5th to 7th grades, they start falling behind their classmates, they recognize there is something wrong, they feel different then

their classmates and they start withdrawing. By the age of 14 or 15 their motivation may be all but gone.

We deal with a fair number of teens who have gotten cynical after having been tested multiple times, been put through multiple programs, only to have nothing work (yet) for them. This is understandable.

As a cognitively challenged child enters adolescence and the hormones begin kicking in, often parents find that the struggling child that seemed compliant now becomes rebellious and wants to do their own thing. They begin withdrawing from their parents, seeking life in a fantasy world of the Internet, computer games, books or TV/movies. They just don’t care any more. They are more subject to angry outbursts. They start taking things that are not theirs, both at home and other places and often begin lying. They often get into trouble with the law. Studies have shown that a high percentage of delinquents in penal institutions have cognitive problems/learning disabilities. According to Dr. Michael M. Merzenich, professor in the Keck Center for Integrative Neurosciences and director of the Coleman Laboratory at the University of California, San Francisco, an award winning brain researcher, **50% of children that fail first grade go on to commit a felony later on in life!** (this is his statistic, not ours).

These kids can’t seem to understand consequences or the results of actions, so they often do crazy things, unaware that they could be hurting themselves, others or things. They are more accident prone, and will likely wreck a car or be in an accident before too long. They are more likely to engage in harmful behavior such as smoking, drinking, doing drugs, or promiscuous behavior. They probably don’t like themselves and have low self-esteem. Girls are more likely to become pregnant out of wedlock often leading to poverty or a low-income lifestyle. They may “have to” get married earlier than planned. Marital issues that normally wouldn’t be that big a deal become of great importance and result in angry outbursts. When finally the other partner has had enough, divorce results. Most of these marriages often end within 5 years, leaving behind the next generation of cognitively challenged children. The young adult has trouble holding down a job, so money often becomes a sticking point in the relationship.

Fortunately, it doesn’t have to be this way.

13. What does Sharper Minds do that is so different from other organizations that claim to diagnose and treat ADD?

Sharper Minds specializes in two areas:

1. Detailed, comprehensive evaluations to determine the root cause of a child or adult’s ADD-like behavior.

2. A cognitive training program that resolves many of the cognitive-related issues that we are discussing.

First let’s look at the evaluation process:

For families local to the DFW metroplex, we offer several in-home testing options depending on the family’s specific needs. The evaluation provided by Sharper Minds is an objective comprehensive evaluation involving graphics, drawing, writing, reading, instructions, and emotional aspects. It tests all five Critical Brain Programs, and many of the other aspects listed in Table 1. Its goal is to find the specific area of the deficiency. Specifically, we examine the following:

- Family History – Genetic, health, family relationship and other components.
- Possibility and probability of the occurrence of ADD-behavior causes.
- Preferred mode of learning
- Age of Neurologic development
- Adequacy of the following mental programs. The ability to properly perceive:
 1. Shape
 2. Size
 3. Position-in-space (one’s or something’s location physically, mentally, socially relative to others or other things)
 4. Figure-ground (the ability to pull detail out of the background)
 5. Directionality & Angle
 6. Sequences
- Skimming and/or Detailing
- Random Alphabet Recognition
- True ADD/Irregular mental tempo
- Ability to remember and follow instructions
- Right-left brain integration
- Brain dominance
- Image retention
- Self Esteem Evaluation
- Eyesight Recognition Test
- Eidetic-Phonetic Memory Test
- Auditory Discrimination skills (auditory dyslexia)
- Reading Recognition of Words/ Reading Grade Level
- Eyesight Spelling Memory
- Auditory-Phonetic Memory Test
- Stress Response
- Psychological perception of self and/or family
- Fine Motor Skills
- Non-verbal learning disorders
- Asperger’s Syndrome

While you may not understand the above evaluation factors, each plays an essential role in determining how the mind operates. Each of these will be explained in more detail at the evaluation appointment.

The results of the evaluation are discussed at the end of the in-home appointment with the family. Families will have a definitive answer to their concerns, along with a fuller understanding of the solution.

If a child's parents are married, or separated but on reasonable terms, it is required that both attend the evaluation. If a child's parent is single, we recommend they have a trusted friend or relative with them who can be an independent observer for them, someone with whom they can discuss the evaluation results afterwards. Bringing one or more grandparents can be helpful. If the evaluation is for an adult, we require that they bring a spouse, significant other, or trusted friend with them to the appointment.

The fees for the evaluation options are very competitively priced given their in-depth natures, running generally less than 1/3 to on half of what other institutions charge. Call for details. A deposit is required at the time of booking the appointment.

Time requirement:

It takes some at-home preparation time filling out the questionnaire that will be emailed or sent to you. The appointment takes 4 to 4½ hours for one person, and an additional hour per additional person being evaluated. Depending on the family's needs a detailed report, or bit more detailed report which includes ICD-10 diagnosis codes and reviewed by a Medical Doctor who helped create the evaluation.

To schedule an evaluation, call toll free 1-866-HELP-A.D.D. (1-866-435-7233). As appointments are done in the convenience of your home, we can be flexible with the timing to suit you and other family members that need to be there.

Let's move on to Phase 2, the therapy.

The Sharper Minds program is a very effective therapy program for enhancing

mental performance and for overcoming Attention Deficit Disorder (ADD/ ADHD), various types of dyslexia, vision coordination, cognitive dysfunction, various other behavioral and cognitive problems and in some cases head trauma. It can also be used to stave off and even possibly reverse the

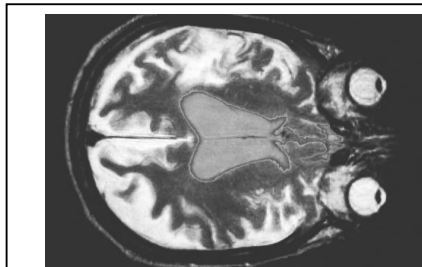


effects of aging, such as senility and Alzheimer's. As an important side benefit, there is usually notable improvement in athletic performance.

It is a whole brain approach that includes elements of physical and occupational therapy, vision and auditory

therapy, stroke therapy, balance training, counseling and much more. It also addresses behavioral and social concerns.

To help understand the brain and thus the therapy, permit me to draw a comparison between the human brain and a computer. For a computer to function correctly, it has to have two separate categories working correctly together: the hardware and the software. The hardware is the tangible parts of the computer including the computer case, CPU, power supply, circuit boards,



Bilateral (two sided) brain functionality is extremely important for proper seeing, hearing and thinking.

integrated circuit chips, hard drive, memory, etc. The software consists of the computer programs that you use to do useful tasks. This may include Microsoft® Windows, Word or Excel, games, your Internet browser, e-mail programs, etc. If either the hard-

ware or software has defects, the computer will not run properly and will be frustrating to those who try to use it.

In an analogous sense, for a person to function correctly, both the hardware (the brain and its 100's of trillions of connections) and the software (the brain's programs) have to be working correctly. If either category has defects, malfunctions (cognitive dysfunctions) will take place with the resultant frustrations, misperceptions, missed responses, poor behavior, misunderstanding of consequences, anger, withdrawals, etc.

True Attention Deficit Disorder (often correlated with an irregular mental tempo) is a problem that some limited MRI and

PET scan studies suggest originate in the frontal lobes of the brain. Dyslexia is an impairment of the left hemisphere (the *lex* or word side of the brain), more specifically the left auditory cortex, the left visual cortex and associated reading cortex, the left motor-sensory cortex/mind/muscle feedback loop (whether gross or fine motor skill issues), etc. These, along with other organic dysfunctions such as autism and schizophrenia, could be considered "hardware" issues.

Relating to software issues, the five most critical of the brain's programs or processes are the ability to discern correctly: size, shape, position-in-space, figure-ground, and directionality (These are explained in more detail at the evaluation appointment). It is very common for children or adults who have ADD-like symptoms to have moderate to severe problems in two or more of these 5 critical functions. When a person is having problems in one or more of these areas, resulting behaviors are quite predictable.

Our cognitive therapy program works on both the hardware and software issues. It first works in promoting proper whole brain function, especially that of brain bilateral function and left hemisphere function through the use of innovative whole brain exercises. This is done through a carefully structured series of physical exercises involving movement of the major muscle groups, done in conjunction with multi-sensory stimuli. Each set of exercises builds on the previous ones, each resulting in higher levels of mental function.

This portion of the therapy has its scientific validation in studies that demonstrate that the human brain has the ability to generate new nerve cells (in the subventricular zone, olfactory bulb, dentate gyrus and hippocampus) and to have those nerve cells migrate through the body of the brain to areas where higher cognitive functioning takes place. This process of brain change is called neuroplasticity. Our program focuses on nerve growth with resultant "lasting" effects.

Secondly, we work on the brain's program/processes to permit the individual to accurately perceive their environment and surroundings. Thus the problems that a child or adult might have with perceiving size, shape, direction, figure-ground or position-in-space are corrected, improving the behaviors that result from the misperceptions.

As capabilities improve, we add in distractions or the principle of challenge, increasing performance under stress. We also incorporate program success skills, essentially common sense approaches to dealing with the program and life's challenges. As

many ADD children act out and misbehave, we also provide parents with parenting tools and techniques that help regain loving control of the child.

How the above methods, techniques and therapy are actually carried out will be taught to participating families at the appropriate times.

As explained earlier, our neural-cognitive therapy is a "lasting solution" for ADD, dyslexia and other learning problems. It is not a mask or temporary fix that wears off like drugs or herbs. It optimizes the productive or realized intelligence of an individual, allowing them to take full advantage of their innate or inborn intelligence and thus enjoy life to the fullest!

Not only is the child optimized, but the frustration and pain that parents have felt are removed as well, bringing a level of peace and satisfaction to parents that many have not previously felt.

In Conclusion

Many children and adults struggle with mental processing issues or mental problems that hold them back from the success

they or their parents know they should be able to achieve.

To determine the appropriate treatment and cure for these issues, one has to accurately and definitively diagnose the underlying causes of the issues, and not just the symptoms.

Fortunately, there is a solution for most conditions; and these are not issues that one has to live with for the rest of their lives. Sharper Minds specializes in a "restorative neurology" type therapy program that is very effective in overcoming these conditions. We can help your family reduce their frustrations and improve the peace and mental performance that you are looking for.

We offer programs for both local and long-distance clients via fully guided home training systems.

As the next step, how do I set up an appointment for the evaluation or get started with your program?

Simply call toll free 1-866-HELP-A.D.D. [1-866-435-7233]. Our staff can assist you. Why not call today?

1-866-HELP-A.D.D.

Sharper Minds™

Sharper Minds®
P.O. Box 253
Burleson, TX 76097-0253

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