

agree with what Dr Sam Goldstein recently suggested: that ADHD is primarily a disorder of "efficiency."¹ It seems to take me about 1.5 times as long to do something compared with others whom I have asked.

Russell Barkley speaks to the concept that those of us with ADHD seem to be about 30% delayed in the achievement of many developmental stages of maturation,² which seems about right given that I was 36 years old before I married—or perhaps I was fashionably appropriate given the number of people who marry later in life these days. I am blessed with a stable and mature wife, who, for the most part, puts up with the challenges I must present on virtually a daily basis. She acts as a social buffer for me at times, reminding me that other people do not think I am funny and that sometimes it is best if I just do not say something. She manages the checkbook and is a great mother, soothing hurt feelings when my emotional reactivity causes me to yell, once again, at my children.

I continue to learn about the brain and to observe the research that is helping our understanding of ADHD and other neurodevelopmental conditions evolve. I continue to work toward feeling more at peace with my own particular profile of executive functions and dysfunctions. I stopped taking methylphenidate last summer because although stimulants had been a huge part of managing day to day for many years, I found that, at age 50, the intensity of daily amphetamine use was unpleasant. I do believe that medications help one compensate and develop better strategies in daily life. I also recognize, however, that the problems do not "go away" and that ADHD seems to truly be a lifelong phenomenon. So my search for understanding and lessons to learn continues. I anticipate that the courtship of neurology and psychology will progress and that the dissociation of mind and body will continue to blur. Who knows, we might soon be invited to meet each other's families! I just hope that I will not be late.

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Helping Children With Nonverbal Learning Disability: What I Have Learned From Living With Nonverbal Learning Disability

When I was first diagnosed with a nonverbal learning disability at the age of 36 years, my reaction was one of both relief and grief. I had always felt that I had pervasive and sometimes incapacitating difficulty learning, but no one ever believed me. My relief came from the fact that there was finally some external support for this feeling, and the grief from the fact that I finally understood the seriousness of what I had been struggling with for so long. Why was this not recognized earlier? First, little was known about nonverbal

learning disability at the time when I was growing up, and, second, because of my strong verbal skills, my friends, family, and the professionals who were treating me did not believe that I could have such a serious problem.

NONVERBAL LEARNING DISABILITY IN THE CHILDHOOD YEARS

As a young child, my most obvious and severe problem involved both fine and gross motor coordination. I could not jump rope or stand on one foot. When writing, I gripped a pencil very tightly. Interestingly, I was not aware that these were problems or that I was different from other children. When I was about 7 years old, my parents took me to see an occupational therapist every Sunday morning. That made me feel different and bad, so they had to chase me around the house to take me to these sessions. The treatment was successful in advancing me to the average or above-average range. I am now grateful for this help because I did not have to deal with the impact that impaired motor skills could have had on my life. Other adults with nonverbal learning disability have told me how their poor motor skills continued to plague them throughout their lives, even into adulthood. This is sad, and I was lucky.

SCHOOL

Elementary school was not a problem for me, but school became hell starting in seventh grade. I began to study 5 hours a night. I always had a hunch that if I did not study a hundred times harder than everyone else, I would come home to a report card full of F's. The learning disability specialist who later diagnosed me said that she was sure that was true. In 1981, I graduated from a college preparatory public high school with a 3.0 grade point average, but it took extreme effort to achieve this.

The only year that I did not do well despite the same effort was in the tenth grade. The course work required making inferences and dealing with complex information that relied on nonverbal reasoning. Geometry was a nonverbal disaster, and we were starting to read more complex novels in Spanish class. I did fine when we were reading *El Frijolitos Saltones (The Mexican Jumping Bean)*, but when we got into Spanish crime stories, I lost it. Although I did well in Spanish in general, I think the problem here might have been related to the complexity of the reading, which required more focus.

I always had a tremendous amount of trouble concentrating during classes and when I was reading or doing homework. I would sit in class and daydream, and almost nothing would go in. When I was taking notes, I did not know what to write down as the main points. I would go home and stare at my books for hours without being able to concentrate. I also later found out that my memory was in the borderline range. I assumed that I would get an F with normal effort and a B with extreme effort; that fueled the ferocious studying. My parents did not pressure me; I did. If attention-deficit disorder had been well known in the 1970s, I am sure that I would have diagnosed myself with it.

When I told my parents about my severe problems with concentration, they took an approach that was consistent with those of the time, namely, "If you just practice reading more, you will

improve." In the summer before my junior year, they sent me to an intensive college preparatory summer school where the assignment was reading the very, very thick book *Bleak House*, by Charles Dickens. Classics were hard for me to understand, and I still could not concentrate on reading. I ultimately gave up and went home.

That was not the only defeat I experienced that summer. I got my first job as a cashier in a supermarket and was fired shortly thereafter. By the time that summer was over, I had my first significant depression. It was very bad but did not debilitate me; I was still a functional and active teenager. I was very social, went to many parties and concerts, and studied as much as usual.

I entered the University of Rhode Island in 1981 and transferred to the University of Colorado at Boulder, where I earned a bachelor's degree in sociology, graduating in 1987. My overall grade point average was a 3.1, with a 3.4 in my major. I had a very resourceful survivalist approach. Before deciding which courses to take, I would collect all of the syllabi for the courses I was considering and then go to the bookstore and pick the courses that had the least reading and tests and the most projects and presentations. I rarely took over 12 credit hours a semester—that is, 4 courses—because I felt that a fifth course would spread me too thin. I also did a lot of independent study, which involved working as a volunteer and writing a paper about the experience for 3 credit hours. I took a year off in 1984–1985. College was very hard, and I sacrificed some of my social time studying.

WORK

What have I experienced on the vocational front? For one thing, whenever I try to learn a new job or acquire new information about an old one, there are times when almost nothing registers. I watch how the people around me learn. Generally, they absorb information through listening, reading, watching, and practicing. Within moments, it is as if the information is superglued to their brains, to be retrievable within seconds of when it needs to be used.

My work experiences have not always been positive. As I mentioned, I was fired shortly after I got my first job as a cashier in a supermarket. I pushed the cash register buttons too soon and made mistakes. I kept pounding the pavement for cashiering and waitressing jobs just to prove that I could do it. Not being able to do this made me feel inadequate because it seemed that everybody was capable of these jobs. I kept trying to get another one of these jobs even after being fired repetitively. I was able to work successfully as a cocktail waitress because this did not involve as much memory, multitasking, and organization, and I was able to interact nicely with the customers.

However, I have also had some significant successes. After I graduated from college in 1987, I marketed credit cards on college campuses for 7½ years. I was one of the top representatives in the country at this lucrative job. Most of the time, I worked within commuting distance of my home in Colorado, but I also traveled to other parts of Colorado and to other states. One "business marathon" involved a 2-month trip in California. I related well on a social level with the students and used very good strategies.

In the summer of 1994, I began to get depressed but did not stop working until late January 1995. I struggled through the fall

of 1994, but it was becoming increasingly difficult to drive long distances and to manage overnight trips away from home.

In 1995, I started working as a volunteer at the Volunteer Connection, a nonprofit agency that matches volunteers with positions at approximately 300 local nonprofit agencies. My first job was as a receptionist. I then moved up to being a referral counselor and then a group project coordinator. After a year of moving up through the ranks, I was hired on to the paid staff as the operations manager.

Running the Volunteer Connection was the most challenging job that I have ever held. In this position, I recruited, placed, and trained the volunteers who kept the agency running. Many of the volunteers had disabilities of all kinds. I recruited an experienced and committed volunteer computer team and guided the team as they set up a new database, which provided us with a more comprehensive statistical recording system of the agency's referrals and placements. One of my functions was to advise them on how I thought we could make the new database truly "user-friendly" for our disabled volunteers. I also facilitated meetings, conducted public relations, interacted with other nonprofit agencies, updated our Internet site, directed an outreach program, completed monthly statistical reports, coordinated mailings and special events, and provided administrative support to the executive director.

Unfortunately, I have a sleep disorder that was not correctly diagnosed or treated at the time, so during the period in which I worked at the Volunteer Connection, my sleep was getting worse and worse. After I had been working there for a year, I requested a leave of absence to focus on trying to figure out the sleep problem and get it treated. When I left, I was given an incredible reference by the executive director of the Volunteer Connection, who wrote, "I have been a supervisor for over 30 years. During that time, I can honestly say there are few people that match her eagerness to work hard and contribute. Her people skills are wonderful and she is a delight to be around."

The years 1998 and 1999 were bad. I had three job failures and got depressed again. I did not get a good diagnosis for the sleep disorder for several more years. Although my depression was treated at times, it was not until 2001 that I found a really effective treatment.

In 1999, I started doing some volunteer work related to nonverbal learning disability. I created and managed a Web site and bulletin board for persons with nonverbal learning disability. The purpose of my Web site and bulletin board was to answer questions about nonverbal learning disability, offer a place of support, and find resources for people with nonverbal learning disability. This involved doing a lot of telephone research to find knowledgeable professionals and schools around the country on request. I have also given presentations at the Annual Nonverbal Learning Disorder Symposia in California and have written a chapter for a career guide for people with Asperger's syndrome and nonverbal learning disability.

SWIMMING AND THE GREAT OUTDOORS

Since the age of 21 years, I have participated in the Masters Swimming program. This is a national coached swimming program with interval training in which I swim approximately 3000 yards a day. For years, I have started my day with a swim as a way of managing fatigue. Later I learned that exercise also helps with executive

function. I have also done quite a bit of backpacking. Once I took a 4½-day backpacking trip by myself in the wilderness of Colorado, hiking over four 12,000-foot mountain passes with 50 pounds on my back. I have hiked to the top of 17 mountains that are over 14,000 feet above sea level. My ex-husband and I took several bike tours in the western states. Once we took a week-long bike tour over a mountain pass in Rocky Mountain National Park—20 miles uphill, with 4 miles of it 12,000 feet above sea level. We rode with all of our camping gear on our bikes.

FRONTAL EXECUTIVE FUNCTION AND HOW NONVERBAL LEARNING DISABILITY AFFECTS MY LIFE

Nonverbal learning disability is a complex disorder in which the pattern of strengths and weaknesses and severity varies from person to person. In general, people with nonverbal learning disability have strong expressive verbal skills but deficits in social, visuospatial, and motor skills and difficulty with mathematical concepts. Frontal executive function (regulating attention and emotions, effective planning and organization) is usually impaired. People with nonverbal learning disability often can express themselves verbally much better than they can process information auditorily or otherwise.

Nonverbal learning disability affects all aspects of my life, every day, all day. Certain tasks are very difficult for me: cooking, packing a suitcase (which involves decisions, spatial planning, and good organizational skills), grocery shopping, fixing and assembling things, reading comprehension, and understanding information from auditory sources, such as television, film, and conversation. Written and spoken instructions can be confusing. Reading instruction manuals is very difficult because the implications and inferences are often not clear to me. To understand a paragraph and sometimes just a single sentence, I often need to break the instructions into microsteps and write them down in detail. I developed a system for keeping my own detailed versions of these instructions in a binder so that I can refer to them later. This is obviously very time-consuming and tiring.

Problem solving is one of the most difficult things for me. One aspect of problem solving is the ability to generalize. I often take things very literally. One day, when my husband was out of town, my large talking parrot, Clyde, got out of his cage and was hanging out on top of it. I did not know how to get him back in the cage and was scared that he would attack me because he can be very aggressive. I called my husband for advice, and he told me to get a stick and tell Clyde to "step up" on it, carry him back to his cage or use the stick to scare him off the top of the cage, and open the door of the cage and give him a chance to go back in on his own. I interpreted that to mean that I had to go outside and get a stick of a certain length. It did not occur to me that I could use any number of stick-like objects, such as a plunger, a broomstick, or even the neck of my husband's guitar. Now that I am aware of my problem with generalizing, I watch out for this and am better able to think out solutions.

Other examples from everyday life of things that are difficult for me are figuring out and later remembering the method and sequence of steps required to clean up spills or doggie accidents

on the carpet. Cooking has been hard for me. Nothing was obvious. I do not know what spices to use, how much to use, how to substitute ingredients, or how to make sauces. I do not know what temperatures to cook at, how long various foods will stay fresh in the refrigerator, how far in advance to take meats out of the freezer to thaw, or whether to thaw them in the refrigerator or on the counter. I know that one has to be careful about handling raw meats, but I did not know which kinds of meat need washing and what temperature the water should be to wash it. I have problems planning meals and coordinating the multiple steps and timing involved in cooking. However, the good news is that I am finally getting somewhere in learning how to cook and am creating a manual with basic recipes and the rules of cooking and storing food.

When I underwent psychoeducational testing, I found out that I had the broad knowledge base of a 14 year old. I was able to answer all of the questions up to a certain level and also answer some things at a pretty high level, but there were significant holes along the way, a pattern my learning disability diagnostician called a "Swiss cheese" knowledge base. I have never been able to follow current events and often feel so embarrassed and ignorant in conversations about them that I have to change the subject. I believe that as a result of my attentional problems I never acquired the background information in high school. Because of this limited foundation, I sometimes blank out when trying to listen to or read the news because I can't make sense out of it.

Making decisions is a very difficult and drawn-out process for me. I have more trouble making decisions than anyone I have ever met. I usually do not have a sense of intuition or "gut feeling," and the "pros and cons" approach does not work and tends to stir me up. Pros and cons do not work for me because of difficulty prioritizing and an inability to identify which items carry more weight. Each item seems extremely important, and the risks and consequences of making a decision also seem critically important.

The array of problems that people with nonverbal learning disability have to deal with makes negotiating the challenges of everyday life very difficult and extremely time-consuming. People assume that if you have very good verbal skills, you can handle common daily tasks as easily as everyone else. They cannot even begin to understand how difficult basic living skills and problem solving can be for a person with nonverbal learning disability. It is hard for them to understand why I often need to ask many questions to learn.

SOCIAL RELATIONSHIPS

Although people with nonverbal learning disability typically have social problems, mine are somewhat more subtle than what you usually see. I do not have the serious problems reading nonverbal cues that are often seen with nonverbal learning disability. I can read facial expressions and tone of voice. My speech has normal prosody (ie, it is not flat or monotonous), I have good eye contact, and I am neither shy and retiring nor intrusive. I laugh and cry easily. I have a good sense of humor. My neurologist says that I can be charming and engaging.

I always had lots of friends when I was growing up but could not always figure out how to join some of the social groups to which I aspired. Although I have had many long-term friendships, it has been easier to make friends than to keep them. I have always had

the fear that people will like me and then stop liking me, even though I might have no idea what I did that was wrong. It was like walking on a tightrope. I lacked awareness of some social rules, which I learned only after finding out that I had nonverbal learning disability. I was not aware of the importance of reciprocal turn-taking (how long you should speak before giving the other person a chance), not talking about oneself too much, and considering whether my topic of conversation was of interest to the other person. I often talked too much. I also often took things too literally and concretely. Once I became aware of these problems, I worked hard to overcome them and have improved a great deal.

My husband and I were together 20 years and had a wonderful relationship. We shared many good memories and adventures together. I mention this because many people with nonverbal learning disability never get married. My husband stuck by me through a hell of a lot. We are divorced now but still care about each other very much and are friends. Even before I was diagnosed with nonverbal learning disability, he intuitively understood my learning problems—better than anyone else in my life. He was a patient teacher who used multimodality methods and repetition. For example, he made me change my bicycle tire eight times to make sure that I had mastered it. He is a computer consultant and taught me most of my computer skills.

MY COMPLEX MEDICAL PICTURE AND TREATMENT

In addition to nonverbal learning disability, I have struggled with a sleep disorder all of my life. I slept poorly as an infant, and my sleep was nonrestorative as far back as seventh grade and maybe even before that. My sleep has become progressively worse since childhood. Although my problem was originally one of sleep quality, it later developed into full-blown insomnia. It was only last summer, at the age of 40 years, that I learned that what I had was obstructive sleep apnea and started to get it treated.

When I was 28 years old, I spent a year trying to get my sleep disorder treated or even cured with holistic or alternative treatments ranging from acupuncture to ayurvedic medicine. None of them helped. That same year (1991), I got my first overnight sleep study. I was diagnosed with periodic limb movement disorder, but the treatment for that did not work either.

In 1992, I was referred to a psychiatrist to work on treating my sleep problem. She viewed my problem with sleep as being due to depression and focused on treating my symptoms as likely to be a psychiatric problem, using a series of medications. Even so, she was supportive of my interest and efforts to also look into nonpsychiatric causes and treatments for my sleep disorder. Over the course of the next 8 years (1992–2000), I was tried on 50 different medications (Table 1). I worked with this psychiatrist for about 6½ of those years; I liked her and know that she had very good intentions and my best interests in mind.

In 1994, after a few years of constant medication trials, I had my first severe, lengthy, and debilitating depression. Trying to treat this medically compounded the picture even more. Although I tried several medications for depression and anxiety, from my perspective, the reason for trying about half of them was solely to help my sleep disorder.

Table 1. List of Medications

<i>Brand Name</i>	<i>Generic</i>
Wellbutrin	bupropion
Parnate	tranylcipromine
Nardil	phenelzine
Deprenyl	selegiline
Norpramin	desipramine
Amitryptiline	elavil
Serzone	nefazodone
Paxil	paroxetine
Zoloft	sertraline
Anafranil	clomipramine
Prozac	fluoxetine
Desyrel	trazodone
Celexa	citalopram
Tofranil	imipramine
Catapres	clonidine
Remeron	mirtazapine
Xanax	alprazolam
Ativan	lorazepam
Klonopin	clonazepam
Dalmane	flurazepam
Serax	oxazepam
Valium	diazepam
Cogentin	benztropine mesylate
Symmetrel	amantadine
Aricept	donepezil
Tegretol	carbamazepine
Depakote	divalproex
Lithobid	lithium
Lamictal	lamotrigine
Neurontin	gabapentin
Risperdal	risperidone
Seroquel	quetiapine fumarate
Zyprexa	olanzapine
Thorazine	chlorpromazine hydrochloride
Phenergan	promethazine hydrochloride
Cylert	pemoline
Adderall	amphetamine-dextroamphetamine
Ritalin	methylphenidate
Concerta	methylphenidate
Provigil	modafinil
Restoril	temazepam
Ambien	zolpidem
Inderal	propranolol
Tenormin	atenolol
Sinemet	carbidopa/levodopa
Percodan	oxycodone/aspirin
Buspar	buspirone
Noctec	chloral hydrate
Dexedrine	dextroamphetamine sulfate
Pamelor	nortryptiline

I lost a great deal of my thirties by being debilitated by a combination of the sleep disorder, depression, and the medication trials. The situation was an impossible balancing act. Often the medications that helped me sleep through the night made it harder to initiate tasks in the daytime, contributing to depression. The medications that helped me with depression often made my sleep worse. Most importantly, medications never helped my sleep quality.

I would periodically continue to try holistic or alternative modalities to solve my sleep problem. In 1997, I had two more overnight sleep studies. Again, one suggested periodic limb movement disorder, and, again, the prescribed treatment did not work.

In an attempt to get better, I consulted numerous physicians and other practitioners (Table 2). I also accumulated a long list of psychiatric diagnoses, which were later proven to be erroneous

Table 2. List of Physicians and Other Practitioners That I Have Seen

Six psychiatrists
Eight psychotherapists
Four neurologists
Four acupuncturists (including a physician who combines homeopathy with acupuncture)
A craniosacral practitioner
A naturopath (working mostly with diet)
An ayurvedic practitioner
An herbalist
A homeopath
Four holistic or integrative medicine physicians
Four sleep studies plus consultation with another sleep specialist
A brainwave biofeedback specialist
A speech-language pathologist (tutor for nonverbal learning disability)
A learning disability specialist
Two hypnotists
A sleep specialist whose treatment involved use of tapes that teach a technique called the sleep breath, which is supposed to be the kind of breathing we do when falling asleep

(Table 3). This is a common problem for people with nonverbal learning disability because the symptoms appear on the surface to look like many psychiatric disorders (more about this later).

Before getting caught up in the medication whirlwind, I was not a strong believer in Western medicine, but my desperation to fix my poor quality of life resulting from my inability to function led me to research medicines that might help, and I suggested that we try them. As hard as it is to believe, I did not truly understand what "side effect" meant. When I was being treated with a whole series of medications, I was not clear about the potential risks and consequences. I guess I thought that "side effect" meant merely irritating and temporary discomforts such as constipation, dry mouth, or nausea. I did not clearly understand that side effects could be extremely severe, serious, and sometimes permanent. I knew about things such as tardive dyskinesia, but my difficulty with seeing "the big picture" caused me to forget the risks in moments of desperation to get better. I also did not understand how medications might interact with one another.

I was not diagnosed as having nonverbal learning disability until the age of 36 years. As a child, I had been evaluated and treated for motor coordination and visuoperceptual problems. My difficulties seemed to be resolved, and no further attention was focused on this problem because, at that time, not many people knew about the long-term implications of these findings. When I was 22 years old and trying unsuccessfully to work as a cashier and as a waitress, a psychiatrist referred me for testing, and I was diagnosed as having a learning disability. However, the diagnosis was quite vague and did not mention nonverbal learning disability. It was not particularly helpful. The diagnosis of nonverbal learning disability led to finally getting effective treatment and intervention and a new and very helpful understanding of my challenges.

In 2000, after many years of struggling with this mess, I finally found an excellent team of doctors (a psychiatrist and a behavioral neurologist). They are both very supportive, very tough, and extremely funny. They talk to each other frequently, and we have periodic team meetings. The focus of the treatment was different; we embarked on the slow and painful process of withdrawing the

Table 3. List of Diagnoses

Major depression
Bipolar disorder
Generalized anxiety disorder
Borderline personality disorder
Mixed personality disorder
Dependent traits
Atypical depression
Atypical bipolar disorder
Developmental disorder (not otherwise specified)
Learning disorder (not otherwise specified)
Periodic limb movement disorder (sleep disorder)
Attention-deficit disorder
Sleep disorder
Obstructive sleep apnea
Nonverbal learning disability

medications and shifted the emphasis to helping me become more effective in managing the problems of everyday living. Over a period of 15 months, they systematically and methodically weaned me off eight medications. The doses started out high, so, during that time period, we lowered the doses twice a week. Their support and availability made this possible. The feeling that this was a "group project" and that we were in it together clearly helped a great deal. Both doctors look at everything that goes on in my life, keeping the nonverbal learning disability in mind and being aware of the way in which it affects my day-to-day behaviors. They use a style that is based on coaching and teaching coping skills. I have been working with this team for 4 years.

My neurologist has taught me coping skills for dealing with all aspects of nonverbal learning disability. We have focused on learning to compensate for executive function problems—developing routines, systems, and organizational skills. This work has really paid off. Now that I see how quickly I have been able to learn these skills, it is clear how much easier and successful my life would have been had I received this help earlier.

Before, psychotherapy had never been helpful, and although the literature on nonverbal learning disability often states that therapy does not work for people with nonverbal learning disability, working with my current psychiatrist, who is my therapist, has been greatly beneficial to me. I believe that therapy that is based on coaching and coping skills, in the present, can be very effective with nonverbal learning disability.

In 2003, I went to the Stanford University Sleep Disorders Clinic for yet another sleep study and discovered that I had obstructive sleep apnea. I was started on continuous positive airway pressure therapy, which has made a significant difference and has been a real breakthrough. The Stanford doctors said that I had sleep apnea all of my life and that it was caused by a structural problem; I have a small, crowded mouth, and, as a consequence, my airway is too narrow. The main reason why the doctors at Stanford were able to identify obstructive sleep apnea, even though the other sleep studies did not, is because their equipment is more sensitive than that of most sleep clinics. It is a relief to finally have an explanation and effective treatment for my problem after all of these years.

I am convinced that my undiagnosed and untreated sleep disorder dramatically worsened my memory, attention, organizational, and problem-solving skills and nonverbal learning disability in general. I do not mean that it made the actual condition worse,

but it made it much harder to cope with and learn compensatory strategies. I am absolutely sure that I would have learned how to do many of the things that challenged me sooner and more successfully had I been sleeping better.

WHAT PHYSICIANS SHOULD KNOW ABOUT NONVERBAL LEARNING DISABILITY

Physicians who are not knowledgeable about nonverbal learning disability see people with nonverbal learning disability as having a mysterious combination of symptoms and tend to throw medications at the patient. In any given individual with nonverbal learning disability, symptoms resemble those seen in a number of psychiatric disorders: mood disorders, anxiety disorders, including obsessive-compulsive disorder, social phobia, and panic disorder. The mood lability that sometimes occurs can meet the diagnostic criteria for bipolar disorder. Depending on the specifics, the interpersonal style and social behaviors can be labeled schizotypal, borderline, or dependent personality disorder. Attention deficit is usually seen in nonverbal learning disability. Psychiatrists often focus on the pharmacologic treatment of these symptoms, so patients with nonverbal learning disability can end up on a lot of medications. If the behaviors are instead viewed as components of nonverbal learning disability, then this array of symptoms becomes somewhat more understandable and manageable. Deficits in executive function often underlie many of these problems and make management difficult. Although some medication might be required, it is important to approach the use of medication carefully, thoughtfully, and systematically. Medication in combination with behavioral interventions and training is often a more effective long-term strategy in managing nonverbal learning disability.

Psychotherapy is most helpful when it focuses on helping the patient understand his or her array of strengths and weaknesses and learn appropriate ways to manage them. Coaching, teaching coping skills, and helping patients understand how nonverbal learning disability affects their thinking, behavior, and perceptions should be primary goals for therapy. Learning to deal with the present is usually much more helpful than focusing on the past. Some aspects of nonverbal learning disability can get better and some will not improve much, but people with nonverbal learning disability can often learn to work around it if they understand the problems and are taught how to compensate. If one does not learn to work around the problems, there is potential for anxiety and severe depression, which further compound the cognitive problems.

The fact that some learning-disabled patients may not fully grasp the concept of "side effect" or consequences of treatment should be of the utmost importance to physicians. Doctors need to make sure that their patients understand what they are getting into. When I started working with a psychiatrist, the tone was set that medications solved problems and were accompanied by little risk. I also had trouble processing the complex and multiple factors in the use of medicine. My neurologist and psychiatrist emphasize the fact that every medication has both positive and negative side effects.

It is also important for doctors to know that it can be much harder for people with nonverbal learning disability to pull out of a depression if they have problems with initiating and organizing,

which are part of executive dysfunction. One psychiatrist told me, when I was severely depressed, that for the medication to work, I could not lie around and do nothing. I had to get up and do things. But I did not know where to start and had trouble initiating, and my whole world seemed disorganized. These problems were there without the depression, but life came to a halt when I was depressed. Patients might do better if they have learned how to cope better with their executive function deficit.

TAMING CHAOS: REWARDS OF INTERVENTION FOR ADULTS AND CHILDREN WITH NONVERBAL LEARNING DISABILITY

In the past, I did not have many systems in my life and was very disorganized. I am now getting my house well organized. I am setting up routines to deal with my daily and weekly tasks and responsibilities. I try to get many of my routines done first thing in the morning before doing anything else. This eliminates a lot of potential stress from my day. I am developing a very organized and functional filing system so that there is a home for any paper that comes through my life. Working with a coach who specializes in attention-deficit disorder or a professional organizer can be very helpful for adults with nonverbal learning disability so that they can develop systems, learn organizational and living skills, and get help with problem solving. It can also help with problems with initiation if present.

One of the effective strategies that I have learned by developing routines is that there is a time to do things and a time to ignore things. One example of this is my laundry routine. I take my laundry downstairs to my laundry machine on Friday, wash it all on Saturday, and fold it all on Sunday. I make it a requirement to get these things done on these days and do not allow myself to do it on other days. I have often gotten very little done in a given day because I spent a great deal of time and energy attempting to make microscopic decisions of what to do in a given moment. I have found that having routines has freed me up for higher levels of cognitive functioning, enabling me to accomplish things that are more difficult for me.

One of my most helpful and life-changing interventions is the binder system that I am creating. I have never done this before. Some examples of the binders that I have set up are *Cooking and Nutrition, How To: Instructions for Household and Health Care, Budget/Finances, Insurance Claims Follow-up, To Do Lists, Writing Projects, and Physical Therapy*. This gives me a place to put all loose papers. I often write down notes from telephone calls, and now I do not have to waste hours organizing these papers, trying to figure out where they go (taming the chaos). I hole-punch them and then put them in the designated section of the appropriate binder. As a result of learning the benefit of these new skills, I am becoming addicted to order!

WHAT CAN PARENTS DO TO HELP THE CHILD WITH NONVERBAL LEARNING DISABILITY?

Parents who are concerned that a child might have nonverbal learning disability should arrange for a multidisciplinary evaluation, which would include neuropsychological testing and assessments

of attention, motor skills, social behavior, and educational achievement. Then an appropriate remediation program should be instituted in the problem areas. The child should be monitored and re-evaluated every year, and the treatment program should be re-configured and modified as needed to adapt to the problems with nonverbal learning disability that shift across the life span. It is important to realize that being good at talking does not necessarily mean that a child is performing well in other areas.

It is critical that children with nonverbal learning disability who are having trouble academically receive academic intervention to learn study skills, better organizational skills, how to get the main point, how to make inferences, etc. I would not assume that things are going well academically just because your child is performing at grade level. It is important to check in with children with nonverbal learning disability (and children in general) to find out how much effort they are putting forth to perform at their current level. Personally, I think that the schools should be doing this, but because they are not, parents should take this on. For myself, "learning how to learn" would have served me better than what we actually learned in high school. I am sure that school would have been much easier and more fruitful for me with appropriate intervention.

Depression is extremely common in the nonverbal learning disability teen population, and parents and professionals need to keep an eye on this possibility. When teenagers repeatedly do not live up to their own expectations and those of others, are unable to do what peers are able to do and/or need to expend excessive effort, do not fit in or experience rejection, and are faced with academic difficulties and/or job failures, the susceptibility to depression and anxiety is very high. Recognizing depression when it occurs and seeking help are very important.

I have always liked the quotation, "If you give a man a fish, he eats for a day. But if you teach a man to fish, he eats for the rest of his life." I think this is a great motto for helping the child with nonverbal learning disability. The greatest service that you can do for children is to find the right balance of what you do for them and what

you teach them to do and expect them to do on their own. This balance, of course, depends on your child's pattern of specific strengths and weaknesses. You should never make children do what they are truly unable to do, but you need to teach them to do whatever they are capable of and expect them to do it on their own once they are competent. Investing the extra time now will save time later.

I recommend that you take the time to make sure that your child learns and masters all of the daily living skills necessary to be independent. Teach your child coping, organizational, and problem-solving skills and how to perform everyday tasks in an efficient manner. Do not give up if your child seems uninterested; he or she is probably just having trouble learning. Try to figure out exactly how your child learns because this information can be used to help educators and others work with them and later will help them self-advocate in school, at work, etc.

I would also recommend helping your child understand his or her specific pattern of strengths and weaknesses. This can help a lot when children grow up and enter the workforce and potentially prevent the painful employment or career trials that so many adults with nonverbal learning disability have had to endure. They can use this information to learn which deficits they can reasonably compensate for and what sorts of jobs they need to avoid. In some cases, it can be helpful to begin the ongoing process of considering what career choices would be appropriate as early as ninth grade, if not earlier. If people with nonverbal learning disability know their strengths, they will have an easier time finding the potential niches in which their talents can shine.

Intervention is critical with nonverbal learning disability—the earlier, the better. There is ever-growing evidence that intervention for children and adults with nonverbal learning disability makes a huge and promising difference in the outcome.

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Special Article

From Research to Policy to Practice: Prescription for Success for Students With Learning Disabilities

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ABSTRACT

As a community, physicians with expertise in child development and an appreciation of school-related challenges are uniquely positioned to enhance the well-being of children with specific learning disabilities. Efforts in such areas as differential diagnosis, enhancing communication between home and school and among parents and related service providers, accountability for effective and timely intervention, advocacy, and the application of scientific approaches to instruction and progress monitoring are among the ways in which the medical community can support children with special learning needs. (*J Child Neurol* 2004;19:836–839).

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