

Learning Challenges

A NeuroDevelopmental Perspective

By: Certified NeuroDevelopmentalists



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Learning Disabilities

By Cyndi Ringoen, BA. BS, Neurodevelopmentalist, copyright 1999

Someone you know or love has been labeled "learning disabled." What does this mean? What are you to do now? The first and most important thing you can do is try to find out and understand what exactly does this label mean. It absolutely does not mean that someone has a disease. It does not have anything to do with how intelligent a person is. And it does not mean you have to accept it and live a life learning how to 'cope' with this problem. You need to try and find out what exactly the underlying inefficiencies are and then start eliminating them.

Eliminate it?? Yes, learning disabilities can be eliminated. But in order to do that you must identify the causes, and create a plan of attack to address each of them. The reason that more learning disabilities are not eliminated has to do with how they are perceived. Often they are viewed as static, meaning they do not have the ability to change. In essence, they are what they are and nothing you can do will impact them. This is an incorrect view. Other times, professionals become microscopic in their assessment of learning problems. Each professional sees only within a very small, narrow scope, the width of their profession and expertise. If 15 clients with reading problems came to be assessed, it is likely that such a professional would find somewhere between one to three reasons why the person was having a problem. The worst part is after you have paid for an assessment, often the professional identifies a problem or two and sends you on your way without the most important piece of information that you need: THE SOLUTION! In reality, if 15 clients came to me with a reading problem, it is likely that I might find 30 or more reasons, or combination of reasons, as to why reading was not working for them. After identifying the major underlying problems, it is then necessary to develop an individualized plan for addressing each area of inefficiency. Identifying and addressing each inefficiency is the key to eliminating the learning problems.

The organ that you use to learn with is your brain. Therefore, if learning is a problem it becomes necessary to take a look at the brain and how it is functioning in order to pinpoint possible problem areas. According to the Information Processing Theory, the components necessary for learning are the ability to receive, process, store and utilize information. By looking at each of these, we may be able to find areas of weakness that are causing learning problems.

RECEIVE:

It makes sense that in order to learn anything you must first be able to receive the information. We take in information in two major ways- visually (through the eyes) and auditorily (through the ears). If there are any problems with the information coming into our brain, it will stop or decrease our ability to learn. It is necessary to check out the eyes and make sure that everything is working well. Some common problems with the eyes receiving information properly are: acuity (seeing well enough), convergence (the eyes working together), enhanced peripheral vision (seeing too much from the sides of the visual field), underdeveloped central/detail vision (not seeing enough of what is right in front of you) and various other eye sensitivities.

Common problems with the ears are: hypersensitivity to sound, causing a defensiveness to sound, hearing, and listening; tinnitus (ringing or sounds in the ear); and ear fluid problems. Fluid in the ears is a major developmental problem in that it causes inconsistency in the ability to hear good quality auditory input. The consistent hearing and processing of auditory input is necessary to develop good auditory processing skills.

After assessing how the information is being received, the next step is to take a look at the processing ability.

PROCESSING:

Processing is the ability to hold information in your short-term memory.

We have two types of short-term memory- auditory and visual. The average ability to hold 3

pieces of information in our short-term memory appears to be age related early on. This means an average two year old can hold two pieces of information, a three year old three pieces, etc. But the average for our society from 7 years up to adult is 7 pieces. A short-term memory of 7 is average, but it is not great. You can test your own family at home. Slowly (at one second intervals) and in monotone say 6 -4 -1 -9, then have the person repeat it back to you. If they can do it correctly they have an auditory short-term memory of 4. Continue in this fashion until you reach the highest level they can complete successfully. This indicates their auditory digit span or auditory short-term memory capacity. You can also test this visually by holding up a card with a sequence of numbers on it. You hold the card for about 3 seconds, take it away and have the person repeat what they saw. If anyone over 7 years of age has a short-term memory less than 7, they are working with an inefficiency. The greater the discrepancy, the greater the inefficiencies will be.

For younger children, you may test the auditory memory by saying words that they can repeat back. For example, you say (slowly) dog -cat and have them repeat back. If you have a nonverbal child you can say simple directions and see if they can respond. For example, you can say "Touch your nose and hair." If they follow the directions they have an auditory sequencing ability of two. You can continue increasing the number of objects, words, directions or numbers until they reach their maximum success level.

If a person is found lacking in their short-term memory, it is likely to cause many learning and behavior problems. Improving the processing ability will improve the overall function of the individual. One exercise that appears to be useful is to repeat the above process several times a day for about 1 -3 minutes each time. Over time the brain is able to hold more and more pieces of information, and this will be reflected in an increase in the number of sequential pieces recalled.

STORING:

Storing information is the same as long-term memory. As opposed to short-term memory, which is only from 3-20 seconds long, long-term memory is for use at a much later time. Many researchers believe that all or almost all of the information that makes it to long-term memory is in fact there. The problem becomes one of retrieving the information at will. It appears that the most efficient way to enable a person to retrieve information is by ensuring that a person has established laterality or dominance of their hand, eye, ear and foot. This means that if a person is right-handed they should also be right eyed, right eared and right footed. The difference between storing information in a brain that has established laterality and one which has not can be understood easier through the following example:

You write down the name and number of a very important person (which you will need at a later date). You walk to the file cabinet, file it alphabetically under the last name and close the file drawer. In about a week you need the number. You go to the file drawer and easily retrieve the name and number. This is an efficient way of storing and retrieving information, as opposed to--- You write down the name and number of a very important person (which you will need at a later date). You walk to the file cabinet where you discover the entire contents have been emptied out and thrown around the entire room. You toss your paper onto the entire mess. In about a week you need the number, so you go to the file, which is all over the room. You begin searching frantically for the information. Maybe you find it, but probably you will not; if you do it might be too late to use anyway.

One of the major components to not having established dominance is inconsistency. You never know if the information will be there or not. Sometimes parents interpret this as the child purposefully withholding information. Since they knew it yesterday, the parent is sure that they must know it today. The reality is, they did know it yesterday, and the information is in their brain, but they do not have access to it at this moment in time. This causes much frustration with the child and the parent.

To determine where you or your child is with dominance, you can observe some of the following things in your own home. First, it is necessary to determine if the child is right or left

handed. If a child is too young or has not developed a hand, then you may need professional guidance before going further. You do not want to influence handedness in any way, as it is a very important neurological foundation. If the child is right handed, you would want the other dominant functions to also be to the right. If the child is left handed, you would want the other dominant functions to be to the left.

To determine which ear is dominant, you can make several observations over a period of a few days. Watch which ear your child holds the phone up to. Ask them to try and hear a conversation on the other side of a door and watch what ear they put to the door. Put a watch on the table at their midline and ask the child to see if they can hear it ticking, then observe which ear they turn to or put on the watch. You can also notice while speaking with a child sitting directly in front of you if they tend to lean in with one ear closer than the other. The closer ear is usually doing the work of in taking most of the information. If they do everything with the right ear consistently, they are probably right eared. If they do everything left, they are probably left eared. If they do variations and are inconsistent they are probably mixed eared. Any degree of mixed dominance can cause learning inefficiencies. To help move the dominant ear (if necessary), you can plug the other ear for a few hours a day, thus forcing the open ear to start taking in information.

To determine which eye is dominant you must look at the use of the eye at two distances: near-point and far-point. Near point is anything from your nose to several feet away. You can observe as they look into cameras, kaleidoscopes, telescopes, key holes, etc. To determine far point, you can have the child stand about 8 feet away from you, but lined up straight in front of you. Extend your arm with your finger pointed and point at the child's nose. Ask the child to point back at your finger with their finger. When they have it sighted, notice which eye is sighting the finger. You can usually tell by looking straight at their finger up to the eye behind it. Have them switch hands and point again with the opposite hand. If they are not using the correct eye, or if they are inconsistent with which eye is used, then they are mixed dominant. To help insure use of the dominant eye, you can patch the other eye for a couple of hours a day for several months. During the hours patched, it is helpful if the child is doing something visually stimulating, i.e. reading, writing, playing computer, watching television, etc.

I have done this type of dominance work with many of my children and have seen significant improvement in their ability to learn, remember and control emotionality.

UTILIZING:

Using the information that you have is a final area of exploration. One of the most important things necessary for utilizing the information you do have is a positive, relaxed environment in which to output the information. If a child gets upset or anxious (as is often the case when kids having learning problems), then they lose access even to the information which they do have. This happens because emotionality is a subdominant function, whereas retrieval of factual information (analytical and logical thought) is a dominant function. If a child is in a negative learning environment, that, in and of itself, will impair their ability to output information.

By assessing each of these areas, you will learn important information about how your child takes in information. Or you may find answers to your questions about why your child is having such a difficult time with learning. Each of the above areas is extremely important to the ability to learn easily. I often find that it is the combination of inefficiencies that make each person's learning problems unique, and this is the reason that 'packaged programs' do not work well for the majority of people.

Author: Cyndi Ringoen, Certified Neurodevelopmentalist

Auditory Processing

By Jan Bedell, PhD

Many people wonder why so many children are being labeled with learning disabilities, today. Some say that we have better testing capability than ever before and that explains the dramatic rise in labeling our children with ADD and other learning challenges like poor auditory processing. Other groups, like Brain Sprints that recommend The NeuroDevelopmental Approach to Life, point to changes in our society and environmental factors as significant influences causing these challenges to exist.

Low auditory processing has been found to be a significant influence in the labeling of individuals with ADD or ADHD. What is ADD exactly? It stands for Attention Deficit Disorder. A common definition is “a developmental disorder that is marked especially by persistent symptoms of inattention (such as distractibility, forgetfulness, or disorganization) or by symptoms of hyperactivity and impulsivity (such as fidgeting, speaking out of turn, or restlessness) or by symptoms of all three and that is not caused by any serious underlying physical or mental disorder.” (www.merriam-webster.com) Dr. Rick Nauert, a PhD with over 25 years’ experience in clinical, administrative and academic healthcare, stated that there has been a 66% increase in the diagnosis of ADD/ADHD since 2000.

Auditory processing is the ability to hold pieces of information in one’s short term memory. Challenges with this ability is also on the rise to the extreme of receiving its own label, CAPD (Central Auditory Processing Disorder). From the perspective of a medical model, these diagnoses are from a list of symptoms (a check sheet if you will) typically gleaned from parents and teachers. The medical/psychological recommendations are characteristically - coping, compensating and medicating.

What are parents to do? Their child is struggling, there is tension in the home and classroom, the good natured otherwise obedient child feels bad about herself and the list of undesirables goes on. Parents are left not knowing whether the negative behaviors in their home are really behavioral/heart issues or beyond the child’s control. The angst and uncertainty of how to help their child weighs heavy on their hearts. Many parents are opting out of the medication route because of the many side-effects and rightly so. This leaves uncertainty nagging at their heart and parents are left to search on their own through confusing and often opposing views. Some think, “If I only had a diagnosis, everything will be okay.”

Most parents, I have talked with, have been disappointed in the results of testing for labels. The solutions offered usually include a few general recommendations and medication that are often disheartening, disappointing and certainly not the solutions they were hoping for. Let’s look at the other side of the same coin for at least one possible cultural reasons for the rise in symptoms that are common to both ADD and low auditory processing.

Many years ago, when our educational system was developed, we were an auditory society. We ate together as a family three times a day and TALKED (no one was on a devise). We read

as a family in the evenings or LISTENED to radio broadcasts for hours. We developed our auditory processing ability by listening. Today, our society has become primarily visual with electronic gadgets dominating our daily landscape.

Auditory sequential processing is the ability to hold pieces of information together in short-term memory, matching the order it was given. This short-term processing has to happen before information can be transferred to long-term memory. How is this skill foundational to a person's function? Well, it is vital to reading comprehension - holding the details of the story together; vital to the ability to learn to read with a phonics approach - holding specific sounds together long enough to get the word out; vital to interpreting social cues - putting all the pieces of spoken words, inferences and body language together to understand the full meaning of the communication; and vital to understanding cause and effect - grasping the big picture and realizing the ramifications of current actions. When this understanding is not in place, impulsivity often follows. Parents are dumbfounded by the seeming lack of consideration for others by a child acting on a whim without thinking of the consequences. Developmental deficits in language processing as well as in reading recognition and spelling have also been attributed to auditory deficits. These and more indicators too numerous to mention here, are symptoms listed on the ADD checklist, available through any internet search. These are skills essential to success in school and life.

Even behavior is an area greatly influenced by auditory processing. For example, if a 12-year-old processes more like a 4-5-year-old, he will act like a much younger child causing considerable conflict in the home and with peers. Interrupting conversations or not following conversations well causes one to say things that are viewed as inappropriate. These socially challenging interactions are common occurrences, when auditory processing is low. Let me be clear, this has nothing to do with intelligence! It is a developmental issue and fortunately can be changed.

ADD and low auditory processing share many of the same symptoms but auditory processing is not the over-arching reason for all of the symptoms. Neurodevelopmentalists look for any reason that a symptom might exist. For instance, there might be a metabolic reason (internal chemistry of the body- gut issues, allergies...) why a child can't sit still. The disorganization of papers, notebooks, room, etc. could be caused by a disorganized central nervous system. You can't expect organized actions from a disorganized brain but that is unknowingly what we do! A child might feel defeated in school work because the information seems to "get lost in his brain" and doesn't want to come out. This poor or inconsistent retrieval of information may be a dominance issue (hand, eye, ear or foot) that causes the filing system in the brain to fail.

The bottom line is, the brain controls everything we do so we need to look there to change the function. Since the brain is dynamic and ever changing, much can be done to change the processing ability, dominance or central nervous system organization of any person at most any age. If parents only knew what to do to change the brain pathways and did those activities, the results could be dramatic! One example of this brain change is a young man named Aaron T. who had been labeled ADD and put on Ritalin from the 3rd -7th grade. The medication seem to

help him cope with the demands of school. After applying the activities based on The NeuroDevelopmental Approach for one year, he was able to finish high school very successfully without the use of medication or modification. He got his associates degree and today Aaron is a dedicated Christian husband and father of four as well as a part owner in a successful small business.

I have been in the field of education for over 30 years. Never have I seen anything so substantial in changing lives as NeuroDevelopment. In my opinion, medication can only mask symptoms. To obtain lasting change we can choose a drug-free solution: The NeuroDevelopmental Approach to Life. The brain is complex and all the reasons for the rise in the label of ADD and low auditory processing cannot be expanded on here. Moms are traditionally good researchers when it comes to struggles of their children. The good news is that there is a way to change the brain so any curriculum or school experience will be successful. I encourage you to find out more about NeuroDevelopment through the many podcasts at: www.BrainCoachTips.com* or find this same information with added graphics on the YouTube channel - Brain Coach Tips.*

The facts are, if you exercise the brain with specific stimulation, it produces better function. With practice, any person's auditory processing can be raised and the majority of the symptoms on the ADD and CAPD checklist will be diminished or eliminated altogether. Get a free test kit to discover the current auditory processing levels for your entire family. This one skill, auditory processing, even though it is not the full reason for labeling children and adults with low auditory processing type labels, can be life-changing!

*Little Giant Steps is getting a new name: Brain Sprints

The Neurodevelopmental Approach to Developmental Delays

By Kay Ness, 2000

There is much hope for the child with developmental delays. This hope lies in the very nature of the brain and the central nervous system. A review of scientific literature reveals that the human brain displays plasticity. This means that, with specific stimulation, changes in function, structure and even chemistry of the brain and central nervous system will occur. This tells us that human function, which is controlled by the central nervous system and more specifically the brain, is changeable. If we can evaluate what is causing problems in development and if we are wise enough to find the specific stimulation that can impact that development, we can accelerate the development and help improve function.

In order to explore the neurodevelopmental approach to dealing with developmental delays, we must understand the meaning of the term. To be developmentally delayed simply means that in some way, a child is functioning at least one to two years behind in areas of cognition, speech and language, gross and/or fine motor areas. The term in no way indicates causes of delays. They can be attributed to genetic anomalies, brain injury, chronic ear infections, metabolic problems or a combination of these and many other causes. A Neurodevelopmentalist treats a child with developmental delays the same way that he treats any other child: find out where the child is functioning; find the specific causes of problems; and design a specific stimulation and educational program to accelerate development to the next levels. Any sensory system can be too sensitive (hyper) or insufficiently sensitive (hypo). Specific stimulation can normalize the sensory systems no matter what the present condition.

Evaluating Developmental Delays

Motor Function

A simple but universal principle of a neurodevelopmental evaluation is if there is a problem with a specific function (OUTPUT) such as gross motor function, then the input to that system must be examined. In this case, it is the tactility and the vestibular system.

The tactility system is broken into 3 major areas: the deep sensors next to the bones (responsible for deep pain sensation, muscle tone and mobility); the soft touch on the skin surface (responsible for feeling textures, tickles and so forth); and temperature sensation.

Low muscle tone is a sign that the deep sensors have low sensation. The evaluator looks at the pain sensation system by squeezing arms and legs then watching how the individual responds to this and how he is able to distinguish different pressures. Also, the parents are questioned as to how the child responds to pain. For example, does the child come in with mysterious bruises, bumps and even is slow to respond to broken bones, etc. Also, a child with low deep sensation may have ear infections and not feel them appropriately. There have been children whose eardrums burst before the parents knew that the child had an ear infection, the pain sensation was so low. This is a child that could be walking around, a little awkward, tending to bump into things and not quite knowing where his arms and legs are going (proprioception). This child is often described as uncoordinated and awkward.

Many children are sensitive on the skin surface to tickles, textures, temperature and still have low pain sensation. Specific evaluation of each system is important in deciding a program design for that individual.

The vestibular system can be hypo (not sensitive) or hyper (too sensitive). Specific tests are done to decide how to help normalize this system. Signs that the vestibular system is not functioning normally are carsickness, balance problems, eye tracking problems, dizziness and so forth. Chronic ear infections can involve the vestibular system and keep it from developing normal function.

If an individual has never gone through normal developmental steps of crawling, creeping and learning to walk in a cross pattern, the foundations for smooth and coordinated motor function has not been laid. Taking an individual back through these steps while working on specific tactile and vestibular problems can remediate these problems.

Fine motor function also involves the tactility system. Little hands with low muscle tone or unbalanced muscle tone and development make it hard to develop good fine motor function. Some children are too sensitive on their hands and avoid handling things or do not like feeling certain textures. Some children can have strong muscles to grip something but very weak muscles that open their hands. They can be quickly identified by those cute little dimples on the back of their hands. Some children just have very weak hands from low muscle tone. It is important to note that low muscle tone prevents muscles from building. Developing normal tactility helps build the ability to develop muscles.

Intellectual/Cognitive Delays

A label of mentally retarded is often devastating to parents. Many children come to us with labels like Mentally Retarded, Central Auditory Processing Disorders, visual processing disorders, figure/ground discrimination problems, etc. Some children have low eye contact, participate in sensory play, hand flapping, rocking, and other self-stimulatory activities. These labels are simply terms describing what they are doing. It by no means describes what they are capable of doing once the specific problems are addressed and teaching is accelerated according to how that individual learns best.

The way to begin evaluation of problems with cognition is to look at the main ways we learn: the visual and auditory systems. With the visual system, we evaluate whether the central detail vision is well developed; whether the individual uses the peripheral vision inappropriately (visual sensory play and/or low eye contact); whether the eyes track and converge smoothly; and the level of visual processing. All of these problems are easily remediated with appropriate exercises and specific stimulation to normalize function.

With the auditory system, the "normal" years of chronic ear infections can interfere with auditory development to result in cognitive delays. Since hearing is developmental, fluid in the middle ear will distort the hearing and delay auditory development and processing. Some individuals have actual hearing loss, some have tonal processing problems, some are sensitive to certain frequencies (covering ears in noisy or confusing environments or changes in behaviors in noisy environments). These individuals can test with normal hearing on an audiogram but still have significant problems with processing tones. All of these problems are open to remediation with sound therapy and specific training to improve auditory processing.

Processing, both visual and auditory, are very significant in intellectual function. If an individual can only process 1 or 2 pieces of information and is older than 5 years, this individual is unable to function with his peers. This individual would be considered "retarded". If we improve the processing (short-term memory) to 6 or better, this individual can now process information in the environment and can function normally. This is discussed in more detail in the paper: "Hearing, Learning and Listening".

Once the sensory systems and processing abilities are evaluated, neurodevelopmentalists evaluate how the individual thinks, either visually or linearly. An individual needs both abilities but often, due to developmental issues, lopsided development takes place and we often see individuals with great visual abilities and no logic, or the contrary, great linear thinking but no ability to think globally. Balancing these thinking abilities is important in helping the individual function normally and eliminates some "strange" behavior.

Speech and Language Delays

There are many pieces to developing good speech and language skills. As in other areas of development, neurodevelopmentalists first look at the inputs: hearing and oral motor issues.

Hearing and processing skills were already discussed. When a child is sensitive to sounds, there is a tendency to shut down auditorily and not listen. Hence, the child will not develop good auditory processing and the ability to speak in sentences. Not distinguishing certain sounds may interfere with enunciation also. Samonas sound therapy is used to remediate these problems.

Oral motor issues are a bit more involved and can interfere with articulation. First, looking at the ability to move and control the tongue and jaw is important. Does the child chew properly? Is the child sensitive to textures in his mouth? Is the child aware when he has too much food in his mouth? Does he choke easily? These can involve mouth tactility issues and specific mouth stimulation is important to help normalize this function.

In looking at tongue control, can the child stick his tongue out and raise the tip towards his nose? Can the child lateralize his tongue, moving it from corner to corner of his mouth smoothly? If not, mouth stimulation and tongue exercises are called for before any specific speech therapy will be effective. A tongue thrust or being tongue-tied can also interfere with articulation.

Once processing and oral motor pieces are in place, specific training can take place to model good articulation and practice it with the child. Without those pieces, it is very difficult to make good progress.

Conclusions

Though an individual has problems and has been labeled as disabled in some way, this by no means is indicative of the ultimate level at which that individual may be able to function. We evaluate the causes of the problems and treat these causes. Then we teach the individual in an intense way that emphasizes his strengths while remediating weaknesses. Ultimately, functional improvement can be achieved.

Author: Kay Ness, Certified Neurodevelopmentalist Southeastern Neurodevelopmental Consultants (SENC)

Make Learning Easier With a Strong Foundation

More and more parents are wondering why their children are struggling...

Why is reading, spelling or math so difficult for my child? Why do they seem to know something one day and not the next?

does it seem to take so long to

something called Dyslexia,

Processing Disorder, or

have something like Autism or

struggling so much with reading

right! Why is my bright child struggling to learn? If you have asked some of these questions,

you are not alone...

These are all signs of a weak foundation.



Why are they so disorganized? Why teach him? I wonder if my child has

ADD, ADHD, Low Auditory

something else? Does my child

Asperger's Syndrome? Why is she

comprehension? Something is just not

Brain Sprints (www.brainsprints.com) helps children who are struggling to learn as well as help in the prevention of learning problems. Learning difficulties do not have to last a lifetime or even exist at all. They are simply symptoms of a root cause.

Why is my child struggling

The most important part of any structure is the foundation and that includes the brain. First, imagine a building that has cracks in the walls, door frames are pulling away, and the windows and doors do not close properly... all of these “problems” are symptoms of an underlying root cause, a weak foundation. When you fix the foundation, the “problems” are correctable. The same applies to a person. Struggling to learn is an indicator of a “foundation problem.” The “problems” your child is experiencing are symptoms of an underlying root cause. When troubles appear, don't look to the symptoms, but to the source: repair the foundation of the brain.

Why would my child have a “weak foundation”

A child may have a “weak foundation” when they are missing some developmental steps that are necessary for their brains to be organized, which is the very foundation of learning. We'll discuss a few here. When babies are born, they have a built-in, precise program that enables them to complete their developmental steps. If given the opportunity and placed on the floor on their tummies, babies will move through these steps. Unfortunately because of our societal practices of keeping babies upright in carriers, walkers, swings, etc. many are not given the opportunity to work through their developmental steps. In turn, this has affected every aspect of their life. We have progressed in the wrong direction wanting to keep our babies in various contraptions which are detrimental and not developmental. As a result, any special programs, trying to teach with new learning styles or changing curriculums each year will not help a child until their “foundation” is fixed. There are exceptions, of course, that can

naturally keep a child off the floor like surgeries or reflux problems, but when possible a baby should be on the floor in a clean, safe environment.

Influencing the “handedness” of a child is another huge aspect of learning. With children going to preschools and daycares earlier and earlier they are many times being influenced to use the wrong hand. Hand dominance is a huge factor in neurological efficiency.

We’ve moved from an auditory to a visual society in this nation; causing many to experience, “Low Auditory Processing”. When a person increases their auditory processing, learning becomes easier. Our preoccupation in this nation with “screens” like video games, computers, TVs, iPhones, etc. can cause a child to be labeled ADD or ADHD for the reason that attending is an auditory skill.

Another societal change that has greatly affected the brains of our children is that we have become a very sedentary nation. Instead of children being outside playing ball, jumping rope, etc. they are sitting in front of a TV and playing video games – need we go on! Exercise is for the brain! Recess and P.E. classes have become a thing of the past, just like this nation’s high math and science scores. Little Giant Steps wants to help get this nation and your kiddos back on their feet again!

The GOOD NEWS is that this is all fixable due to the neuroplasticity of the brain!!

What is neuroplasticity

Neuroplasticity is just a big word that means your child’s brain is not hard-wired and is changeable... the developmental steps can be completed at any age! So whether a person is in those pivotal years from zero to six-years-old or any age, developmental steps can be completed! The foundation of the brain can become strong and in turn struggles with learning can disappear!



Armed with this new information, please check any areas listed below (which is not an exhaustive list by any means) where you see your child struggling and come talk to us about the “foundation repairs” needed to remedy your child’s current symptoms to help put them back on the road to make learning easier!

- | | |
|--|---|
| <input type="checkbox"/> Difficulty in reading or math | <input type="checkbox"/> Difficulty with spelling |
| <input type="checkbox"/> Overly sensitive to sound | <input type="checkbox"/> Clumsy-poor sense of balance |
| <input type="checkbox"/> Picky eater | <input type="checkbox"/> Difficulty expressing themselves |
| <input type="checkbox"/> Difficulty following directions | <input type="checkbox"/> Socially immature |
| <input type="checkbox"/> Difficulty grasping math concepts | <input type="checkbox"/> Distracted and/or disorganized |
| <input type="checkbox"/> Very emotional | <input type="checkbox"/> Unable to retain information |
| <input type="checkbox"/> Hyperactive or Hypoactive | <input type="checkbox"/> High or low pain tolerance |

Remember!

Learning difficulties and disabilities do not have to last a lifetime!!

ASK YOUR QUESTIONS! We have the answers you are looking for today! www.BrainSprints.com



Brain Training

By Ruth Young ND, BS



Have you ever had this experience? You recognized someone but cannot remember the name? Here's why: The image of a face is stored on one side of the brain and the name is stored on the other. You have to have a good bridge between the two sides to go across and retrieve the name quickly. This bridge is called the corpus callosum.

Dr. Leaf, a neuro-metacognitive learning specialist from South Africa, wrote *Who Switched off My Brain?* In her book she explains that the corpus callosum is the thinking part of our brain. This bridge between the two hemispheres pulls in information from each side to consider both perspectives. Your child answers all your questions on the bridge!



As you look at this picture, your brain is going back and forth to see a smiley face and then to notice that it is a puzzle. One side of your brain processes “detail to big picture” and the other side processes “big picture to detail.” They both are mirror images of each other and work together to offer different perspectives. Here is another example: One side stores a detail, the fact of $2 + 2 = 4$ while the other side understands the big picture that four is two groups of two.

It is important that the bridge between the two hemispheres is built strong from the foundation up with brain-organizing activities. Your child may be bright and know everything you ever taught him. However, if the bridge construction is sketchy, then he may have difficulty accessing what he knows, finding words to express his ideas and following through on what you ask him to do. Have you ever asked your child to go clean his room and an hour later walk by the room and see a bigger mess than before? It may not be an obedience issue; it could be the result of expecting organized behavior from a disorganized brain. The brain controls everything we do! The good news is that you and your family and even your school can do a brain training program. Then education will be easier for your children and life will be more manageable for you. When the brain works better, learning is faster and life is easier!

A brain training program includes stimulation to five specific levels of bridge construction for the corpus callosum, and you have probably heard of some of them:

- **Sensory Integration:** Your senses like seeing, hearing and touching are learning pathways. We have to be sure eyes and ears are working well and that other senses like smelling, tasting, and feeling pain are appropriate, too. For example, deep pressure to arms and legs sends signals up to the brain and back so a child can experience better brain/body connections for holding a pencil correctly, resolving bedwetting and becoming more coordinated for sports, among other things. This foundational part of the bridge must be organized and integrated for the rest of the structure to be built well.
- **Medulla:** Picture a golf tee in your mind. Now, imagine the tee as a spinal cord and the top of a tee as the medulla. This special part is responsible for autonomic functions like heartbeat, blood pressure, breathing and focus. Specific physical exercises can stimulate the Medulla area to integrate primary reflexes, mature the central nervous system and reduce stress.

- **Pons:** The lower level of your brain is responsible for perception of pain, heat, cold, hunger, threatening sounds, fight/flight responses, self-preservation, survival, life, empathy, bonding, attachment, interpretation of social cues, cause and effect and moral choices. Trauma at any age (including abuse, adoption, a difficult birth, surgery or high fevers) can compromise the Pons and produce anxiety if there is a new person in the room, a new food on the plate, going to the park or sleeping alone in a bed. Perception and trust can be a big problem and manipulative behaviors can be an attempt to gain control when individuals feel they have little influence on the world around them. An army crawl can build the Pons for better behavior and to improve side-to-side eye tracking.
- **Midbrain:** The middle of your bridge construction impacts body chemistry, the endocrine system, immune system, allergies, controlling anger, sleeping well, waking up in the morning and motivation. The midbrain influences impulse control, memory for learning, emotional responses and eye/hand coordination for sports.
- **Cortex:** The upper level of a corpus callosum is organized and constructed with cross patterns like walking, jogging, marching and skipping. The cortex is responsible for formal reasoning, language, inner speech (thinking before acting), test taking and the ability to respond quickly and intelligently to new situations.

Everyone in the family, children, teens and adults, can benefit from a tune-up! Your time commitment for brain training can range from an hour a day to a full school day program four to five days a week. Each program is designed for four months and can be implemented for an entire year or more for amazing results. [Here are a few testimonies:](#)

- Jonathan was seventeen, a senior in high school who bombed the ACT test with a score of 14. He wanted his brain to work better so he could raise his scores to get into college. Jonathan was faithful to work on a brain training program five days a week. Three months later he took the ACT again and scored 20!
- Mrs. S., age 55 was a Montessori teacher and did not read much because she didn't like to. She faithfully worked for four months on brain training. It was amazing to see her reading comprehension jump three and a half years without any type of reading program during that time! When her brain became more organized, she could easily access what she already knew.
- Mercy was eleven and in the fifth grade when she began a brain training program. In four months she advanced two years in maturity (auditory processing), jumped an entire year in reading comprehension and improved a whole year in understanding math concepts! She did math and reading every day for school but nothing was new in these subjects or out of the ordinary. It was the brain training program that helped organize her brain!

Make your plans to add brain training to your daily routine and organize your brain for a lifetime of success in learning at school and on the job. Choose a brain training program that strategically stimulates five levels of brain development for children and adults. Online instructions for every brain training activity is available. Many have video introductions and demonstrations. A shopping list of supplies is included with each program.

Building success for school, success as a leader, success in a career or success in managing a home can happen if you make your plans now to work toward a goal for gaining full potential. A brain training program of specific physical and mental activities for a year or more can result in a lifetime of academic benefit and learning pleasure.



By Ruth Young ND, BS

LONG-TERM MEMORY

The Question of Dominance by Faith Haley, Neuro-Educational Specialist

Long-term memory. What a lovely thought! To have really good, long-term memory a lot depends on what we call dominance. When the term dominance is used, however, there are always many questions. What is dominance and why is it important? It is perhaps one of the most important factors in having a truly wonderful life and yet few of us know what it is.

All animals on Planet Earth have two hemispheres in their brain. We humans, however, have the benefit of having a dominant hemisphere that allows us to have language abilities and to reason. In the dominant side of your brain you have a magnificent filing system that is especially made for the systematic filing of language. It is from here that you have the ability to speak, reason logically, have common sense, have the ability to read and all that encompasses speech and language. It's called your long-term memory. You also have a sub-dominant hemisphere, where your creative abilities are located, to draw, sing, and to be creative in so many different ways. Processing emotions takes place in the sub-dominant hemisphere as well.

Many have heard the terms right brain, left brain. Your left brain is for reasoning and logic and your right brain is for your creativity. That's exactly correct if you are right-handed. However, if you are left-handed then the right brain/ left brain theory is not true. If you are genetically predisposed to be left-handed, then your right brain is where your reason and logic and language filing system are located and your left brain is where your creativity and your emotions are. Remember, we are crossed-wired. The left brain controls your right side and the right brain controls the left side. Therefore, to enjoy the most efficient brain if you are truly, genetically, right-handed, you must take all information in through your right side: your right hand, foot, eye and ear. If you are truly, genetically left-handed and you want to experience the benefits of an efficient brain, then you must take all information in through your left side: your left hand, foot, eye and ear.

You see, everyone has a dominant eye and a dominant ear. Even though you use both your eyes and ears, only one eye and ear are chosen to take in information for long term storage. Your dominant eye takes in information to be stored for long term memory. Your dominant ear receives auditory information that will be stored in long term memory. Therefore, because you want to be able to remember what you see and hear, you need to be sure that you are receiving that information through your dominant side for rapid recall.

These are just a few of the symptoms that accompany individuals who are what we call "mixed dominant": A student might know something one day and not be able to remember it the next. You may know someone with one of those artistic personalities, highly talented in music, art or drama but is highly emotional, too. A person might be bi-polar, may have a stutter or might be ambidextrous. Those using their dominant ear but not their dominant eye will be able to better remember what they hear but not what they see. They are called auditory learners. If they are using their dominant eye and their sub-dominant ear, then they are mostly likely what you would call a "visual learner" because they more easily remember what they see. Why, because they are placing the information in the dominant side of their brain for easy retrieval of those stored facts.

Faith Haley Neuro-Educational Specialist
A Brilliant Foundation

Services

DFW Center

Now available in the DFW area. Same excellent results, new coaching options. Trained Brain Coaches work with your child at our McKinney location on an NeuroDevelopmental Action Plan.

In-Home Option

Partnering with parents to help eliminate learning challenges since 1995.

Parents as Coaches - You work one-on-one with your child from anywhere in the world on a NeuroDevelopmental Action Plan.

Let's go beyond tutoring to resolve academic and functional challenges at the source!



Many families come to us, frequently feeling hopeless and exhausted, after spending years searching for answers. When solutions like Brain Sprints come along, it's often difficult to know exactly where to start. Our goal is to help you find the best solution for your family's situation by providing options for your consideration.

To better understand your needs, please complete this questionnaire. You will then receive a link to schedule a free consultation. This process helps guide your decision about the path to better functional ability through The Brain Sprints' NeuroDevelopmental Approach to Life.

Free Consultation

Free Auditory Processing Test Kit

Request your free test kit from the home page of our website. You will be equipped to determine the auditory short-term memory level of each individual in your family. Also included is how to improve this important auditory processing skill.

