

# THE NEURODEVELOPMENTAL APPROACH TO DEVELOPMENT

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The Neurodevelopmental Approach is like no other approach to human development. It is unique in its approach of looking at the whole individual, not the separate pieces. Taking the individual pieces without an understanding how they interrelate will severely impede the success you have working with individuals.

Whether you have received a label, should receive a label, or are searching for a label for your child; whether the labels are due to learning concerns, genetic disorders, or brain injury sustained, I encourage you to understand labels. Labels are nothing more than symptomatic identifications of problems or concerns. Labels do nothing but limit, nothing but lower expectations. The potential of any individual is based upon the opportunities presented them. If appropriate, specific opportunities are presented, there will be greater outcomes. If opportunities are not offered, often due to the limitations set forth by the self-fulfilling prophecy of the label expectations, less will be achieved.

Learning disability labels are interesting in nature. Most believe they are unchangeable conditions you must learn to live with. They are treated as diseases. The term disease gives one the impression that there is nothing you can do to change the situation. Left unchecked, Dyslexia, ADD, ADHD, etc. seldom see much change. Dyslexia, ADD, ADHD, etc. are not diseases. When you understand the root cause of symptoms of these learning disability labels, you can treat the cause and alter the symptoms. Often, you can eliminate the symptoms, and thus eliminate the label entirely. If not eliminated, you can improve the situation immensely. Treating some of these conditions with medication is nothing more than treating symptoms. Learning how to cope and compensate with these conditions will never bring you to the point of eliminating them. Only by addressing the root causal level will freedom from labels, with all their frustrations, pain, and limitations, be achieved.

When genetic labels are a concern, you have to reach beyond the expectations which have been set based on past observations. An example would be a label of Down Syndrome. The genetic condition of Down Syndrome was first identified by Dr. Langdon Down. Once Dr. Down identified the twenty-first chromosome abnormality, he began assessing the commonality of individuals who shared this condition. The individuals he observed were all people he worked with in the institutions. The assessment was made on individuals who had very limited opportunity presented to them. I would suspect any one of us would have far different outcomes had we spent our lives institutionalized. I challenge you to look beyond the expectations and reach for typical, normal function. You will never achieve typical, normal function for your brand new baby with genetic concerns if you have subnormal goals. No one really knows how much a person with a genetic condition can achieve. Without any question, though, normal function will never be achieved if that is not at least the targeted goal. Most all the individuals we have worked with have far surpassed the predictions and expectations their genetic conditions offered.

In the case of brain injury, roughly the same scenario occurs. Limited opportunity produces limited results. Traditional methods of dealing with the injury are typically insufficient to create the stimulation needed to produce change. The brain is a magnificent piece of creation. Modern science is now beginning to understand what Neurodevelopmentalists have known since the 1930's. The brain is not hard wired. There is incredible plasticity and redundancy of the brain. If you stimulate, with appropriate stimulation, you can improve function. If you stimulate with appropriate frequency, intensity, and duration there will be improved function. It has been erroneously thought that structure determines function. However, the truth is that function determines structure. By inputting the proper function, you can improve function, and thus alter and improve structure. With proper stimulation, appropriately administered, you can have healthy parts of the brain take over the function of damaged, unhealthy parts of the brain. It is a matter of knowing what stimulation is needed. Traditional methods for working with brain injury do not follow the normal developmental progression.

Bypassing levels of development will only limit success. A typical example would be putting a non-walking child into a stander prior to that child going through crawling and creeping stages of development. Crawling (on the stomach as an army crawl) and creeping (on hands and knees) are the only activities that organize the lower levels of the brain. Bypassing these steps will make a very weak foundation for higher brain level function. A child is not born with their hip sockets developed. The activity of crawling and creeping develops hip sockets, in order to properly bear weight. If those imperative steps of crawling and creeping are missed, standing in a stander will put the hips and related structure in jeopardy. Correctly working with tone (whether high or low) is another area that is often misdirected. Ranging of muscles generally will cause high tone to increase; similar to stretching a rubber band. You may get that band to stretch out further. However, when the pressure is released it snaps back even tighter than previously. By knowing how to release the lower bodies own reflex system, you can work spastic leg muscles without risking injury to them.

Autism Spectrum Disorder is a concern with wide ranging problems. It is usually determined by a check list. When a certain number of symptoms on this checklist are associated with an individual, he will receive this label. Differing symptoms within the checklist will also determine if the label also includes Aspergers, Pervasive Developmental Disorder (PDD), or high functioning Autism. Most often, when working with children with this label,

you are primarily working with children who have sensory dysfunction and metabolic problems. Getting to the root of the problem and aggressively addressing the sensory distortions can result in significant improvements, and in some cases, complete recovery for the individual.

From the time of birth, brain cells die. Every second, every minute, every day, brain cells die. Although brain cells continue to die, the brain does increase in size. The increase in size and weight of a maturing child's brain is a reflection of the growth of the connections between the brain cells. The brain grows those connections through stimulation, specific stimulation. There is a paramount difference between specific stimulation and random stimulation. Much of what is done is random stimulation. This will not produce change quickly or efficiently. It produces change almost by accident. A kindergarten classroom is usually covered with loads of stimulation. Colors splash across bulletin boards and posters. Items hang from the ceiling, and the walls are full. Unfortunately, the stimulation does not produce learning as it is too scattered and random. A room which offers little stimulation actually is far more successful in endeavors for learning.

Stimulation needs to be given with proper frequency, intensity, and duration. Frequency means having enough opportunity and repetition in order for the stimulation to produce a change in the brain and become learned information. Often, we are testing for output without ever properly putting in the information. Intensity refers to the strength of the input of the stimulation. Is the stimulation at a level where the individual is actively engaged with it, or have they tuned out because of lack of intensity? You can drag an individual through an activity, but without a high level of involvement and interaction, change or learning will not occur. Duration has dual meaning. It refers to the time the stimulation is being given. Usually the shorter the duration the higher the intensity. Five or ten minutes of mathematics will have a far greater impact than dragging a child through an hour of math. Duration also refers to staying with the stimulation for however long it takes to produce change. Specific stimulation will produce change. It may take time, though. Many times the stimulation is creating, developing, and building new pathways to the brain. Usually that work produces internal changes that are not always seen. Just because immediate improvements are not evident does not mean it is time to stop offering the stimulation. Again, specific stimulation does produce change, but one must stay in for the duration needed to see the outward changes, which brings us back to the Neurodevelopmental (ND) Approach. By knowing what is specific, through the ND Approach of looking at things, you can have significant change.

The ND Approach uses a developmental profile to look at two primary areas. The first area addresses sensory input. In the area of sensory input, auditory, visual, and tactile function is identified. The second primary area addresses motor output. In the area of motor output, gross motor, fine motor, and language function is identified. You can not have good output without good, clean input. It is important to look at the whole individual. If the tactility is not developed, you can have problems in all the other areas. If an individual can not feel their feet, they will not stand unaided, no matter how many hours are spent in a stander. If an individual can not feel their hands, it is hard for them to write. If an individual does not use their central detail vision properly they have a hard time formulating language, coloring within lines, and doing anything that requires detailed vision. They also can have many problems that develop through having an enhanced peripheral vision. An individual who does not process sequential information auditorily will have many problems. They will be limited in their ability to follow directions, stay on task, and keep up with normal conversational language. They will have problems with distractibility and conceptual thought processes. Language problems encompass looking at the tactility of the mouth, oral motor control, control and utilization of the lips, vital capacity, resonance, phonation, sinus passage development, auditory sequential and tonal processing, auditory processing rate, health, and the condition of the ears (ear canal, inner ear, middle ear, eardrum). All pieces need to be evaluated in order to effectively design a treatment program.

Most families desire to take primary responsibility for their children's welfare. Sadly, too often the family feels the least equipped to take on that role. They are overwhelmed by the needs of their child, the newness or complexity of the diagnosis, the medical community, and/or the educational community. The ND Approach gives the power back to the family, the true experts of their children. The ND Approach was created to equip the parents with the knowledge, expertise, and exact "how to" for working with their children. Once equipped, the family has the ability to make wise choices for their child. Families will have the on-going support of the Neurodevelopmentalist, as well as a network of parent's internationally who are actively guiding their children in the pursuit of reaching their maximum potential.

For more information regarding the Neurodevelopmental Approach to Child Development, please contact:

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