



## WHAT IS NeuroDevelopmental Movement?

NeuroDevelopmental Movement (NDM) is an approach to behavioral, academic, psychological, social, and physical challenges of both children and adults with any form or degree of injury or delay in the central nervous system. NDM is fully informed by, and takes all of its powerful tools for change from, the model for natural growth called the Developmental Sequence.

It is critical to recognize the source of our information, the Developmental Sequence before going on to define the practice based on that model. The Developmental Sequence is the hierarchy of physical activities through which every human being moves. From pre-natal activities up through cross pattern walking, all humans are genetically programmed to move through an ascending hierarchy of functional movements, each of which stimulates the next phase of growth. Each layer of development is built on the layer of growth that occurred prior, so it is critical that each stage is fulfilled in a timely manner. This hierarchy of movements is responsible for our anatomical and neurological health.

We can support the unfolding of the Developmental Sequence in neonates, infants, and children by providing appropriate environments that allow and support them in a full range of motor activities and sensory experiences in the context of appropriate parenting.

However, that ideal environment for the infant and young child is not always a reality, so in many cases, stages of development may be missed. In addition, children who are born with neurodevelopmental challenges, for example, brain injuries resulting in the diagnosis of Cerebral Palsy, strokes, or toxic exposures in utero, may need to work longer and harder to build stability at various stages of the Developmental Sequence. By replicating the Developmental Sequence through a program of NeuroDevelopmental Movement, we are able to create a healthy physical body and nervous system.

NeuroDevelopmental Movement is the specific approach that meets the needs of this child or adult in the most comprehensive way available because it follows the Developmental Sequence. Through its neuro-motor and sensory programs, NDM completes and fills in gaps in development, allowing the client to move forward in their anatomical and neurological growth.

NeuroDevelopmental Movement is a movement and sensory-based, drug-free approach to addressing the challenges of a disorganized or injured brain. Brains can become dysfunctional with a patchy or spotty distribution of challenges that often stand out against a pattern of largely normal neuro-developmental skills. They may present themselves against a background of good intelligence, while behavior can be extreme and unmanageable. Some children have pervasive neurodevelopmental challenges that impact all areas of their functioning, and in more extreme cases, children are globally delayed, or brain injured.

More commonly, however, children can have a wide range of less extreme, but still highly challenging diagnoses, including most of the “alphabet” diagnoses: RAD, ODD, OCD, ADD, ADHD, FASD, CP, Tourette’s, Autism Spectrum, etc. All of these diagnoses are on a continuum of a damaged or under-developed brain.

The Central Problem lies in the brain itself, rather than in any number of other factors that have been considered in the child’s experience. The brain itself is the central problem, and when you have a central problem, you can logically posit a central solution. Thus, when you treat the central organism, the brain itself, you can go a long way toward recovery.



## **HOW DOES NEURODEVELOPMENTAL MOVEMENT WORK?**

NeuroDevelopmental Movement addresses these issues by evaluating skills at seven developmental levels, and considers reflexes, movement, and sensory development. If there are gaps at any level, work is begun at the lowest level to enhance functionality and complete the required developmental task, by replicating the activities that a neurologically typical child instinctively utilizes to integrate the brain. There is some variation on this if the child has been traumatized in utero.

The tools that are naturally provided to integrate the infant brain are the most effective way to integrate a brain that is missing some of those functions that lead to the above diagnoses.

A typical infant goes through a series of reflexes or whole-body patterns of movement that lead to mobility and expand their sensory world. The more they move through the activities that comprise the Developmental Sequence, the greater the interaction with parents and the sensory world around them, the more they will be neurologically, emotionally, physically, academically, and socially whole.

Some children who were neurologically compromised at birth need more of these activities than is seen in typical development. By going back to replicate the Developmental Sequence, in these children, the brain is prompted to integrate the functions that, if left un-integrated, become rages, dyslexia, repetitive behaviors, bed-wetting, poor coordination, dyslexia, ADD . . . the list goes on.

## **HOW DOES A BRAIN BECOME DISORGANIZED OR INJURED?**

How do those gaps in functioning occur? Specific brain damage can mean, for example, that the baby was dropped on its head; they may have had a stroke in utero; in some children we see exposure to alcohol or drugs during pregnancy—all of these are obvious. Less obvious are toxins in our environment, such as mercury, arsenic, lead, etc., that are in the chemicals we use every day. A highly stressed mother's biochemistry will also flood the fetal brain with cortisol, which damages brain tissue. Other circumstances that can compromise the brain include: premature separation of the placenta, a difficult birth in which the baby's head gets stuck against the mother's pelvic bones, with pressure on the skull and brain, the umbilical cord wrapped around the neck with unrelieved pressure, jaundice—all of these can cause compromises in the brain.

Separation from the biological mother, through adoption or merely a mother going right back to work, can traumatize the neonate. High fevers and medications can damage the brain. Anesthetics are culprits, and recent research has shown that babies who are administered anesthetics prior to two years old are more likely to have learning disabilities.

In addition, when children's natural motor activity is interrupted, they may skip critical parts of their developmental process. Children who do not have adequate opportunity to crawl or creep due to constant holding, growing up in a car seat or variations of a "walker", children who are sometimes referred to as 'bucket babies', can have specific impairments that lead to learning and behavior challenges.

## **WHERE TO BEGIN?**

NeuroDevelopmental Movement will assess a child with all of this in mind and provide a program of activities that should take about an hour a day. These activities will replicate any missing stages and will include reflex, motor, and sensory activities. NeuroDevelopmental Movement provides the client with one of the most comprehensive, effective, and natural approaches to these challenging issues.



Traditionally, the prevailing approaches in our culture respond to challenging children with one or both of two solutions, either: 1) Change or modify the behavior directly through behavioral programs or coaching—including social behavior, academic behavior, and physical behavior; or, 2) Medicate.

We are given primarily these modalities, but with the ever-increasing level of dysfunction in our children, we must look beyond the two approaches that have been tried for an extended period of time with no resolution of the bigger trends in the culture. We challenge all of our clients to look beyond interventions that have failed to heal the current problems in childhood mental and physical health, and look to the central solution which, on examination, is the most logical and effective approach. Treat the brain itself with what the brain naturally needs.

NeuroDevelopmental Movement discards the behavior and/or medication model and focuses on the problems underlying the neurological dysfunction. The central problem is met with a central solution.

If medication would consistently work without side effects, parents might consider the effort put into the process as “too much”. Completing an NDM program takes approximately two years for many children, and for those children with considerable trauma, it can take up to three years in the resolution process.

This is daily work, yet we have known families who have worked for two years simply adjusting medications with no improvement, and sometimes some huge regressions in behaviors. So, as difficult as it may be to take an alternate route, five years from now those who have worked to resolve the source of the problem will be getting on with their lives, whereas those who have only addressed the symptoms through the behavior/medication model, will be dealing with, perhaps, teenagers whose behaviors have escalated.

NeuroDevelopmental Movement, properly done, can lead to tremendous healing in the vast majority of children. Adults who have suffered these same insults to the central nervous system can do as well as children. In addition, adults who have had central nervous system insults, such as a traumatic brain injury or stroke, can find a great deal of resolution of their issues through this process. All NeuroDevelopmental Movement Consultants work with adults, as well as children, and we welcome their unique insights. We celebrate their full resolution of symptoms as much as we do in our children.

## **SERVICES**

- Free 30-minute Neurodevelopmental Screenings, dependent on Consultant availability.
- 3-4 Hour Full Neurodevelopmental Assessment, complete with a comprehensive look at findings and a NeuroDevelopmental program personalized to the client’s needs. The program will be created at the initial appointment and all participants will be trained in its execution.
- Free Follow-up Support by phone and email.
- Flexible Payment Schedules Available.