

## Directions for LD Treatment with Reflex Therapy

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### Abstract

*Increasing number of children with learning difficulties is a nationwide problem that requires immediate attention apart from neurobiology sciences, psychology, pedagogy, medicine, etc.. Children with learning disorders, ADHD, dyslexia, hypo / hyper tonic, autistic, hyperactive, language disorders, oral retention, coordination disorders, sensory disorders, emotional disorders and various other neural developments are known to maintain reflexes that have contributed to their symptoms and level of dysfunction. Difficulty in learning, from the presence of the initial reflexes beyond biological, Babinski, Moro and Startle, Walk or Steps (Stepping), Research (Rooting), feeding (sucking), Asymmetric Tonic Neck Reflex (ATNR), Tonic Reflex Maze (TLR), Palm Reflex (Palmar) Plantar Reflex (Plantar) Galant Reflex, such as parachute reflexes and about 70 as these are neurological disorders and children may have difficulty speaking, reading, and/or writing, spelling, reasoning, perceiving, memorizing, organization and processing information. Primitive reflexes are essential for the survival and development in the womb and in the first months of life. Times of occurrence that initial reflexes begin are in early prenatal stages of the child in the uterus. Some initial reflexes are present at birth and are an indicator of development neurobiology. By anatomical and biological perspectives, initial reflexes stay for a short period of time and under the influence of specific movements, they refrain and postural reflexes take place. This is the stage when they are integrated with the higher centers of the brain control. If they are kept beyond their normal age of integration they can disturb some or all the functions of the higher brain centers which includes behavior; such as learning and integration of large or fine movements and more neurological disorders. Initial stem reflexes use a program based on the theory of repetition which enables alliteration of specific stages of development through paraphrasing movement patterns based on early brain development. The brain is given a "second chance" to pass through the stages which have been missing or have been incomplete movements in the first year of life, so therefor, nerves and nerve development pass in the proper time.*

**Keywords:** learning disorder, primitive reflexes, movement, therapy

### 1. Introduction

At birth, a baby has no control over voluntary movement (Color Atlas of Neurology, 2004). The baby responds to environmental stimuli through the primitive reflexes, which are automatic stereotyped responses. From very early on in utero, the primitive reflex movements literally help develop the brain (Smart moves, 1995). In infants, primitive reflexes are observed to determine neurological function (University of Chicago Press, 1973. Birth). They also provide the training ground for many aspects of later functioning. Their presence or absence at various stages help set the foundation for later development. These primitive reflexes should slowly be inhibited during the first year of life. As the infant begins to grow and mature during the first six months of life, so the Central Nervous System also begins to mature. Higher, more sophisticated regions of the brain begin to supersede the primitive reflexes. As this occurs early survival patterns are inhibited or controlled to allow more mature patterns of response, or postural reflexes, to develop in their place (Child Development .Transition from Reflex Movement to Voluntary Movement.)

It is only as postural reflexes replace primitive reflexes that the infant begins to gain control of the body and body movements. Most children in the early months of life rapidly gain control of the primitive reflexes, and thus lay the foundations for later voluntary movement. Some children fail to gain this control fully in the first six months of life and continue to grow up in areflexive where some of the primitive reflexes remain present and the postural reflexes do not develop fully.

Initial reflexes are crucial for surviving and development in the womb and during the first months of life. ( Hannanaford, 1995). The appearing time of initial reflexes starts since the pre natal stage in the womb, but it exists a great deal of difficulty in seeing its development. This fact stands like a great barrier in intervention and avoiding of any disorders. Some of the initial reflexes are present since birth and they are an indicator of the neuro biological development, especially of the brain.( Wolf and Binet, 1973) Every single reflex is active only throughout the first year of

life and parents lack information upon their role and features in order to observe and help do develop them the way they should. During this period we can notice the signs of initial reflexes malfunction, but the consequences are seen later, during the second year of life where children experience problems in the language learning process or during the learning in the pre-schooling system etc.

Regarding the anatomic and biological terms, the initial reflexes stand for a shorter period of time and they are under the influence of specific movement based on the initial reflex, thus they are constrained and give way to the postural reflexes. This happens in a stage in which they are more integrated in the highest controlling centres of the brain. (Zaferiou, 2004) If they are kept further, beyond their normal age of integration, they can lead to spoil of some or all functions of the high controlling centres of the brain, including here, behaviour, learning or the integrating movement and other neurological disorders too. (Salkind, 2002) Another damage is the destruction of the structural foundation, emotional and biochemical of the behaviour and learning process

Neuroscientists and educationalists are making in-depth research and are arguing specifically regarding the learning process, referring on the brain study. (Whitebread and Coltman, 2008) If we refer to the early development of the brain, since in the womb, it is affected by movement and initial reflexes. (Rohkamm 2004, Melillo 2009) Movements make patterns of the nerving nets and lay the way which allow the connection of different brain areas. These areas are of great importance for the next stages, such as learning, communication, emotions, motivation. (Frank and Peter L, 1994). What has happened with the brain during pregnancy if the child does not own these reflexes in the moment of birth? Have the movement and initial reflexes functioned in the pre natal period? The cognitive and physical development is in real danger. What has happened to the initial reflexes which are present since their biological age, the first year of life? They must have been replaced by postural reflexes in order to ensure a kind of practice which later on is harmonized in willing movement. (Rohkamm 2004) How did the movement function and what happened during this phase due to which was not made the reflex replacement.

Learning initially comes via our sensations. Every single initial reflex is connected to one or more systems of the sensing operation such as, space, taste, touch, smell, sight and hearing. They can be proprioceptive or/and interceptive. (Melillo 2009). Thus, if the initial reflex is maintained, children can experience the malfunction in one or some of these sensing systems. This may lead to the so-called disorder of the sensing process which plays a principal role on the learning process.

In order to refrain the initial reflexes, it is used a therapeutic programme on reflexes based on the repetitive approach, it is made possible the repetition of specific phases of development by repeating the movement models based on the early brain development. (Goddard, 2002). Brain is given a second chance to go through the phases it has missed or the movement have not been complete during the first year of life. This way the nerving links are created and the nervous development goes on the right time. Every reflex functions equipped with its own specific movements which have a performance concerning the neurobiological function. Here we have exercising with specific movement for every reflex. For eg, Moro is exercised by performing frightening simultaneous opening and closing movement of limbs and head and these movements exercised for a certain period of time make the Moro reflex to be refrained. ATNR follows a specific order to help the hemispheres left and right, this is achieved by moving the limbs and head. The initial position is important to be made right, arms crossed on the knees and legs crossed on feet on a sitting position, for eg, on a chair. First step is turning the head on the left, accompanying the head movement with an opening of the left hand, then right hand, left leg, right leg. Turning in the first position following the same order of movement, legs, hands and then head. The same is for the right side. An hyperactive crawling, like floating on air, a dyslexic turning left and right on lying down position and accompanying every movement with their eyes. The whole range of movements leads to a programming of the brain balance according to a series of exercises selected, they are sensory, physical and academic. (Melillo, 2009) After completing the abnormal reflex exercises, many academic, emotional and physical problems are disappeared and consequently replaced by postural reflexes.

Even if the disorder and lack of reflexes is early diagnosed, medicine cannot make up for their treatment. Being maintained since birth or later on, the initial reflexes cannot be replaced by postural reflexes. Medical treatment or the term "never" does not suggest refraining the whole causing components of storing and integration of initial reflexes because there are many complicated mechanisms which create and support them. (Buzan 2003; Rohkamm 2004; Roger S, July, 1973). There are many useful approaches which help to improve the life quality of specific individuals, but nobody has ever made a helpful approach for the individuals experiencing learning disorders. It is of paramount importance to work in a multi-disciplined team (such as doctors, professional therapists, educationalists or psychologists) in order to define the possible approach and effective methods for every person. Implementing these methods and observing carefully and attentively the further process should also be fully considered.

Interventing the biochemical system (Neubauer, Walker- 1998) helps the integration of initial reflexes. The biochemical system and the intestine usually reflect the neurological system. The intestine inflammation commonly means the brain inflammation. ([www.ultramind.com/\\_autism.php](http://www.ultramind.com/_autism.php)). Many children have the sensitivity of gluten or sugary food leading thus severe inflammation on brain. The biochemical system is greatly affected by what children are fed with. Healthy feeding helps in eliminating the toxins and allergic components but also helps in the learning process, their behaviour and the strengthening of their immunity. (besahamet@yahoo.com)

Several researches carried out by research and scientific centres, have come to a conclusion that the eating habits are directly linked to chemical reactions in organs and they are accompanied by difficulties in learning and behaviour. (Melillo 2009). It is scientifically accepted that some food ingredients have reactions which cause disorders in the digesting system because they contain metals or other toxins. Some molecules such as gluten for eg; are not melted to aminoacid components thus go to blood and destruct the brain and the child's immunity. These proteins raise the adrenaline level in blood and this is why a child can perform aggressive manners and suffer by development pervasive disorders. Following a regular and healthy diet the level of aggressivity and hyperactivity goes down. (Barkley, R.A, 1997).

## 2. Interventing by Neuro-Emotional Techniques

Such emotions like, fear, anger, stress, aggression and others which are caused by the presence of the initial reflexes, may have a negative effect on the learning process, headache, backache, eye strain etc. the neuro-emotional technique, is the latest therapy and along with some other ones they have been really successful in the last decade. (Walker Piggot, 2003). These therapies have a more quick effect compared to the previous ones. This is mainly because their target is the most primitive part of the brain. This technique is based on the Chinese medicine, acupuncture, on the area system which has to do with the body need for balance. If the body energy is in balance, than it is supposed that the body will be able to cure itself. This is done by testing different spots in our body which are divided into 12 areas. These areas are named after the main organs, for eg; the liver area, lung area etc. each of these systems is linked to specific emotions. The lung area is linked with sadness and grief and the liver zone with anger and dissatisfaction. Anxiety and phobias are disappeared by the brain activity which cause the improvement of learning and behaviour.

However this kind of technique is not widely applied by doctors or specialists because it has a financial cost which cannot be afforded by the majority of parents.

## 3. Conclusions

There is no precise study or observation in our country in defining the exact number of children suffering by learning and behaviour disorders according to their own difficulty. In the US 15-20 of the population has problems in the learning process and 80 % of this figure experience difficulties in reading, according to National Health Institute. Treating students which have these disorders because of the initial reflex, can not be performed by teachers at school or by parents at home because they are not qualified or professionals to do that. Creating a reflexo-therapy is done by specialists and therapists design realistic goals concerning the interventions to the integration of reflexes.

The applied programme on refraining initial reflexes is made of stereotypes of physical movement, this is practiced 5-10 minutes every day in a period of time of 9-12 months. (Melillo, 2009. Miller, 2007.) when initial reflexes are integrated, children should be treated with other therapies such as Neurofeedback, which is really difficult to be applied in our country. Other examples of therapies are those with a speech specialist, social therapies (Interface Relation Development) and applied behaviour analysis. There can be noticed a great improvement in the learning process if the intervention in the nervous structure, biochemical and emotional for the itegration of the initial reflexes, is made at an early stage in children who suffer from difficulties in this field.

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