PRIMITIVE REFLEXES AND LEARNING DIFFICULTIES

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I have no financial relationships to disclose.

Primitive Reflex	Purpose of Reflex	Appears	Should Integrate By:	Signs of Retention
Moro Reflex	Primitive Fight or Flight Reaction	Birth	2 to 4 Months	Hyper Sensitivity, Hyper Reactivity, Poor Impulse Control, Sensory Overload, Social & Emotional Immaturity
Rooting Reflex	Automatic Response to Turn Towards Food	Birth	3 to 4 Months	Fussing Eating, Thumb Sucking, Dribbling, Speech and Articulation Problems
Palmer Reflex	Automatic Flexing of Fingers to Grab	Birth	5 to 6 Months	Difficulty with Fine Motor Skills, Poor Manual Dexterity, Messy Handwriting
ATNR	To Assist Baby Through Birth Canal and Develop Cross Pattern Movements	Birth	6 Months	Poor Eye-Hand Coordination, Difficulty with Handwriting, Trouble Crossing Vertical Mid-line, Poor Visual Tracking for Reading and Writing
Spinal Gallant Reflex	Assist Baby with Birth Process	Birth	3 to 9 Months	Unilateral or Bilateral Postural Issues, Fidgeting, Bedwetting, Poor Concentration, Poor Short Term Memory
TLR	Basis for Head Management and Postural Stability Using Major Muscle Groups	In Utero	3 1/2 Years	Poor Muscle Tone, Tendency to Walk on Toes, Poor Balance, Motion Sickness, Spatial Orientation Issues
Landau Reflex	Assist with Posture Development	4 to 5 Months	1 Year	Poor Motor Development
STNR	Preparation for Crawling	6 to 9 Months	9 to 11 Months	Tendency to Slump While Sitting, Poor Muscle Tone, Poor Eye-Hand Coordination, Inability to Sit Still and Concentrate

PRIMITIVE REFLEX INTEGRATION SCHEDULE

Asymmetrical Tonic Neck Reflex (ATNR)- develops around 6 months

ATNR

ATNR- What does this reflex do?

- In my eyes it is the most important reflex in development, and the most common area of underdevelopment!
- It helps us develop appropriate muscle tone
- Develop hand eye coordination
- Develop balance
- Develop eye tracking abilities from side to side
- Helps us develop the ability to cross midline
- Also helps us get out of the womb
- Helps us develop army crawling, cross crawling, and walking
- Helps us to develop proper ROM in cervical spine- results in torticollis, feeding issues, rolling delay, crawling delays, walking difficulties if not developed well.

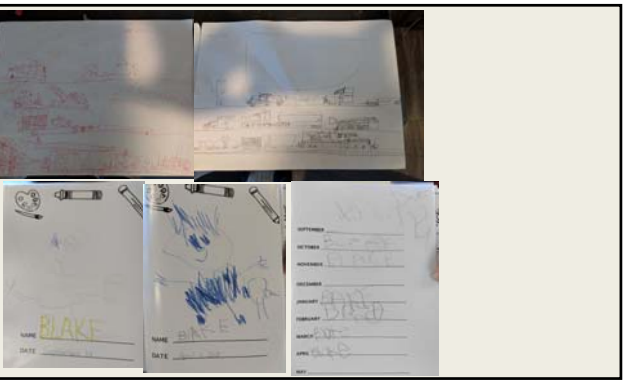
Symmetrical Tonic Neck Reflex (9-11 months)

STNR- What does it do?

The STNR helps baby lift and control the head for far-distance focusing. It preps the infant for crawling. This reflex helps to link the upper and lower extremity to move reflexively.

Common symptoms

Squirming or moving, poor posture, slouching	Headaches from muscle tension	Difficulties with reading and writing	Vision disorders (convergence insufficiency and saccadic eye movements in vertical plane)



MORO REFLEX- Develops in the womb and gets inhibited by 2-4 months

What is the purpose of the MORO Reflex?

- This reflex is an automatic reaction to sudden changes in head position, light, sound, touch or temperature. It creates an instant arousal of the baby's survival system, or an automatic fight or flight response. When this reflex is elicited the infant:
- 1. Releases stress hormones- ADRENALINE and CORTISOL
- 2. Increases breathing rate
- 3. Increases heart rate and blood pressure.

If the MORO Reflex does not integrate and get inhibited at the appropriate time what are common symptoms?

- Sleep disturbances
- Difficulty settling to sleep
- Easily triggered anger or emotional outbursts
- Shyness
- Poor balance and coordination
- Poor stamina
- Motion sickness
- Poor digestion
- Weak immune system
- Asthma, allergies and infections
- Hypersensitivity to light, movement, sound, touch and smell
- Difficulties with vision, reading or writing
- Difficulty adapting to change
- Cycles of hyperactivity and extreme fatigue
- Easily distracted
- Difficulty with visual perception Easily fatigued

Case

This young lady presented with:
1. Chronic anxiety
2. Motion sickness if she rode in a care longer than 5 minutes
3. Vision disorders (convergence insufficiency, saccadic eye movements)

After one month of care:
1. No more anxiety
2. Can ride in a car 2 hours
3. Graduated from vision therapy

What we did: Adjusted her, worked on a MORO reflex, ATNR, STNR. Removed gluten from her diet.

Resources and references for you to learn more.

Reflexes, Learning and Behavior: A Window Into a Child's Mind. *A non- invasive approach to solving learning and behavioral problems.* – Sally Goddard

Neurobehavioral Disorders of Childhood by Dr. Robert Melillo and Dr. Gerry Leisman

Neuromotor Immaturity in Children and Adults- Sally Goddard

All of Sally Goddard's books are great for learning about primitive reflexes

Interdisciplinary Association of Functional Neurology and Rehabilitation- International Childhood Neurodevelopmental Disorders Certification Course- taught by Dr. Melillo and is a wonderful course to learn about brain asymmetries and abnormal development.