

Reflex Integration Intervention

by Pat Fasick, O.T.R./L

Primitive reflexes are automatic, stereotypic movements the infant uses to survive and for his immediate response to the environment his/her changing needs. Some of reflexes you would see in infants are the startle, sucking and rooting, the hand grasp reflex and the fencing reflex. All of these present themselves within the first few months of a baby's life. They are there for survival and protection and should be automatic. The reflexes are directed from the lower brain and carried without higher-level thinking. These reflexes emerge in utero and are present at birth. They are considered the fundamental neurological building blocks for all learned movement and skills. They are also felt to significantly influence brain development as well as cognitive and intellectual processes.

The infant utilizes the primitive reflexes up until and around 6-12 months of age. Prolonged use or activity of the primitive reflexes indicates the possibility of a central nervous system immaturity or a structural weakness of the brain. The primitive reflexes are typically inhibited or controlled by the higher centers of the brain and allow for brain sophistication. It is proposed that the integration of infant reflexes promotes the development of:

- Health protection/survival reactions
- Health self-regulation
- Gross and fine motor skill development
- Transition from reflex patterns into intentional movement and motor skills
- Refinement of controlled, skillful, intentional movement
- Enhanced memory, attention, focus and perseverance
- Motivation and confidence
- Maturation of social skills
- Academic achievement
- Mature cognitive development

When reflexes persist beyond their initial usefulness, there are immature behaviors or a persistence of immature systems. Secondary to this persistence or lack of inhibition, higher-level skills do not develop or develop poorly. Some of the behaviors or symptoms of poor reflex integration are as follows:

Persistent Moro (present @ 9 weeks in utero, fully present at birth, inhibited @ 2-4 months)

- Motion sickness
- Physical timidity
- Photosensitivity, difficulty under fluorescent lights
- Auditory hypersensitivity &/or poor auditory discrimination
- Allergies and lowered immunity
- Poor stamina
- Anxiety

Palmar Grasp (emerges @ 11 weeks in utero, fully present at birth, inhibited @ 2-3 months)

- Poor manual dexterity
- Lack of pincer development
- Speech difficulties
- Hand hypersensitivity
- Mouth movements during writing or drawing

Asymmetrical Tonic Neck Reflex (ATNR: emerges @ 18 weeks in utero, fully present @ birth, inhibited around 6 months)

- Poor balance
- Difficulty crossing the midline
- Poor walking, marching, skipping
- Mixed laterality of hands, feet, ears
- Poor ocular pursuits
- Poor handwriting and expression of ideas on paper

Rooting Reflex (emerges around 24-28 weeks in utero, fully present @ birth, inhibited @ 3-4 months)

- Hypersensitivity around lips and mouth
- Drooling and forward tongue posture

- Poor chewing and swallowing with possible arched palate
- Speech and articulation problems
- Poor manual dexterity

In Dr. Masgutova's research on nearly 3000 children ranging from 1 month to 18 years, she found significant correlations between poorly integrated reflexes and specific developmental delays. These findings are indicative of how incomplete integration of reflex patterns can be linked to structural and functional challenges.

Dysfunction	Related Reflex	Percentage of Children with Persisting Reflex
Poor memory	ATNR	78%
Poor Transition from concrete operations to logic & abstract thinking	STNR	57%
ADD, ADHD	STNR, ATNR, Spinal Galant, Spinal Pereze	58%
Allergies & Food Hypersensitivity	Spinal Pereze	54%
Enuresis, poor Bladder control	Spinal Pereze	72%

At Heart Light, the Musgatova Neuro-Sensory-Motor Reflex Integration Method – MNRI (www.musgatovamethod.com), is utilized. The MNRI helps to integrate primitive infant reflex patterns as well as dynamic and postural reflexes to promote motor development. The MNRI Method assesses the areas of need and provides a series of progressive exercises for each reflex that may require integration. The program involves natural noninvasive movements that can be easily learned by parents &/or caregivers. The techniques can be performed without equipment, require just minutes each day and can be practiced in almost any setting or location. The program has been useful to people of any age, regardless of their mental and/or physical condition.

Examples of the relationship between healthy performance throughout the lifespan and adequate reflex integration are as follows:

- HANDS SUPPORTING: Sense of personal space, social skills
- GRASP & HANDS PULLING: Good manual skills, including writing and drawing
- SEQUENTIAL FINGERS OPENING & CLOSING: Differentiation, calculation and other mathematical skills
- ATNR: Good development of hearing, memory, proprioception, audio-visual integration and eye-hand coordination
- STNR & TRUNK EXTENSION: Postural control, binocular vision, visual accommodation, and binaural hearing
- SPINAL GALANT: Good posture, bladder control, and mood regulation
- SPINAL PEREZE & GALANT: Brain detoxification and gross motor coordination
- TENDON GUARD & TONIC LABRYINTHINE REFLEXES: Self-regulating processes, vitality and health

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Pat Fasick holds a B.S. in Occupational Therapy from The Ohio State University School of Allied Medicine. She has practiced Occupational Therapy for over 25 years with a primary emphasis in pediatrics and years of experience in adults and geriatrics. She is certified in Neurodevelopmental Treatment, The Therapeutic Listening Program and Interactive Metronome. Pat also has extensive training in Sensory Integration and Sensory Processing treatment. In the last 10 years, Pat has focused much of her treatment intervention on eating and feeding concerns of infants and children. She has recently trained in the SOS (Sequential-Oral–Sensory) model and has over 20 years experience with in hospital and outpatient feeding. She is greatly interested in the biomedical model of assessment for infants and children and its effects on eating behaviors and volume intake. She feels strongly that the OT & biomedical practitioner should work closely to coordinate care and treatment for many children.