**What are Primitive Reflexes?**

Primitive reflexes are reflex actions originating in the central nervous system that are exhibited by normal infants, not not neurologically intact adults, in response to particular stimuli, these reflexes are suppressed by the development of the frontal lobes as a child transitions normally into child development.

**Why are they retained?**

Retention of primitive reflexes can be caused by a variety of factors, including:

- traumatic birth experience
- birth by c-section
- falls
- traumas
- lack of tummy time
- delayed or skipped creeping or crawling
- chronic ear infections
- head trauma
- vertebral subluxations

**What is the result?**

Retained primitive reflexes can lead to developmental delays related to disorders like ADHD, sensory processing disorder, autism, and learning disabilities.

The persistence of primitive reflexes contribute to issues such as coordination, balance, sensory perceptions, fine motor skills, sleep, immunity, energy levels, impulse control, concentration and all levels of social, emotional, and academic learning.

**PATH INTL. Precautions and Contraindications**

Contraindication for Cerebral Palsy:

A physical/occupational therapist or primary care physician should evaluate persistent primitive reflexes and if present equine-assisted activities and therapies are contraindicated.

**Primitive Reflex Set**

<table>
<thead>
<tr>
<th>Reflex</th>
<th>Purpose of Reflex</th>
<th>Appears</th>
<th>Should Integrate By</th>
<th>Signs of Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moro</td>
<td>Primitive right or left reflex</td>
<td>Birth</td>
<td>2 to 4 months</td>
<td>Hyper-reflexivity, hyper-responsiveness, poor muscle tone, sensory overload, social &amp; emotional immaturity</td>
</tr>
<tr>
<td>Rooting</td>
<td>Automatic Headturn to turning towards food</td>
<td>Birth</td>
<td>2 to 4 months</td>
<td>Feeding issues, thumbucking, drooling, speech and articulation problems</td>
</tr>
<tr>
<td>Palmar</td>
<td>Automatic opening of fingers in grasp</td>
<td>Birth</td>
<td>2 to 4 months</td>
<td>Difficulty with fine motor skills, poor bilateral dominance, weak handwriting</td>
</tr>
<tr>
<td>ATNR</td>
<td>Assisting baby through birth canal and develop movement coordination</td>
<td>Birth</td>
<td>6 months</td>
<td>Poor eye-hand coordination, difficulty with handwriting, trouble clearing vertical line</td>
</tr>
<tr>
<td>Spinal Gallop Reflux</td>
<td>Assisting baby with balance</td>
<td>Birth</td>
<td>2 to 9 months</td>
<td>Unilateral or bilateral postural issues, difficulty with balance, poor coordination, poor motor control</td>
</tr>
<tr>
<td>TLR</td>
<td>Erase for head Management and posture stability, using major muscle groups</td>
<td>1 year</td>
<td>2-5 years</td>
<td>Poor muscle tone, tendency to walk on toes, poor balance, motion sickness, spatial orientation issues</td>
</tr>
<tr>
<td>Lateral Reflex</td>
<td>Assisting with posture development</td>
<td>4 to 5 months</td>
<td>1 year</td>
<td>Poor motor development</td>
</tr>
<tr>
<td>STMR</td>
<td>Preparation for crawling</td>
<td>6 to 9 months</td>
<td>6 to 11 months</td>
<td>Tendency to limp while sitting, poor muscle tone, poor eye-hand coordination, inability to sit, stand and concentrate</td>
</tr>
</tbody>
</table>

Brain Balance Achievement Centers
**Face Stroking for Root and Suck Reflex**

Stroke the child’s face until the reflex stops, which usually takes five to six times in a row. Do this at least twice a day until you can no longer elicit the reflex. Chewing gum can also be helpful to inhibit this reflex.

Dr. Robert Melillo

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**Starfish for Moro Reflex**

Have your child sit in a chair in a fetal position, with the right wrist crossed over the left and the right ankle crossed over the left ankle. Fists should be closed. Ask your child to inhale and make like a starfish by swinging his arms up and out and thrusting his legs out while extending the head back and opening hands. Have him hold this position for 5 to 7 seconds while holding his breath. Then tell him to exhale and return to the same position, crossing the left wrist and ankle over the right wrist and ankle. Repeat this again until they are back to the original position. Do this 6 times in a row a few times a day until the reflex is inhibited fully.

Dr. Robert Melillo

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**Snow Angels for Galant Reflex**

Have your child lie face-up on a mat or flat surface with his legs extended and arms at the sides. Have him breathe in and simultaneously spread his legs outward and raise his arms out along the floor and overhead, with the hands touching. The hands should touch at the same time the legs are fully extended. Exhale and return to the original position. The key is to get the child to move all four limbs slowly at the same time. Do this 5 times several times a day until you can no longer elicit the reflex.

Dr. Robert Melillo

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**Ball Squeezes for Palmer Grasp Reflex**

Have child squeeze a small ball, such as a tennis ball, several times in a row. Or you can just stroke the palm of the hand with a light brush until the reflex is suppressed.

Dr. Robert Melillo

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**Fencer Exercise for Asymmetric Tonic Neck Reflex**

This one may take some practice to get right, so be patient. Have your child sit in a chair and turn his head to both sides or to the one side that still elicits the reflex. As your child is turning his head, have him extend the foot and arm of the same side outward from the body and look at his hand. The opposite hand should also open, the arm should flex, and the other leg should bend. Have the child return to starting position and repeat until the reflex fatigues. Repeat three times in a row.

Dr. Robert Melillo

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**Resources**

- Brain Balance Achievement Centers
  [https://www.brainbalancecenters.com/](https://www.brainbalancecenters.com/)
- Dr. Robert Melillo- 5 Exercises That Inhibit Primitive Reflexes
- Research Study: Persistence of primitive reflexes and associated motor problems in healthy preschool children
  [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5778413/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5778413/)