

Primitive Reflexes

As an occupational therapist, we work with a variety of children who have issues related to primitive reflexes, which are essential early motor responses that lay the foundation for more advanced motor skills and sensory integration. As the typical integration of primitive reflexes allow the development of coordinated voluntary movement and mature postural reflexes. Primitive reflex retention has been found to be significantly associated with various problems, including gross motor deficits, lack of fine motor coordination, visual-perceptual deficits, behavior problems, and poor reading performance (Richards et al., 2022)

Overview:

Moro reflex

Palmar reflex

Plantar reflex

Spinal Galant

Juvenile suck/Rooting reflex



The Moro Reflex



This reflex is seen when a baby is set off by excessive information in any of the babies senses.

it is also known as the “ Startle reflex” and it is the earliest form of fight or flight

What does it look like?

The baby will extend its arms with palms up and hands open. Then baby will bring arms back to the body and may begin to cry.

How to assess the Moro Reflex

**place the baby face up on a soft surface or in a seated position
gently lift the baby's head, supporting it enough to take some body weight off the pad
suddenly release the head, allowing it to fall backward for a moment, but quickly support it again**



Tips and tricks:

Use a swaddle to help restrict movements

use slow deliberate movements with your baby to avoid sudden movements

Do the starfish exercise on a yoga ball. Start with the child seated on a yoga ball, hold their legs/feet, and have them lean back and bring their arms overhead. Then have them come forward and bring arms across their chest, chest down to knees (fetal position). Repeat 5-10 times depending on strength



The Palmer Reflex

What is it?

Light touch or pressure in the palm of the hand that will cause the fingers to close

The Palmar reflex begins at 16 weeks gestation

The Palm of the hand is stimulated and three or four of the small fingers bend toward the palm

Signs and symptoms of retention:

poor manual dexterity

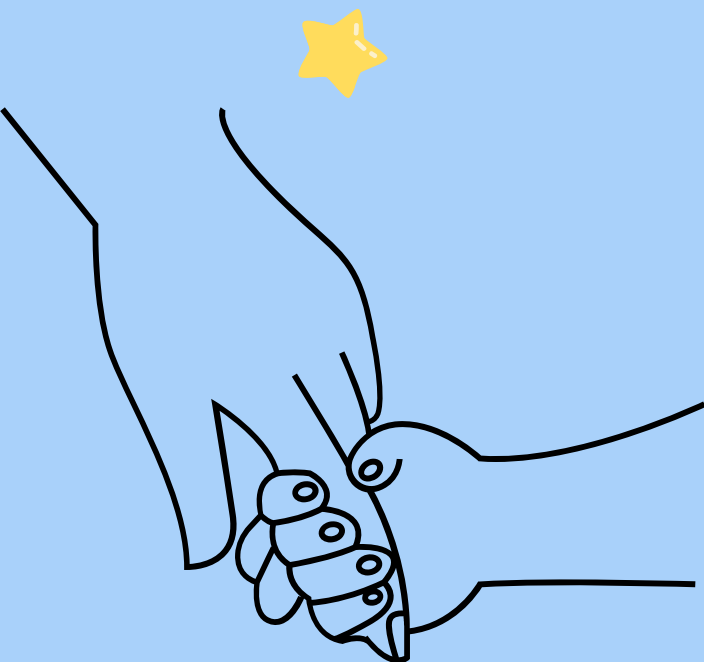
poor fine motor control

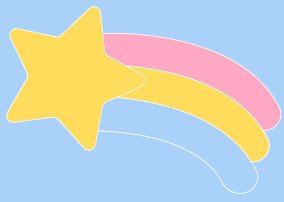
poor writing skills (messy writing or pressing too hard)

Tips and Tricks:

Help your little one by having them move a small object such as candy/marbles/pom poms etc, across their hand, without using their other hand to help. Have them move the item between their fingers and across the palm.

have baby explore during tummy time with different textured surfaces such as a blanket or grass





The Plantar Reflex

The Plantar reflex, located under the toes, is triggered by touch and causes the toes to curl down and grasp the object, providing stability when a child stands.

Proper toe isolation is crucial for establishing a normal walking pattern, where movement transfers from heel to toe. The Plantar reflex is the integrated form of the Babinski reflex, and after age two, stroking the sole should cause the toes to curl downward. If the toes still extend up and out, it is known as a retained Babinski reflex.

Tips and tricks:

Introduce foot-related tasks into daily routines, such as putting on socks and shoes, climbing stairs, or playing games that involve running and jumping.

Incorporate balance exercises like standing on one foot, walking on uneven surfaces, or using balance boards to enhance foot stability and proprioception.

Encourage activities that promote toe grasping, such as picking up small objects with toes

Signs and symptoms of retention:

Difficulty / delay in learning to walk.

Poor balance.

Immature foot arches and ankle stability.

Tip-toe walking.

Reduced speed when running.

Issues with the

**Proprioceptive/vestibular systems.
gravitational Insecurity**





Spinal Galant reflex



What is it?

The spinal Galant reflex assists in the birthing process as contractions stimulate the lower back, causing the baby to move their hips.

While the baby is laying on their stomach, stroke the side of their spine. This will result in hip flexion (rotation) to 45 degrees toward the side of the stimulus

Because the Spinal Galant is directly related to the vestibular system and consists of a physical reaction, it directly impacts movement, balance, muscle tone, and coordination.

Signs and symptoms of retention:

**Excessive fidgeting
bedwetting beyond
the age of 5**

**hypersensitivity to
clothing and tactile
input**

**Motor skills such as
crawling and walking**



Tips and Tricks:

**Make snow angels with your
child and do 5-10 times.**

**have your child wear loose-
fitting clothing to reduce
hypersensitivity**

**Work on tummy time to focus
on turning in both directions**



Juvenile Suck and Rooting Reflex



The Juvenile suck and rooting reflex is an autonomic response when a newborn baby projects its tongue forward to accept food or the breast

When you lightly touch the cheek near the edge of the mouth, the baby will turn his/her head.

What happens when the rooting reflex is not integrated?

**articulation problems
difficulty swallowing
and chewing
difficulty speaking
involuntary tongue
movements
tongue tie
thumb sucking**



Tips and Tricks:

Gently stroke the baby's cheek to elicit the rooting reflex and practice with your finger or a cloth encourage oral motor control by doing activities such as blowing bubbles, using a straw, and playing with a kazoo to strengthen those muscles

Doing tummy time will help strengthen head control and muscles needed for proper rooting reflex



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