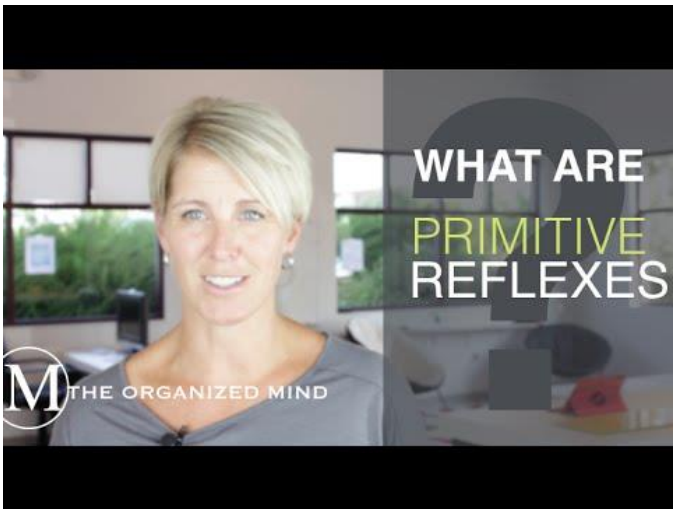
Born to Move Programme

Stocksbridge Nursery Infant School

You may have heard the term “primitive reflexes” thrown around before but do you know and understand what they are and why they’re important? If not, that’s ok! Many people have no idea what primitive reflexes are, much less why they are so important to childhood development.

We are all born with primitive reflexes



Symptoms of retained primitive reflexes

Use this quick symptom checker to identify if your child may have retained primitive reflexes.

Please note, this is not a symptom checker to diagnose. This is simply to assess whether your child may or may not have one or more retained primitive reflexes.

- Anxiety
- Motion sickness/car sickness
- Clumsy
- Poor hand-eye coordination
- Poor right / left discrimination after the age of 8
- Challenges with reading at age level
- Poor handwriting at age level
- Low muscle tone
- Decreased coordination with sporting activities

- Challenges with sequencing
- W-sitting and/or toe walking
- Challenges sitting still - ADHD symptoms
- Bedwetting past the age of 7
- Poor short-term memory
- Hypersensitivity to sound, touch, movement
- Speech and articulation challenges
- Picky eating and/or oral motor challenges
- Challenges with fine motor tasks at age level
- Diagnosis of Autism
- Early Diagnosis of ADHD

If you checked off half or more of the above items, your child may have one or more retained primitive reflexes.

What do you do if you suspect that your child may have retained primitive reflexes?

First, remember that there is NOTHING wrong with your child! This may just be something that they struggle with and your job is to help them as they grow.

Next, keep reading! We are about to dive into the main six primitive reflexes that are retained and give you some simple ideas that you can use to help your child.

5 Primitive reflexes

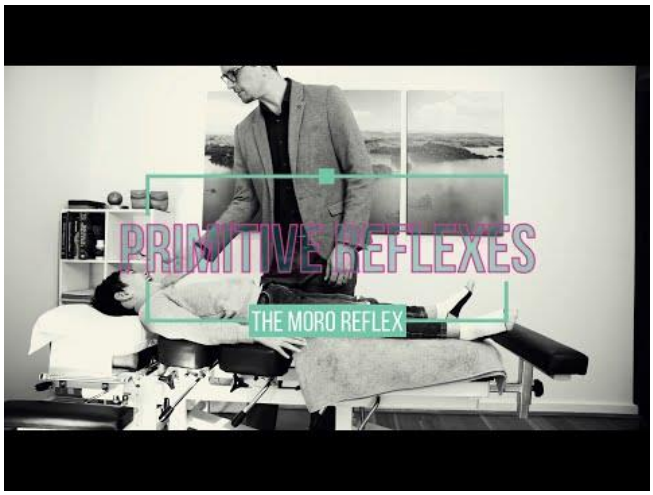
The five primitive reflexes that are most commonly addressed in our school are:

- Moro Reflex
- Tonic Labyrinthine Reflex (TLR)
- Palmar Grasp Reflex
- Asymmetrical Tonic Neck Reflex (ATNR)
- Symmetrical Tonic Neck Reflex (STNR)

While there are many more primitive reflexes, these are the most common ones to be addressed in school.

Next, let’s briefly discuss each of these six primitive reflexes.

1) MORO REFLEX



The Moro Reflex is present at birth - it is an involuntary movement in response to sudden stimuli. A report from 2020 reported that the Moro Reflex can be seen as early as 25 weeks postconceptional age and usually is present by 30 weeks postconceptional age. You've heard of the startle reflex, right? That's the Moro Reflex!

The Moro Reflex should be integrated - not present - by six months after birth, at the latest.

Some potential symptoms of a retained Moro Reflex in infants and older children are:

- Motion sickness
- Decreased eye contact
- Light and sound sensitivity
- Allergies, poor immune system
- Anxiety and mood swings
- Challenges with sports involving hand-eye coordination

2) TONIC LABYRINTHINE REFLEX (TLR)

The TLR is closely linked to the Moro Reflex and is seen with movement of the head forwards or backwards - providing a method of response to gravity (an infant experiences gravity for the first time after birth, so this reflex is a direct response to this newfound challenge). The TLR develops in utero and has a direct influence on the development of muscle tone throughout the body.

The TLR should be integrated - not present - by as late as 3 years old. However, it can be integrated as early as six months (note, this is the approximate age when the Moro Reflex should be integrated - quite the connection!).

Some potential symptoms of a retained TLR in toddlers and older children are:

- Challenges with crawling
- Poor posture, low muscle tone
- Vision challenges
- Auditory processing challenges
- Poor sense of space, time, and organization
- Challenges with sports

3) PALMAR GRASP REFLEX

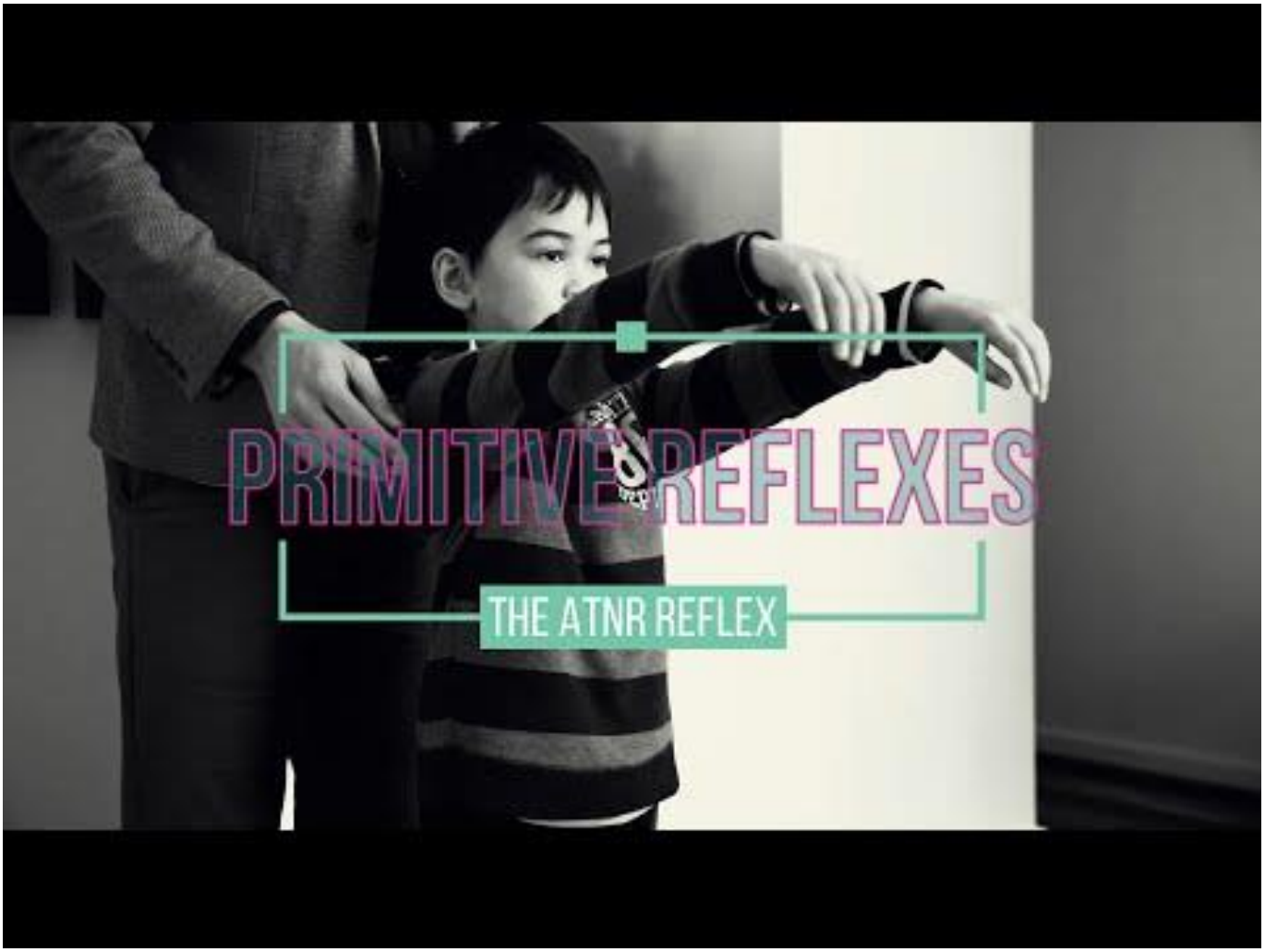
The Palmar Grasp Reflex is an involuntary response to stimuli on the palm of the hand. This assists a newborn with grasping objects before they actually do so on purpose. A report from 2020 also found that this reflex can help create interaction and bond between the infant and the adult. The Palmar Grasp Reflex develops roughly between 11-16 weeks in utero.

The Palmar Grasp Reflex should be integrated - not present - by no later than six months of age - the age when an infant begins to intentionally grasp objects.

Some potential symptoms of a retained Palmar Grasp Reflex in infants and older children are:

- Delayed fine motor skills - poor grasp on objects
- Challenges with handwriting
- Challenges with self-care such as self-feeding and dressing
- Potential challenges with speech
- Tactile hypersensitivity

4) ASYMMETRICAL TONIC NECK REFLEX (ATNR)



The ATNR has been associated with assisting during the birthing process as well as it also facilitates the kicks felt in utero. Movement of the head to one side causes movement of the arms and legs and therefore helps to build muscle tone, skills on each side of the body, and hand-eye coordination. The ATNR develops at around 18 weeks in utero.

The ATNR should be integrated - not present - by no later than nine months of age.

Some potential symptoms of a retained ATNR in toddlers and children are:

- Challenges with crawling
- Poor handwriting
- Challenges with visual tracking
- Poor establishment of hand dominance after age 7
- Consistent left / right confusion after age 8
- Challenges with age-appropriate gross motor skills such as skipping

5) SYMMETRICAL TONIC NECK REFLEX (STNR)

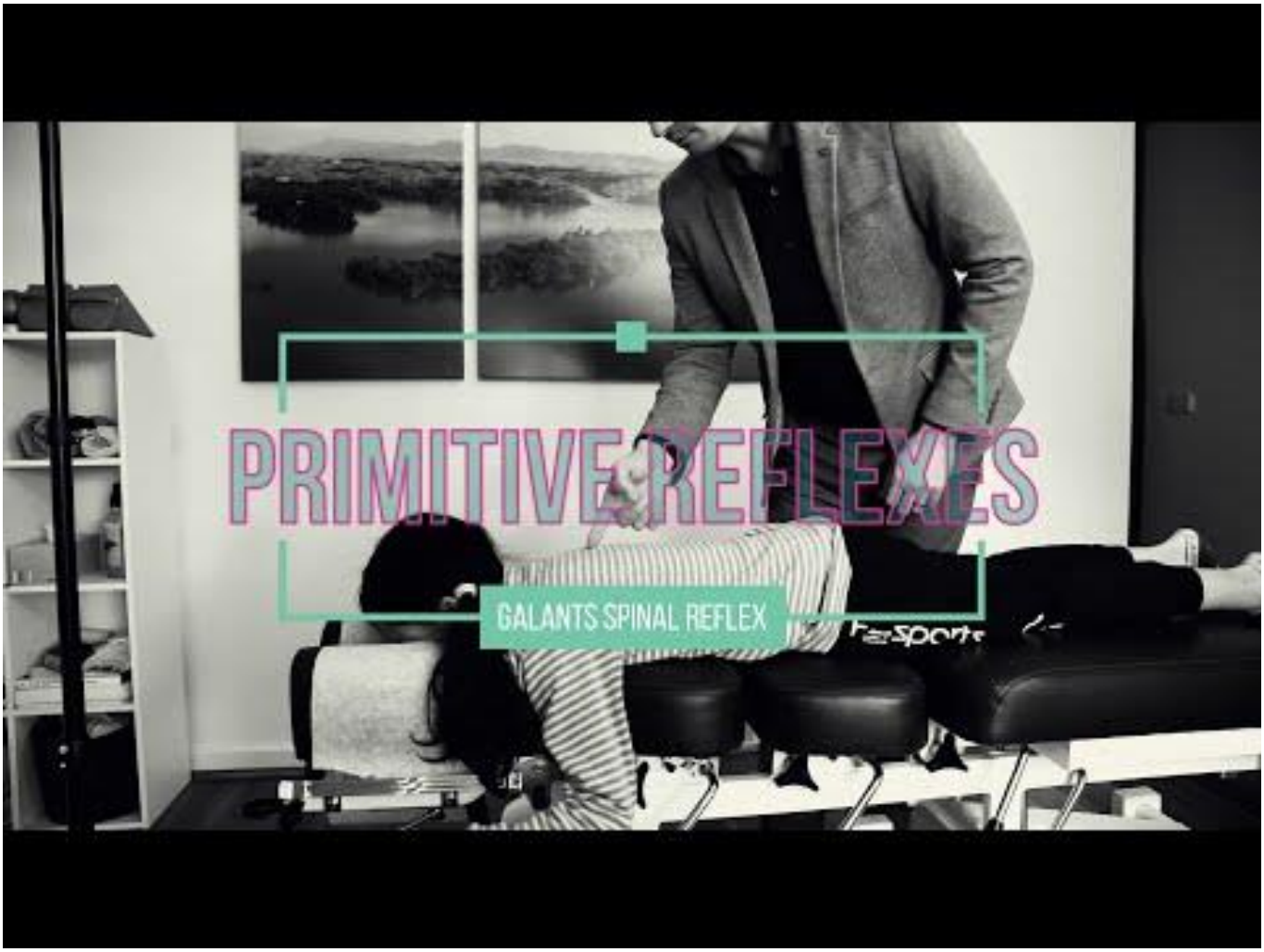
The STNR is directly related to the TLR - because the STNR assists the infant with moving from prone (laying on belly) into quad (on all 4s - pre crawling position), it additionally assists with integrating the TLR. According to a report from 2020, the STNR develops between 6-9 months after birth.

The STNR should be integrated - not present - by 9-11 months of age (a very short life span compared to some of the other Primitive Reflexes).

Some potential symptoms of a retained STNR in toddlers and children are:

- Challenges with crawling
- Poor posture, low muscle tone
- W-sitting
- Clumsiness
- Poor sustained attention
- Challenges with reading and writing

6) SPINAL GALANT REFLEX



The Spinal Galant Reflex is associated with assisting during a vaginal birth, along with the ATNR, according to one research study. In infants, stimuli provided to the lower back will produce movement of the spine and hip away from the stimuli. Therefore during the birthing process, contractions stimulate this reflex to help the baby move through the birth canal. The Spinal Galant Reflex develops around 20 weeks in utero.

The Spinal Galant Reflex should be integrated (not present) by around six months of age.

Some potential symptoms with a retained Spinal Galant Reflex in infants and children are:

- Challenges with developmental milestones such as rolling
- Challenges with natural gain - can have an effect on developing scoliosis
- Challenges with focus, attention, and sitting still (ADHD symptoms)
- Bedwetting beyond the age of 5 or 6 years
- Tactile hypersensitivity, specifically with clothing

Ideas to help your child at home

If you are concerned that your child might have one or more retained Primitive Reflex, try these exercises, games, and activities. You can implement these into your daily routine, into playtime, and so much more!

- Climbing activities - rock walls, climbing gyms, etc.
    - This will not only help to strengthen your child's muscles, but it also requires coordination of the arms and legs, as well as the left and right sides of the body.
- Ball games - rolling, throwing, bouncing, etc.
    - If your child struggles with ball games, use a larger ball and try rolling the ball instead of throwing.
    - Ball games are great for improving visual tracking, hand-eye coordination, and bilateral integration (using both hands together for a task).
- Superman exercise
    - This exercise is specific for the TLR.
    - Superman - laying on your stomach, lift both arms and legs up off the ground simultaneously, maintaining them straight. Hold this position for as long as possible. If this is extremely challenging, try turning it into a game!
- Crawling activities - crawling through tunnels, over obstacles, animal walks, etc.
    - Because retained primitive reflexes can have such a profound effect on crawling, incorporating more crawling into your child's day can be very beneficial (even if your child is older!).
- Cat-Cow exercise
    - If you're familiar with yoga, you may already know this exercise.
    - This exercise is specifically for the STNR.
    - On all 4s, slowly bend your neck to look down at your knees while simultaneously arching your back up.
    - Then, slowly bend your neck to look up at the ceiling while simultaneously arching your back down.
    - Complete slowly and with good control. If your child has retained Primitive Reflexes, you may notice extra movements throughout the arms, legs, and trunk.
- Obstacle courses
    - If you're familiar with physiotherapy, you may already be familiar with obstacle courses.
    - These are great opportunities to provide movement, incorporate bilateral integration activities, crawling and climbing, etc.
    - Setting up an obstacle course is easier than it sounds - keep it simple!
    - Example obstacle course:

    - Step 1: Log roll across 3 couch cushions
    - Step 2: Crawl through a tunnel
    - Step 3: Bounce and catch a ball 5 times
    - Step 4: Complete a Superman 2 times
    - Step 5: Bear walk back to the beginning
- You can make the steps more complex for an older, higher functioning child. You can also incorporate other sensory systems and fine motor skills. Get creative!

What does this look like at Stocksbridge Nursery Infant School?

Your child's class teacher will have picked up on some of the indicators above. Your child will take part in a short assessment which covers the following reflexes:

- Moro Reflex
- Tonic Labyrinthine Reflex (TLR)
- Palmar Grasp Reflex
- Asymmetrical Tonic Neck Reflex (ATNR)
- Symmetrical Tonic Neck Reflex (STNR)

The assessment is based against age related development milestones. These will be different for Reception and Year 2 children.

If you child could do with some extra support in any of these areas, they will begin a short programme called Born to Move. Discussions about this programme are held with parents beforehand.

Children take part in daily sessions of up to 10 minutes in the hall in small groups. Children take part in activities using a variety of PE equipment such as mats, balance beams or footballs to help integrate these reflexes.