

Retained Primitive Reflexes Assessment



What are Retained Primitive Reflexes?

Primitive reflexes, originating in the brainstem before birth, are fundamental reflex actions essential for early development. When these reflexes persist beyond the first year of life, they can give rise to Retained Reflex Syndrome (RRS), exerting a significant impact on our functional abilities. RRS is implicated in various childhood disorders, including ADHD, dyspraxia, and dyslexia. These disorders are often characterised by neurodevelopmental delays, yet their underlying causes lack consensus.

In accordance with nature's design, all primitive reflexes follow a similar pattern. Originating in the uterus, they integrate into the neural system, serving as foundational templates for future controllable actions and

responses. As development progresses, these reflexes naturally inhibit, paving the way for advancement to the next developmental stage. By the age of one, the vast majority of these early reflexes should have undergone inhibition, facilitating the transition to more mature motor and cognitive capabilities.

Most people will be familiar with the Palmar reflex - when an object, such as an adult finger, is placed in an infant's palm, the infant's fingers reflexively grasp the object. If this persists beyond infancy, it can significantly impact manual dexterity, hindering the development of a pincer grip necessary for tasks like holding a pencil. Furthermore, the lingering connection between hand and mouth movements from infancy may interfere with speech development, leading to involuntary mouth movements while writing.

It's crucial to recognise that these primitive reflexes reside in the brainstem, the most primitive region of the brain, and operate involuntarily. Despite our inability to control them, as we mature, higher brain regions such as the

cortex (responsible for thinking and reasoning) and the midbrain (the organisation centre for motor and sensory systems) gradually assume control over these reflex functions. Through this process, these reflexes are transformed into responses and actions that can be consciously regulated or modified, facilitating adaptive behaviour and refined motor skills.

When primitive reflexes persist without inhibition, the proper development of more advanced neural structures in the brain, along with the emergence of postural (adult) reflexes, is hindered. This disruption affects the normal progression of motor and processing skills, as well as the integration of left and right brain hemispheres. Consequently, the individual may remain stuck with immature responses to their environment, making it challenging to "act their age" as expected.

Retained Reflex Syndrome (RRS) extends beyond the typical symptoms of learning difficulties, encompassing a range of associated challenges that significantly impact both adults and children. Examples include:

- Persistent bedwetting or soiling beyond the age of five, indicative of bladder or sphincter control issues stemming from a retained Spinal Galant Reflex.
- Poor appetite or picky eating habits, signaling swallowing and chewing difficulties and an immature digestive system linked to persistent Rooting and Suck Reflexes.
- Overly active or workaholic behavior in adults, attributed to excessive adrenaline production due to a lingering Moro Reflex.
- Hypersensitivity, characterized by severe physical discomfort in response to stimuli like light touch, hair or nail cutting, or certain fabrics, stemming from a persistent Upper Spinal Reflex.

Boys often exhibit these warning signs more prominently and at an earlier

age, around 7 or 8, compared to girls. Societal expectations may influence their behaviour differently, with boys being less inclined to control hyperactivity and antisocial behavior due to societal norms valuing physical activity. In contrast, girls may develop coping mechanisms to conform during their primary school years, though their challenges may resurface, particularly during puberty, manifesting as feelings of overwhelm and low self-esteem.

What we test:

There are five reflexes we test for at Holland Osteopathy, alongside other physical testing. These are:

Spinal Galant Reflex:

This is vital to help the baby wriggle down the birth canal. Once he has emerged, he has no further use for it. If it fails to inhibit however, the problems start. This reflex also plays a role in developing the vestibular system and is connected to the Asymmetrical Tonic Neck Reflex (ATNR), which also plays a role in the birth process. Urination is also frequently associated with the Spinal Galant Reflex. The Spinal Galant is developed in utero at approximately 20 weeks. It should be fully developed at birth and should integrate (go away) between 3-9 months of age.

Asymmetrical Tonic Neck Reflex (ATNR):

This appears at 13 weeks of age. It doesn't usually linger past the age of six to seven months. This primitive reflex activates when a baby's head is turned to the left or right while they lie on their back. When their head turns, their arm and leg on the opposite side flex. For example, if the head turns to the right, the child's right leg and arm extend and their left leg and arm flex. ATNR is important in early development. It serves as a precursor to hand-eye coordination and stimulates developing muscles before birth.

Symmetrical Tonic Neck Reflex (STNR):

This reflex allows the baby to straighten its arms and bend its legs when it

looks up. The STNR reflex is present in normal development for a relatively short time span and is normally lost at 8 months after birth. If it is not lost, it can affect a child's ability to crawl on hands and knees. Crawling is a major developmental milestone, as a baby crawls, as well as looking ahead, babies also learn hand-eye coordination from the movement of the hands. Later on this ability will be essential for being able to read without losing the words at the middle of the line and to visually follow the moving hand when writing. The focusing distance and hand-eye coordination skills used in the act of crawling are at the same distance that the child will eventually use when reading and writing.

Tonic Labyrinthine Reflex (TLR)

The TLR is the opposite of STNR; when a baby looks up TLR causes the baby to straighten it's legs and arms, likewise when the head goes down the limbs fold in. This reflex should be fully present from the time of birth to 4 months old. It is active during the birthing process. It is linked to balance and muscle tone.

Moro Reflex:

The Moro Reflex should disappear at 2-4 months and should be replaced by the adult "Startle" reflex. It is a response to a sudden loss of support and involves three distinct components: spreading out the arms pulling the arms in crying It is distinct from the startle reflex. The Moro reflex is a response to unexpected changes within the infant's environment and acts as the infants' "fight of flight" response. A child with a retained Moro reflex demonstrates many of the following problems: difficulty focusing, distractibility, poor impulse control, emotional immaturity/sensitivity, mood swings, anxiety, easily triggered anger, difficulty performing different types of eye movements, and decreased visual perception.

Integration and treatment of retained reflexes

To facilitate the integration of retained reflexes, specific exercises are prescribed to engage the brain in a process of absorption. These exercises

aim to promote both static and dynamic balance and equilibrium through a complex feedback loop involving the vestibular apparatus, cerebellum, cerebrum, and skeletal muscles. This intricate neurophysiological interplay is a cornerstone of osteopathy.

It is not a quick fix and typically takes around 12 months to complete the program. Patients must perform exercises daily, focusing on regularity, repetition, and duration. While we cannot guarantee complete resolution of problems, many children experience significant improvements. The first appointment includes some initial exercises, followed by follow-up sessions at eight-week intervals to retest and monitor progress, looking for changes in scores.

Through an osteopathic approach focused on restoring body equilibrium and preventing further deterioration, we provide children and adults with a more positive experience of their bodies. Treatment and intervention can also involve techniques such as oscillation, harmonics, and vibration to help integrate retained reflexes.