



What are primitive reflexes?

They are automatic movements and changes that happen in a baby, in order to help him to survive, grow and develop. You know some of these reflexes, for example the "Suck Reflex" - a new baby is able to suck automatically, that's how he gets his food ... as soon as you put something in his mouth he starts to suck - this is the "Suck Reflex". When you put your finger onto a new baby's hand, his fingers will close around yours automatically ... this is the "palmar reflex".

There are many more such reflexes. You also know that you and I as adults no longer suck if we put something into our mouths! Our "suck" reflex disappeared many years ago as did all the other primitive reflexes. Usually these reflexes are inhibited by the time we are a year old and replaced by postural reactions which remain for life. As our primitive reflexes are inhibited the parts of our brain needed for us to learn to walk, run, read, write and so on, begin to grow and develop. These parts of the brain can only develop fully when the primitive reflexes have developed fully and are then inhibited and replaced by postural reactions. If this process has not occurred or has been interrupted at any stage there may be a difficulty learning to do certain things.

How would you know if your child had a developmental delay or had primitive reflexes?

Some of the things which may alert you to the fact that your child still has primitive reflexes and some degree of a developmental delay, are: not having crawled normally, learning to talk late and maybe needing Speech Therapy, having difficulties being toilet trained, learning to walk late, having difficulty learning to ride a bike or tie shoelaces, not wanting to separate from you. At school, he may have difficulty sitting for any length of time, he may fidget and squirm or he may sit in unusual positions. Learning to write and read may be difficult for him. He may be disorganized and not be able to remember things.

Some of these children are good at sport but most of them are not, being clumsy or awkward. Socially they may have difficulties making friends, they may be children who blush a lot, they may be impulsive or may be shy and many of them suffer at the hands of other children who pick on them and bully them. Very often these children's confidence and self esteem are low.

Here are some of the reflexes that may be involved in specific learning and behavioural problems

The Moro Reflex

The Moro reflex acts as a baby's primitive fight/flight reaction. It should be inhibited by around 4 months of age and be replaced by the adult "startle" reflex. If it persists in the older child, it can be associated with:

- Hypersensitivity
- Hyper-reactivity
- Poor impulse control
- Stimulus bound effect (cannot ignore peripheral stimuli to focus attention on one thing - has to pay attention to everything)
- Sensory overload
- Anxiety (particularly anticipation anxiety)
- Emotional and social immaturity

Tonic Labyrinthine Reflex (TLR)

Inhibition of the TLR is a gradual process involving the maturation of other systems. It should be completed by three and a half years of age. If it is not inhibited it can be associated with:

- Postural problems, specifically hyper- or hypo-tonus (muscle tone)
- Tendency to walk on the toes
- Poor balance
- Motion sickness
- Orientation and spatial difficulties
- Oculo-motor problems
- Visual-perceptual problems
- Dislike of Physical Education (PE)

Asymmetrical Tonic Neck Reflex (ATNR)

This reflex should be inhibited by 6 months of age in the waking state. If the ATNR remains active in a child at a later age, it can affect:

- Hand-eye co-ordination - difficulties such as ability to control the arm and hand when writing
- Ability to cross the vertical midline. For example, a right-handed child may find it difficult to write on the left side of the page
- Discrepancy between oral and written performance
- Development of lateral eye movements such as visual tracking (necessary for reading and writing)
- Control of automatic balance

- Bilateral integration (differentiated and integrated use of the two sides of the body)
- Continued cross laterality or ambiguity of laterality above 8 years of age

Symmetrical Tonic Neck Reflex (STNR)

The STNR is present in normal development when a baby is around 8 to 11 months old and is a precursor to crawling on the hands and knees. If it remains present in an older child, it can affect:

- Integration of upper and lower portions of the body (for example, when swimming)
- Sitting posture (tendency to slump when sitting at a desk or a table)
- Poorly developed muscle tone
- Poor hand-eye co-ordination
- Attention *

*O'Dell and Cook (1996) Stopping hyperactivity - a new solution. Avery Publications

These are only some of the reflexes that might be involved in specific learning difficulties and behavioural problems. More than two reflexes must be present before a diagnosis of Neuro-Developmental Delay is considered.

Adapted from & Further recommended reading:

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