

TLR FACT SHEET

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What are Primitive Reflexes?

Primitive reflexes develop in utero and are present at birth. They are survival reflexes that help keep a baby alive in the early months of life. They also allow the newborn to respond to its new, gravitational environment.

These reflexes are directed by the brain stem which is the lowest centre of the brain. Primitive reflexes cause an infant to make repetitive, involuntary movements.

It is these movements of the body which train the brain in the first year of life.

The repetition of movement serves to integrate the reflex into the central nervous system and builds strong neural pathways between the brain and body. Integration of the reflexes should occur by 6-12 months of age.

Each primitive reflex plays a role in the development of other senses and skills like balance, coordination, fine motor and vision. They lay the foundations for all future learning.

Primitive reflexes that don't integrate as expected are called retained reflexes. They are markers of dysfunction in the Central Nervous System and can be involved with many physical, social, emotional, behavioural and academic challenges.

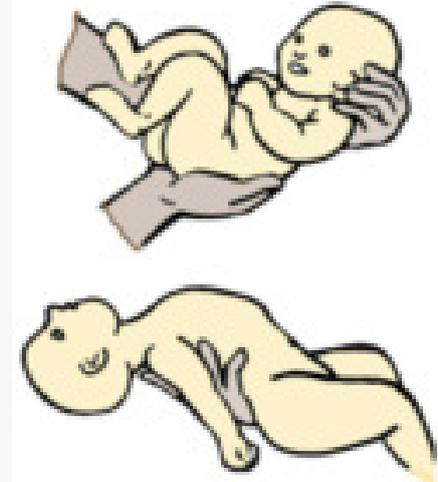
What is the TLR?

The Tonic Labyrinthine Reflex (TLR) is one of the primitive reflexes.

The TLR forwards is elicited by movement of the head forwards (flexion), above the level of the spine. This causes the arms and legs to flex or bend.

The TLR backwards is elicited by movement of the head backwards (extension), below the level of the spine. This causes the arms and legs to straighten or extend.

TLR forwards



TLR backwards

Image credit: Rhythmic Movement International

The TLR forwards integrates around 4 months of age.

The TLR backwards integrates gradually, up until 3 years of age and involves the emergence of several postural reflexes.

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What does the TLR do?

The TLR helps a newborn to straighten out after being curled up in the flex position in utero. It also develops their understanding of front and back of body.

The reflex exerts a tonic influence on the muscles throughout the body. Hence, it develops and trains muscle tone as well as balance and proprioception.

Symptoms of a retained TLR

If the TLR does not integrate into the central nervous system, it can have long-term effects including interference with learning.



Some of the signs and symptoms of a retained TLR are;

TLR forward

- Poor posture- hunched
- Low muscle tone
- Motion sickness
- Weak neck muscles
- Poor balance
- Problems climbing
- Dislike of sports and PE class
- Tendency to be cross-eyed
- Oculomotor dysfunction
- Poor sequencing skills
- Poor sense of time
- Trouble walking down stairs or escalators

TLR backward;

- Tendency to walk on toes
- Tense leg muscles
- Motion sickness
- Poor balance
- Trouble walking up stairs or escalators
- Oculomotor dysfunction
- Coordination issues
- Poor organisation skills
- Poor sequencing skills

At Unlock Learning and Health, we can assess for retained primitive reflexes and provide a developmental movement program to integrate them and improve functioning.

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