



YOUTUBE FREEBIE

Symmetrical Tonic Neck Reflex (STNR)

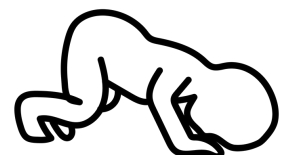
What is the STNR?

- The STNR divides the body in half - lower half and upper half. There are also two movement patterns - flexion and extension.
- As the infant moves from prone (on belly) to quad (on hands and knees), they will begin to extend their neck - look up, and flex their neck - look down.
- These movements will then elicit a response in the upper and lower limbs.
 - During neck extension, the arms will straighten while the legs will flex/bend.
 - During neck flexion, the opposite will occur - the arms will flex/bend while the legs will straighten - moving the infant into a somewhat down dog position.
- The STNR emerges to help progress to the next phase of development, crawling.
- The STNR directly and indirectly impacts developmental milestones, as well as influences early life experiences learning skills and developmental maturity.
- It impacts head control against gravity, pulling up to stand, sitting, crawling, visual-motor skills, auditory processing, posture, muscle tone, fine motor and gross motor development, vestibular awareness, balance, focus, and concentration.
- The STNR is not actually present until after birth.
- This is due to its correlation with the TLR (Tonic Labyrinthine Reflex) - as an infant begins to integrate the TLR, the STNR emerges to help progress to the next phase of development, crawling.
- The life span of the STNR is very short - just 2-3 months. That is because as the infant moves from prone to quad, they will begin to start learning how to crawl. As they learn to crawl, the STNR will start to integrate.
- The “rocking” movement that infants do while on hands and knees, right before they begin to crawl? That may be the STNR beginning to integrate!
- With the STNR present in infancy, the baby is at the mercy of their head / eye movements. It prevents forward (crawling) progress in this position. The head / vision decides the position of the limbs.
- Rocking on the knees in a quadruped position helps to fully integrate the STNR, which makes crawling possible.

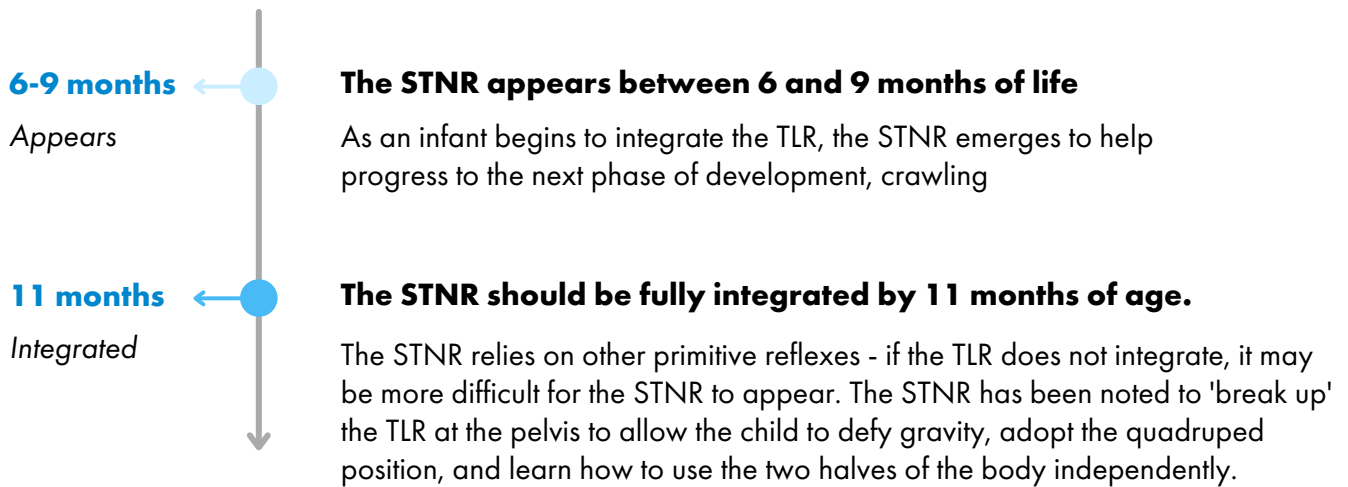
Source:

Reflexes, Learning and Behavior

The Symphony of Reflexes



STNR Integration:



Special Notes on Integration:

Special Note #1

If a child has successfully integrated their primitive reflexes, a sudden or chronic bout of trauma, stress or injury can re-activate these reflexes.

Special Note #2

While there is no guarantee for reflex integration, there are contributing factors to consider if your child has an unintegrated STNR.

Special Note #3

If the child has an unintegrated TLR, it's likely that the STNR may not appear, or may not integrate.

Source:

journals.plos.org/plosone/article?id=10.1371/journal.pone.0214548

What an unintegrated STNR looks like:

As previously mentioned, the STNR is linked with the TLR as well as has a direct correlation to:

muscle tone, upper and lower body movements, and head movements.

The child may sit with poor posture or in a w-sit position, struggle with learning to swim due to unsynchronized movements, have difficulty changing from near to far focus, which causes them to be slow copying from the board.

These connections go even further to include vision and ocular motor skills, balance, and coordination.

With a retained STNR, the child may have poor impulse control.

One study identified that many of the children with ADHD were noted to have a retained STNR and ATNR as well.

The ADHD characteristics started to improve when the STNR was integrated.

When the STNR begins to integrate, the child often experiences improved focus, memory, impulse control and other skills required for academic success.

Children with a retained STNR rarely crawl on all fours; they are often observed to bear walk or scoot on their bottom.

Those who do crawl tend to have a 'janky' crawl, which might look like one leg up, hands externally rotated with elbows locked, or a poor, uncoordinated crawling movement.

Additional symptoms of a potentially retained STNR:

- Minimal to no crawling
- Unusual/awkward crawling
- Poor posture / slumping or slouching
- W-sitting
- Lays head on desk during focus tasks
- May be a messy eater
- Challenges with attention and focus
- Challenges with reading and writing
- Decreased hand-eye coordination
- Challenges with near-far point tracking
- Difficulty learning to swim
- May seem clumsy, poor overall coordination
- ADHD / ADD symptoms
- Difficulty copying from the board
- Signs of Dyslexia