

Primitive Reflex Integration Exercises

What are primitive reflexes?

Primitive reflexes are supposed to be present in infants and children under the age of 1. Their purpose is to help the infant do important jobs like nurse, cling to a caregiver, and learn to crawl. These are automatic movements and are controlled by the brainstem, meaning there is no cortical/higher level thinking involvement. As the brain matures, these movements should be replaced by more mature movement patterns that are purposefully controlled by the more developed parts of the brain. Physicians and therapists commonly use primitive reflex testing to assess the health of the central nervous system.

Sometimes, primitive reflex patterns are carried over into later childhood. Reasons for this may include birth method, like Caesarean section versus vaginal delivery, trauma, exposure to toxins, anesthetics, and medications. Obviously, all of these things do not result in retained reflexes, but they are possible causes.

Additionally, other possible causes for retained primitive reflexes are decreased tummy time in infancy, a lack of crawling, early walking, head injuries, or chronic ear infections. In the OT world, we are always looking at decreased tummy time and a lack of crawling during our intakes and assessments. Often, we ask families about when the child started crawling, how long they crawled, and when they started walking. When we see the motor and sensory deficits, crawling (time, quality) can be a good indicator of that.

When primitive reflex patterns continue to be present beyond the first year of life, they interfere with normal development of some skills. Multiple studies show that children who have retained reflexes have problems in sensory development, postural disorders, decreased motor/cognitive

performance, and decreased psychomotor development.

Your occupational therapist can help determine if your child shows indicators of having retained primitive reflex patterns. Specific exercises and developmental play activities can be used to help your child integrate these patterns and develop more mature movements and abilities.

Exercises to integrate the **ATNR** (Asymmetrical Tonic Neck Reflex):

Marching exercise: <https://www.youtube.com/watch?v=XzHRVy-t2Z0>

Robot: <https://www.youtube.com/watch?v=7xOCXYkfm7A>

Crawling exercise: <https://www.youtube.com/watch?v=NHDSTxDEAjM>

Exercises to integrate the **STNR** (Symmetrical Tonic Neck Reflex):

<https://www.youtube.com/watch?v=V8m2Y85u3qQ>

Exercises to integrate the **TLR** (Tonic Labyrinthian Reflex):

<https://www.youtube.com/watch?v=2xLGf-ijmMg>

<https://www.youtube.com/watch?v=RQwzoZWxnDM>

<https://www.youtube.com/watch?v=Gm8u2BDeMmA>