

Brain Development Basics

Babies are born with an intact brain, however, it is not yet linked up. There are very specific experiences that the baby must have and movements she must do in order to make the neural connections for proper development.

At birth, the brain stem is what is mostly functioning and developing. This part of the brain is in control of automatic functions such as breathing, heart beat, and digestion.

Another brain stem function that of which most people are unaware is that it controls the primitive reflexes. These are reflexes which develop either in the womb or shortly after birth, and help the baby learn to move and develop more complex motor patterns. These reflexes are activated by some kind of stimulus, either a head movement, touch, light, sound, etc.

When babies move in a reflexive way over and over, or when they engage in specific rhythmic movements, they integrate that reflex, thus having control over that motor pattern. This integration of reflexes helps to further develop and mature the brain stem and causes it to make neural connections to higher up areas of the brain.

Babies also need a lot of outside stimulus, such as light and deep touch, movement, sound, sight in order to ensure proper brain development.

When babies are prevented or otherwise unable to move or receive the appropriate stimulation, such as a prolonged hospital stay after birth, they are at high risk for developing learning and behavior disorders.

No matter what the health status is of your baby, the information contained in this brochure is critical for all caregivers to understand and to implement from day 1.

Nutrition

A few of the basic nutrients that are important for brain development are: DHA/EPA, D3, Zinc.

Today's environment is very toxic and it is nearly impossible to avoid such toxins. One way to help to prevent your developing or nursing baby from absorbing the toxins in your system is for you to take a clean source of chlorella daily, which acts as a binder to your toxins. Your milk may have a greenish tint, but that is ok.

If your baby starts to experience colic, then it is imperative that you examine his or your food sources, especially gluten and dairy, as they often cause digestive issues

If you are interested in learning more about primitive reflexes, rhythmic movements, or how to help promote brain growth in your children, please contact me.



Lisa Ann de Garcia, MA, MEd., FDN-P
Brain Gym® and BRMT instructor
385.484.1499

lisa@wholechildlearningandwellness.com
www.wholechildlearningandwellness.com

Preventing Learning Challenges

What you must do **now** to help your baby develop correctly



Whole Child Learning and Wellness

Sensory Stimulus

Babies must receive a variety of sensory stimuli in order to create neural pathways from the brainstem to the rest of the brain. Do these following sensory exercises while holding, changing, bathing, or playing with your baby.



Tactile

- Gently stroke or caress your baby, especially on the back, face, palms and bottom of the feet

Proprioception (body awareness)

- Massage your baby
- Gently squeeze head, body, and limbs
- Wiggle and gently pull and push on the fingers and toes and other joints

Vestibular (contributes to balance and spatial awareness)

- Rocking in different positions
- Tipping baby head down
- Turning while holding your baby (in both directions)
- Gently turn head side to side

Auditory

- Sing, talk, and read to your baby
- Play classical music, especially Mozart

Visual

- Move toys in Visual View
- Use flashing color lights in visual view
- Use Red/black patterns



Rhythmic Movements

Babies use rhythmical movements in order to help integrate their reflexes. You can assist your baby during play.

- Gently slide your baby on her back by pushing the feet.
- While lying on her back, move her legs like windshield wipers (both legs out and then both legs in, touching the toes when moving inward).
- While lying on the stomach, gently move her bottom side-side

Primitive Reflexes

The Absence of primitive reflexes is a red flag and can be a sign of brain damage or developmental delays. Here are a few reflexes you should see at birth.

Rooting: stroke cheek from mouth towards ear and baby should seek breast.

Babkin: Press on palm with your finger or thumb and baby should start to suck.

Babinski: stroke the side of the foot and the baby's toes should fan out with the big toe up.



Tummy Time

Tummy time is critical to help the baby integrate reflexes and to develop muscles in the neck and back. Even if your baby does not like to be on the tummy, you must make it a priority, or there will surely be problems down the road.

Crawling Links the Brain



Some babies like to go from scooting to walking, but crawling is a very critical stage. Studies have shown that babies need a good 6 months of crawling to get the right and left hemispheres of the brain to work together. If your baby is an early walker, play games with her daily that encourage her to crawl.