

REFLEXES

THE SECRET KEY
TO CHILDHOOD DEVELOPMENT?

QUESTION

Did you know that the very first movements of children are reflexive?



Unraveling Reflexes

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Did you know that the very first movements of children are reflexive? In other words, they do not have to think about it. The movements they make just happen naturally. This is exactly what a reflex is – a nervous reaction that causes muscles to react automatically.

As an example, you will quickly withdraw your hand if you accidentally touch a hot plate or pot. This is an automatic reaction to protect your hand from damage. You don't think about it. It just happens naturally. The same happens when you step onto something sharp. You will want to keep these reflexes working!

The very first notable reflex in the womb is basically a withdrawal reflex and it can be observed at about five weeks after a baby has been conceived. You can see this reflex in action when the embryo receives touch on his upper lip. He will then immediately withdraw from the stimuli or touch. A few days later, the sensitivity of that area has spread to other parts of the embryo's body as well. First it spreads to the palms of his hands, then to the soles of his feet and eventually his whole body is responsive to touch. At this stage, the withdrawal reflex involves a full body reaction.

It is interesting that at 9 weeks in utero this specific reflex lessens, and another type of reflex begins to appear. How does it happen that reflexes go away and new ones appear? It all has to do with a child's brain development!

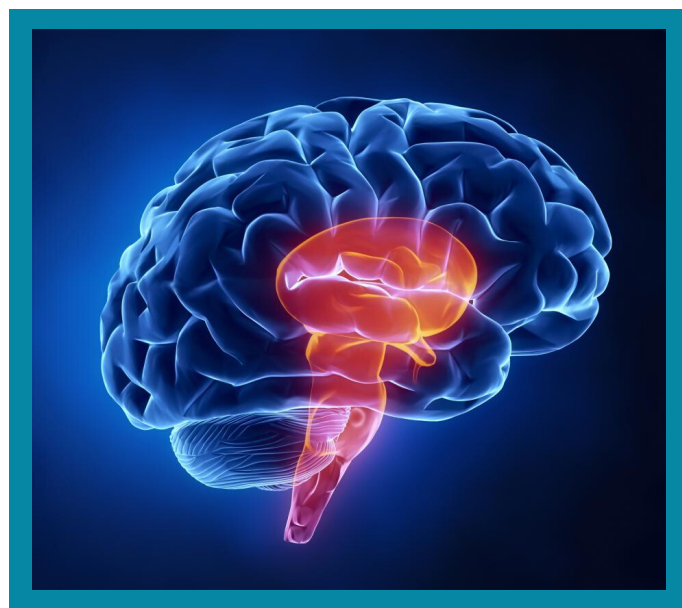
Reflexes & Brain Development

As the brain develops from the bottom to the top due to repetition and the constant feedback it receives via the reflexes, brain pathways start to become thicker and stronger. To protect the pathways, the brain will insulate them with fat, almost like the white tape around loose electrical wires.

This process is called myelination. This also helps messages to travel faster and in turn, it leads to a quicker response. Messages that travel along these insulated pathways, can travel up to a speed of 125 meter per second. That is as fast as some of the Formula 1 racing cars!

Now, as the brain 'insulate' the various pathways, new reflexes appear, and 'old' ones go to rest or 'integrate'. As you learn more of the various reflexes as well as their timelines, it will basically provide you with a small window through which you can 'peep' to see how a child's brain is busy developing. Isn't that just amazing! Thus, reflexes can help to assess the integrity or development of the central nervous system and the brain!

Remember that reflexes in a baby happen naturally, they cannot be learned. They also follow a predictable sequence of development and this is what serves as signposts of how the brain develops. Lastly, each reflex has a very specific function to fulfill.



Have you ever wondered how it works that babies know when they need to turn and lie with their head pointing downwards as their birth is approaching?

It is with the help of reflexes, of course! Together with the vestibular system in the ear, or the balance system in layman's terms, these reflexes help the fetus to assume the correct positions in the womb. This is just one of the functions of primitive reflexes! It also helps the fetus to turn and move through the birth canal during a vaginal birth.

For example, the two Spinal Reflexes, the Spinal Pereze & the Spinal Galant, are stimulated or activated by touch to the baby's back. During the birth process, they help the baby to wiggle down the birth canal during contractions and also empty the baby's bladder to get rid of any body-waste. This also assists the birth and it promotes the normal functioning of the baby's bladder and bowel.

The ATNR is another reflex that you will learn about later in our follow-up articles. This reflex is also thought to assist the baby in the birthing process.





Primitive reflexes are further very important as they help to establish specific bodily functions that are necessary to help the fetus survive outside of the womb. This includes helping a baby to breathe after he is born or assisting the little one to feed outside of the womb. They further help a baby to move and develop specific muscles of various body parts until he learns to do it by himself. The only exception is the MORO reflex but this will also be discussed in a later article.

Another function of these reflexes is that they help to gather info from the sensory systems such as our eyes, ears and skin. It also helps to wire & establish a strong link between the sensory systems, the brain and the muscles. However, for this to happen the reflexive movements need to be repeated many times over and over again.

All primitive reflexes are controlled by the brain stem, and not at spinal level anymore. Can you see how the brain has developed from the spine up to the brain stem, from the one category of reflexes to the next? Can you also see the tremendous amount of functions that the primitive reflexes have to perform?

After the discussed reflexes have served their purpose during the natural birth and in the early life of the baby, they are later no longer required. They go to sleep as the brain matures and "grows" or myelinates.

However, if these reflexes are not stimulated or triggered during birth, it can result in later difficulties such as bed-wetting, soiling, inattention or even hyperactivity. The following types of births may not trigger these reflexes at all: a breech birth, a fast last-stage birth, or an assisted birth using suction or forceps. A C-section or caesarean birth may also cause a baby to 'lose out' on these primitive reflexes being activated as the baby does not pass through the birth canal.

If you did have any of the mentioned births or know of a child who was not born via a vaginal birth, do not be discouraged. There are various exercises that you can do to first help activate the necessary reflexes and later to put them to rest again. For more information about these reflex integration exercises, visit www.edupro-online.com.

Stay tuned for more educational information in our upcoming newsletters. Until next time, happy moving moments..!

Much love, Marene

About the author:

Marene Jooste is a registered Kinderkineticist at SAPIK who has been in private practice for 15 years. She is the founder and owner of Kwanda Kinetics and Edupro Online. For more information, visit www.kwandakinetics.co.za or www.edupro-online.com



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