

# RETAINED PRIMITIVE REFLEXES *and* LEARNING DIFFICULTIES

*Compilation of Knowledge*

*By Dr. Stéphane Provencher DC, PScD, FIM, BCHHP, BCAMP, DICS*



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# Retained Primitive Reflexes & Learning Difficulties

From very early on intrauterine, the primitive reflex movements literally help develop the brain. The movements lay down the patterns of neural networks and myelination (development of growth) of pathways that allow the connection of the various areas of the brain that are so important later on for learning, behavior, communication, relationships and emotional well-being.

Primitive (brainstem-level) Reflexes are repetitive, automatic movements that are essential for development of the body's control, muscle tone, sensory integration and development. As newborns we are pretty vulnerable. Most of our brain hasn't turned on yet and, even if it had, we don't have the dataset to recognize what's safe and what's not.

To survive the first several months of life, we are endowed with *Primitive Reflexes* that tell us when to hide or be still, when to fight or run, allow us to recognize "self" versus "not-self", and help us perform other crucial acts. These primitive reflexes are normally integrated into our developing nervous system within 2 to 9 months after birth as they are replaced by recognizing "safe" from "dangerous" and by postural reflexes which allow us to crawl then walk.

If they are not absorbed or integrated, they get in the way of the postural reflexes and cognitive skills that normally follow. *Retained Primitive Reflexes* (RPR's) can cause anxiety, depression, and fearfulness, attention deficits and learning difficulties, sensory integration disorders, extreme shyness, lack of confidence, addiction, constant feelings of feeling overwhelmed, bullying, tantrums, and aggression, inability to recognize social cues, speech delays, bedwetting, fidgeting, thumb sucking, and many of the challenges seen among children and adults with learning, behavioral, and emotional issues.

## What is in this eBook:

A word from Dr. Stéphane Provencher

What to expect with RPF

What are Primitive Reflexes?

Why are Primitive Reflexes so important?

What happen when they don't go away?

Brain hemispheric integration, its parts & functions

Causes of RPF

Integration of RPR becomes important because

RPR may disrupt

What can cause RPR later in life?

Dr. Stéphane story from Billionaire Parenting Book

Names of the Primitive Reflexes and what they mean

Research

QUIZ

1. Quick Screening Quiz
2. Cranial Therapy Questionnaires

Developmental Pyramid

References

About the Author

# *A Word from Dr. Stéphane Provencher*

***DC, PScD, FIM, BCHHP, BCAMP, DICS, CKTP***

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Traditional medical research has not yielded consistent and effective therapies for retained primitive reflexes and learning difficulties. The types of investigations used are reductionist in nature, first attempting to find the cause of the malady.

For example, one popular alternative theory is that autism may be caused by mercury, aluminum or other toxicity from vaccinations. While thousands of parents and practitioners have observed a radical shift in a child's health after immunizations,, there is no “proof” via the scientific literature that mercury, aluminum, adjuvant, live virus or aborted cells tissue is/are the issue.

The proof by this standard is the scientific double-blind research published in peer-reviewed journals.

If indeed the vaccination relationship has merit, it is unlikely you will ever see this information published in such a journal. The journals are largely funded by the industry that produces the vaccinations. While we are led to not believe anything without proper journal publication, it is wise to realize that scientists are all trained in the accurate interpretation of such research reports. Most of the public is not.

Scientists know how misleading scientific investigations can be.

Sometimes, such as in the case of ADD/ADHD and ASD, the only potential therapeutic intervention that we have comes from observation and experience. While the literature is unclear about this theoretical connection between vaccinations and some diseases, our experiences tell us otherwise.

It is not surprising that experience differs from the journal literature on the subject. Scientific investigation attempts to control all variables except for the one being evaluated.

This is very difficult to do with people because we are all different. This is why so much medical research is performed on animals such as the lab rats. The lab rat is a manufactured commodity bred to be genetically identical.

Therefore, it becomes difficult to extrapolate information obtained from lab rat studies and apply it to the highly individualistic differences in people. For example, if there is a direct correlation between the effects of mercury or aluminum or adjuvants or aborted cells tissues or live virus toxicity from vaccinations and autism, then the logical prediction is that all children will not react the same. Some may have immediate and severely destructive effects. Others will have more subtle or delayed responses.

It is likely that the effects would also be varied and the symptom picture and intensity differs from case to case. For example, if such mercury or aluminum toxicity leads to a predisposition to Alzheimer's in certain genetically-susceptible individuals, it would be extremely difficult to correlate that data. What is more reasonable, however, is to understand how toxic mercury, aluminum, adjuvants, aborted cell tissues and live viruses are to the neurological systems of vertebrate animals.

It is also simple logic that the developing neurological system in humans is exquisitely delicate.

Therefore, it is logical to be very wary of using a mercury-based, aluminum-based and adjuvants preservative in vaccinations (along with dental materials, air pollutant, cookware, cosmetics, etc) for children from our understanding of known anatomy and physiology.

In 1976 Barry and Samantha Kaufman published the book, [Sonrise](#), documenting their experiences with their autistic son. Totally contradicting the medical system and all of its predictions, these two committed parents followed their observations and intuition to impact their son's life in a truly powerful and efficient manner. They felt compelled to tell their story to the world.

Their story spawned a whole new look at autism and inspired many desperate parents and practitioners to treat these children differently.



# *Partial synopsis of observations and experiences of parents and practitioners dealing with these subjects:*

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It seems that many of these children and individuals have a hyper-reactive neurological system. This may be the result of numerous possible causes; however, it would stand to reason that proper intervention through Chiropractic Craniopathy could be of value.

Any disturbance in the craniosacral mechanism, including spinal and pelvic dysfunctions, can also disturb the cranial mechanism. Your [SORSI-certified chiropractor](#) is the best professional able to evaluate this possibility.

It is likely that the gentlest of approaches will be most effective in these circumstances. It is essential to always gauge the patient's individual tolerance.

Cranial distortion can be due to any compromise within the entire neurological system, which in turn affects the craniosacral mechanism. This can result in an increase, however slight, in intracranial pressure. Spinal and other subluxations (misalignment) can produce stasis of cerebral spinal fluid flow.

All of these effects can contribute to a hyper-reactivity of the central nervous system. By alleviating these distortions and subluxations, the central nervous system can be affected in a calming fashion. Especially effective may be techniques like CRI balancing, CSF directing, and some of the sacral-based cranial therapies.

This can be translated to a hypersensitivity of the nervous system by compression of the actual brain by the skull (delivery, uterine-constraint, fall and hit head) and a reciprocity relationship with the pelvis since the primary respiratory system works at these two ends.



*“Biology gives you a brain. Life turns it into a mind.”*  
Jeffrey Eugenides



## *What are Primitive Reflexes?*

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Primitive reflexes are automatic stereotypical movements directed from the brainstem and require no cortical involvement (thought). Babies are born with brainstem-level (hence “primitive”) reflexes to help support the birth process and survive their first few months outside the womb. However, as higher, more sophisticated centers of the brain begin to mature and integrate all cortical levels, these primitive reflexes must disappear (integrate) during the first year of life in order for proper neurological organization of the brain to develop. This leads to a perception of the inner and outer environment and ability to respond to it in a less automatic or survival reaction but in a volitional way, using your thoughts and emotional guidance instead of primal or subconscious patterns. In other words, they are making way for postural reflexes and cognitive functions as the cortical brain develops. If the Primitive Reflexes don't get integrated, they can interfere with each of the three sides of the Triad of Health...emotional, biochemical and structural.



# *Why Are Primitive Reflexes So Important?*

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From very early on intrauterine, the primitive reflex movements literally help develop the brain. The movements lay down the patterns of neural networks and myelination (development of growth) of pathways that allow the connection of the various areas of the brain that are so important later on for learning, behavior, communication, relationships and emotional well-being.

Primitive (brainstem-level) Reflexes are repetitive, automatic movements that are essential for development of the body's control, muscle tone, sensory integration and development. As newborns we are pretty vulnerable. Most of our brain hasn't turned on yet and, even if it had, we don't have the dataset to recognize what's safe and what's not.



To survive the first few months of life, our Primitive Reflexes tell us when to hide or be still, when to fight or run. These reflexes also allow us to recognize “self” versus “not-self”, and help us perform other crucial acts. These primitive reflexes are normally integrated into our developing nervous system within 2 to 9 months after birth as they are replaced by recognizing “safe” from “dangerous” and by postural reflexes which allow us to crawl then walk.

If they are not absorbed or integrated, they get in the way of the postural reflexes and cognitive skills that normally follow. Retained Primitive Reflexes (RPR's) can cause

anxiety, depression, fearfulness, attention deficits, learning difficulties, sensory integration disorders, extreme shyness, lack of confidence, addiction, constant feelings of being overwhelmed, bullying, tantrums, aggression, the inability to recognize social cues, speech delays, bedwetting, fidgeting, thumb sucking, and many of the challenges seen among children and adults with learning, behavioral, and emotional issues.

Interestingly, it's not just newborns and children who show signs of RPR's. We commonly see them ***reappear following traumatic and hypoxic injuries*** and in kids and adults who have been through harsh emotional events. When I first started treating people with RPR's back in 2006, I tested almost everyone and found one or more of them in the vast majority of our patients. What a wonderful improvement people made when these were cleared out of their way!

Parents who are aware of RPR's have usually learned about them through the book [Reflexes, Learning and Behavior](#) written by [Sally Goddard Blythe](#) and through the work of the [Institute of Neuro-Physiological Psychology](#) in England. Her book popularized the importance of RPR's as hindrances to healthy neural and emotional development and describes them well from a lay therapist's perspective.



The best clinical therapies for RPR's have come from a group of Osteopaths and Chiropractors in Sydney, Australia including [Dr. Keith Keen](#) & my good friend and mentor the late [Dr. Jim Blumenthal](#). Happily, more and more behavioral optometrists, including several of our local optometrists, are also becoming aware of the role RPR play in brain performance.

Combining the best of INPP (Institute for Neuro-Physiological Psychology) and the Sydney group, we have been able to consistently identify and clear RPR's with completely non-invasive approaches. Primarily we use chiropractic Craniopathy and sacral adjusting, eye positions, acupuncture points, and targeted neurotransmitter therapies. We also integrate RPR work with clinical nutrition, drug-free neurology, homeopathy, and chiropractic. However, even done by itself the results are impressive.



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Vestibular function (balance)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Auditory perception and integration (listening and hearing)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Visual and oculomotor function (movement of the eyes, vision, eye tracking)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Gross and fine motor coordination (sports or drawing)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Hemispheric integration (Left and Right brain connection; art versus math)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Endocrine and neurochemical functions (hormones, stress)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Social cueing and individual behavior (interaction with people and peers)*



# *What happens if Primitive Reflexes don't go away?*

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If the Primitive Reflexes are retained past the first year of life they can interfere with:

- *Learning*



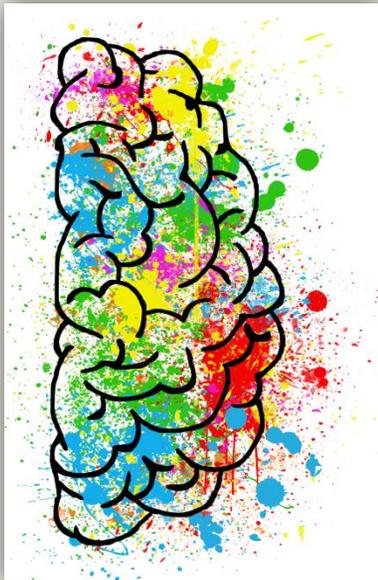


## Left Brain Hemisphere:

- Social motivation
- Detail
- Reading skills
- Verbal communication
- Math skills (processing)
- Auditory
- Fine motor skill
- High frequency sound, light, and movement
- Approach behavior
- Intention
- “Female Brain”
- Content
- Familiar stimulation
- Sequential processes
- Immune responsiveness

## Right Brain Hemisphere:

- Nonverbal Communication
- Withdrawal Behavior
- Visual/Spatial
- Low Frequencies
- Reading Comprehension
- Math Reasoning
- Novel Stimulation
- Humor
- Social Behavior
- Focused Attention
- “Male Brain”
- Gross Motor
- Global Processing (big picture)
- Sense of Self
- Immune-Suppression



Basically, the perception of our inner and outer environment and our response to it may be disturbed. That is, conscious life may be disturbed. Children with learning disorders, ADHD, Autism Spectrum, and various other neurodevelopmental disorders are known to have retained primitive reflexes which contributed to their symptoms and level of dysfunction.

Each reflex is associated with one or more of the Sensory systems: Auditory, Taste, Tactile, Smell, Visual, Vestibular, Proprioceptive and/or Interoceptive. Therefore, if retained, a child/person may experience dysfunction within one or more of the sensory processing systems. This can lead to what is known as *Retained Primitive Reflex Disorder* or *Sensory Processing Disorder*.

Here's a small description of these sensory systems and areas that these retained Primitive Reflexes could affect in a child's optimal development:

**Auditory:** *Part of the brain responsible for all sound*

**Taste:** *Part of the brain responsible for all 5 tastes*

**Tactile:** *Part of the brain responsible for all touch sensations*

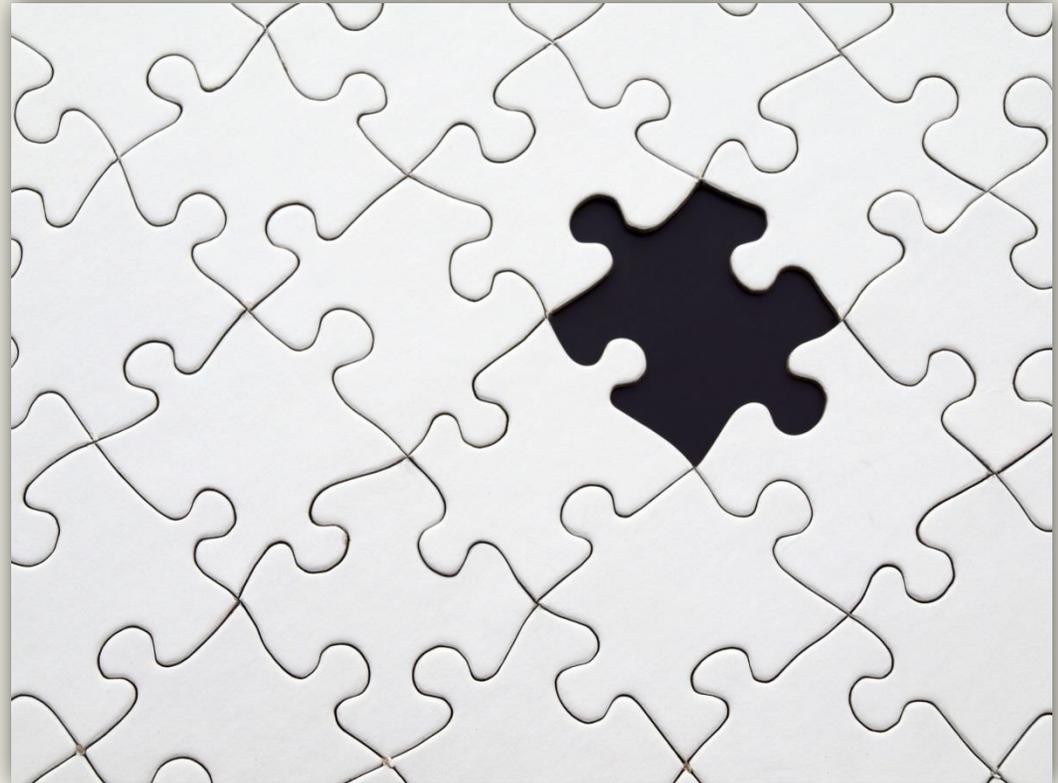
**Smell:** *Part of the brain responsible for all type of smells/odors*

**Visual:** *Part of the brain responsible for all visual sensations/images*

**Vestibular:** *Part of the brain responsible for balance related to your ear*

**Proprioceptive:** *Part of the brain responsible for knowing where are you in space i.e. I am sitting on a comfortable chair and now I am jumping out of it.*

**Interoceptive:** *Part of the brain responsible for digestion and organs*



# *Functions of the Brain*

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**The Frontal Lobe:** It is the seat of emotions and judgments related to sympathy, which is the ability to feel sorrow for someone else's suffering, and empathy, which is the ability to understand another's feelings and problems.

**The Temporal Lobes:** They are responsible for interpreting speech and sound. Visual and long term memory is also interpreted within this part of the brain.

**The Occipital Lobe:** It is responsible for interpreting visual information, especially the ability for musicians to read sheet music.

**The Parietal Lobes:** They are responsible for interpreting stimuli, sensory integration and orientation. This area is shown to have high performance in gifted and highly sensitive children. The left lobe process arithmetic. Hence, those with damage to the left lobe have difficulty with math. The left and right lobes are responsible for multiplying, subtracting and comparing numbers.

**The Hippocampus:** This area converts short term into long term memory. Gifted and highly sensitive children often have a well-developed hippocampus.

**The Amygdala:** This is linked to emotional behavior most significantly fear.

**The Hypothalamus:** This structure is the main controller of the autonomic system. The hypothalamus is essential to integrating the nervous system, the immune system and the endocrine system. The hormonal aspect of the hypothalamus firstly controls the digestive system. Secondly, it serves for motivational control and behavioral aspect. And thirdly, it deals with stress and emotional changes.

# *Causes of Retained Primitive Reflexes*

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Children born via cesarean section are susceptible to trauma, toxicity exposure, anesthetics, chemical, genetics, impaired detoxification pathways etc. and are more at risk of having retained primitive reflexes. This may cause the brainstem and higher centers to get overwhelmed.

Other causes may be: insufficient tummy time as an infant; lack of, or little, creeping or crawling; early walkers; head injuries; excessive falls; and chronic ear infections.

Other causes may also involve physical, neurological and biochemical changes which is all based of learning and adaptation for the brain and sensory systems. But the most common trigger to the retained primitive reflexes and the sudden onset or sudden trigger in life is: emotional stressors. These emotional stressors can happen in the womb and outside the womb. Ninety percent of all physical dis-ease is now links to emotional stressors according to the clinical observations of [Dr. David Simon MD](#) and [Dr. Stéphane Provencher DC](#) clinical observations.



# *Integration of the Primitive Reflexes Is Important Because:*

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- They are the basis of our nervous system and our ability to move.
- They originate in the brain stem. This area of the brain is responsible for survival. If we are under stress our minds are still moving and we are not able to easily access our prefrontal cortex which help us process and readily analyze information. Instead we stay in survival and stress modes.
- As we get older our unintegrated reflexes trigger the fight or flight response even when there is no 'logical' reason for the stress. So stressed behavior becomes our pattern of responding.
- When our movements come from active primitive reflex movement patterns then there are challenges with coordination. This can lead to reading and writing difficulties, language and speech delays, disorganization, fidgeting, concentration Etc. Other challenges may be seen in poor bladder control, breathing difficulties, skin problems, and having an uncontrollable sweet tooth.
- Restore low muscle tones, muscle weakness, chronic body aches, poor endurance and fatigue.



## ***Retained Primitive Reflexes may Disrupt:***

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- Vestibular function (balance)
- Auditory perception and integration
- Visual and oculomotor function
- Gross and fine motor coordination
- Hemispheric integration
- Endocrine and neurochemical functionality
- Social cueing and individual behavior
- Learning

## ***What Can Cause Retained Primitive Reflexes later in life?***

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Unintegrated, active primitive reflexes may be caused by:

- Stress of the mother and/or baby during pregnancy; breech birth, birth trauma, caesarean birth, induced birth
- Lack of proper movement in infancy: being placed in baby walkers/rings, jumpers, being left for long periods of time in car seats/baby capsules, and being placed in front of a TV in bouncers. These all restrict critical movements required for brain development
- Illness, trauma, injury, chronic stress
- Environmental toxins, complications with vaccinations
- Dietary imbalances or sensitivities

Reflexes that are inhibited and integrated in infancy can later reactivate because of trauma, injury, toxins and stress.



*"Tell your heart that the fear of suffering is worse than the suffering itself . . . And that no heart has ever suffered when it goes in search of its dreams, because every second of the search is a second's encounter with God and with eternity." – The Alchemist*

*“Parts of the cranial distortion are caused from the retention of the primitive reflexes which are corrected at the cranium using eye movements. Even though this rectification of removing the retained primitive reflex has good results, the child and its body might need time to adjust to this new pattern of thinking/learning. Therefore, the cranial adjustment might take 1-3 visits before it is permanently resolved.*

*The primitive reflex, explained in the brain section, can trigger an old pattern of neurology and limit the advancement of the child. These patterns can come back even as adults when stressors occur in our life. To metaphorically illustrate what it will be like to live by the old pattern, imagine trying to live your life today but using the same lifestyle and standards as back in the 70's. How productive or effective would it be for your daily living habits? This is why it is important to have primitive reflexes fixed early in life and to reduce stress levels that might retrigger them.*

*Correlation with the first cervical and the occiput bone also has shown a relaxation process and an increase in focus for these children. But every child is unique. If trauma created the initial problem, please allow time for their body to accept the change and stabilize the changes toward a more permanent lifestyle within their body's balance.*

*Another memorable client that had primitive reflex issues and exhibited hyperactive behavior was also pleased with the medical interventions that I performed. This young child was probably 6 years old. She had a host of emotions and crises since she was born. She also wasn't able to wear long pants at all and wearing shoes was not possible due to her sensory sensitivity.*

*She was categorized as having hypersensitive sensory disorder and was told that nothing could be done to help alleviate this issue or improve her lifestyle. She was also destined to live this particular way of life for the remainder of her adulthood.*

*However, after I treated her twice, her behavior changed so much that her mother wondered what happened and who this new girl in front of her was. It was a total transformation that made her mother extremely grateful. After 1 year the girl was able to wear pants, shoes, and socks. She also listened and did not scream anymore to communicate. She was given back a normalized lifestyle and could experience many things that were not deemed possible with her condition.”*





# Names of Primitive Reflexes & What they mean:

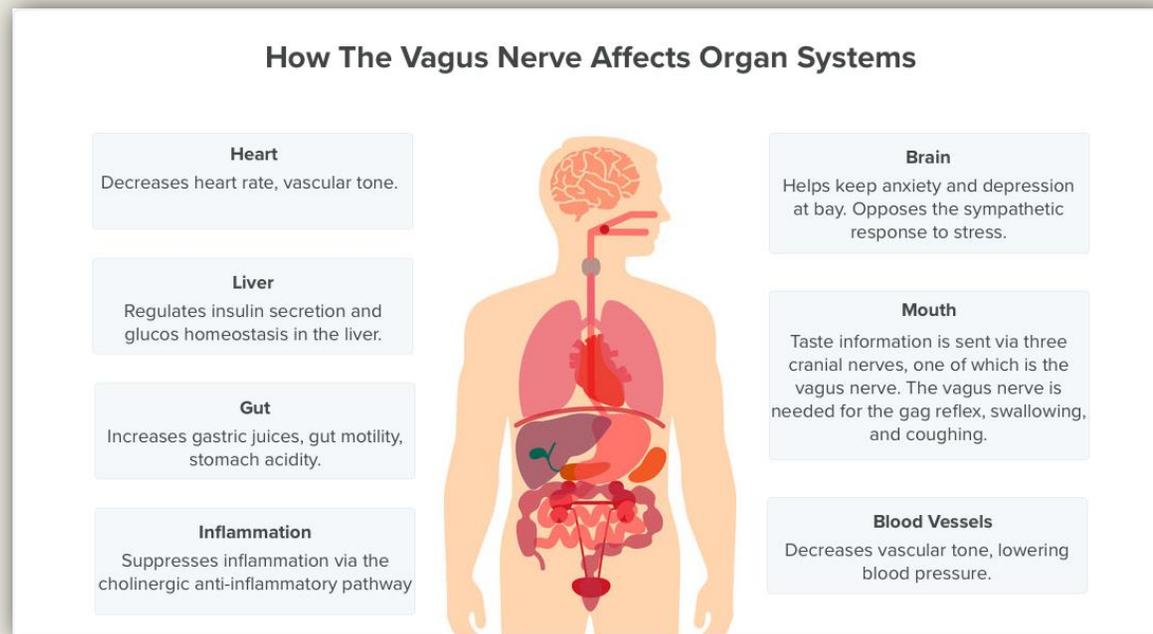
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## The Fear Paralysis Reflex

This reflex is the first reflex to appear and to be abated (get integrated). If this reflex is retained it deals with withdraw sensitivity; fear of new and different circumstances it contributes to elective mutism, hypersensitivity disorders, sudden infant death syndrome and panic disorders in adulthood. The 'fraidy cat' child that often bears the brunt of teasing from other more adventurous children/siblings. If you have ever seen a deer or bunny try to hide by freezing in position, you have seen the FPR working. Withdrawn behavior does not necessary mean quiet behavior. The child might scream loud, and for a long time when faced with a new situation or a perceived fear/threat. This reflex should disappear at 2 months of age.

*It can be related to an excessive release of Acetylcholine which the body cannot metabolize.*

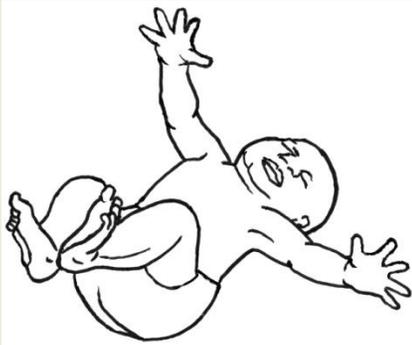
The retention of this reflex can result in the entrapment of the vagus nerve. The vagus nerve entrapment can also lead to seizures, abdominal discomfort, heart issues, lung and breathing issues, liver issues and more:



# *Names of Primitive Reflexes & What they mean:*

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## *The Moro Reflex*



This reflex is also referred to as the ‘Startle Reflex’ or “fight or flight”. When you fail to support or hold your baby’s neck and head or if your baby becomes startled by a loud noise, bright light or sudden touch, the arms of your baby will thrust outward and then curl in as to embrace themselves. This reflex should disappear between 2-4 months of age.

If retained, the child/adult may be hypersensitive to other senses, may over-react to stimulation, and be in constant ‘fight or flight’. This will lead to over activity of the sympathetic nervous system and the adrenal glands. Due to the constant demands on the adrenal glands, this may cause: immune deficiency, allergies, chronic illness and asthma. The constant drain this puts on the adrenal glands and immune system can lead to symptoms such as allergies, asthma, sugar handling problems, chronic illness, and chronic fatigue

Retention of the Moro Reflex could lead to; inability to focus on one thing at a time, poor impulse control, being withdrawn or timid, being distracted easily, aggressiveness, anxiousness, and/or easily excited, aggressive or “temper tantrums”, “can’t turn off”, emotional or explosive episode, “weeping anger”, learning difficulties and hypersensitivity to sound, touch, sight and balance.



In the case of APGAR scores dropping in babies, the moro reflex might be retained later on in life. Any stimulation will kick off the Moro, from loud noise, to rough touch, to sharp movement. Moro turns on adrenals, which puts them into “Where” and inhibits “What”



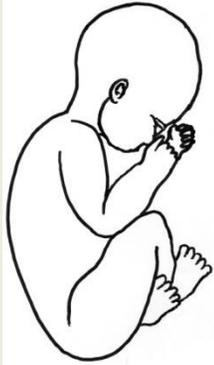
Most of the time when you ask a kid if they did something (which they did) and they deny it, you're looking at a Moro Reflex.

*This is related to an excessive release of Norepinephrine and the body's ability to metabolize it.*

# Names of Primitive Reflexes & What they mean:

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## The Rooting Reflex



When you stroke your baby's cheek she will turn towards you, usually looking for food. This is very useful when learning to breastfeed your baby. This reflex should be gone by 3-4 months of age.

Retention of the Rooting reflex includes: poor articulation, messy eaters, poor manual dexterity, hypersensitivity around the lips and mouth. The tongue remains too far forward resulting in: difficulty chewing, swallowing, speech and articulation problems, dribbling and poor manual dexterity (Babkin Response).

It is often regained following facial trauma from a sport injury, motor vehicle accident, or a dental procedures especially following orthodonture.

Correction of this reflex promotes normalization of the HPA axis including:

Hypothyroid and Hyperthyroid signs and Lab Test, Adrenal and Cortisol Test, Thyroid Stimulating Hormone (TSH) indicators.

*This is related to a deficit of Histamine and lack of the body's ability to metabolize it.*



## Juvenile Suck Reflex

This reflex is similar to the Rooting reflex but in the juvenile and adult populations.

Retention of this reflex can lead to: difficulty chewing and swallowing, speech and articulation problem, development of Class 2 dental occlusion. It is also associated with high, narrow mouth roof.

*It is related to an excessive release of Histamine and the body's inability to metabolize it.*

# Names of Primitive Reflexes & What they mean:

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## The Palmar Reflex

This reflex is also referred to as the 'Grasp reflex'. It is demonstrated by placing your finger or an object into your baby's open palm, which will cause a reflex grasp or grip. If you try to pull away, the grip will get even stronger. This reflex should be gone by 2-3 months of age.

Retention of the Palmar reflex includes: poor manual dexterity (lack of thumb opposition), poor pencil grip, difficulty with writing expression, intertwined speech and hand movements which can lead to difficulty with speech (Babkin response), hypersensitive palm, mouth movements when writing or drawing, slumping at the keyboard or during manual tasks and the feeling of "Can't get ideas from my head, down my arms and onto a paper".

*This reflex is related to a deficit of GABA and lack of the body's ability to metabolize it. Drugs and other component can inhibit or create the deficit in GABA.*

## The Plantar Reflex

This reflex is also referred to as the 'Grasp reflex' for the foot. This reflex should be gone by 2-3 months of age.

Retention of the Plantar reflex includes: poor coordination, gait imbalance, unsteady on feet which results in delayed walking in children resulting in delay of other cognitive functions (Llinas), tendency to fall, especially in older adults, cerebellar-cortical challenges secondary to reduced and uneven inputs (feet and ankles are essential to bipedalism), unable to "Think on your feet", poor at sports which leads to social stigmatization. Self-confidence and self-image (approval seeking behaviors) are also affected.

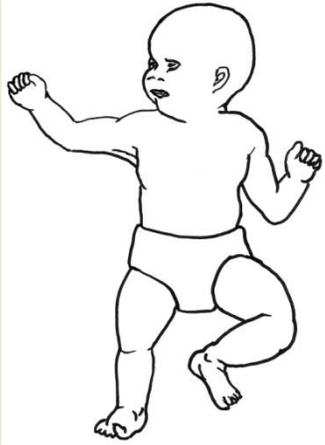
*This reflex is related to an excessive release of Serotonin and of the body's inability to metabolize it.*



# Names of Primitive Reflexes & What they mean:

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## Asymmetrical Tonic Neck Reflex (ATNR)



This reflex is also referred to as the “fencer position”. To elicit this reflex, while your baby is lying on his back, turn his head to one side. This should cause the arm and leg on the side that he is looking toward to extend or straighten, while his other arm and leg will flex. The ATNR prepares the baby for future transitional movements like turning from back to front and vice versa. ATNR is involved with recognizing “Self” vs. “Not-Self” and developing depth perception. It also helps to later develop hand-eye coordination and activities that require crossing the mid-line of the body. ATNR also thought to be involved in the birthing process. If it is weak in utero, it may lead to the baby becoming stuck in the birth canal. It is reinforced by the natural birthing process. This reflex should be gone by 4-6 months.

### **Retention of ATNR include:**

Learning difficulties such as: reading (misses parts of visual field), writing (tendency for poor pencil grip with excessive pressure), spatial reasoning and judgment of distance leading to poor hand eye coordination directions, difficulty with tasks that involve both sides of the body (including eyes, ears, limbs etc) or brain, lack of focus and easily distracted (bright/shiny), possible scoliosis, difficulty expressing ideas in written form, difficulty with tasks that require crossing the mid-line (reading/writing).

Social difficulties such as: lack of or disrupted, discrimination of self from not-self, inappropriate behaviors in certain settings, tendency to be awkward, poor eye-hand coordination causing impaired sports skills. The older child or adult may be prone to shoulder and neck injuries.

*This is related to a deficit of Norepinephrin and the body's inability to metabolize it.*



# Names of Primitive Reflexes & What they mean:

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## Tonic Labyrinthine Reflex (TLR)



With this reflex, tilting the head back while lying on the back causes the back to stiffen and even arch backwards. It also causes the legs to straighten, stiffen, and push together. This reflex causes the toes to point, causes the arms to bend at the elbows and wrists, and the hands to become fisted or the fingers to curl. This reflex prepares the baby for movements of rolling over, crawling on all fours, standing and walking. This reflex has two components: a lateral labyrinthine and sagittal labyrinthine. Each has its own screening test, challenges and corrections. This reflex should be gone by three and a half years of age.

Retention of this reflex include; difficulty keeping the head forward, fatigue when working with head bent forward, trouble paying attention when sitting at a desk and/or reading, poor posture, poor balance and optical function, susceptibility to motion sickness, dyspraxia, walking on toes, hypo or hyper-tonus (muscle tone), dislike of physical education (PE), poor sense of rhythm/timing, disturbed judgment of space, distance, depth and motion, “floppy” or “rigid” child. They may run into things repeatedly or have trouble finding their “indoor voice”. Looking up at a blackboard then down at a desk creates neurological disorganization for them, causing loss of attention and problems studying. They are often diagnosed as ADHD, but drugs rarely solve their problems.

*Lateral Laryrinthine Reflex is related to a deficit of Acetylcholine and the body's inability to metabolize it.*

*Sagital Labyrthintine Reflex is related to a deficit of Serotonin and the body's inability to metabolize it.*



# *Names of Primitive Reflexes & What they mean:*

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## *Spinal Galant*



This reflex is demonstrated by holding or laying the newborn on their stomach and stroking along one side of their spine. The normal reaction is for the newborn to flex sideways toward the stimulated side. This is one of the reflexes tested in newborns to help rule out brain damage at birth. Spinal Galant Reflex is the wriggling reflex that helps us out of the womb. Stimulation down both sides of the spine at the same time simultaneously activates a related reflex that will reduce urination. Like the ATNR, it is thought that the Spinal Galant is important in the birthing process and it facilitates movement of the hips as the baby descends into the birthing canal. This reflex should be gone by 3-9 months of age.

Retention of Spinal Galant reflex includes: inability to sit still ('ants in the pants' child), possible scoliosis, poor concentration and attention, poor posture, hip rotation on one side when walking, chronic digestive issues, and bed wetting beyond age of 5 years (it is connected to the bladder control), delayed development of sitting position, abnormal gait, posture, fluency and mobility and contributes to spinal scoliosis.

*Spinal Galant is related to an excessive release of GABA and the body's inability to metabolize it.*



# *Names of Primitive Reflexes & What they mean:*

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## *Additional Reflexes*

The above reflexes are only a few of the primitive reflexes that are present during infancy and should be inhibited in order for more sophisticated areas of the brain to develop. These reflexes represent some of the more prominent and important ones for proper social, academic, and motor development.

## *Examples of possible RPR correlations:*

### **ADD/ADHD:**

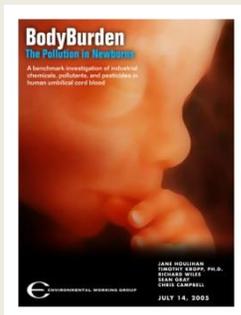
Moro reflex which remains activated in young children and teenager (even adult).

### **Dyslexia/Dyspraxia:**

Moro Reflex, Palmar Grasp Reflex, Asymmetrical Tonic Neck Reflex, Tonic Labyrinthine Reflex and Symmetrical Tonic Neck Reflex.

# Research

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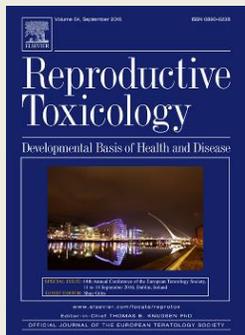
**“American researchers have found an average of 200 industrial compounds, pollutants, and other chemicals in the umbilical cord blood of newborns, including seven dangerous pesticides - some banned in the US more than 30 years ago. Their report: *Body Burden -The Pollution in Newborns*, released by the Washington based Environmental Working Group, detected 287 chemicals in the umbilical cord blood of 10 randomly selected newborns collected by the American National Red Cross. **Of those chemicals, 76 cause cancer in humans or animals, 94 are toxic to the brain and nervous system, and 79 cause birth defects or abnormal development in animal tests.**”**

“What’s most startling is that we have such a wide range of compounds in us the moment we are born,” said Tim Kropp, the senior toxicologist for the project. “Babies don't use any consumer products, they don't work in a factory and yet they're already starting off with a load of these chemicals. **Among the most pervasive pesticides found were: 4,4'-DDE**, a contaminant and by product of **DDT**, banned in the US in 1972 but still used in other countries to control mosquitoes; **hexachlorobenzene**, a fungicide widely used on wheat until 1965, when the chemical giants Bayer and Dow voluntarily discontinued production of the probable carcinogen; and **dieldrin**, routinely used on corn and cotton until banned in 1974 except for controlling termites. Scientists say that many of the compounds take decades to break down and some are still used in countries that export produce to the US. Besides the pesticides, chemicals from two widely used household products - **Teflon and Scotchgard** - **were found in every baby tested**. Although the amounts of some of the chemicals detected were extremely small, no one knows how much of any given chemical - much less a mixture of chemicals - could affect a human fetus. What research exists has shown that chemical exposure in the womb can be dramatically more harmful than exposure later in life. This is the first study to attempt to detect so many chemicals, pollutants and pesticides in umbilical cord blood - a total of 413. Of these, 307 had never before been sought in cord blood tests.”

- *The Pollution in Newborns, Environmental Working Group, Washington, DC, July 2005*

# Research

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“The plastic monomer and plasticizer bisphenol A (BPA) is one of the highest volume chemicals produced worldwide. BPA is used in the production of polycarbonate plastics and epoxy resins used in many consumer products. Here, we have outlined studies that address the levels of BPA in human tissues and fluids. We have reviewed the few epidemiological studies available that explore biological markers of BPA exposure and human health outcomes. We have examined several studies of levels of BPA released from consumer products as well as the levels measured in wastewater, drinking water, air and dust. Lastly, we have reviewed acute metabolic studies and the information available about BPA metabolism in animal models. The reported levels of BPA in human fluids are higher than the BPA concentrations reported to stimulate molecular endpoints in vitro and appear to be within an order of magnitude of the levels needed to induce effects in animal models.”

- *Journal of Reproductive Toxicology. Volume 24 Issue 2, August-September 2007, Pages 139-177*



“The results of reflex/motor activity interactions in 177 normal infants are evaluated. The asymmetrical tonic neck reflex, tonic labyrinthine reflex-supine, and Moro reflexes were assessed for each child at birth and at intervals up to 12 months. Ages of rolling prone to supine, rolling supine to prone and sitting alone were elicited from parents. The effects of the primitive reflexes on early motor activity were assessed, and statistically significant correlations were demonstrated between decreased reflex activity and the emergence of motor milestones. The distinctive association of reflex activity with motor function suggests the interaction of several reflexes (a primitive reflex profile) rather than the influence of isolated reflex activity. Such patterns support the hypothesis that decreasing primitive reflex activity is associated with the onset of volitional motor activity in normal infants.”

- *Developmental Medicine & Child Neurology; November 2008.*

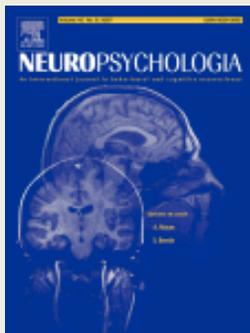
# Research

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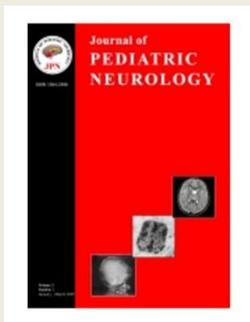
“A link between reading difficulties and control of movement in children was found with the presence of retained primitive reflexes. A new approach to the treatment of children with reading difficulties should include the assessment of underlying neurological functioning and appropriate remediation.”

- *The Lancet. Feb. 2000*



“The persistence of the ATNR was significantly predictive of attainments in reading. Educational skills may be affected by the persistence of brainstem mediated reflexes that should be inhibited in the first year after birth.”

- *Neuropsychologia. 2007; Vol. 45, Issue 4*



“Infants with Cerebral Palsy (CP) have been known to manifest persistence or delay in the disappearance of primitive reflexes and pathologic or absent postural reactions. Moreover, infants with >5 abnormal postural reactions have developed either CP or developmental retardation. The combined examination of primitive and postural reflexes should be considered by the child neurologist as a simple but predictive screening for the early identification of infants at risk for CP.”

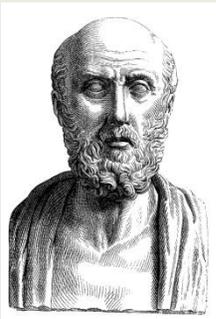
○ *Pediatric Neurology. 2004; Vol. 31, Issue 1*

# Research



“Primitive Reflexes and Attention-Deficit/Hyperactivity Disorder: Developmental Origins of Classroom Dysfunction’ describes an overlap of ADHD behaviors and retained infant reflexes. The boys in the study that were diagnosed with ADHD had significantly higher levels of retained infant reflexes than the boys who were not diagnosed with ADHD. The main reflexes that were retained are called Moro, Tonic Labyrinthine Reflex (TLR), Asymmetrical Tonic Neck Reflex (ATNR), and Symmetrical Tonic Neck Reflex (STNR). The retention of these reflexes also corresponded to lower math achievement than the boys who were not diagnosed with ADHD and had lower levels of retained infant reflexes. It was also discovered that an active Moro reflex inhibits the integration of the other three reflexes.”

- *International Journal of Special Education 2004, Vol 19, No.1.*



"Diseases are crises of purification, of toxic elimination. Symptoms are the natural defenses of the body. We call them diseases, but in fact they are the cure of diseases." Hippocrates founded a medical school on the island of Cos, Greece and began teaching his ideas. He soon developed an Oath of Medical Ethics for physicians to follow. This Oath is taken by physicians today as they begin their medical practice. He died in 377 BC.



“According to the Harvard Medical School, current research strongly suggests that ADHD is caused in part by a deficiency of norepinephrine in the ascending reticular activating system.” Celeste Krawchuk, DC, and Eric C. Epstein, MsT, DC.

- *Chiropractic Management of Children with ADHD. D.C. Tracts. Copyright © 2003 Data Trace Publishing Company, Vol. 15, No. 2. Printed in U.S.A. 1041-469X/S4.00/03*

Quinn!

# Quick Screening Questionnaire

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The following questions may help to determine if your child has some retained Primitive Reflexes. This “quiz” should not be used as an official diagnosis; however, if your child presents with a “cluster” of “yes” answers to the following, they should be screened by a trained health professional knowledgeable in the retained of Primitive Reflexes, their meaning, and recommended treatment. (Questionnaire from Sensory Processing Disorder™)



# *Part I: Pregnancy & Birth History*

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1. Did the mother have a viral infection in the first trimester of pregnancy?
2. Were there any medical problems during pregnancy such as threatened miscarriage, high blood pressure, or excessive morning sickness?
3. Was the mother under severe emotional stress between the 23rd and 28th week of pregnancy?
4. Were there any complications during pregnancy or delivery; prolonged labor, fetal distress?
5. At any time during the pregnancy/delivery was the child said to be in a breech position?
6. Was there use of forceps or suction delivery?
7. Was a caesarian section performed?
8. Was the child more than 2 weeks pre-mature or 2 weeks late?
9. Were excessive ultra sounds performed during pregnancy?



## *Part II: Family & Health History*

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1. Is there any history of learning difficulties in the family or either parents' families?
2. Has the child been diagnosed with a learning disability?
3. Has the child been diagnosed with ADD/ADHD or Autism Spectrum Disorder?
4. Did/does the child suffer from chronic ear infections?
5. Did/does the child have a history of allergies, asthma, or frequent illnesses?
6. Does the child have chronic digestive disorders?
7. Is/was the child a bed wetter past the age of 5 years?
8. Does the child suffer from motion sickness?
9. Did the child suffer from a head injury?



## *Part III: Learning & Developmental History*

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1. Was there lack of, or little, creeping or crawling on all fours with this child?
2. Were there any troubles with feeding or latching on in the first 3 months?
3. Did/does this child have difficulty distinguishing right from left?
4. Is, or did, the child have difficulty deciding which hand they would use as their dominant hand?
5. Does the child have difficulties sitting still and/or paying attention?
6. Does the child have difficulty tying shoelaces or doing up buttons?
7. Does the child have reading difficulties?
8. Does the child occasionally reverse letters when writing?
9. Does the child have difficulty writing or is their writing very messy?
10. Does this child have difficulty catching a ball or have poor hand-eye coordination?
11. Does this child seem awkward in P.E., dance, gymnastics, etc?
12. Does/did the child have difficulty learning to ride a bicycle, swim, or swing?
13. Does the child have any speech/articulation difficulties?



Quizz!

# *Cranial Therapy Questionnaire*

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Cranial therapy is the most amazing for opening your full potential. Misaligned skull bones change how you see your world and react to it. This was designed by Amahra Jaxen, from Vancouver, Canada ([shared with permission](#)) and serves as a wonderful guide for you to recognize the bones that may need your immediate attention by a holistic practitioner including a chiropractic Craniopath's care:

Only check the statements that are true

## *1. SACRUM (spinal base)*

- Is it difficult for you to accumulate money or materials things?
- Are you easily thrown off balance?
- Is it hard to stand your ground in an argument/confrontation?
- Do you feel unsafe, unstable or unsupported?
- Is it hard to stay in one place for very long?
- Are you sensitive to criticism?
- Do feel tense when confronted by an authority figure?

## *2. OCCIPITAL (skull base)*

- Is it hard for you to accept responsibility or be a leader?
- Is problem solving or brainstorming difficult?
- Do you over react fairly easily?
- Do you have a problem with authority?
- Is it hard to feel joy or to “go with the flow” in life?
- Do you easily feel betrayed or “stabbed in the back”?
- Is it hard to be in present time?
- Are you often disturbed by images from your past?



### 3. SPHENOID (*eyes*)

- \_\_\_ Do you have hormonal imbalances?
- \_\_\_ Do you often have headaches or feel that you are “not yourself”?
- \_\_\_ Do you suffer from SAD (seasonal affective disorder)?
- \_\_\_ Is it hard to see your potential?
- \_\_\_ Do you feel dis-connected?
- \_\_\_ Do you get headaches behind your forehead?
- \_\_\_ Do you feel low back pain?
- \_\_\_ Do you suffer from migraines?
- \_\_\_ Do you feel the desire to look to a higher power for support?
- \_\_\_ Did your parents fight, shout or argue around you as a child?

### 4. TEMPORAL (*ears*)

- \_\_\_ Do you have poor balance or vertigo?
- \_\_\_ Do you often feel hungry, even shortly after eating?
- \_\_\_ Is change and new experience difficult for you?
- \_\_\_ Are you often inflexible?
- \_\_\_ Do you easily over-react to situations?
- \_\_\_ Do you have short-term memory lapse?
- \_\_\_ Do you often feel tired and regretful?



## 5. *FRONTAL (forehead)*

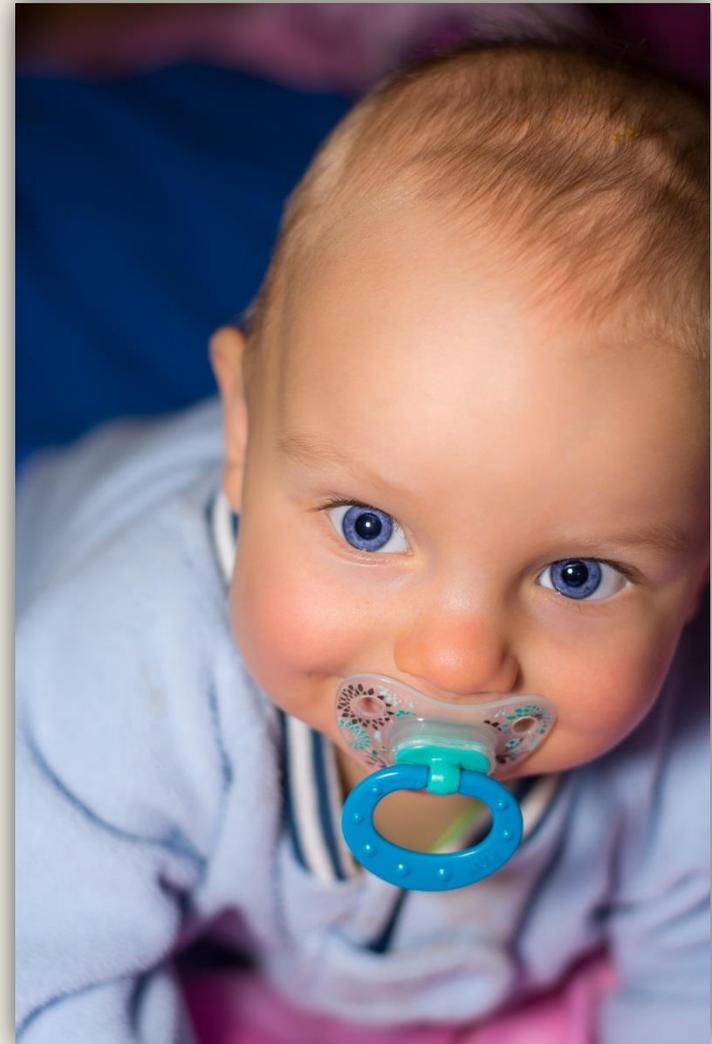
- \_\_\_ Are you quick to blame or judge?
- \_\_\_ Do you feel a sense of longing or discontent?
- \_\_\_ Do you feel disconnected from other people?
- \_\_\_ Do you ever get so angry that you want to blow your stack?
- \_\_\_ Do you find it difficult to hear or receive divine inspiration?

## 6. *PARIETALS (top of skull)*

- \_\_\_ Are you easily overwhelmed?
- \_\_\_ Is it hard to find direction in your life?
- \_\_\_ Are you stubborn, obsessive?
- \_\_\_ Do you often feel that you are butting your head up against a wall?
- \_\_\_ Are you constantly stuck in your head?
- \_\_\_ Is it hard to make long term plans and handle the details
- \_\_\_ Do you get headaches when you are confused?

## 7. *ETHMOID (nose between the eyes)*

- \_\_\_ Does it always seem that your life has obstacles in the way?
- \_\_\_ Do you ever feel lost in a fog?
- \_\_\_ Do you suffer from sinus problems or constant stuffy nose?
- \_\_\_ Do you feel in despair or disturbed for no apparent reason?



## 8. *VOMER* (between palate and bridge of nose)

- \_\_\_ Is it hard to put what you are thinking into spoken words?
- \_\_\_ Are you always off in the future? Worrying what if?
- \_\_\_ Is your mind unclear or indecisive?
- \_\_\_ Do you suffer/agonize from regular sinusitis?

## 9. *ZYGOMAE* (cheekbones)

- \_\_\_ Is it hard to feel proud of yourself?
- \_\_\_ Is it hard to find your place of inner strength?
- \_\_\_ Are you somewhat defensive?
- \_\_\_ Do you have sinus problems?
- \_\_\_ Do you often feel unsafe?

## 10. *MAXILLA* (upper jaw)

- \_\_\_ Is it hard for you to display affection?
- \_\_\_ Is it hard for you to communicate?
- \_\_\_ Do you give up too easily?
- \_\_\_ Are you unable to sing or write poetry?
- \_\_\_ Is it hard for you to do nice things for yourself?
- \_\_\_ Are you afraid to tell the truth?
- \_\_\_ Do you easily feel resentful?
- \_\_\_ Do you feel awkward or ungraceful?



## 11. *PALATINES (soft palate support)*

- \_\_\_ Are there often times when you feel you've "had it up to here"
- \_\_\_ Do you find some circumstances hard to swallow?
- \_\_\_ Do you find it hard to cry?

## 12. *MANDIBLE (lower jaw)*

- \_\_\_ Do you have a fear of speaking up?
- \_\_\_ Do you hold in unexpressed aggression?
- \_\_\_ Is your determination level low?
- \_\_\_ Is it hard to see who you are, what your identity is?
- \_\_\_ Is self-expression difficult for you?
- \_\_\_ Is it hard to express or get in touch with your sexuality?

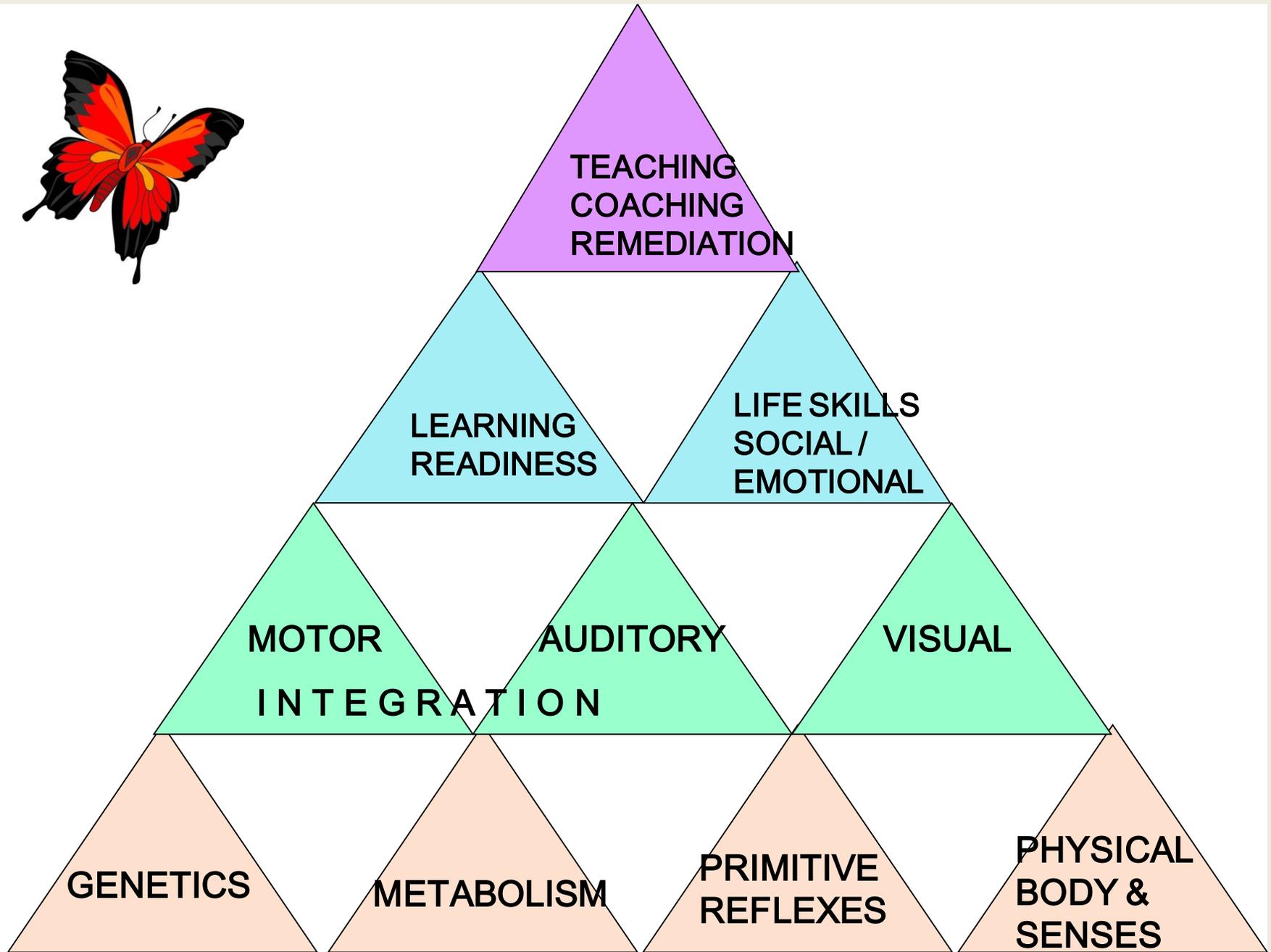
**Tally up your score and become empowered by helping your chiropractic Craniopath understand your most critical needs.**

- \_\_\_ Sacrum (base of spine)
- \_\_\_ Occiput (base of skull)
- \_\_\_ Sphenoid (behind the eyes)
- \_\_\_ Temporal (ears)
- \_\_\_ Frontal (forehead)
- \_\_\_ Parietals (top of skull)
- \_\_\_ Ethmoid (upper nose bridge)
- \_\_\_ Vomer (under nose)
- \_\_\_ Cheekbones
- \_\_\_ Maxilla (upper jaw)
- \_\_\_ Mandible (lower jaw)
- \_\_\_ Palatines



# DEVELOPMENTAL PYRAMID

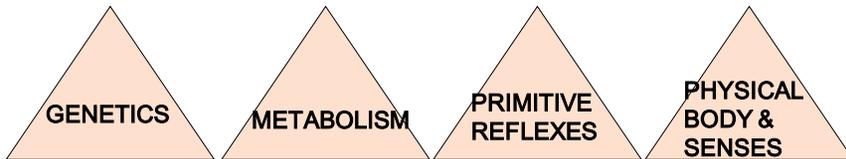
By the late mentor, Dr. Blumenthal DC



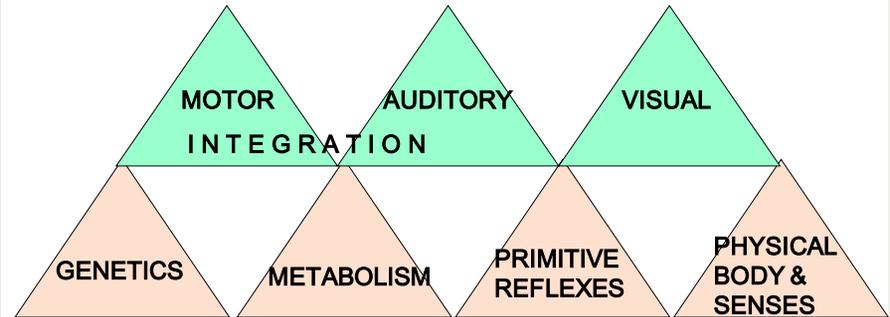


***The Foundation:***

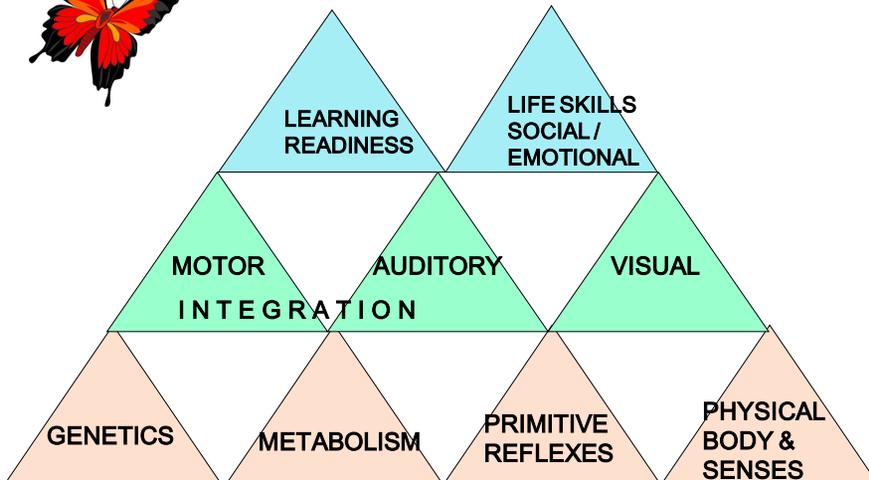
***Metabolic / Neurological***



***Then Functional***



**By the end of (+/-) 5th year of life  
*Pre-Academic***



***...Then we're ready for...  
ACADEMICS!***

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# About the Author

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Author, Speaker, Researcher, Instructor, Lifestyle Prescription™ Health Coach Faculty and Practitioner and Whole-Listic, Functional & Quantum Integrating Chiropractic Specialist

*"Tell your heart that the fear of suffering is worse than the suffering itself . . . And that no heart has ever suffered when it goes in search of its dreams, because every second of the search is a second's encounter with God and with eternity." – The Alchemist*

[STÉPHANE PROVENCHER D.C., PSc.D., F.I.M., B.C.H.H.P., B.C.A.M.P., D.I.C.S., C.K.T.P.](#)

Founder of [Gainesville Holistic Health Center](#)

Co-Founder, the [Whole-Listic Children's Foundation and Hospital](#)

Former Chairman of Research, the [Sacro Occipital Research Society International](#)

Featured among [Dr. Wayne Dyer, Dr. John Demartini, Louise Hay, Jack Canfield, Bob Proctor, Joe Vitale, Dr. Deepak Chopra, Maya Angelou, and more](#)

For many years, Stéphane Provencher's earliest memories resounded with cries of pain and discomfort. Massively obese and bullied throughout childhood, he knew only one thing for certain: He was not normal. "By the time my parents divorced, it was clear that any personal roadmap I might have developed had been shattered, my apparent destiny no more than a vague memory wrapped in the solitude of despair. It was not until years later, after leaving school and traveling through Europe, that I read *The Alchemist* and discovered that my limiting beliefs were no more than illusion and began to ask *Who am I? Why am I here?*

Now able to see his past cast in the colors of a rainbow rather than the prior swathe of black, Stéphane recalled how his gift for intuiting where people held pain had enabled him to look deep inside their souls, feel their feelings, and help them heal their wounds. This awareness guided him in his dedicated studies and career in chiropractic, through which he began to truly understand the intertwined relationship among the body, mind, and spirit. For Stéphane, learning that emotions—not physical ailments—actually cause 90% of all pain, all dis-ease, was not as much revelatory as confirmatory.

It was the staggering realization that emitting or sending frequencies of love can restore proper balance, however, that forever changed Stéphane's life and the lives of those he serves. "I am 100% clear that I am only a vehicle. My commitment and passion is to guide as many as possible to wellness through self-love and knowledge, and I invite all of you to join me on this extraordinary journey of the soul."

From a young age, Dr. Stéphane's dream was to unite a multi-faceted model of health care in one place. With the building of the Whole-Listic Children's Hospital underway, this dream is now coming to fruition.

[www.ghhcenter.com](http://www.ghhcenter.com); [www.billionaireparenting.com](http://www.billionaireparenting.com); [www.all4ourkids.org](http://www.all4ourkids.org); [www.drstephane.com](http://www.drstephane.com)

