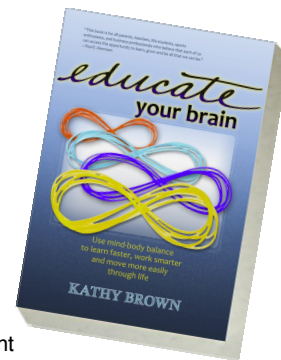


Classic Articles on Brain Gym®
And Retained Reflexes
By Kathy Brown, M.Ed., author of the 2012 Book
Educate Your Brain
www.EducateYourBrain.com



This article was written in 1999 as Kathy was beginning her exploration of the impact of retained reflexes on children and adults, and how Brain Gym processes could help relieve them. More current information is presented in her book, *Educate Your Brain: use mind-body balance to learn faster, work smarter and move more easily through life*.

June 2013 -- Kathy has added a brand new article on **Fear Paralysis Reflex and Baseball Performance** to her blog. See it at www.wholebrainliving.com and click on the article name under Past Articles on the right.

Retained Reflexes in Children and Adults

and its Effects on Learning, Behavior and Performance

by Kathy Brown, M.Ed.

Claire Hocking is an extremely gifted educator and Brain Gym® practitioner in Australia who has illuminated a vital link in the use of Brain Gym to support resolution of childhood reflexes that stand in the way of personal and academic performance. The following is a glimpse of the course she taught recently following the July, 1999 International Brain Gym Gathering.

What Are Childhood Reflexes?

Many people who have cared for an infant are familiar with childhood reflexes: Put your finger in the infant's hand and her fingers and thumb grip tightly around it toward each other (Palmar Reflex). The infant's head turns to one side and both arms turn to that side (Asymmetric Tonic Neck Reflex). Stroke the infant's low back on one side and her side muscles instantly contract (Spinal Galant Reflex). Surprised by a sound, the infant instantly spreads his hands wide, head back, eyes wide open, breathing in (Moro Reflex). Doctors often gauge the development of the child by the orderly progression of these reflexes.

Under optimal circumstances all reflexes "initiate" during the appropriate stage of the child's development, "integrate" themselves as a firmly functioning reflex, and then "inhibit" or fall away when it's time to move on to the next developmental stage. It is vital that this occurs.

If various reflexes fail to initiate, integrate and inhibit, the system is locked into a developmental holding pattern that prevents natural maturation of neural systems, inevitably leading to mild to severe learning and performance challenges.

"Stuck" Reflexes Lead to Learning Challenges

For children, these challenges show up clearly in the classroom, where it is hard for them to keep up with grade level expectations for academics and behavior. Children most able to cope develop techniques for compensation, and succeed or just get by with great effort. Those least able to cope often end up in special-ed classrooms or alternative schools. They are at high risk for behavior and attitude problems, most often out of years of sheer frustration.

Children and teens with reflex challenges grow into adults with reflex challenges. They may end up with limited career choices, or may simply have to work extremely hard for each success. In any case, the common denominator is the need for struggle and effort against the invisible pull of these reflexes.

What Disrupts the Reflex Continuum?

Many things can disrupt the normal progression of infant reflex development. At-risk pregnancy, Caesarean section, fetal distress, birth trauma, infant illness, and extreme stress or illness in the mother are but a few of the suspected causes.

Examples of the Effects of Retained Reflexes:

Each retained reflex controls aspects of posture, movement, perception and

behavior, all of which affect our ability to function in the world. Here are a few examples:

- "Karen" has the first reflex of all, the **Fear Paralysis Reflex**, still strongly "on." Her body is constantly under "red alert:" hypersensitive to touch and sound, constantly complaining that people hit her, when the truth is they only brush by her as they pass in the crowded hallway or make other casual contact. She is very uncomfortable in tight clothing or in sleeping bags. People with FPR still "on" may suffer from "selective mutism," being extremely non-verbal away from home, for example; their mind/body system is so overwhelmed by stress that the vocal cords actually become temporarily paralyzed.

- "Charlie" still has the **Spinal Galant** reflex strongly "on." A light stroke on one side of his lower back causes him to instantly and involuntarily contract to that side. He instinctively takes odd seated postures so that area of his back doesn't rest against the chair back. If told to "sit up and sit back in your chair!" his back makes contact with the chair and he can't help but wriggle, diminishing his chances of actually paying attention. People with Spinal Galant strongly "on" may be bed-wetters. Stimulating both sides at the same time can cause someone with strong Spinal Galant to wet himself; the Spinal Galant reflex seems to be triggered through contact with bedding during sleep. Tickling may have the same effect. Adults with irritable bowel syndrome have a very high incidence of Spinal Galant still "on."

- "Frances" has elements of the **Rooting and Suck Reflexes** still "on." She has a



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hard time articulating words, and chews and bites objects (like her pencil) while concentrating. She has labored, noisy chewing and is over-sensitive to touch on her cheek or mouth. People with R&S still “on” may be fearful regarding separation from known security. When instructions are being given both verbally and visually, this person will need to shut down one mode or the other to understand the instructions, giving rise to others saying, “Look at me when I talk to you!” which often results in no information being received at all.

- “Mara” still has the **Symmetrical Tonic Neck Reflex** (STNR) strongly “on.” She has a strong tendency to slump when sitting, particularly at a desk or table, and frequently twists her legs around the legs of her chair. Cross-legged sitting is uncomfortable; she prefers “W” sitting, with both legs folded back to the outside of her body. She has great difficulty with any activity that involves rapid adjustment of near to far vision, such as copying onto paper from the board in the front of the room.

- “Sheldon” still has the **Tonic Labyrinthine Reflex** (TLR) strongly “on.” When his knees bend his head must come forward, and vice versa. This results in a multitude of odd physical postures and propping up of his head when seated, and cries from the teacher or parent to “Sit UP!!” Of course, when he does, the effort required to overcome this reflex saps his energy, leaving little for listening and learning. People with STNR may dog-paddle happily in the pool with their head up but when asked to put their head down to actually swim, the knees automatically come toward the chest and they founder.

- Claire Hocking, the course creator and instructor, described her own ATNR (**Asymmetrical Tonic Neck Reflex**) situation. She always had to look straight down the road when driving – not even a slight glance left or right – or she’d turn the car in the direction she was looking, because the ATNR response kept her eye and hand movements closely tied. Following a balance to resolve this reflex, she was fine. Retained ATNR can cause considerable problems with academics; it affects the ability of the eyes or hand to move back and forth across the vertical center line of the body, vital for writing, and eyes moving across a line of print.

Compensation Takes Great Effort

Throughout our lives we strive to compensate for any of these reflexes that may still be “on,” and these compensations take a tremendous amount of energy. Under stress we simply run out of energy for this compensation and we are less able to cope.

As one enters the elder years of life, the energy to continue these automatic compensations becomes less and less available and the reflexes themselves begin to reappear, in reverse order; in this way, abilities fade and frustration emerges because of the tremendous effort required to do familiar tasks.

The good news is that there are simple ways of determining where any child or

Throughout our lives we strive to compensate for any of these reflexes that may still be “on”

adult is in relation to any or all of these reflexes, and, through the Brain Gym Balance process, allowing them to completely resolve, one at a time. Results are often immediate and quite dramatic.

Resolution Through The Brain Gym Balance Process

Following a “balance” to become more comfortable while writing, which included resolution of the Palmar (hand) Reflex, one of my recent clients (age 32) found himself immediately able for the first time to hold a pencil in the classic “pincer” grip and write without his hand aching after just a few words.


One of our post-Gathering course members volunteered to “balance” for resolution of the Spinal Galant Reflex. She recognized herself immediately in Claire’s description of the typical Spinal Galant response, because she had never been able to stand having her lower back massaged: she would always jump

uncontrollably. A precheck showed extreme discomfort and classic side contraction when the Spinal Galant spots were stimulated. Following the balance (perhaps fifteen minutes of specific movements) she was completely comfortable with this same stimulation. She is an avid golfer, and a quick swing of a handy golf club showed that her chronic sense of “not connecting with her backswing” had disappeared.

It’s interesting to note that this particular course participant is an extremely experienced Edu-K instructor who had been doing Brain Gym for many years. Yet this reflex had not resolved because it had never been directly addressed through a balance.

Throughout the course Claire regaled us with self-disclosures of all the counterproductive things she’d said to children during her years as a classroom teacher, before her new awarenesses of childhood reflexes: *Sit up straight! Sit back in your chair! Look at me when I talk to you!* She’d shake her head ruefully and say, “If I’d only known...”

Certainly, I could see the ghosts of my many years as a classroom teacher, and all the things I would have done differently if I’d known Brain Gym and this reflex material at the time.

With knowledge comes under-standing, and with that, new action. My goal is to use this new material widely and inspire others to take Claire’s course as well. The only prerequisite for this course is the basic Brain Gym 101. With enough demand we’ll entice Claire to “come over” (as the Aussies say) and teach  again soon.

Recommended Reading:

To learn more about how reflex continuum delays may manifest in older children and adults I highly recommend ***A Teacher’s Window Into The Child’s Mind*** by Sally Goddard.

Please note: The book by Sally Goddard referred to in this article has been revised and has a new title: ***Learning, Reflexes and Behavior: A Window Into the Child’s Mind***.

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Sample pages from *Educate Your Brain*

Two pages from the section discussing Infant Reflexes in *Educate Your Brain*, the new book by Kathy Brown.

For more information and to order your copy, go to
www.EducateYourBrain.com

Palmar Reflex: A touch to the inside of the infant's hand causes her to grip very hard, curling fingers around that object: perhaps your finger, hair, or necklace. A neurological loop between the mouth and the palms of the hands (sometimes active when nursing) may cause the mouth or tongue to move when manipulating objects, drawing, etc. Palmar Reflex emerges at 11 weeks in utero (present at birth); should integrate by age 2–3 months.

Birgitta has poor manual dexterity and holds her pencil in a tense, fist-like grip. She has speech articulation issues and moves her mouth or tongue while writing.

Asymmetrical Tonic Neck Reflex (ATNR): When the infant turns his head, his arms and legs automatically assume specific positions. Head to the right—right arm and leg extend and left arm and leg draw in toward the body. Head to the left—the opposite limb movements occur. This reflex builds the ability to move one side of the body while the other side is still. ATNR emerges at 18 weeks in utero (present at birth); should integrate by age 6 months.

Rafael struggles to concentrate and has challenges with reading and writing. Unable to fully combine input from both eyes, he avoids working in the midfield, so he often positions his book or paper off to one side. He has a history of coordination challenges, from tying shoes to balancing and ball-catching. He's learned to stare straight ahead when riding his bike because if he turns his head, his hands jiggle the handlebars and he risks steering into a parked car—or oncoming traffic.



Infant in ATNR position.

Tonic Labyrinthine Reflex (TLR): a reaction to changes picked up by the vestibular system, the body-balance mechanism within the inner ear. Forward movement of the head (relative to the spine) immediately causes her arms and legs to bend; backward movement of the head causes her arms and legs to extend. When fully integrated, this response becomes the muscle tone that allows us to automatically hold our body upright in opposition to gravity. TLR emerges in utero (present at birth); should integrate at about age 4 months.

Akemi has low muscle tone, or hypotonus. (Other children may have high muscle tone, or hypertonus.) She assumes a multitude of peculiar sitting postures including slouching and propping up her head on her hand. She struggles with sequencing, organizational skills, short-term memory, and sense of time. She experiences difficulty focusing near to far (copying from the board in the classroom) or accurately perceiving figure-ground (seeing the words in a sentence rather than being distracted by the white space around them).

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Seated postures that relieve the STNR impulse



The book *Stopping Hyperactivity: A New Solution* by O'Dell and Cook describes retained STNR as a significant root cause of ADHD diagnosis in children.

find reasons to stand, sit on the floor, or even lie down, all in an unconscious attempt to straighten his legs.

Yet, even standing can be a challenge, especially in the "soldier" position, which leaves his legs *and* his arms straight—triggering the unconscious need to bend one or the other. This is the source of much agitation as such a child tries to stand for

very long, even unintentionally "poking" or "tickling" others as he reflexively bends his arms. Such a child would do much better with his hands resting on opposite elbows or clasping his hands near his waist.

Of course, these behaviors are not the child's fault: they're the direct result of delayed integration of this basic reflex. The effort required to maintain a "proper" seated or standing position may drain him of energy needed for focus, resulting in all sorts of behaviors that may be categorized as hyperactivity. In this case, a child may end up being medicated to control impulses that are part of a retained reflex.

Edu-K courses addressing infant reflexes are available as part of the Edu-K curriculum. Please see Appendix A and the course listings at www.braingym.org.

Calling on Edu-K balancing to resolve reflex issues

One of the things I appreciate most about the Brain Gym/Edu-K program is that it offers a means of resolving core issues behind learning challenges. Through various upper-level courses, those trained in Edu-K can learn to address retained reflexes through the five-step balance process.

Here's an example of how this process was of use in supporting a student who simply couldn't sit still and focus:

I recently worked with Ronny, a very bright, likable boy, whose teacher was amazed (and frustrated) by how agitated he was when sitting and how poor his focus was. Now in eighth grade, Ronny was still struggling to achieve academically. I had seen him several times over the past few months, and after each session, he showed progress but still lacked the ability to sit quietly, and he was not reading at grade level.

Smarter standing up

Throughout the course of our sessions, perhaps as a direct result of the way Brain Gym processes foster inner noticing, Ronny became a very good observer of his own state. One day he commented, "You know, I

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