



DEVELOPMENTAL DELAY RESOURCES

The ONE Resource Network Integrating Conventional & Holistic Approaches



The Upledger Institute and Clinic: Powerful Skills from Our Hands to Yours

This Newsletter is made possible by a grant from The Upledger Institute and Clinic, Palm Beach Gardens, FL

Do you have a child or other relative who is not speaking, had a traumatic birth or injury, or has significant sensory problems? Are you a therapist who wants to add new tools to your tool chest? **The Upledger Institute and Clinic** can help!

The Upledger Institute, which includes **The Upledger Clinic**, is a world-renowned health resource for children, adults, and therapists, founded in 1985 by Dr. John E. Upledger. *Time Magazine* featured Dr. Upledger, an osteopathic physician, as one of America's next wave of innovators. He is celebrated for leading a team of anatomists, physiologists, biophysicists, and bioengineers whose clinical research formed the basis for the development of CST.

The Upledger Institute provides hundreds of workshops of continuing education each year. It educates healthcare professionals of diverse disciplines in CranioSacral Therapy (CST), Lymphatic Drainage, Healing From the Core, and other techniques. **Upledger** has trained more than 90,000 therapists at sites worldwide.

The Upledger Clinic has treated thousands of patients. All clinicians have advanced skills. For instance, staff clinician Rebecca Flowers, OTR/L CST-D, author of the article on page 5, holds three certifications. She's just one example of the high caliber of therapists available at **The Upledger Clinic**.

CranioSacral Therapy is a very gentle, light-touch approach that releases tensions deep in the body, relieves pain and dysfunction, and improves whole-body health and performance. The positive effects of CranioSacral Therapy rely to a large extent on the body's inherent self-healing abilities. CST normalizes the craniosacral system – the environment around the brain and spinal cord. Because this system directly affects central nervous system function, CST indirectly addresses a wide range of sensory, motor, and neurological concerns.

CranioSacral Therapy sessions at **The Upledger Clinic** are available in several formats: hour-long one-on-one sessions, and five or 10-day Intensive Programs. Individual sessions take place in a quiet, private setting, where the client lies fully clothed on a padded treatment table. During outpatient Intensives, patients receive five to six hours of CST treatment per day, with two to three clinicians working simultaneously. Each summer the clinic also offers Dolphin-Assisted Therapy Intensive Programs held in the warm waters off of Freeport on Grand Bahama Island.

CST can be especially powerful for children with developmental issues including autism, ADD/ADHD, Sensory Processing Disorder (SPD) and other challenges, and can also include Sensory Integration Therapy as an integral part of the treatment. (See article, page 5.) To a child, the new treatment room at **The Upledger Clinic** in Florida looks like a playground full of colorful toys. To parents and therapists, it looks like the perfect place to blend Sensory Integration with CranioSacral Therapy to help kids make real progress overcoming processing dysfunctions and developmental challenges.

CranioSacral Therapy isn't just for children, however. Many adults, including caregivers, benefit from CST for issues such as chronic pain, migraines and headaches, neck and back pain, accident recovery and more. Caregivers and family members of patients attending Intensive Programs at **The Upledger Clinic** qualify for special discounts on sessions while at the Clinic.

Therapists and parents interested in learning CranioSacral Therapy themselves can attend classes taught through **The Upledger Institute**. Workshops are available at **The Upledger Clinic** itself, or in dozens of convenient locations across the U.S., Canada and the rest of the world. For more about the services offered at **The Upledger Clinic**, please call 561.622.4706 or visit www.upledgerclinic.com. To learn more about continuing-education programs through **The Upledger Institute**, please call 800.233.5880 or visit www.upledger.com.

IN THIS ISSUE

Sponsor	Page 1
The Upledger Institute and Clinic	
Executive Director's Column:	Page 2
Total Load Theory	
News and Comments	Page 3
Education	Page 4
Are Schools Contributing to Learning Problems?	
Sensory	Page 5
CranioSacral Therapy and SI	
Reflexes	Page 6
The Tendon Guard Reflex	
Nutrition	Page 7
Getting Good Supplements into Bad Eaters	
Upcoming Events	Page 8



Total Load Theory: How the Cumulative Effect of Many Factors Causes Developmental Delays

When the bridge collapsed last week in Minnesota, who or what was to blame? Improperly placed machinery? The engineer who conceived the design? The weight of the cars traveling over the bridge every day? The weather? Total load theory postulates that it is the cumulative effect of all these factors that brought down the bridge.

Every human body, like a bridge, has an individual load limit. One can handle only a certain number of stressors before collapsing. The accumulation of chemicals, heavy metals, sensory assaults or deprivation, and immune system stressors can produce a dangerous overload that puts children at risk for developmental problems. At last, according to August 14th's *Boston Globe*, researchers at the University of California - Davis, are investigating the impact of some of these environmental issues.

Total Load Starts Pre-Natally

Environmental factors begin to add up prenatally. For about 25 years, more or less, a woman builds up her personal body burden. According to a Swedish study, she dumps about 75% of her toxic load into her baby. That's why so many women experience first pregnancy miscarriages: nature's way of detoxing her body, and at the same time, assuring a healthy baby for the next pregnancy.

What happens if that first pregnancy is viable? That baby is born, not with a zero toxic load, but with toxic levels already approaching its body's threshold. Many of these firstborn children, mostly boys, are born with toxic levels of mercury and other dangerous substances. With the addition of more after birth, their immune systems collapse: diagnosis, autism.

Genetics Loads the Gun

Parents with allergies and other immune system dysfunction, such as chronic fatigue and fibromyalgia, pass along hereditary risk factors to their unborn babies. The poor ability to detox is primary. Endocrine and nutritional factors also play a role. We now know the importance of a properly working thyroid, the master gland, for the unborn child. Sufficient levels of maternal essential fats (EFAs) are also vital for a healthy baby.

Environment Pulls the Trigger

Any complications during pregnancy, such as gestational diabetes, conditions requiring bed rest, or repeated sonograms, add further to a baby's load factors, interfering with sensory and motor development. The amniotic fluid amplifies the vibration of the sonogram, making its strength analogous to a jet engine in the baby's immature ears. Research shows that the higher the number of sonograms, the more likely babies are to have frequent ear infections. Lessened maternal physical activity, due to prescribed bed rest, affects the vestibular system and the baby's ability to move against gravity. Add a cord wrapped around the neck, lengthy labor, forceps or vacuum aspiration at delivery, a C-Section, and/or a hepatitis B shot in the first 24 hours of life, and that baby is already very high risk for delays.

Load Factors Add Up During the First Year of Life

The closer the baby's burden approximates its threshold at birth, the fewer factors are necessary in the first year of life to put that baby over the line. Welcome a newborn home to a freshly carpeted and painted nursery, with off-gassing materials, start that baby on a cow's milk based formula, rather than mother's milk, add vaccines, with or without mercury, put that baby on its back for sleeping, restricting motor development, and use antibiotics freely for any infections. Developmental delays, including autism, are now almost inevitable.

The Body's Top Priority is Staying Well

How and why do the very common practices above interfere with development? Because the body prioritizes health over development, and automatically puts the bulk of its energy into staying well. Breathing, digesting, and surviving all supersede interacting with the outside world. Sensory, motor, language, and social-emotional development must take a back seat to biological functioning.

If a threshold exists, below which individuals are "well," and above which they are "sick," many of us sit precariously slightly below the tipping point of health. All it takes is one more load factor, such as a high pollen day, a powerful antibiotic for a sinus infection, or a booster vaccine to put us over the top into "sick."

The Degree of Overload Determines a Diagnosis

The timing and number of total load factors is directly proportionate to the severity of a diagnosis. With early and multiple factors, a child is more likely to become autistic. Fewer and later factors might result in learning, behavioral, and sensory motor delays, with diagnoses such as pervasive developmental disorders, learning disabilities, and attention deficits.

Specific Load Factors Determine Treatment

Taking a history, which includes environmental factors, is essential to choosing the right treatment. Just as headaches can be caused by both nagging mothers-in-law as well as brain tumors, speech-language delays and late reading can have multiple causes. Without knowing a child's unique history, considerable money, time, and effort can be wasted on inappropriate therapies.

Prevention is the Key

All prospective parents should educate themselves about the risk factors for autism and developmental delays. Start *before* conception by putting the mother on a detoxification program. Check her thyroid, including TSH levels, switch to non-toxic cleaning, personal care, and pest control products. Decorate the nursery only with non-toxic products. Finally, read Dr. Dietrich Klinghardt's letter to potential and new parents, available on his website at www.klinghardt.org.

Make reducing the total load of everyone in your family top priority now!

Time to Renew

The DDR Membership year coincides with the school year. It is NOW time to renew to avoid missing any newsletters and to assure that you are listed in the 2008 Networking Directory. Just go to www.devdelay.org or send back the form in the middle of this copy of *New Developments*.

National Children's Vision and Learning Month

August kicks off a year celebrating education concerning the relationship between children's vision and learning. Go to the newly revised website of the College of Optometrists in Vision Development www.COVD.org and download their public information kit. Is your school doing proper vision screenings?

USAAA Conference a Gigantic Success

Thanks to Dr. Larry Kaplan, the second summer conference of the U.S. Autism and Asperger Association was a great success. Over 900 attendees attended over 30 sessions from experts in many related fields. DDR Executive Director, Patricia Lemer, a member of the USAAA Advisory Board spoke on "Prioritizing Therapies." Parents and professionals related that her talk was extremely helpful in sorting through the many options available for individuals of all ages.

Edelson on the Road

During the last few years of his life, Dr. Bernard Rimland was gratified to learn that many children had recovered from autism, largely due to the many interventions he tirelessly promoted. To honor his work, Dr. Steve Edelson, Director of the Autism Research Institute, drove through the Midwest this summer, met with families of recovered and near-recovered autistic children, and collected documentation to validate their recovery. He stopped in Illinois, Indiana, Kansas, Missouri, Texas, Oklahoma, and ended up in the Pacific Northwest. To read his trip blog, go to www.ARITravelLog.com.

Children's Excel Center Opens in New York

Looking for the best in a multi-disciplinary approach to support those with developmental issues? Located just over the Williamsburg Bridge in Brooklyn, the Children's Excel Center combines a biomedical and nutritional approach that enhances sensory therapies. Practitioners include a DAN! Physician, a homeopath, a chiropractic kinesiologist, and an acupuncturist. To make an appointment, call 718.218.6200. To learn more, go to the website at www.childrensexcelcenter.com.

New CD Supports Parents of Children with Autism

With the album *What Remains*, musician Jamie Manning has found his voice as a songwriter by giving a voice through song to parents raising children with autism. In 2002, Jamie's 18-month-old son was diagnosed with autism. *What Remains* is a heartfelt collection of well-crafted, listenable songs, taking the listener on a journey through a wide range of profound emotions. Go to www.autismsongs.com to contract Jamie for a benefit concert and to purchase this wonderful album.



DDR Book Sales Change Format

In the coming months, DDR will be bundling books at reduced prices for specific populations. If you are interested in purchasing single copies of books, please let us know soon. After October 1st, books will be sold in packages for the newly diagnosed, veterans interested in alternative therapies, reflexes, books about sensory processing, and a package on vision. Let us know if there are other categories that interest you.

Court Halts Sensory Integration International from Doing Business

According to the July 9th issue of *ADVANCE* for Occupational Therapy Practitioners, the Superior Court of California in Los Angeles has ordered Sensory Integration International (SII) from conducting any business in the United States, pending the outcome of an ongoing civil case filed against the company a year ago. California Deputy Attorney General Sonja K. Berndt filed the case after she became aware that consumers from several states had filed more than 50 complaints with the Better Business Bureau, for failure to issue refunds for courses that were not held.

If you are due a refund from SII, and have not been able to collect, send documentation to the primary investigative auditor assigned to the case at Martha.Gallardo@doj.ca.gov. Berndt would also like to hear from anyone who has registered for a workshop or certification course, made a donation, or paid for membership since the injunction was filed on June 22, 2007. The case is to go to trial in July, 2008.

The Rimland Center to Open Fall, 2007

Dr. Elizabeth Mumper is honoring her mentor, Dr. Bernie Rimland, by opening The Rimland Center in Lynchburg, VA this fall. The 1.8 acre complex will be a one-stop destination for biomedical information and services. It will include exam rooms, lab equipment, a state-of-the-art hyperbaric oxygen therapy center, and a demonstration kitchen where families and doctors can learn first-hand how to implement special diets that have the potential to change their children's lives.

While they wait, children will enjoy the adjacent playroom. The new building, just over 5,300 square feet, will also serve as a community center where organizations can meet outside of office hours, and a place for seasoned DAN! Clinicians to mentor others. The center will feature a bookstore and a supplement counter. For more information, call 434.528.9075. Bernie will be smiling down on all who enter.

New Developments is a quarterly newsletter published by **Developmental Delay Resources (DDR)**, a 501c3 not-for-profit organization whose mission is connecting families, professionals, and organizations and disseminating the most current information about possible causes, interventions, and preventions for developmental delays. Members of DDR support the inter-relationship of physical, cognitive, and social-emotional development in children whose delays include, but are not limited to, sensory-motor deficits, speech-language disorders, attention deficits, learning disabilities, pervasive developmental disorders, and autism. DDR seeks to educate the public about treatments that: address sensory-motor processing, including occupational therapy, vision therapy, auditory training, and perceptual-motor therapy; boost the immune system, including dietary modification, nutritional supplementation, homeopathy, and detoxification; address structural integrity, including osteopathy, CranioSacral therapy, and chiropractic; and encourage positive social-emotional relationships, such as communication therapies, FloorTime, and family therapy. **DDR is the only organization that integrates all these disciplines.**

Newsletter Editors: Patricia S. Lemer DDR Executive Director: Patricia S. Lemer Graphic Designer: LLouise Altes

All material in **New Developments** is for information purposes only and is not to be substituted for professional advice from your health care provider.

DDR 5801 Beacon Street, Pittsburgh, PA 15217 • Phones: 412.422.3373 800.497.0944 • Fax: 412.422.1374 • e-mail: devdelay@mindspring.com • Website: www.devdelay.org



Is Our Educational System Contributing to Attention & Learning Problems?

by Susan R. Johnson, MD, FAAP

In over 20 years as a Developmental and Behavioral Pediatrician I have seen countless children diagnosed with attention deficit disorders and learning disabilities. Many improve miraculously when transferred from academic kindergartens to classrooms emphasizing movement and the integration of their sensory systems. Why? Because their bodies and minds are not yet neurologically ready for academics. Pushing reading and writing early makes no sense for many young children who have not yet mastered the developmental progression that is a pre-requisite for academic learning.

Sensory and Motor Pre-requisites for Learning

Tactile, proprioceptive, vestibular, visual, and auditory systems come together to allow children to balance, concentrate, tell right from left, locate their bodies in space, sit still, make eye contact, and visually track. Bodily movements, starting in utero, and continuing through infancy, childhood, and beyond, form neural pathways that students later use to read, write, spell, and do math. Children integrate and strengthen these neural pathways by physical activities, not through flash cards or electronic games.

They need large movements, such as walking, skipping, hopping, running, rolling, playing catch, and jumping rope, as well as fine motor activities using their hands and fingers: clapping, cutting, digging, kneading, pulling, painting, beading, drawing, sewing, and knitting. The out-of-doors provides many natural opportunities for gardening, collecting specimens, and playing. In contrast, watching television or videos and playing computer games are extremely poor sources of stimulation for sensory-motor development. While the former promote nerve myelination and brain development, the latter actually over-stimulate the “fight or flight” sympathetic nervous system. The stressed out minds and bodies of children with overactive sympathetic nervous systems cannot make neural pathways. They also over-react to the stimulant effects of sugar, chocolate, television, video, and computer games.

Brain Development and Academics

The right brain recognizes a word’s overall shape, not individual letters; it develops first, around ages four to seven. The left side of the brain, typically the home of language, does not fully develop for reading until around ages seven to nine, often later in boys. When children read and write before age seven, they are forced to use only their right brains to guess at unfamiliar words based on their first and last letters, rather than sound them out, a left hemisphere activity.

Children who read and spell with only their right hemisphere often reverse numbers and letters, spell and write poorly, and have difficulties using phonics to match sounds to letters. These children also have trouble creating pictures in their minds associated with the words they are reading. Since their right hemisphere is overwhelmed by the task of reading everything by sight, it is not free to imagine. Comprehension now suffers. Once both sides of the brain are fully developed, pathways connecting the right and left sides form, and bilateral integration skills emerge, allowing them to use both sides of the brain flexibly.

Symptoms Showing Lack of Academic Readiness

Developmentally, children with difficulties learning to read and write follow a pattern. Here are some symptoms to look for:

- mouth and tongue movements and/or tense and fistful pencil grip when writing;
- difficulty sitting still, focusing, listening;
- strong need to move;
- drawings of a person that are stick figures and lack details;
- poor visual tracking and converging;
- startling at or difficulty catching a moving ball.

A Formula for Academic Success

Parents and teachers must provide young children with strong foundations for brain development and bilateral integration in preparation for learning. The formula is simple: adequate sleep, predictable rhythms and routines, limited “screen time,” wholesome nutrition, including omega 3 fats, physical warmth, harmonious non-competitive rhythmic movements, and, most importantly, love. This combination assures that children stay in their relaxed autonomic nervous systems, which fosters brain development and growth.

Checklist for Academic Readiness

Children who are ready to read and write are able to:

- skip cross-laterally and jump rope;
- sit still in chairs and pay attention for at least 20 minutes without wiggling, sitting on or wrapping their feet around the chairs’ legs;
- balance on one foot, with arms stretched out in front, palms up, eyes closed, for 10 seconds;
- reproduce geometric shapes, numbers, or letters on a piece of paper from “feeling” the figure that someone has drawn on their backs.

What Parents and Teachers Can Do

Choose preschools, kindergartens, and elementary classrooms that promote daily movement and encourage creative play. Learning is not “all in your head.”

I believe that our current epidemic of attention and learning problems comes, at least in part, from our environment. When schools support healthy activities, and stop trying to teach our very young children to read and write, then we will start seeing confident eight and nine year olds who can listen, focus, sit still, write, read, pay attention, learn with ease, and think in imaginative and creative ways.

Susan R. Johnson, MD is a developmental and behavioral pediatrician in Colfax, CA. She is certified as a Waldorf teacher and studied Anthroposophical Medicine in Switzerland. Go to her website at www.YouAndYourChildsHealth.org.

CranioSacral Therapy for Children with Sensory Integration Dysfunction



by Rebecca Flowers, OTR/L, BCP, CST-D

“Hello” and “kay” are a few of John’s favorite new words. John is a bright-eyed four-year-old born with a rare neurological disorder. John’s primary symptom is hypotonia, characterized by difficulty moving against gravity.

John’s doctors predicted that he would never walk or talk, and would be on medication for seizures his entire life. Lately though, John has been receiving a combination of CranioSacral Therapy (CST) and Sensory Integration (SI) Therapy, with spectacular results. John is now moving around and vocalizing better, and he’s no longer on anti-seizure drugs.

What is the CranioSacral System?

The membranes and cerebrospinal fluid that surround and protect the brain and spinal cord comprise the body’s craniosacral system. This important system extends from the cranium (the skull, face, and mouth) down to the sacrum (the tailbone area). Any restrictions in the membranes of this system can directly affect central nervous system performance, causing a wide range of sensory, motor, and neurological problems.

What is CranioSacral Therapy?

CranioSacral Therapy is a non-invasive technique that facilitates the body’s own healing process by monitoring the health of the nervous system. Using a soft, light touch, typically no more than the weight of a nickel, the CranioSacral therapist palpates the craniosacral rhythm, to locate and correct restrictions in the body that impair nervous system functioning.

When a restriction releases during a CST treatment session, the patient may not even notice the affect. Sometimes changes manifest themselves hours or even days later. Often, they can be profound and dramatic, and involve tissue memory releases as well. A child may become noticeably calmer, or have increased function in some skill. Effects usually become more evident over time with multiple treatment sessions.

What is Sensory Integration?

Sensory Integration (SI) is something our bodies do automatically. Organs take input from the external environment through touch, sound, sight, smell, taste, movement, and proprioception (information received through our joints and large muscles). If the central nervous system processes what is going on in the body and environment accurately, a person reacts appropriately. However, in many children with delays, that is not the case.

What is Sensory Processing Disorder?

When the nervous system does not process sensory information accurately because of dysfunctions with sensory registration, integration, and modulation, Sensory Processing Disorders (SPD) occur. An affected child may be either over-reactive or under-reactive to touch, sound, movement, smell, tastes, and sight. The child may exhibit speech/language difficulties, challenges in coordination or learning, clumsiness, delays in motor skills, and poor muscle tone.

Visual motor skills, poor socialization skills, behavioral issues, problems sequencing, or difficulty with self-care and play skills are other outcomes. With SPD, symptoms can be intense and frequent. SPD has many causes, including C-sections, vacuum extraction at birth, prematurity, exposure to toxins and pathogens *in utero*, as well as hereditary factors. A large number of children with sensory processing problems have had traumatic births, with breech presentation, and decreased oxygen to the brain.

What is Sensory Integration Therapy?

Therapeutic strategies to treat SPD favor approaches rich in vestibular, proprioceptive, visual-motor, and tactile inputs. Therapists carefully select appropriate activities to stimulate motor planning and neurological development in compromised areas.

SI therapy uses equipment designed to develop the neurological skills necessary to perform everyday functions. For example, swinging in a special glider filled with colored plastic balls gives tactile and vestibular input. Standing on a platform swing enhances balance while promoting bilateral integration and motor planning. A vertical tire swing with two handles encourages hand-eye coordination along with bilateral integration of the brain. Therapists carefully choose, monitor, and direct these activities to provide the child with an appropriate level and type of stimulation.

CST and SI: A Great Team

Therapists see profound changes in the children receiving combined CST and SI therapy. CST can be powerful paired with SI therapy because CST works directly on the nervous system to improve neurological functioning, processing and integration of sensory information. SI therapy often allows a child to better tolerate the gentle, steady touch of CST and to facilitate and further the changes that result from treatment.

CST therapists often use listening therapy with special music transmitted through headphones during the CST treatment session to modulate alert states and regulate reactivity to sensory input. Another method is replacing a standard treatment table with a net swing, allowing the child to swing while the therapist uses her hands to give vestibular input. In some cases, the therapist may choose to alternate sensory integration exercises with short sessions of CST to allow the child to relax, process and accept the treatment.

To learn more about combined CST and SI treatment contact The Upledger Clinic (see cover article). Several books on how CST changes lives are available on their website. For information on sensory integration, go to the DDR website at www.devdelay.org for links to many great sites.

Rebecca Flowers, OTR/L, BCP, CST-D, is certified in CranioSacral and Occupational Therapy, and in the Sensory Integration and Praxis Test (SIPT). She is a certified instructor in CranioSacral Therapy and Pediatrics at The Upledger Institute, Inc.



The Tendon Guard Reflex

by Mary Rentschler, M. Ed.

How do we balance the needs to protect ourselves from danger and to take risks that facilitate learning? How can we comprehend our lives, the world, and our reading assignments, while keeping perspectives that encompass both details and context? The fascinating tendon guard reflex (TGR) is in charge!

Like all reflexes, the TGR has important ramifications for survival/protection *and* development, as well as both healthy and unhealthy (hypo- or hyperactive) manifestations. Today, though survival may not often depend on our physical ability to defend ourselves, we do experience high levels of stress that call forth the TGR.

Under chronic stress, and especially when we have no opportunity to dissipate tension by taking action, the reflex can remain active beneath our conscious awareness, keeping us either in constant motion or immobilized in an internal posture of withdrawal and search for safety.

The TGR is an automatic whole body reaction to a message from the brainstem. Under threat, this ancient survival-oriented part of the brain mobilizes for our protection. Depending on the nature of the threat, the body has three choices: freeze, fight, or run away (take flight).

When the TGR sets off a “freeze” response, the body collects its resources at its core; we bend forward, and stop. In the “fight or flight” response we straighten in preparation to move. Russian psychologist Svetlana Masgutova, Ph.D. refers to these two versions of the TGR as the “Red Light” and “Green Light.”

The “Red Light” TGR

The Red Light reflex sets off the “freeze” response by causing the abdominal, shoulder, and neck muscles to contract. The trigger can be a sudden, unexpected sound, sight or sensation. Hearing a suspicious noise upon opening the garage door is a perfect example of something that could trigger a normal Red Light tendon guard response. We stop in our tracks, hold perfectly still, quieting the body, while activating vision and hearing to locate possible danger.

In full maturation the Red Light reflex also supports one’s ability to narrow the field of attention, movement, and action, to concentrate on and analyze details. Such a state of intense focus, referred to in Brain Gym as “low gear,” is usually characterized by stillness or deliberate one-sided movements. In the garage example, we would move carefully, analyze the situation, and reach a logical conclusion about the source of the noise.

When the Red Light reflex is over-active, we have its negative version: an excessively narrow attention field and limited ability to act. Behavior becomes compulsive, over-focused on unimportant details. Children who perseverate or shut down often have hyperactive Red Light reflexes.

The “Green Light” TGR

An activation reaction, the Green Light TGR causes spinal muscle contraction, lifting and extending the spine, getting us ready to move. More developmental than protective in its initial purpose, it helps infants discover their spinal muscles.

When babies lift their heads at two or three months, they activate their spinal muscles for the first time. Lying on the stomach, they learn to arch their backs, and raise and stretch legs and arms. Later, when sitting up, the head-righting reflex emerges. Eventually the muscles that permit standing, walking, and posture control develop. The Green Light TGR, interacting with other reflexes, supports all this growth.

The mature Green Light Reflex also enables individuals to widen the field of vision, movement, and action, to see the “big picture,” to act and to foresee consequences. Easy contra-lateral movements usually characterize this state of more relaxed focus, referred to in Brain Gym as “high gear,” the basis for the ability to think and move simultaneously. If a threatening growl comes out of the dark garage, the Green Light reflex would trigger the flight response. On the other hand, a familiar voice will cause us to look up, relax, and move toward it.

In children with ADD and ADHD this reflex is hyperactive. The negative version, excessive widening of the attention span and chaotic, uncontrolled, impulsive movement is apparent.

Regulating the TGR

When integrated, both parts of the TGR bring the support of good postural dynamics into movement development, sensory integration, attention, organization, comprehension, and overall cognitive development. Individuals with poorly integrated TGRs are vulnerable to the extremes of the red and green lights: excessive withdrawal and self-protection or excessive engagement and inappropriate risk taking.

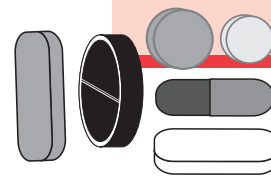
Structurally, the TGR activates a tendon/muscle/joint system comprised of the big toe, the foot tendon, the Achilles tendon, the hamstrings, the sacrum, the spine, various back and neck muscles, and the occiput. Many children with developmental challenges have chronic tension in these tendons and muscles, with accompanying motor/emotional/cognitive issues and, in severe cases, postural or structural abnormalities. Children with autism and/or speech delays are often toe walkers with extremely tight calf muscles.

Carla Hannaford, author of *Smart Moves* (see Booklist), recommends releasing the TGR to develop language in non-verbal children. Dr. Masgutova teaches parents to lengthen children’s foot tendons by massaging the soles and flexing and extending a child’s feet. Another simple intervention is pushing rhythmically on the balls of the feet while a child lies supine on the floor; this activity initiates a gentle relaxing movement that rocks the entire body from toe to head.

The TGR is one of many reflexes that respond well to intervention. Calming it can reset proprioceptors and reeducate muscle-tendon systems that habitually contract in unfamiliar learning situations. Energy then moves away from the survival-oriented brain stem into the frontal lobes, and the child experiences a feeling of participation readiness.

Mary Rentschler is a consultant in private practice in Washington, DC. She lectures on reflexes and Brain Gym, and is a Masgutova Method Specialist. You can contact her at wren@pipeline.com .

Getting Good Supplements into Bad Eaters



by Kelly Dorfman, L.D.N., Nutritionist and Cofounder DDR

Parents are justifiably alarmed when children eat poorly. Inadequate and improper nutrient intake can decrease intelligence and affect brain functioning, especially during the first few years of life. Unfortunately, these indisputable facts are not enough to convince many children to eat their whole grains and vegetables!

The best most parents can do is offer consistently good choices and eliminate the worst of the heavily processed, artificially colored and flavored foods. What often remains are foods like cereals and meal bars, because many parents fear that children will eat nothing if the menu is adjusted any further.

One mother does not even keep vegetables in the house because the child reacts so negatively to the sight of them. “He reminds me of me,” she confessed sheepishly. She is not alone; fewer than one in four Americans eat five servings of fruits and vegetables per day.

Why Use Supplements?

Children who are distractible, have behavioral issues and developmental delays need more nutrients than non-affected youngsters. Their higher nutritional needs may be due to:

- Poor absorption of nutrients due to gastro-intestinal issues;
- Self restricted diets due to sensory processing issues or poor oral motor skills;
- Restricted diets because of food reactions or allergies;
- Genetic anomalies affecting their ability to detoxify environmental toxins; and
- High exposure to environmental chemicals and pollutants.

One logical step is to close the nutritional gaps with the therapeutic use of nutritional supplements. Discuss your dietary supplement program with a doctor or other knowledgeable health professional. The right person can help you develop a good balance of nutrients for your child’s situation.

Mixed messages in the media, and from doctors themselves about which and how much supplement to take, can be extremely confusing to parents. They often receive one set of instructions on nutrients and dosages from their DAN! doctors, and dire warnings concerning toxicity of the same program from their pediatricians.

These conflicting messages reflect pervasive confusion and misinformation regarding supplements more than any real danger of toxicity. Nutrient supplements are regulated by the Food and Drug Administration (FDA) under the Dietary Supplement and Health Education Act (DSHEA). While nutrients are generally well tolerated, and have a long history of safe and efficacious use, side effects and individual differences occur.

If you are uncomfortable with any supplement program, get a second opinion from a knowledgeable professional. When a supplement program is too aggressive, a total program can be out of balance. A good rule of thumb to follow is: “When in doubt, take it out,” and then get further input.

Basic Supplements

A good place to start is with a multiple vitamin containing at least two to three times the recommended daily allowance (RDA) of B vitamins, with added trace minerals. Consider a calcium magnesium combination, also, especially if a child is on a dairy-free diet. Avoid brands that contain artificial colors and aspartame.

Getting Supplements In: Pills or Liquids?

Once a practitioner develops a supplement program for a child, the biggest challenge for most parents is getting it in. Most children under the age of nine cannot swallow pills. Furthermore, pulled apart capsules can contain foul tasting, gritty powder. If your supplement program involves pulling apart capsules, ask your health care provider for better tasting alternatives.

Some children will take liquid supplements better if they are squirted in with a dropper or given in a small medicine cup that they can chase with straight juice. Better a small amount of weird flavored juice than an entire nasty cup. For children on sugar restricted diets, consider tea or lemonade sweetened with agave or stevia. Agave is a sweet cactus extract that does not disrupt blood sugar metabolism as badly as sugar or honey.

A mother called me complaining that her son refused to take the magnesium citrate recommended by her doctor. Magnesium citrate is sour; many forms of magnesium have a sweeter taste. I recommended two alternatives: magnesium glycinate, which is milder, and a magnesium product called *Natural Calm*, which can be mixed into water or juice. Her child now happily consumes *Natural Calm*.

Hide Supplements in Food

Some supplements just taste yucky. A supplement that is fat based or gritty needs a thick, strong carrier. For children eating dairy or soy products, yogurt does the trick, as an excellent base. Fish oils and vitamin E are both well tolerated in yogurt. Peanut and other nut butters (with or without jelly) are also good for hiding oily products. Maple syrup (poured on pancakes) and honey are excellent carrying agents for heavier substances. For a particularly strong flavored oil, one creative mother melted chocolate, incorporated the supplement, and made chocolate candy drops.

Custom Compounding

For the most resistant cases, water based supplements can be combined, custom flavored, and mixed by a compounding pharmacy. Custom formulations require a written order from a health professional familiar with compounding. If you find yourself emptying out 10 capsules and are starting to feel like an amateur pharmacist, ask your health care professional if this alternative is available.

Treat Supplements as Essential Medicine

Supplements should not be optional; treat them as you would insulin for a diabetic. Children are much more agreeable when they sense the parents are serious. Try “when:then.” “When you are done with your supplements, then we can play outside.” With creativity and persistence, most supplement programs can be successfully delivered to even the most taste discerning child.

UPCOMING EVENTS

- **Wednesday, September 12 – Thursday, September 13, 2007 – Minneapolis, MN**
- **Tuesday, November 6 – Wednesday, November 7, 2007 – Concord, NC**
The SI Tool Kit: Bringing Sensory Integration to Schools and Homes
Speaker: Diana Henry, OTR/L. For more information and other dates visit www.ateachabout.com.
- **Saturday, September 15 and October 28, 2007 – Washington, DC**
Family Constellations Workshops
Experience how trans-generational pain can affect today's families. For more information and other dates, contact Mary Rentschler at 202.244.8280.
- **Saturday, September 22, 2007 – Little Rock, AR**
Mini-DAN! Conference
Smaller version of DAN! Conference focusing on needs of parents and caregivers. To register, go to www.danconference.com.
- **Thursday, September 27 – Sunday, September 30, 2007 – Parsippany, NJ**
International Conscious Design Conference & Expo
Four days of lectures on feng shui, green architecture, and healthy living. Friday night benefit dinner for Habitat for Humanity speaker is William Spear. To see schedule and to register, go to www.consciousdesignexpo.com.
- **Saturday, Sept. 29 – Sunday, Sept. 30, 2007 – Kitchener, Ontario, CANADA**
Autism, PDD, AD(H)D – A Comprehensive Biomedical Approach
Conference sponsored by Great Plains Laboratory. For more information and to register, go to www.greatplainslaboratory.com.
- **Saturday, Sept. 29 – Sunday, Sept. 30, 2007 – Los Angeles, CA**
How Does Your Engine Run? The Alert Program for Self-Regulation
To register & for other dates call 877.897.3478 or visit www.AlertProgram.com.
- **Saturday, October 6 – Sunday, October 7, 2007 – Danbury, CT**
- **Friday, November 16 – Saturday, November 17, 2007 – Bayside, NY**
Vision Techniques to Enhance Therapy Outcomes.
For occupational therapists, speech language pathologists and other professionals. Speaker, Cathy Stern, OD, FCOVD. To learn more go to www.educationresourcesinc.com.
- **Wednesday, October 10, 2007 – White Plains, NY**
Nutrition and Your Child
One of four-part series. Lecture by DDR co-founder and nutritionist, Kelly Dorfman. For full series and more information contact Whole Child at wholechildinfo@verizon.net.
- **Thursday, October 11 – Monday, October 15, 2007 – Garden Grove, CA**
DAN! 2007 Fall Conference
Join the whole DAN! team to learn the newest biomedical treatments for autism. To register, and for more information, go to www.danconference.com.
- **Friday, October 12 – Saturday, October 13, 2007 – Austin, TX**
Sensory Integration and Beyond: Power Tools for Treating Children
Learn how to prescribe a sensory diet, use music and rhythm and the suck-swallow-breathe techniques. Contact PDP at www.pdpro.com.
- **Friday, October 12 – Sunday, October 14, 2007 – Seattle, WA**
Matrix Therapy and Energy Medicine
Learn practical application of energy medicine, including autonomic response testing, cold laser therapy, and using microbial inhibition frequencies with Dr. Dietrich Klinghardt. For more information and to register, call 425.637.9339 or visit www.neuraltherapy.com.
- **Wednesday, October 17, 2007 – Pittsburgh, PA**
Treating AD(H)D without Drugs
Free lecture by DDR Executive Director, Patricia Lemer at the East End Food Coop 7516 Meade Street, Pittsburgh, PA 15208. For directions, go to www.eastendfood.coop or call 412.242.3598.
- **Thursday, November 8 – Sunday, November 11, 2007 – Atlanta, GA**
National Autism Association 2007 Conference
Speakers include Ken Bock, Deirdre Imus, David Kirby, Seth Pearl, Anju Usman, and more. To see schedule and register, go to www.nationalautismconference.org.
- **Saturday, December 15 – Sunday, December 16, 2007 – Palm Beach, FL**
Sensory Integration for CranioSacral Therapists
Course taught by Rebecca Flowers, OTR/L of the Upledger Institute. To register, call 800.311.9204

Developmental Delay Resources

www.devdelay.org

5801 Beacon Street
Pittsburgh, PA 15217

RETURN SERVICE REQUESTED

NON-PROFIT ORGANIZATION U.S. POSTAGE PAID WOODBRIDGE,VA PERMIT #70
