



**DEVELOPMENTAL DELAY RESOURCES**

**The ONE Resource Network Integrating Conventional & Holistic Approaches**



*A message from  
 Sidney MacDonald Baker, MD,  
 Co-founder and Emeritus Medical Director of  
 Defeat Autism Now!*

The Autism Research Institute (ARI) and I invite readers of “New Developments” to join Medigenesis.com, a community of mutual support and information sharing. ARI has an ownership interest in Medigenesis.com, as do I and a few angel investors who helped with its start up funding in 1999. Medigenesis sponsored the Spring, 2001 edition of “New Developments.”

Medigenesis.com, originally a not for profit effort, began with the mission to create an organic, intelligent database that allowed those with chronic illness to find others very much like them medically speaking, in order to determine which treatments had the greatest likelihood of success. On the surface, it sounds like a simple enough concept; anyone facing chronic illness in themselves or in a loved one can imagine how powerful such a tool could be. Medigenesis: medical genesis.

“A new beginning in medicine” is our motto, and we really mean it. The key to the problem of establishing “proximity” among individuals with similar issues was to focus not on diagnostic labels, but on the granular data of signs, symptoms, laboratory results, life events, environmental exposures, and treatment responses, all coded in a novel structure that allows that data to “talk.”

Imagine Medigenesis.com as a “library,” where, instead of old books, you can find the anonymously shared experiences of children like yours. The children are similar to yours, not only because of a diagnostic label, such as autism, PDD, asthma, or colitis, but with a likeness portrayed in a fully-remembered, detailed description that defines each child as an individual. You can easily find those who are most like your child, so that you may consider data that tells you what worked for closely-matching groups of children.

Medigenesis.com offers the immediate benefit of well-organized reports to share with professionals, in order to efficiently present a full picture of your child. As our database grows you will also gain near-term feedback from clusters of children who match yours. In addition, you will reap the long term benefits of a system that uses information technology as a “macroscope” to see otherwise invisibly large or hidden patterns.

The requirements for your participation in our private beta trial are that you are:

- Relatively savvy* about the Internet and computers.
  - Motivated* by a clear understanding of your obligation to provide accuracy and detail at the time you record and update the anonymous data.
  - Well intentioned* in terms of using Medigenesis.com as a serious part of record-keeping.
  - Patient* with aspects of the site that represent interface standards in 2001, when we regrettably had to put the site on ice due to the collapse of the Internet bubble. We are now engaged in a bootstrap operation. Your help in building the database will help us find resources to upgrade the site to today’s usability standards.
  - Confident* that the power of intention, integrity, and good design will allow Medigenesis.com to grow from its own childhood to serve the large community of autism families and find a destiny as a new beginning in medicine.
- For an access code and links to more information please go to [www.autism.com/medigenesis/](http://www.autism.com/medigenesis/) and enter your e-mail address. Check your spam folder if a reply does not reach you. The email address you type will not be made available to Medigenesis.com.

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## Executive Director's Column

by Patricia S. Lemer, M.Ed., NCC, M.S. Bus.



# Summer Options: ESY, Camp, Intensive Therapy, or Just Hanging Out?

Parents frequently ask me to make recommendations about summer programming for their children with special needs. They are torn between using the season for intensifying therapy programs or giving the child a break from routine. Let's explore some options. Only you can decide what is right for your child.

### Extended School Year

Any child who has an Individualized Education Plan (IEP) is eligible for an Extended School Year (ESY) program. First, the IEP identifies "critical life skills." Next, a committee of educators and a child's parents determines that, without ESY services, the identified critical life skills: 1) will regress, and not recover in a reasonable amount of time; 2) are emerging, and at a breakthrough point; or 3) are impeded by stereotypic, ritualistic, or self-injurious behaviors.

If an interruption in programming is likely to prevent a student from receiving some benefit from the educational program during the regular school year, the school system must provide ESY services. IEP goals for ESY are carried over from annual goals; no new goals are added.

My experience is that ESY services often sound better than they are. The services tend not be intensive or remedial, and are often just fulfilling an obligation. Even though free, better ways for children with developmental delays to pass the summer months exist.

### Sensory Camps

Occupational therapists across the country, who realize that being outdoors and practicing sensory skills are a perfect marriage, have developed sensory intensive camps. Each day, children are involved in activities that stimulate and normalize touch, movement, listening, and visual skills. Swimming lessons help children gain confidence and provide the opportunity for movement without the demands of resisting gravity. Students studying occupational therapy and special education often work as counselors and aides.

Some kids with special needs develop lifelong friendships, and are deliriously happy with the nutritious sensory diet they get through heavy work, the martial and fine arts. Some camps include typical siblings of children with autism, attention deficits, and emotional problems, making this a summer with inclusion possibilities, as well.

Research studies show that children in programs such as these showed remarkable gains in language, social-emotional, and academic areas, although these areas are rarely addressed directly. The children also do better in post-testing on a screening of neurological risk factors.

If a child meets ESY criteria, on occasion, school systems might fund a private camp in the same way that it funds private school. Receiving this service could require going to due process, however.

### Inclusion with Typical Peers

For children in self-contained classes, the summer can be an opportunity to try some inclusion with typical peers in a general day camp. Integrating children with special needs with non-disabled peers benefits both groups. Sometimes a "shadow" from a local graduate school in education, psychology, or occupational therapy may be necessary for success. Typical children learn about autism, attention deficits, and retardation, while those with delays have a chance to practice social interactions, language, and physical skills.

### Intensive Therapy

Summer can be a great time to schedule therapy that is hard to fit in during the school year. I would especially recommend this for older children. Consider intensifying auditory or vision therapy to several times a week. If you need to travel to a practitioner in a distant city, combine the trip with a visit to a theme park or camping out. Do home therapy exercises outside. Enroll a child in FastForWord, Earobics or a Lindamood-Bell program. Find a tutor who understands sensory processing and incorporates movement into her sessions.

### Family Vacations

Trips to theme and national parks are opportunities for families to be together, bond, and enjoy nature. Fortunately, many parks have tried to make it easier by issuing special passes to avoid long lines and other perks. Use the park's web site or call before you go.

A new opportunity this summer is in Warner Springs, California [www.warnersprings.com](http://www.warnersprings.com) in August...yes, it will be HOT!!! Dana Gorman, founder of [www.DefeatAutismYesterday.org](http://www.DefeatAutismYesterday.org) is in the process of creating a full complement of practitioners, therapies, and seminars to take advantage of while you camp or lodge in this unique area of clean air, water, and low electromagnetic fields (EMF). In addition to being the almost perfect environment for special needs children to heal, Warner Springs is surrounded by healthy activities: hot springs (chlorine-free), pony rides, petting zoos, golf for Dad, and much more! This is an evolving project that will be unfolding with updates available at [www.GeckoRanch.org](http://www.GeckoRanch.org).

While vacations with children with special needs can be trying, the unpredictable does happen. Some children hop right onto a roller coaster and love it. One child I know of spoke his first words after that intense vestibular stimulation.

### A Summer to Remember

Make this summer a memorable one by keeping up a child's routines as well as providing sensory and nutritional diets that you know your child thrives on. Just "hanging out" can be hard on everyone. Help relatives understand the importance of being flexible within set limits. Those not familiar with your child may think of behaviors as "bad," when they truly are not.

Most importantly — have fun!

## Join iGive and Support DDR

Have you joined iGive yet? Just go to [www.iGive.com](http://www.iGive.com), enter your email address, and choose Developmental Delay Resources as your "cause." Enter their online mall and shop in over 600 sites that you already use, like Orbitz, Drugstore.com, Barnes & Noble, and Lands End. Every time you buy online, iGive donates a percentage to DDR. Download the iGive Shopping window and never miss an opportunity to donate.

## Sensory Baby Products

Thanks to South African occupational therapist Megan Faure and New York physical therapist Janessa Rick, new parents around the world can learn how to enhance their infants' development. These experts are sharing their sensory secrets in exciting new products for caretakers of babies birth to 12 months. Faure's book *Baby Sense* is the perfect tool for parents wondering why their baby is crying or not sleeping. Rick's DVDs *Baby Massage* and *Tummy Time* have easy to understand directions for relieving bronchial distress, tummy aches, and laying a solid foundation for movement. Package them together for the ultimate shower gift!

## Spring DAN! a Tribute to Dr. Bernie Rimland

The 10<sup>th</sup> annual Defeat Autism Now! conference, held the weekend of April 20<sup>th</sup> in Alexandria, VA, was a celebration of the life and work of DDR Professional Advisory Board member Bernie Rimland, who died in November. Thanks to Maureen McDonnell, Joanne Sheehan, and their wonderful team for making it all run so smoothly.

## Chicken Pox Vaccine and Shingles

Research published in the *International Journal of Toxicology* (IJT) reveals high rates of shingles (herpes zoster) in Americans since the government's 1995 recommendation that all children receive chicken pox vaccine. Shingles, previously considered a disease of the elderly, is now showing up in adults in their thirties and forties. Dr. Gary S. Goldman's findings have corroborated other independent researchers who estimate that if chickenpox were to be nearly eradicated by vaccination, the higher number of shingles cases could continue in the U.S. for up to 50 years.

## S'Cool Moves Workshop a Huge Success

Many thanks to reading specialist Debra Wilson for giving a fabulous workshop to parents, teachers, therapists, and other professionals on Saturday, April 14<sup>th</sup> at Crossway Community in Kensington, MD. Debra got everyone up and moving with her fantastic ideas for the home and school. Her S'Cool Moves materials are available on her website at [www.schoolmoves.com](http://www.schoolmoves.com), where you can also view her schedule of upcoming trainings.

## DDR 2007 Directory Done

Watch your mail for the *2007 DDR Networking Directory*. This pumpkin orange volume should jump right off your desk! It is chock full of resources around the world, including professionals in over 50 disciplines, and national organizations with websites and newsletters that will keep you busy for quite awhile.



## DDR Experts Go to Utah

The U.S. Government has declared the state of Utah as number three in the country in autism incidence. Yet, this beautiful state has few professional resources to support their families. In response to the need, Kelly Dorfman, Patricia Lemer, Mary Rentschler, and Deborah Zelinsky will go there in June with educational and diagnostic programs on nutrition, reflexes, and vision. (See Upcoming Events.)

## New NAA Board Members

Katie Wright-Hildebrand and Deirdre Imus are newly appointed members of the Board of the National Autism Association. Katie, mother of two boys, believes that her son Christian regressed into autism following a vaccine. Deirdre Imus is an advocate for using environmentally friendly products to avoid toxins for our children. To learn more about these great individuals, go to [www.nationalautismassociation.org](http://www.nationalautismassociation.org).

## Nourishing Hope

Certified nutrition consultant Julie Matthews provides a holistic nutritional approach for those with autism and related disorders in her new book, *Nourishing Hope*. Julie is a DAN! practitioner, and has a private practice in San Francisco. This welcome compendium, based on scientific research, contains very practical information about the roles of genetics and environmental toxins, the impact of nutrients, and dietary options, garnered through parents' and her own clinical experiences. To purchase, go to [www.NourishingHope.com](http://www.NourishingHope.com).

## 2007 US Autism & Asperger Association Conference in Denver

Don't miss the hottest conference of the summer: The USAAA meets August 8-11 in Denver this year. DDR Executive Director, Patricia Lemer, joins an awesome line up of speakers, including the best of the best in all areas of research, diagnosis and treatment. Patty will speak on Thursday, August 8<sup>th</sup> on "Prioritizing Therapies." To see the complete schedule, go to [www.usautism.org](http://www.usautism.org).

## Bock's Book is BIG

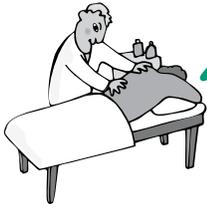
Congratulations to DDR Professional Advisory Board member, Dr. Kenneth Bock, on his new book, *Healing the New Childhood Epidemics: Autism, ADHD Asthma and Allergies*. Dr. Bock introduced this great new resource by appearing on "The Early Show" with Harry Smith in April. To order see enclosed DDR booklist.

**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.**

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](mailto:devdelay@mindspring.com) • Website: [www.devdelay.org](http://www.devdelay.org)



## The Lymphatic System: A Key to Improving Immune Function

By Colleen Martens Endrizzi, MS, CCC-SLP, LLCC

**C**an you name two systems of the body that transport fluid? Most people would be able to name the circulatory system. However, many would be unaware of the lymphatic system. The body's lymphatic system is very extensive and complex. A properly functioning lymphatic system is critical in the body's ability to circulate fluids, proteins, and immune cells, as well as filter toxins and waste, regenerate, and maintain strong immune function.

### What is the Lymphatic System?

The lymphatic system is the body's uni-directional transport network that moves dead cells and other waste products from the tissues to the veins just before they reconnect with the heart. The lymphatic system begins with single cells called endothelial cells. They create the initial lymphatics that open, allowing fluids to enter from the tissues.

Pre-collectors, which have valves, then move the transparent lymph fluid forward on that one-way path toward its ultimate destination, an area called the angulus venosis. During the third step, the fluid goes through collectors, tiny muscular units that contract and expand, propelling the lymph fluid to transport its passengers to the lymph nodes.

The nodes filter and process the lymphatic fluid, breaking down any harmful particles, which are then sent to the appropriate organs of elimination such as the liver, kidneys, or lungs. Movement of the fluid through the lymph nodes also increases production of lymphocytes, thus enhancing the body's immune function.

### What Can Go Wrong?

In people with immune system dysfunction, the movement of lymph fluid is often sluggish, causing toxins to back up and accumulate, possibly resulting in swelling. An imbalance between the sympathetic and para-sympathetic branches of the autonomic nervous system can keep the body in a fight or flight mode. Very gentle manual massage of the lymph system can increase the movement of the fluid through the lymphatic system impacting the nervous system allowing for calming and relaxing of the over-active parasympathetic branch.

### What is Lymphatic Drainage Therapy (LTD)?

Bruno Chikly, MD, of France developed a gentle, noninvasive hands-on technique called Lymphatic Drainage Therapy. LTD stimulates lymphatic fluid to move ten times faster than it moves on its own. A lymphatic drainage therapist (LDT) performs Manual Lymphatic Mapping of vessels to assess the rhythm, direction, depth and quality of the lymphatic flow.

After detecting the lymphatic rhythm, a therapist works with flat hands, engaging the skin with zero to five grams of pressure for a three second stretch, followed by a three second relaxation of the skin. She makes as much hand contact as possible while performing gentle stretching strokes closest to the nodes receiving the lymphatic fluid in an area. After clearing a specific area, she moves distally with precise, gentle pressure to drain body-fluid stagnation of an area, and to encourage the flow of fluids to the nodes.

### What are LTD Techniques?

Following an initial clearing of an area, a therapist may do the same strokes in the reverse order to 'rinse' the region. These subtle manual maneuvers activate lymph and interstitial fluid circulation, as well as stimulate the functioning of the immune and parasympathetic nervous systems.

Therapists' techniques differ depending upon their training. However, the goal of all therapists is to remove stagnation and to get the lymph fluid moving freely.

### What are the Benefits of Lymphatic Drainage Therapy?

LDT proves beneficial in treating many conditions, and in preventative health maintenance, because it increases general health. Often one sees increased range of motion, improved liver function, and better brain function as a result of the relationship between lymph and cerebral spinal fluid.

After LDT, anxious children can become calmer. Kids with sensory integrative issues become more regulated. Insomniacs sleep better. Those with attention issues focus better. The possibilities are endless! As a speech pathologist, I do LDT on the tongues and in the mouths of children with articulation problems. I find that it relieves congestion and stagnation, and the changes in tongue, lip, and cheek movement results in easier formation of sounds.

Effective lymphatic system function often increases the benefit of other therapies. It makes sense that removing debris from the body can free up energy to stimulate the immune system. Individuals with immune system dysfunction are good candidates for LDT because it helps the body detoxify, relieves chronic inflammation, and allows for deep relaxation, thus relieving insomnia, depression, and pain.

### Who is Skilled in Lymphatic Drainage Therapy?

Lymphatic drainage therapy is a tool used by many trained physical therapists, occupational therapists, massage therapists, doctors, chiropractors, nurses, speech-language pathologists, or anyone with a license to touch patients. It is just one of many manual therapies for which those working to improve the health of children and adults can learn. To find someone in your area, go to [www.upledger.com](http://www.upledger.com) and use the online directory.

### What Can the Patient Do?

Ask your therapist to recommend techniques you can use at home to improve lymph drainage. Some suggest using a rebounder to encourage lymph movement.

The lymphatic system is an important transport system in the body and plays a role in many functions. Even though it is critical to life, it is a system that many people have limited knowledge about it. Treat it with care and improve your health!

*Colleen Martens Endrizzi, MS, CCC-SLP, LLCC is a speech-language pathologist in West Saint Paul, MN. Contact her at 952.545.0200, [colmartens@cmetherapy.com](mailto:colmartens@cmetherapy.com), or go to [www.threeriversclinic.com](http://www.threeriversclinic.com).*

# Electromagnetic Fields (EMFs) What is Really Going on Here?

By Jeannie Tower, BBEI

In today's world we are constantly bombarded by invisible man-made electromagnetic fields (EMFs) that cover the surface of the earth with increasing density. If EMFs were visible, we would see a tightly interwoven net totally surrounding the earth. These man-made EMFs have a profound and far-reaching effect on everything from our health to the weather. Every building and neighborhood has the latest wireless technologies, exposing us to ever-increasing frequencies and pulses that create electromagnetic smog/pollution and biological stress on our bodies.

To grasp the complexities of electromagnetic pollution, one needs to understand the electromagnetic spectrum, which makes the invisible visible. It is a graph that shows different categories of EMF frequencies from 1 hertz (oscillations per second) to infinity.

At the low end of the spectrum are human brainwaves, measuring between 1-22 hertz. The human body, comprised of 90% water, is an excellent conductor of electricity. The higher on the spectrum, the more oscillations; the higher frequencies thus have a pulsing versus a wave characteristic. Constant exposure adds an immense stress to the body's natural systems. The combination of the lower frequencies and the pulsing energy of the higher frequencies disrupt our nervous system, which is an intricate web of tiny electrical pulses.

## The Electromagnetic spectrum consists of:

- ELF or extremely low frequencies come from power generating equipment, household appliances, and household wiring. These are 60 hertz in the USA, 50 hertz fields in the UK.
- RF or radio frequencies are communications equipment, AM/FM transmitters, and CB radios. (1 KHz – 100 GHz)
- Microwave frequencies (a subset of Radio Frequencies) are cell phones, digital cordless home phones, WiFi, microwave ovens, MRIs, and ultrasound. (1GHz-100Ghz)
- Infrared radiation includes alarm systems and motion detectors.

All of the above frequencies are categorized as Non-Ionizing radiation. Scientists believe that because they are non-ionizing, there is no biological effect on the human body. However, recent epidemiological studies suggest that non-ionizing radiation does have biological effects. Scientists know that Ionizing radiation (x-rays, etc.) causes cellular damage to the human body.

All frequencies have an electrical field (EF) and a magnetic field (MF), therefore the term electromagnetic refers to two different components. Each component has their own set of characteristics, measuring devices, guidelines for exposure and shielding capabilities.

Electric fields are present all the time, even if a lamp, TV etc. is turned off. The only way for no electric field to be present, is to turn off all the electricity in your home. When an appliance is turned on, both an electric field and a magnetic field are present.



Most research into the health effects of EMFs focuses on exposure to high magnetic fields, which are measured in milligauss with a gauss meter. A 1-2 milligauss reading is considered safe. In most homes, magnetic fields can vary greatly from 2 milligauss to over 1000. Because magnetic fields are higher the closer you are to an appliance and cannot be easily shielded, use "prudent avoidance" by moving electrical items as far away from the body as possible.

In addition to electric gadgets, certain wiring methods, while safe and to code, may inadvertently cause high EMFs. Mitigation devices are available. However, the only way to determine if your home has high EMFs, is to have an inspection by a trained professional. An inspection can document high EMF areas and outline the most effective and safe ways to reduce or eliminate them.

High EMFs contribute to a range of health issues from sleep disorders, depression, ADD, autism, fatigue, bedwetting, nervous disorders, and diseases such as leukemia and cancer. They can also influence any healing process. By increasing your knowledge and awareness about EMFs and following the suggestions below, you can begin to reduce your exposure and help your body maintain its natural health.

Here are just a few ways to reduce your exposure to EMFs:

- Throw out your microwave; cook delicious organic food.
- Remove all electrical appliances from the bedroom, including, TVs, computers, cordless phones, routers, cell phones, and their chargers. Use a battery or wind-up alarm clock.
- Never use a laptop on your lap.
- Avoid electric and synthetic blankets; use natural bedding.
- Make sure you know what is on the other side of the wall from the head of all beds. If a TV is on that wall, then move it or the bed.
- Do not use fluorescent lighting of any kind. Use ordinary full spectrum light bulbs throughout the house EXCEPT in the bedroom, where you can use normal incandescent bulbs. Compact fluorescent energy efficient bulbs emit radio frequencies and are difficult to dispose of because of their mercury content.
- Keep cell phone use to an absolute minimum. Try not to use it in the car, and at home use corded phones.
- Use DSL for your internet.
- Have your home inspected by a trained Building Biology Inspector. [www.buildingbiology.net](http://www.buildingbiology.net)

To learn more read *Electromagnetic Fields: A Consumer Guide to the Issues and How to Protect Ourselves and Cell Tower: Wireless Convenience or Environmental Hazard?* by B. Blake Levitt

Jeannie Tower, BBEI is a Bau-Biologie Environmental Inspector and Feng Shui Consultant. Her web site is [www.fengshuimagic.com](http://www.fengshuimagic.com) and she can be reached at 703.684.6502 or [fsmagic88@aol.com](mailto:fsmagic88@aol.com).

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## Tips for a sensory successful summer

By Anne Trecker, M.S., OTR/L

**H**ot weather and the slower pace of summertime provide excellent opportunities for children to get increased sensory input through enjoyable activities. Learning new skills may be easier without the pressures of school.

For some children, however, with sensory issues who thrive on consistency, routines, and structure, summer can be disorienting and lacking needed direction. Transitions from school to a summer program or camp may be difficult, and vacations, even when enjoyable, can further disrupt a child's routine. Below are some suggestions to help children with sensory integration difficulties, and their parents, enjoy the summer months.

### Camps

**Inform camp directors and counselors about your child's special needs.** Uninformed people can misinterpret sensory defensiveness, gravitational insecurity, and motor planning problems as behavior problems. Explain the concept sensory integration dysfunction, point out your child's underlying difficulties, and discuss strategies that work for your child. OTA-Watertown can provide written materials to increase understanding. Ask your child's occupational therapist to speak with camp counselors.

**Include sensory diet items in your child's backpack.** A sensory diet consists of a variety of multi-sensory experiences that help a child to maintain self-regulation. (See "New Developments" 6:5.) A child's occupational therapist can develop a prescription for the "just right" sensory input to be implemented by parents, teachers, and other individuals working with the child during the summer months. Items often forbidden at school, such as sour foods, chewing gum, objects to squeeze, therapand strips, and putty, can easily travel to camp. Explain the sensory diet concept and the use of the objects to camp counselors so they will support their use.

### Trips

**Motion sickness.** Provide ginger in capsules, candied, or in foods. Acupressure wristbands, available at most drug stores, can also aid greatly in motion sickness. Chewing gum, pulling on a piece of therapand, or listening to music or stories through headphones can often alleviate motion sickness and general restlessness.

**Offer frequent movement stops.** When traveling by car, make frequent stops that include opportunities for movement. Pushing against a parked car during a quick stop can provide the much needed heavy work input. Use rest stops for more than just bathroom breaks. Toss a Frisbee or play ball.

**Establish routines even when away from home.** Have regular meal and bed times, except for very special occasions. This structure provides needed energy for the next day's activities.

**Continue sensory diet activities while away.** Bring a child's favorite, familiar toys and clothing to ease being away from a familiar environment. Try some massage and music for comfort.

**Educate relatives.** Remind family members about sensory integration problems and your child's need for a steady, balanced sensory diet and other accommodations that will make for a successful summer.

### Summer Sensory Activities

**Go to the playground often.** Climbing, hanging, swinging, and sliding are excellent sensory activities. An older sibling or friend can model play activities to help a child with motor planning problems.

**Move messy art activities outside for more sensory fun.** Invite your child to play in shaving cream, fingerpaint, draw with sidewalk chalk, and "erase" the pictures with a squirt gun. Instead of brushes, paint with sticks, pinecones, and cat's tails. Instead of paint, use water or shaving cream. Instead of paper, paint rocks, driftwood, and toenails. Add sand to paint for a new tactile experience.

**Go Swimming.** Water is an excellent environment for providing strong sensory input and for working on muscle strength and endurance. Attempt to include water activities every day. Try out all kinds of pools. Temperatures and chlorine levels differ. The chlorine might bother a child in one pool, but not another. Private pools may be less chlorinated than public ones. Cold water is harder to tolerate than warm. Indoor pools can resonate and may trigger auditory sensitivities not apparent outside. If possible, swim in fresh or salt water.

Use various equipment, including bathing suits of different fabrics, masks, snorkels, nose and ear plugs, until a child is comfortable. Swim laps, go under water, wade at different depths. Experiment with slip-and-slides to help older children gain confidence in their abilities on wet surfaces.

**Build obstacle courses.** Make the back yard into a maze with railroad ties, stepping stones, long boards, and large, sturdy boxes. Use flour or cornstarch to connect distant obstacles, sprinkling it on the ground in a tactilely pleasing and biodegradable path.

**Take hikes and bike trips.** Build children's stamina and endurance with short and gradually longer itineraries. Add hills and different surfaces. Plan a surprise reward at the destination.

**Go to the beach.** Encourage your child to build with sand, walk or run along the shore, and, of course, play in the water. To alleviate stress for the child who has tactile defensiveness, bring digging tools, beach shoes, extra clothes, and large blankets to control the amount of contact with the sand, if necessary.

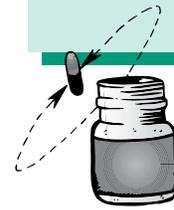
### Have a Sense-sational Summer

Remember that walking in the grass, eating and drinking cold foods, sweating in the broiling heat are all sensory experiences. You don't always need special equipment to provide sensory integration therapy. Let kids use their imaginations and whatever is around, before buying new products. You never know what might turn into a great toy. It just could be that huge box the new clothes dryer came in. Remember making a clubhouse? I do.

*This article is an expansion of one by Anne Trecker, M.S., OTR/L, published in "New Developments" 4:4, Spring 1999. Anne is Clinical Assurance Director, Occupational Therapy Associates (OTA) – Watertown, MA.*

# The Best Dyspraxia Program Ever

By Kelly Dorfman, M.S., L.D.N., Nutritionist and Cofounder DDR



## NUTRITION

Children with developmental delays demonstrate varying degrees of difficulty with motor planning. This disorder is called dyspraxia, a technical term derived from the Latin roots “dys” meaning “poor” and “praxis” meaning “coordination.” Apraxia is a more serious version of this disability, with severely limited motor planning.

Dyspraxia can affect gross, fine, and oral motor skills. Activities such as riding a bicycle, running, and eating with utensils require skilled motor planning. When dyspraxia affects the ability to coordinate sounds, the result is impaired speech and language.

### Dyspraxia, Speech and Language

How does an individual find the right words, sequence them into sentences, and converse? Since conversations can take many directions, mental flexibility and the ability to prioritize ideas are essential. If grandma asks Christopher what he likes about school, he could choose recess, or his new truck. Children with language motor planning issues often answer questions tangentially, with scripts, or by echoing. Fluid social interactions require a combination of competent motor planning and sufficient processing speed.

### Motor Planning Depends Upon Good Fat

The biological foundation of good motor planning is balanced fat. Picture the brain as a house of fat. The house’s foundation and beams are made of structural fats, the walls of fatty cell membranes, and stabilizers (compounds that protect lipids from damage) are the paint and caulk. Together these fats comprise 60-70% of the brain.

### Phospholipids - Structural Fats

What lays the foundation for our house of fat are phospholipids. Unlike the more familiar fats, triglycerides, which have three fat soluble molecules linked to a base, phospholipids have a fat soluble molecule on one end, and a water soluble molecule on the other. Phospholipids are the perfect building material because of their unique ability to link to both fat and water soluble molecules.

However, their quality changes, depending upon whether they incorporate good fats, like omega-3, or poor fats, like trans-fats. The former optimize the strength, function, and quality of brain membranes, making the foundation strong. When combined with the latter, the foundation is weak.

Phosphatidylcholine (PC) makes up 50-65% of the phospholipids in membranes. Research suggests choline supplementation can improve cognitive function. Choline is the raw material for the neurotransmitter, acetylcholine, the major neurotransmitter that regulates memory, motor planning, and executive function. (See, “Choline and Complex Language Development,” DDR newsletter, 11:2.)

An excellent and effective form of phosphatidylcholine is Xymogen Phosphaline, a thick liquid, available from The Village Green Apothecary. [800.869.9159](tel:800.869.9159). Although this supplement is expensive, children with dyspraxia who take it are showing exciting leaps in language complexity. Mix with apple or pear sauce, spread it on a pancake, or camouflage it with maple syrup.

### The Walls - Omega 3 fats

Up to 25% of the brain is DHA (docosahexonoic acid), an omega 3 fat found in fish and seaweed. Many studies show DHA’s ability to improve motor planning, attention, academics and behavior. Essential fats like DHA are the windows and walls of our house of fat. They become incorporated into the cell membranes.

Better function follows improved structure. With sufficient DHA, the cells take in and carry information more efficiently and accurately.

The fat you eat becomes the fat of your brain. Most people consume many omega 6 fats, found in meat, cheese, and nuts, and few fish based omega 3 fats. Flax seeds and oil are good sources of both omega 3 and 6. To avoid mercury contamination in fish, good manufacturers distill the DHA to remove mercury. As a result, ironically, supplements are safer than the real food.

Take DHA with another omega 3 fat, eicosapentaenoic acid (EPA). Dose at between 500-2000 mg for children. Too much fat of any type can cause loose or yellow stools. As in all dietary supplements or changes, watch for irritability.

### Paint and Caulk - Vitamin E

Using our house of fat analogy, vitamin E protects the fat soluble tissue from inflammation and damage, just as paint and caulk protect a house from the weather and other environmental assaults. Vitamin E is a fat based antioxidant, so it is important for the fat-based brain. Antioxidants donate electrons to molecules injured by chemical toxins.

Claudia Morris, MD, a California pediatrician, discovered that many children with dyspraxia show symptoms of vitamin E deficiency, such as poor articulation, low tone, abnormal proprioception, and high pain threshold. To address dyspraxia, she recommends higher than normal levels of vitamin E. Dr. Morris cured her own three year old of dyspraxia with 2,000 I.U.’s per day.

Most children do well with 800-1200 I.U.’s of the mixed tocopherol form of vitamin E. with the upper limit of safety at 66 I.U.’s per pound of weight. Although research offers little safety data on children, no reported cases of toxicity are known.

I recommend using all eight types of vitamin E, including four tocotrienols. Megafood Complete E-8 and Perfect E are products containing the entire E complex. For a child that cannot swallow, puncture the capsule and squeeze out the contents. A parent can swallow the shell of the capsule and reap benefits also.

### Build a Strong House of Fat

Efficient brains need the proper fats for strong motor planning. Fight dyspraxia by building a strong house of fat. Combine good quality phospholipids for a strong foundation with DHA for durable walls and Vitamin E to protect the house. Only then can the brain function maximally.

To learn more, read *The LCP Solution for ADHD, Dyslexia, and Dyspraxia* by Jacqueline Stordy, (See Booklist). and go to [www.foodforthebrain.org](http://www.foodforthebrain.org).

# UPCOMING EVENTS

- **Tuesday, May 15, 2007 – New York, NY**  
*The Sensory Smart Home and School*  
DDR sponsored lecture in our “Creating Healthy Environments at Home & School” series.  
Speaker: Lindsey Biel, MA, OTR/L.  
For more information and to register, call 800.497.0944 or visit <[www.devdelay.org](http://www.devdelay.org)>.
- **Saturday, June 2, 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.
- **Monday, June 4 – Wednesday, June 6, 2007 – New Jersey**  
*Nutrition Therapy for Children with Autism Spectrum Disorder*  
Day-long introduction to using special diets and supplements with Elizabeth Strickland in Parsippany, Edison, & Atlantic City.  
<[www.CrossCountryEducation.com](http://www.CrossCountryEducation.com)>.
- **Friday, June 8 – Saturday, June 9, 2007 – Wilmington, DE**
- **Friday, July 27 – Saturday, July 28, 2007 – Oakland, CA**  
*Partners with a Purpose: OT and Speech, Using an SI Approach*  
Building partnerships to enhance language development, communication, behavior, and learning. For more information contact PDP at 651.439.8865 or go to <[www.pdppro.com](http://www.pdppro.com)>.
- **Tuesday, June 12 – Thursday, June 14, 2007 – Orem, Utah**  
*Nutrition, Reflexes, & Vision as Foundations for Development*  
DDR sponsored workshops and evaluations with Kelly Dorfman, Patricia Lemer, Mary Rentschler, and Deborah Zelinsky. For more information, call 800.497.0944.
- **Friday, June 15 – Sunday, June 17, 2007 – Seattle, WA**  
*Psychokinesiology (PK): Energy Healing with Dietrich Klinghardt*  
For more information and to register, call 425.637.9339 or visit <[www.neuraltherapy.com](http://www.neuraltherapy.com)>.
- **Friday, June 22 – Sunday, June 24, 2007 – Irvine, CA**  
*The Lyme-Autism Connection*  
Physicians, parents and patients can learn about this exciting subject from experts including Anju Usman, Doris Rapp, and the Homeopathy Center of Houston.  
For list of speakers, schedule, and more go to <[www.LIAFoundation.com](http://www.LIAFoundation.com)> or call 877.0650.4046.
- **Friday, June 29 – Sunday, July 1, 2007 – Fort Collins, CO**  
*Natural Building Seminar*  
Learn how to build a healthy house with the Institute of Bau-Biologie and Ecology.  
For details and information call 727.461.4371 or go to <[www.baubiologieusa.com](http://www.baubiologieusa.com)>.
- **Saturday, June 30 – Sunday, July 1, 2007 – Baltimore, MD**  
*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](http://www.AlertProgram.com)>.
- **Wednesday, July 11 – Saturday, July 14, 2007 – Scottsdale, AZ**  
*Autism Society of America 38th National Conference*  
Learn the latest treatments for autism spectrum disorders.  
For more information, go to <[www.autism-society.org](http://www.autism-society.org)>.
- **Friday, July 13 – Saturday, July 14, 2007 – Boston, MA**  
*Eyesight to Insight: Visual/Vestibular Assessment & Treatment*  
How optometrists and occupational therapists can collaborate to enhance development. For more information contact PDP at 651.439.8865 or go to <[www.pdppro.com](http://www.pdppro.com)>.
- **Saturday, July 21, 2007 – Riverside, CA**  
*Cutting Edge Treatments in Autism*  
Sponsored by Great Plains Laboratory and New Beginnings Nutritionals  
For more information, go to <[www.greatplainslaboratory.com](http://www.greatplainslaboratory.com)> or call 800.288.0383.
- **Tuesday, July 24 – Friday, July 27, 2007 – Redding, CA**  
*S’Cool Moves for Learning Levels 1 & 2*  
Make use of the summer to learn how to integrate movement into classroom activities from THE expert, Debra Em Wilson. For more information, and to register, go to <[www.schoolmoves.com](http://www.schoolmoves.com)>.
- **Friday, July 27 – Sunday, July 29, 2007 – Lenox, MA**  
*The Eyes Have It: Holistic Eye Care*  
A weekend workshop at Kripalu with Marc Grossman, optometrist, combining vision with nutrition, yogic practices, and eye exercises to improve vision in adults and children. To register, and for more information, go to <[www.kripalu.org](http://www.kripalu.org)>.
- **Saturday, July 28, 2007 – New York, NY**  
*Gluten-Free Desserts: A Liberating Look at Baked Goods*  
Learn how to make cookies, muffins, cakes, and pies without sounding the gluten alarm. <[www.naturalgourmetschool.com](http://www.naturalgourmetschool.com)> or call the Natural Gourmet Institute at 212.645.5170.
- **Friday, August 3 – Sunday, August 5, 2007 – Pittsburgh, PA**  
*PANLA Health & Wellness Conference*  
Learn about vaccines, coconut oil, and Codex at this year’s gathering of the Pennsylvania Natural Living Association.  
For schedule and speakers go to <[www.panla.org](http://www.panla.org)>.
- **Wednesday, August 8 – Saturday, August 11, 2007 – Denver, CO**  
*US Autism & Asperger 2007 Conference*  
Over 30 of the most renowned experts will present the latest interventions and research. DDR Executive Director will present on “Prioritizing Therapies.” For complete list of speakers, schedule, and to register, go to <[www.usautism.org](http://www.usautism.org)>.
- **Thursday, August 16 – Monday, August 20, 2007 – Clearwater, FL**  
*Electromagnetic Radiation*  
How to evaluate electromagnetic fields in the home, with special emphasis on the bedroom. A 5-day course resulting in certification. To learn more call 727.461.4371 or go to <[www.baubiologieusa.com](http://www.baubiologieusa.com)>.

## Developmental Delay Resources

[www.devdelay.org](http://www.devdelay.org)

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