

Resources on Brain and Sensory Integration

Web Sites

Adoption Wellness
(800) 537-4478
www.adoptionwellness.com

Brain Integration
www.brainintegration.com

PDP Products
www.pdppro.com

Pocket Full of Therapy
www.pfot.com

Sensory Comfort
www.sensorycomfort.com

Sensory Integration International
www.sensoryint.com

Books

Sensory Integration and the Child
By A.J. Ayres. *Los Angeles: Western Psychological Services, 1979.*

Sensory Integration Theory and Practice
By A. Bundy, S. Lane, & E. Murray. *F.A. Davis Co., Philadelphia, 2002.*

The Power of Music: How to Use Sound for Relaxation, Concentration, and Healing
By Don Campbell. *Nightingale - Conant Corporation, Niles, ILL.*

Seeing Clearly, educational booklet
available in therapy catalogs
By L. Hickman & R. Hutchins, 2000

A Revolutionary Way of Thinking,
By Charles Krebs, Ph.D. *Hill of Content Pub Co Pty Ltd; 1 edition, 1998.*

Creative Approaches to Child Development with Music, Language and Movement
By G. Nash *Alfred Publishing Co. Inc., Sherman Oaks, Calif., 1974.*

The Out of Sync Child
By Carol Kranowitz

OUR

By Kim Gangwish and Lois Hickman

It is our birthright to enjoy the world we were born into, this remarkable Planet Earth. To have this rich experience, we need a healthy sensory integrative foundation and a safe, supportive community to make exploring the world a joyful experience and learning a welcome challenge.

We hope to give this full and joyful experience to the children we have lovingly adopted. Many of them come to us from stressful situations, and often we can't know exactly what their early experiences have been. The trauma and stress they may have experienced can create a tendency for the brain to react in a survival mode — fear, flight, fight or freeze. At times, the child may exhibit behaviors that puzzle and disturb us. Why do they have trouble with attention, or why do they seem to need so much movement, hard bouncing or pressure? Who do they avoid hugs or eye contact with? Why do they strongly dislike certain touch or textures? Information about attention deficit disorder and sensory

integration is critical in understanding all children, and especially children with early histories that may likely give them difficulties. It can help us understand them and how to help them.

In the first months and years of life there are critical experiences that give the sound foundation children need in order to develop well, both physically and emotionally. They gain a sense of self and self-worth through ever more independent moving, or vestibular; touching, or tactile; seeing, or visual; and hearing, or auditory, reaching out to others and being seen as loved, respected and special. If the right opportunities don't happen and if the chance for bonding with a loving adult hasn't happened, it can be challenging to remediate the experiences that have been lost. Educating ourselves about the importance of healthy sensory integration in early life and the behaviors that might show us the needs the child has is the first step. Early detection of a problem is important, and this early detection should include consultation with an

**APPLIED
PHYSIOLOGIST,**
Kim Gangwish's
sons Casey and
Jake spend time
in the Colorado
mountains. Jake
was adopted
from Siberia.



BIRTHRIGHT

occupational therapist gifted in recognizing the signs of Attention Deficit Disorder or Dysfunctional Sensory Integration and who also understands children and families in a caring way.

Sensory Integration

Jean Ayres was an occupational therapist who devoted her professional life in researching sensory integration and dysfunction in sensory integration, believing that it is possible to provide an environment that would invite the kind of interactive sensory experiences the child with DSI desperately needs in order to become happy and well adjusted. She discovered that treating the symptoms of a problem was insufficient, and that only by addressing the neurological base of the brain stem and lower centers of the brain can the higher, cognitive centers function optimally. Her work has been continued by other therapists and researchers, and has provided an invaluable legacy that has helped innumerable children and adults.

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giving us a way to relate to the world and to learn from it. As we understand how these senses develop and realize that they are intimately interconnected with emotions and how children perceive their world, it may help us understand how much children need these experiences. It may help us to understand behaviors that may at first seem puzzling. These senses are all concerned with relating to life through seeing, hearing, touching, smelling, moving and muscle sense. The long or scientific names they are given by professionals

have ordinary meanings; they’re all about surviving, learning and enjoying the body we were given.

Brain Integration

Richard Utt is an applied physiologist who has spent the last 26 years of his life researching and working toward developing a methodology to help integrate the mind, body and spirit in today’s stressful society. Everyone, including our children, feels the affects of this stress. Utt has discovered that unlike adults who store stress in their

bodies, young children store the stress in their brains by shutting down pathways to a variety of areas within the brain. By not having full access to all areas of the brain, the child or adult loses optimal function which may look like a learning disability or may compound a DSI issue. It would be incorrect to state that the

find ways to self-regulate, calm and focus. The occupational therapist's suggestions are important as part of a team approach in helping the family and the child.

As an integral part of the team, an evaluation by an applied physiologist can give further insight into the child's

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individual will simply outgrow these problems. Instead, the individual may compensate for his or her loss of function, thus leading to further stress within the system. Ayres and Utt's complimentary treatment modalities help these individuals re-integrate in a non-intrusive and supportive environment. In doing so it allows the person to heal, thus being able to reach his or her full potential.

Attention Deficit Disorder

The child with Attention Deficit Disorder, or ADD, is impulsive, has problems paying attention and with paying attention to detail. He or she may or may not show evidence of associated difficulties with sensory integration.

There might be impulsiveness and hyperactivity as well as problems with pausing attention, and then the label for the disorder would be "Attention Deficit Hyperactivity Disorder," or ADHD. These children are more motorically involved. They can't seem to sit still. They wiggle and fidget, run, climb and interrupt. In their impatience, they become physically agitated.

A child with ADHD has a lot of trouble with self-regulation or self-modulation. It is important to have an occupational therapist evaluate the child's needs and give suggestions about activities and programs that could help a child

needs. Impulsivity, inability to regulate emotions, reading comprehension, poor spelling, poor math skills and lack of coordination are just a few examples of concerns expressed by parents. A typical session with an applied physiologist would include, light touch on acupressure points to first assess which pathways are blocked and then to destress and re-integrate brain and body function.

All children are different

Every child is unique, and their behaviors and needs are also unique. Their behaviors give us clues about what they need, and no behavior is by accident. The child's early environmental experiences will have a profound effect on his or her behavior. Has there been an opportunity to be held by a caring adult; to have proprioception or deep pressure combined with loving cuddling? Has there been a normal chance for independent and free exploration? The child's reactions to movement, sound, cuddling, touch, smell and vision will give clues to early experiences and what we might provide to satisfy the child's needs and to truly connect with him or her.

What you can do before and after you get home

No matter what the early months or years have been like, an occupational

therapist with expertise in sensory integration should evaluate each child when he or she first joins the adoptive family. The experience of joining a new family may be an easy one for some children, but for many others it can be extremely challenging. Each family's experience will be different. The following ideas can be helpful for all children, but for those who show signs of DSI, ADD or ADHD, they can be critical. There is no real substitute for an individual evaluation and intervention that addresses each child's own issues, but there are basic ideas that can help all children.

Basic experiences don't require a room full of expensive toys. They require connections to the basic senses, as well as to us as loving caregivers, in as natural a way as possible. Anything that doesn't ring true to that underlying sensory foundation can create jarring neurological and behavioral responses.

- Blankets and clothing made of natural materials will be more calming and organizing than those made of synthetic materials. There are many companies now that manufacture organic clothing, blankets and pillows. Weighted blankets can be comforting for a child who needs the extra input of deep pressure to feel safe and calmed.

- Loving, cuddling and attention, perhaps using infant massage, can make up for the loss of the critical connection through touch that some babies may have missed and will give a chance for happy bonding.

- Toys should be made of natural materials and provide a lot of room for the child's own imagination to be free to explore and create.

- Calming music designed specifically for babies can be helpful at nap and bedtime. Singing to and with children supports the development of language. It's also fun, no matter what you think of your singing voice. Singing rather than talking to children can help them connect body and mind, can be joyfully playful, and can be easier for children to understand than speaking.

- For toddlers and older children,

there are basic play supplies that can provide a lot of organizing proprioceptive, vestibular, visual and tactile experiences. Stay away from TV and have fun with large bean bag chairs, collapsible tunnels, cushions off the couch, blankets over chairs to make trails, and cardboard boxes. Barrels that are padded on the inside and outside give great opportunities for deep pressure as the child is rolling in them. Remember how you loved swings and slides and sandboxes? It's all vestibular and proprioceptive and tactile.

- The detergents, air fresheners, furniture cleaners, even deodorants and perfumes, need to be natural, preferably organic. Remember that everything that effects the child's basic neurological foundation should support in a gentle way that "does no harm." An example of a gentle scent that can help give a calming background is to have a lavender plant in a room.

Lois Hickman, M.S., OTR, FAOTA, is an occupational therapist who maintains a private clinic at her organic farm near Lyons, Colo., where she works with children and adults. Her work also includes applying sensory integration to therapeutic horseback riding. She is faculty emeritus of Sensory Integration International and served on the Sensory Integration Special Interest Section of the American Occupational Therapy Association, as well as on that Association's Council on Practice. Hickman was awarded the Marjorie Ball Award of Merit in 1998 by the Occupational Therapy Association of Colorado, the highest honor given an occupational therapist in the state, and in 2000, was selected as a Fellow of the American Occupational Therapy Association for "Innovative Leadership in Pediatric Practice and Fieldwork Education."

Kim Gangwish, an applied physiologist, lives in Louisville, Colo., with her two sons 11-year-old Casey and 8-year-old Jake, who was adopted from Siberia. She has a background in child psychology working with emotionally disturbed adolescents. She has spoken across the country about her specialized form of Brain Integration at both health expos and Adoption Heritage Camps. Gangwish is currently in practice in Boulder, Colo., Berkeley and Santa Barbara, Calif. She has also founded an integrated team of professionals who offer a full spectrum of therapeutic services for adoptive parents. Gangwish can be reached at (303) 717-8860 or visit the Web sites at www.adoptionwellness.com or www.lifeenrichmentcenter.net.

Defining Sensory Integration Terms

Proprioception: This body sense, or awareness of where our bodies are in space comes from using our muscles, bearing weight through our trunk, arms, legs, hands and feet, and through moving, reaching and balancing.

Children who are upset, distractible or sensitive to touch may try to calm themselves with heavy proprioceptive input.

Vestibular: The sense of balance and movement. It is intricately connected to the proprioceptive sense. A child who has been deprived of the chance to move may either be fearful of movement, or may seek a lot of movement.

Tactile: This sense connects our inner and outer worlds through informing about where and how we have been touched. The baby explores, first with mouth and hands, then through rolling, creeping, crawling, climbing and exploring in every direction. The tactile sense integrates with all the other senses

If a child's early experience with touch has been inadequate, there may be an aversion to touch or certain textures in the mouth, and have sensitivity to clothing. Or, the opposite might be true, with an insatiable need to touch, and perhaps to smell everything as well.

Vision: This sense progresses from the newborn baby's attraction to light and to pattern to an ability to judge distance and to discriminate shapes, textures and facial expressions. Vision goes from close and narrowly defined to 20/20 vision of seeing far forward and wide peripherally. This three-dimensional space includes the social world as well as the personal world.

Difficulty can occur if there without adequate opportunities to move, explore and touch.

Auditory: The sense for receiving and discriminating sound. Balance and hearing are intimately connected in the inner ear, and are often referred to as one system the "vestibulo-cochlear system."

Children can show sensitivity to certain voice frequencies or to too much sound. If the environment is too cluttered with sound the child may do a lot of talking or screaming to drown out the confusing "traffic jam" of sound. If the early environment has been full of upsetting sounds, the baby learns to "turn off" or dull his or her senses to avoid the discomfort.

Olfaction: Smells are powerful. Helen Keller said, "It has an immediate, direct influence on memory and mood." Smell has a direct connection to the emotional brain. If early experiences are unpleasant, the smells connected with them will be noxious. The child may respond to all smells as if they are dangerous, or may want to smell everything as a way of discriminating the world around him.