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The therapeutic use of music has a long history. Since the mid-1900’s when Alfred Tomatis began his work with the application of sound to treat specific symptoms and behaviors, there has been a veritable explosion in the types of auditory interventions available. As the effectiveness of sound as a treatment modality continues to achieve credibility, the rapid growth of this field of therapy will likely gain even more momentum. While the growth of auditory tools is both promising and exciting, it can be challenging for the therapist and parent to choose the most potentially effective therapeutic strategy for a specific child.

The following provides an overview of auditory intervention methods in common practice in the United States. There are several distinctions between sound therapy programs. Some programs are clinic-based, some inherently contain an active component. Interventions usually require a training or certification for practitioners beyond their already established professional background. Parents should be careful to note a practitioner’s professional background and advanced training.

The Tomatis Method
Alfred Tomatis, MD, a French Ear, Nose and Throat specialist, was the first practitioner to develop an approach for treating listening difficulties. Tomatis originally defined the role of the ear as the ‘integrator’ because the ear was significant in structuring organization at all levels of the nervous system. He recognized

CASE PRESENTATION:
Child with Gastro-Esophageal Reflux and Severe Sensory Modulation Disorder
by Susan Stallings-Sahler, PhD, OTR, BCP, FAOTA

Chronic gastro-esophageal reflux disease (GERD) is a medical condition which can affect infants, children, or adults, and which is caused by inability of the lower esophageal sphincter to maintain stomach fluids and their contents in the stomach. In most individuals, the symptoms are usually transient and do not reach serious proportions. However, in a small percentage of infants and children, the condition can continue, and if unchecked, can result in esophagitis and eventually ulceration of the esophagus.

Medical management of GERD usually includes:
(1) changes in diet and portions of food eaten at one meal;
(2) positioning interventions that maintain the upper body above the stomach;

continued on page 6
Auditory Intervention cont’d from pg. 1

the close relationship between the auditory and vestibular systems and the importance of both as integrators of the nervous system. He connected listening to the development of receptive and expressive language, learning, motor control, and motivation. Through his clinical work with opera singers and factory workers, Tomatis recognized that the voice can only produce what the ear can hear, a principle now known as the “Tomatis effect”. His study of the ear led to the conviction that, beyond hearing, the auditory and vestibular systems work together to detect and analyze movement. He described the function of the vestibular portion as picking up and discriminating the larger movements of the body, which we can see and feel. Similarly, the auditory system registers and regulates the finer movements of sound waves, which pass through the air and are funneled into the ear.

In the 1950's Tomatis developed a listening technique to ‘re-educate the ear’ based upon the following four principles:

- Motivational and emotional needs begin with listening
- Listening plays a fundamental role in language
- Through it's close connection with the vestibular system, the auditory system relates self to self, to others, and to the universe
- The brain needs sound energy to enable the thinking process and integration

Tomatis developed the first auditory training or listening training device, the electronic ear. This device uses progressively filtered sound, specifically those sounds rich in high frequencies (i.e. classical music, the mother's voice, Gregorian chants) to effect change. Tomatis was the first to recognize the importance of high frequency audition. He spoke of high frequency sound as charging the brain. The Tomatis method of auditory training is a clinic-based program, requiring the use of specialized equipment and the expertise of a practitioner trained in the Tomatis approach.

Auditory Integration: Berard Method

Most of the clinically based auditory training techniques are based on the early work of Tomatis, including that of Guy Berard, MD, a French medical doctor who studied and worked with Tomatis. Berard felt that the original protocol of Tomatis was too lengthy and developed a different method of filtering sound. This technique, which uses filtered popular music in which sound frequencies are electronically modulated at random intervals for random periods of time, is called Auditory Integration Training (AIT). Berard believes that hypersensitive hearing causes auditory processing problems. Berard and his technique gained worldwide recognition in 1990 with the publication of Annabel Stelhi’s biographical account of her daughter Georgie. The Sound of a Miracle describes how Georgie, diagnosed with severe autism, greatly benefited from a course of 20 AIT treatments with Berard. AIT is a clinic based program; implementation relies upon the use of the Audiokinetron, a device developed by Berard for filtering music and upon a practitioner with specialized training.

Both the Tomatis and Berard programs are delivered by specific machines using earphones. With the advent of new technology, similar altered music has become available on compact disc. The discs do not replace either the Tomatis Method or the Berard Method. The compact discs do provide a less intense way to access both the auditory and vestibular systems to impact neural function and integration and are easily available to clinicians in a variety of practice arenas. (www.autism.org/ait2.html).

The Samonas Method

The SAMONAS method is another listening approach, which has combined some of the the ideas of Tomatis with advances in both technology and physics. Ingo Steinbach, a German sound engineer with a broad background in music, physics, and electronics developed this method. All of the recordings used in Steinbach’s work are based on the SONAS (System of Optimal Natural Structure) principle, which make it possible to maintain the valuable elements and structure of natural sounds throughout the entire process of recording, processing and reproduction. The choice of music is based on the principles of music therapy. Most selections are classical music and some include nature sounds.

Steinbach wanted his recordings to be as realistic and as spatially expansive as the sounds one hears in the concert hall. He realized that sound reflects the space in which it is recorded, and that choosing the space for recording was a critical factor in the quality of the recording. He also paid particular attention to the music used and the instrumentation. He uses only natural instruments, which produce tones rich in harmonics. Additionally, Steinbach believes that sound carries intention and that the musician’s state of mind is reflected in his/her work. For this reason, he only records when he feels that the musicians are playing with a sense of joy. Steinbach also developed a special device called the envelope shape modulator which enhances the upper frequency range of the music, thereby ‘spectrally activating’ the recordings. The higher frequencies provide information about directional distances of sounds as well as other detailed information about the sound source. In addition to the spectral activation, there are also brief passages on the CDs with intensive filtering so that almost nothing but the overtones are heard. Listening to these ‘high extension’ passages theoretically trains the ear to pay attention to the upper ranges in the sound spectrum. The higher tones are the parts of the sound spectrum that captivate attention and hold interest. These recordings are identified as SAMONAS, which stands for Spectrally Activated Music of Optimal Natural Structure.

Steinbach creates several different levels of compact disc with varying intensities of spectral activation and filtering. The less intense compact discs are available to therapists with an understanding of the implication of filtered sound. These lower level CDs can be incorporated into entry level practices in the use of modulated sound such as Therapeutic Listening™ (see below).

The more intense compact discs require a longer more intensive training period which provides the therapist with more advanced information regarding sound and training in more sophisticated pieces of equipment used in SAMONAS Sound Therapy. To use the title “trained in Samonas” a therapist must complete a five day training course; a year of practical experience and then present documented case studies for peer review. Those who are looking for a therapist with appropriate qualifications may use the therapist database that will be available beginning February 2000 on the web at www.Samonas.com.

Therapeutic Listening™

Therapeutic Listening™ is a term used to describe combined use of a number of electronically altered compact discs in a prescribed manner, but with equipment that can be used in many environments. Sheila Frick, OTR designed this program. continued on page 3
Therapeutic Listening™ implies that the listening programs are individualized to each client and are suited for application in home and school settings. Maximum effectiveness in treatment outcomes is promoted by daily use. The use of modulated and filtered music in conjunction with sensory integrative occupational therapy techniques seems to increase the effectiveness of both treatment modalities. There is commonly a decrease in the time necessary to meet treatment goals in the areas of: modulation, balance and movement perception; an increase in exploration of the environment, sense of physical competence, and drive to challenge one’s praxtic and sequencing abilities; and improved social competence and language abilities.

Therapeutic Listening™ programs can be carried out at home, school or in the clinic with ongoing support from a therapist who is trained in their application. A typical program may be in place for two to six months for initial gains; however, many individuals continue past this time frame or find several of the compact discs useful as part of an ongoing sensory diet. Currently, EASE, and ‘entry level’ SAMONAS’ CDs fall under this use. With the rapid growth of sound therapy, it is likely that other products will also be included in the future. More information can be obtained beginning at www.vittallinks.com.

Listening Fitness

Another home listening program, the Listening Fitness program, is just being introduced in the United States and Canada. This program provides listening training using sound stimulation. It is designed by Paul Madaule who worked closely with Dr. Tomatis and has used the Tomatis method for over 30 years. While the Listening Fitness program shares some similarities with the Tomatis Method, it differs substantially in assessment procedures, audio equipment, and focus and is not regarded as being equivalent. It can be a useful part of a home treatment regimen where the goal is to help an individual to develop and improve both receptive and expressive listening. Like the other listening techniques, Listening Fitness includes a passive phase of intervention. Unlike the other auditory based home programs, Listening Fitness provides an active component or the ‘expresive phase’. This is where one gains control over voice and body through voice exercises (humming, singing, reading in a microphone). The total program lasts about 10 weeks with usually 1 hour of listening a day and a short interruption between the 2 phases. Close monitoring and coaching are provided throughout the program.

Listening Fitness Instructors are carefully screened and trained, and are supervised for 1 year by a highly qualified training team of consultants from the Listening Centre in Toronto. Founded over 20 years ago by director Paul Madaule, the author of When Listening Comes Alive, the Listening Centre is a leader in the field of listening. Currently the Listening Fitness program is being used with children with listening and learning difficulties. At this point in time it is not being used with individuals with a medical or neurological diagnosis such as Autism, ADD, or other neurological disorders.

Interactive Metronome

Recent clinical studies are indicating that another auditory based intervention which is quite different from all of the above listening techniques may also be effective with individuals who experience difficulties with motor planning and sequencing. Interactive Metronome is based on the premise that neural timing difficulties underlie difficulties with learning, cognitive and social skill and interfere with praxis. Occupational therapists have understood that motor planning and sequencing are key facets in the development of functional skills. They have traditionally addressed these difficulties with sensory integrative techniques.

A new PC-based interactive version of the traditional music metronome is now being introduced as a viable tool for individuals with a broad variety of challenges. From existing studies and clinical reports, the most promising areas of use include treatment for persons with difficulties in motor planning and sequencing, rhythmicity and timing, primary motor control, language and speech, learning and cognition and social development and communication. Stanley I. Greenspan, MD, a psychiatrist and clinical professor of psychiatry at the George Washington University Medical School, is the Director of Research for the Scientific Advisory Board of the Interactive Metronome. He states that “the ability to plan and sequence action emerges early in the first year of life. It is essential for adaptive motor development and language development.” He goes on to state that “it is essential for complex social behavior involving a number of sequential steps, such as sharing toys, complex greeting patterns, or simply playing with others.” In a letter to parents of children with special needs, Greenspan states that “the soon to be published research using this tool strongly indicates new hope that the new method may enable children to improve underlying processing abilities for motor planning and sequencing, strengthening their most fundamental learning capabilities.”

A program utilizing the Interactive Metronome entails 15 hours of treatment. The typical training schedule is 3 times a week. In the studies, treatment protocols of less than 3 times a week were not shown to be as effective. More detailed information on current research can be found at the site: www.interactivemetronome.com.

Summary

Given the volume of information available on auditory interventions a parent has a formidable task in selecting the clinician and type of program most suitable for a child’s specific needs. Each of the forms of auditory intervention available has something to offer and each has points of applicability. A clinician trained in several different forms of auditory intervention might reflect less specific bias in methodology and be helpful in guiding the parents through the method of treatment or the proper sequencing of treatments that will be most beneficial.

For more detailed information on Therapeutic Listening™, Auditory Integration Training, SAMONAS, Listening Fitness and Interactive Metronome, contact Vital Links at 919-388-8865 or 608-278-7075. See pg. 18 for course dates.

References

The Story of Me

By Alice E. Gerard

The world of sound, touch, and sight has been uncomfortable, even painful, for as long as I can remember. I vaguely remember being very small and afraid of having my shirt pulled over my head, and I dimly remember the sliminess of finger paints. But much of my early childhood exists in the inaccessible recesses of my mind. When I was a child, I didn’t have the words to describe the sensations. My parents could see that I was experiencing discomfort and that I was not happy. They wanted to help me but they could not. I tried to help myself by using my imagination to escape the pain of overstimulation.

My family lived in a large old house in Syracuse, New York. It had large rooms, ornate doorknobs, and hiding spaces. Next to the house was a trellis. In the spring, the trellis came alive with leaves and brightly colored flowers. The flowers looked like delicate trumpets. I don’t remember ever picking the trumpet flowers. In the backyard, behind an unused and decrepit garage, there was a secret spot, full of weeds and tall grasses. Sometimes, I walked back there, and I imagined myself on a safari in an exotic place really far away. In front of the house and from one end of the block to the other, there were tall trees. They were old, older than me, older than my parents, probably older than my grandparents. I believed that those trees had been there forever, and that they would continue to be there until eternity. I had no idea that they were already diseased and would soon die. They were cut down in 1967 or 1968 and the spots where they had once been sat empty and forlorn.

Living inside the trees was dozens of my imaginary friends. Their world was always cheerful. They came to school with me and helped me with my math. Unfortunately, they weren’t any better at arithmetic than I was. I had another imaginary friend. She lived in the full-length mirror on the landing between the first floor and the second floor of that big old house. I was only vaguely aware that there was a closet behind the door, which was always kept locked. Because the door could not be opened, it held an air of mystery.

I looked at my mirror image and she looked at me. I talked to her. She looked just like me, but she was my exact opposite. I was right-handed, and she was left-handed. I wondered what her world was like. Did she have to go to school? Did teachers honk like geese in her world? Did the screams in her gym class bounce off of the walls and into her ears? Did she have to go to school? Did she have to go to school? Did she have to go to school?

When we moved away from the big house in Syracuse, my mirror twin stayed behind. She lived in only that one mirror that was my window into another reality. The tree people vanished when the trees were cut down. I missed all of my imaginary friends. Their world was more interesting than mine. I always wanted to learn Spanish. In Guatemala, I entered a different world that moved at a slower pace, where I was able to learn and to experience life. And I proved to myself that I was still smart.

When I entered high school, the world went out of control. The hallways were chaotic and frightening, filled with hordes of people in constant motion. The cafeteria echoed like thunder. The schoolwork had suddenly become very difficult. An easy target, I became the object of teasing.

I was sent to a psychologist and a psychiatrist, who probed and tested me, trying to figure out what was wrong with me. I didn’t understand the purpose of all of those tests and only minimally participated. I believed that I was being punished. My parents told me that, if I told professionals about my problems, I would feel better about myself. I didn’t understand that. The following school year, I was sent to a special school for emotionally disturbed children. In reports, that were written for professionals and not for parents or for anyone else who cared about me, the psychiatrist said that I was a “psychotic little girl.” That was in 1969.

From my research, I have discovered that the word “psychotic” was used very freely then to describe children who acted oddly and who did not conform.

After a year in that school, I returned to regular education and eventually graduated from high school and college. I never complained about discomfort but, every now and then, I wondered if I would grow out of my problems. Noise still hurt my ears, causing them to feel as if they were being pricked by hatpins, and I still felt aggressive when people brushed against me, although I tried not to act on those feelings.

At that time, I was not aware that the pain of overstimulation had a detrimental effect on every facet of my existence. Instead, I decided that I was not very smart. When I worked in clerical jobs, I couldn’t figure out how to file the papers and answer the telephones, and type words and numbers and keep all of those tasks straight. When I was a social welfare examiner, I felt so confused by the multitude of forms that I had to fill out and by all of the competing voices in the office that my supervisor’s supervisor told me that I was not capable of learning the job. So, I went off by myself to Guatemala to learn Spanish. In Guatemala, I entered a different world that moved at a slower pace, where I was able to learn and to experience life. And I proved to myself that I was still smart.

Later, I went back to school to become a teacher. I was thrilled with how well I
Socializing is a challenge for a person with a sensory processing problem. One day, I went on a date to a fund-raising party. The goal of the organization throwing the party was to raise money to plant trees. I was immediately attracted to the large buffet table. But, before long, the room, normally used as a gym, was crowded and noisy. I found a chair to accommodate me and my plate and went to sit in a corner so that I could avoid the touch of other people.

My ears were beginning to ring. My date and I went to the smaller front room. Everyone talked at once, saying “Blah, bleat, blah…” My date was happily participating in a conversation. Although I sat next to him, I didn’t understand a word that he said. He seemed calm and relaxed. A speaker approached a makeshift podium and the crowd quieted down. What a relief, I thought.

But the speaker used the microphone. The microphone offered a shrill squeal. None of the others covered their ears nor did they show any sign of discomfort. The speakers said lots of words. Sometimes, people clapped and whistled. The whistles were painful. Then the speakers stopped, and the crowd dispersed to different rooms. My date mumbled something about me.

He had asked me if I wanted a beverage. I did not want food or a beverage. In fact, the combination of perfumes, after shave lotions, and stale cigarette smoke lingering on bodies and hair was beginning to make me nauseated. I could neither eat nor drink anything. I knew that, for someone as food oriented as I am, loss of appetite is a sure sign that something is wrong.

Earplugs. They were in my pocket somewhere. But, I had waited too long. It felt as if someone were jabbing at my eardrums with seam rippers. I looked longingly at the door. But the exit was blocked by a horde of people milling around the door. I would never be able to get past that crowd. I would have to go around one of the sides. I did not want the crowd to touch me nor did I want to touch the crowd.

The voices around me became increasingly distorted. I reminded myself that this was supposed to be fun. After all, this was a fund-raiser for trees. And trees are good. I have always had a special affinity for trees. But I needed a headache remedy. I was sure that fun shouldn’t be quite this painful.

When I got home, I tried to relax. I felt a sudden urge to flap my hands as ferociously as possible. I gave in to that urge and got rid of a little of the tension. I tried writing in my diary but I couldn’t think without getting my thoughts interrupted by the noise. Instead, I lay back in my bed and fell asleep. When I woke up the next morning, my ears still hurt, and my eyes felt puffy. It was too hard to get out of bed.

The world of books, on the other hand, has always been a welcoming place for me. In books, I could find knights and crusaders, kings and queens, space aliens, and talking fish. I made up my mind that I wanted to be a writer, so that I could invent a world and populate it with characters from my mind. And so, I have.

It seems that I have had my processing problems all of my life. And I also know that they don’t go away. Someday, I will have a little house in the woods, which I will share with my cat and maybe also with a dog, and I will draw and paint and write, away from the city and the noise. But, until then, I will have to live in the world of too many sensations and not enough quiet spaces.
GERD Case Continued (from pg. 1)

(3) prescription medications that focus on neutralizing stomach acid, blocking its production, or that stimulate the stomach to empty its contents faster into the intestines; and

(4) surgical procedures, such as vagotomy, to permanently block the ability of the stomach to empty its contents upwards, even when desirable or necessary to do so.

Infants and children with chronic gastro-esophageal reflux disease (GERD) frequently are referred to pediatric occupational therapy because of the primary and secondary medical, nutritional, and developmental sequelae to which this condition often leads.

Introduction

Bobby is a 7 year 4-month old child who was referred for an occupational therapy evaluation of sensory processing by his pediatric gastroenterologist. The child had suffered from reflux since infancy, and medical management had centered on trying various dietary interventions and medications to control it. He had recently had an endoscopic evaluation, and the physician and family were considering the most drastic step, that of a vagotomy, which would surgically sever the vagus nerve’s connections to the stomach.

However, Bobby’s gastroenterologist felt reservations concerning this solution to the problem. Rather than occurring spontaneously, Bobby’s reflux appeared to be elicited by olfactory and gustatory sensory aversions. As this is not typically the case in children who respond well to surgical intervention, Bobby’s physician urged the family to seek “an occupational therapy sensory evaluation” in order to rule out this possibility, and hopefully avoid surgery.

Bobby and his mother were initially interviewed by this author, and occupational, developmental, and sensory histories were taken to determine the best course of action. The information revealed in the interview pointed to the appropriateness of administering the Sensory Integration and Praxis Tests and clinical observations, which were performed one week later.

Occupational Disruptions Attributed to the Condition in This Child

Bobby and his mother spoke of the worry and frustration their family felt over his reflux, but also about his general sensory aversions. At home, there was constant concern in the family for his nutritional status and his being significantly underweight. Mrs. A. seemed consumed with trying to identify and prepare foods that Bobby could tolerate. His limitations affected the quality of mealtime at home, as well as eating out at restaurants, for the entire family. His aversion to many food smells meant that Mrs. A. needed to take precautions in what she prepared for the rest of the family, because of the kitchen odors produced.

Mrs. A. reports that, as an infant, Bobby and she struggled to bond with each other. She often felt conflicted in needing to provide her son with vital nourishment, while at the same time feeling herself the source of his pain and discomfort. “I always felt like I was in this vicious cycle of trying to nourish him, and then feeling guilty about the painful results afterwards.”

With regard to school, Bobby had been absent many days, and often had to go home early because he was experiencing nausea and reflux. His excessive absences nearly caused him to have to repeat First Grade, and it was feared this situation might repeat itself in Second grade. Even when he managed to make it through a full school day, his mother reported that he often arrived at home stressed, exhausted and/or sick.

Furthermore, because the odors from the school cafeteria evoked severe nausea in Bobby, he could not participate in a typical lunchtime with his classroom peers; but instead had to bring his lunch from home and eat alone in the classroom, accompanied only by his teacher or the assistant. Bobby felt that he was perceived as “different” by his peers, but seemed to be able to compensate socially with his friendliness, intelligence, and other positive personality attributes. Other children might not have fared so well.

Summary of Developmental and Sensory History Information

Mrs. A. reported that Bobby was slightly pre-term, delivered via C-section, and spent 10 days in the NICU with possible sepsis. He had frequent and severe middle ear infections since 6 months of age, requiring myringotomies (tubes) in both ears when only 11 months old. She stated that his gross motor milestones were 4- to 5-months delayed. Bobby was “emotionally very hesitant about walking”, which his mother attributed to poor balance. Cognitively, however, Bobby appeared to be extremely bright and his mother stated he made very good grades in school.

In addition to the reflux itself, Mrs. A. reported that there have been severe feeding difficulties throughout Bobby’s infancy and childhood. He was initially breastfed, and refused to accept a bottle when it was introduced. He went straight from nursing to cup drinking. At the interview, both Bobby and his mother stated that he disliked all foods with the exception of chicken, cinnamon rolls, and two or three other bland foods. Aside from taste and smell aversions, Mrs. A. stated that Bobby also seemed to have difficulty managing some foods in his mouth.

Other aspects reported by Bobby and his mother were that he was very “hypersensitive” to touch, and became “saturated” very quickly if other children were touching him, hanging on him, or wanting to engage in rough-house play. Mrs. A. described Bobby as typically a mild-mannered child. Yet when these incidences occurred, she reported he “lost it” and struck out at the other children. Bobby and his mother also stated that he was very particular about his clothing type and textures. Mrs. A. also mentioned that Bobby displayed unusual types of clumsiness, such as bumping into the sides of doors while walking through them, running into other people when he intended to walk around them; and over- or under-stepping obstacles in his path.

Evaluations Administered and Results

The Sensory Integration and Praxis Tests (Ayers, 1989) and clinical observations were administered to Bobby. These 17 individual tests assess certain aspects of sensory processing or perception related to learning, language, and behavior regulation. Several tests also measure aspects of motor coordination and praxis. Praxis is defined as the ability to conceptualize, plan, and execute skilled movements needed for object manipulation, tool use, constructional tasks, organizing the environment, and other occupational behaviors.

During most of the test, Bobby was cooperative, socially engaging, and verbal, continued on page 9
### SII PRODUCTS ORDER FORM

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<td>28 Instant Songames (audio tape &amp; booklet)</td>
<td>$20.00</td>
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<tr>
<td>034</td>
<td>Teachers ask About Sensory Integration (audio tape &amp; booklet)</td>
<td>$20.00</td>
</tr>
<tr>
<td>035</td>
<td>Marvelous Mouth Music (CD &amp; booklet)</td>
<td>$20.00</td>
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<tr>
<td>036</td>
<td>Nourishing the Caregiver (CD &amp; booklet)</td>
<td>$18.00</td>
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<td>040</td>
<td>Sensory Integration in the Schools (10 audio cassetts &amp; manual)</td>
<td>$98.00</td>
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Date: ______________________________________________________ Subtotal _________

Name: ______________________________________________________ Sales Tax _________

Address: ___________________________________________________ (CA only) Shipping _________

City:___________________________________  State: _______  Zip: ______

Telephone #: ____________________________  US 15% Outside Us 30% TOTAL _________

Credit Card #: ______ - ______ - _______ - _______ Exp: _____/____ □ VISA □ Mastercard Check #: _______

Date charged: ____________             Date Mailed: ____________      By Whom: ______________

Spring/Summer 2000 7 Sensory Integration Quarterly

This issue made possible by the generous contribution of Vital Linkss and Vital Sounds
Link to Learning, Living and Laughing  
by Antonia Llull “Tonina”

**Question**: Can lying on your stomach help you read better and longer? Can it also help you play longer, harder, faster?

**Answer**: YES!

**Learning**

1. By lying on your stomach, propped up high on your forearms with your shoulders back, you help your neck & shoulder girdle become more stable. This supports your eye muscles which need to work together for fun reading.

2. By having your infant (3 months-12 months of age) lie on his/her stomach during play time, you are helping develop the ribcage and breathing muscles to support a lot of active playing with friends and family.

**Living**

1. Play board games lying on your stomach propped up high on your forearms with your shoulders back...don’t let your neck drop back onto your shoulders... pretend you’re a giraffe with a long neck looking over that board game.

2. Play scooter board or skate board games on your stomach. Races around obstacles and treasure hunts are great for games on your stomach. Races around obstacles and treasure hunts are great for games on your stomach.

3. Infants can explore their hands, different toys and textures while on their stomachs. You can put them over a ball on their stomach for GENTLE bouncing and rocking while they hold their necks up high and prop themselves on their arms.

**Laughing**

Why didn’t the skeleton cross the road?

He didn’t have the GUTS!!!

Lessons for Learning, Living and Laughing  
by Linda Blues

**Question**: Can wiggling your tongue help you to draw a square or write a letter of the alphabet?

**Answer**: Surprisingly, YES! (Keep reading and see how!)

**Learning**

1. By moving your tongue straight in and out of the middle of your mouth, you will help your brain to learn about a straight vertical line, such as you would need to make the number one or to move your pencil from top to bottom.

2. By moving your tongue from your left cheek to your right cheek you will help your brain to learn about space that goes across horizontally, for example the 2nd line of the letter “t” or the lines that go across a square.

**Living**

1. Look in the mirror and make your tongue go in and out - do this three times! Put pudding, applesauce, whipped cream or a food you REALLY like to eat on the tip of your finger. Come out and touch your finger with your tongue! Get your marker and paper out and make your marker go from top to bottom.

2. Look in the mirror and put a dot of food to the left and right of your lips. On your mark..., get set..., GO: Fetch the food with your tongue! Now, on paper make your marker go from left to right on the page.

3. Look in the mirror and put a dot of food way high on the roof of your mouth. Send your tongue up to lick it off. Now, get your paper out and make your marker go in a diagonal line.

**Laughing**

Where do bees go when they get married?

On their honey-moon!

by Ashley M. from Anniston, AL

---

**Sensory Integration in the Media**

Each day the general public awareness regarding sensory integration is growing. It has caught the attention of the media and the subsequent coverage (while not always accurate) is increasing the visibility of the term, awareness of the problems relating to dysfunction and the value of occupational therapy to treat it. Here is some of the coverage that has been noted by SII in the recent past.

In August of last summer, Business Week magazine ran an article about sensory integrative dysfunction. It was followed in January 2000 by an extensive article in Baby Magazine. Dr. T Berry Brazelton, syndicated columnist for the New York Times, when queried by one of his many readers about sensory overload as a cause of anger referred them to Sensory Integration International/ as a resource for those seeking further information on sensory integrative disorders. The June issue of Parent’s magazine ran an article entitled “The Little Girl Who Hated Hugs.” This article gave a parent’s perspective of a child dealing with sensory integrative dysfunction. Vicki Mlyniec, the author, thought it was vital to list SII/The Ayres Clinic as a resource on page 85 of the magazine.

More recent coverage included a piece on 20/20 filmed at Children’s Hospital in Denver with Dr. Lucy Miller. Unfortunately, time constraints prevented a clear description of sensory integrative dysfunction and its treatment as a whole. Some misconceptions may have been conveyed with respect to identification and treatment of SI dysfunction, since the examples that were aired related specifically to sensory defensiveness, a sensory modulation disorder.

SII had a chance to broaden the perspective on the Dan Stein, MD national radio show that brings information on health and well-being to the public. After the Parents Magazine article, Dr. Stein contacted SII and invited Patricia Oetter, MA, OTR, FAOTA, for a live interview aired on August 14. Ms. Oetter had the opportunity to discuss various aspects of sensory integrative dysfunction and treatment in response to Dr. Stein’s questions. The transcript of the program will be on-line at ‘givemetalk.com’ in early September.
telling many stories to illustrate experiences of which the tests reminded him. He considered all responses carefully, and was not impulsive. Towards the end of the session, he seemed to become anxious as the somatosensory portion of the battery was administered, but otherwise regulated his behavior and attention well.

The results of assessment are presented in the table below. Scores below -1.0 SD are suggestive of dysfunction in the area assessed. Scores are listed lowest to highest, and some test sub-scores (e.g. time taken; separate hand scores, etc.) are given where believed to be clinically relevant.

**Interpretation**

Bobby's test profile was not likened by the computer to any SIPT cluster group. However, his D2 coefficient was closest to the cluster of somatodyspraxia, and his profile contains many key scores representative of that group. (It is likely that the very low LTS and very high FG scores raised the D2 value above 1.0, but those two tests are not critical to making a diagnosis of somatodyspraxia.) Added to this, the behavioral data clearly suggest severe sensory defensiveness, particularly impacting the tactile, olfactory, and gustatory systems.

**Somatosensory Processing**

Although Bobby had only two low scores on somatosensory tests (LTS: -3.0 SD; FG: -1.04 SD), it is noteworthy that the degree of error on nearly every LTS item was several centimeters. Also of interest, the time score on Manual Form Perception (Part Two) was -2.67 SD, suggesting that Bobby's processing of tactile spatial stimuli through his hands was extremely slow. He often passed his hand over the same shapes several times without seeming to remember he had already explored them.

Difficulty with modulating light touch input, both on the body and possibly intra-orally, were evident from the interview data, and also from observation of Bobby's responses during somatosensory testing. Although he seemed stressed and uncomfortable, his obvious desire to please the adults observing him, as well as his own self-control abilities, restrained him from responding too negatively.

**Bilateral Integration and Praxis**

Both during testing and functional activities, Bobby displayed immaturities in development of lateralization of function and midline integration. This is supported by:

<table>
<thead>
<tr>
<th>Below Normal Limits (&lt;-1.0 SD)</th>
<th>Within Normal Limits (At or above -1.0 SD)</th>
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<tbody>
<tr>
<td>Localization of Tactile Stimuli -3.00 SD</td>
<td>Graphesthesia -0.66 SD</td>
</tr>
<tr>
<td>Postural Praxis -1.90 SD</td>
<td>Praxis on Verbal Command -0.61 SD</td>
</tr>
<tr>
<td>Bilateral Motor Coordination -1.89 SD</td>
<td>Finger Identification -0.51 SD</td>
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<tr>
<td>Oral Praxis -1.55 SD</td>
<td>Manual Form Perception -0.21 SD</td>
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<tr>
<td>Motor Accuracy (-1.44 SD; pref. hand &lt; non-preferred)</td>
<td>Sequencing Praxis +0.10 SD</td>
</tr>
<tr>
<td>Post-Rotary Nystagmus -1.08 SD</td>
<td>Constructional Praxis +0.27 SD</td>
</tr>
<tr>
<td>Manual Form Perception Time-Taken Score -2.67 SD</td>
<td>Space Visualization +0.59 SD</td>
</tr>
<tr>
<td>Figure-Ground Perception Time-Taken Score -2.33 SD</td>
<td>Design Copying +0.94 SD</td>
</tr>
<tr>
<td>Finger Identification: Left Hand -1.04 SD</td>
<td>Kinesthesia +1.08 SD</td>
</tr>
<tr>
<td>Clinical Observations/History</td>
<td>Standing &amp; Walking Balance +1.22 SD</td>
</tr>
<tr>
<td>Severe oral and body tactile defensiveness</td>
<td>Figure-Ground Perception +2.00 SD</td>
</tr>
<tr>
<td>Poor prone extension</td>
<td></td>
</tr>
<tr>
<td>Slight hypotonicity</td>
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</table>

Lack of development of preferred hand skill over non-preferred hand.

Parental report that he used to perform many unilateral tasks with his Left hand; he now performs them with his Right; but still kicks and throws a ball with his Left hand/foot.

A depressed Bilateral Motor Coordination score (-1.21 SD).

Difficulty with bilateral simultaneous diadochokinesia.

Difficulty with bilateral simultaneous thumb-finger serial opposition.

With regard to praxis, Bobby's performance on the Postural Praxis (-1.90 SD) and Oral Praxis (-1.55 SD) tests indicate a significant difficulty with imitating movements of the body, limbs, and parts of the mouth. The time score on Praxis on Verbal Command was in the low-normal range (-0.75 SD) which suggested that he took a little longer than is typical to process a response to a verbal praxis command. Given his language precocity, it is surmised that the problem is in the output system rather than the auditory processing system. Sequencing Praxis and measures of visuo-praxis (DC, CPR) were in the normal range.

**Application of Evaluation Results to Presenting Problem**

The results of this evaluation strongly suggest that a significant trigger for Bobby's reflux response was related to sensory modulation disorder. This disorder seems to be particularly manifested by olfactory, gustatory, and tactile defensiveness. However, he also showed a more general set of difficulties with managing the oral-sensory/oral-motor demands of the eating process. It is difficult to say which came first, but atypical sensory processing in the mouth and oral dyspraxia had clearly been mutually reinforcing in inhibiting Bobby's adequate nourishment and engagement in contexts and occupations centered around eating.

**Treatment**

This case presents an interesting juxtaposition of both medical and educational concerns for this child. Although Bobby's primary disorder was health-related (reflux), it significantly impacted his daily participation in his educational program. Due to the recognition of this fact by the Director of Exceptional Children's Services, the recommendation of occupational therapy intervention using a sensory integration approach in the school continued on page 10
covering the point could not be discussed here. However, the point

Occupational task performance. As they

movement challenges and related school

treatment Bobby’s practical and bilateral

goals and related school.

job was to increase the length and frequency of daily school attendance, as well as lunchroom meal participation, via reduction of sensory defensiveness and normalizing as many aspects of the eating process as possible. The family was also desperate to avoid surgical intervention, so an intensive sensory diet program both at home and at school was instituted immediately.

Bobby’s sensory diet included the use of (1) total-body deep proprioceptive input offered at regular intervals throughout the day, and as desired by Bobby; (2) opportunities for vertical vestibular input via trampoline use at home and at school; and (3) the Wilbarger protocol. Bobby’s parents, teachers, and school O.T. collaborated in ensuring that the program was maintained and completed as prescribed.

Goals related to reducing reflux and increasing normal eating included:

• Increase frequency and daily length of school attendance.
• Increasing the repertoire of odors, tastes and textures of foods Bobby would accept.
• Increasing the frequency and duration of eating in the cafeteria with his peers, without becoming nauseous.
• Increase weight gain.
• Increase oral-motor planning skills with food (suck, swallow, bite-tug, chew, bolus management).

In addition, weekly Occupational Therapy services at school were instituted to treat Bobby’s practical and bilateral movement challenges and related school occupational task performance. As they are not the focus of this article, they will not be discussed here. However, the point that should be taken that it would have been a mistake to view Bobby’s sensory-induced reflux as an isolated “olfactory-gustatory problem”, a mistake often made by less experienced clinicians who do not realize that such apparent disorders are usually only the tip of the SI dysfunction iceberg.

Outcomes

Results from the intensive treatment measures instituted were seen almost immediately. After two months, Bobby had gained 4 pounds. He and his mother maintained a food diary, and Bobby added new foods to his repertoire on an almost weekly basis, reporting to his OT the latest new taste sensation. His attendance at school became regular and early dismissals for nausea became almost nonexistent. Now two years later, his attendance at school is well within acceptable guidelines, and absence for reflux seldom, if ever, occurs. He now participates in lunchtime in the school cafeteria with his peers 100% of the time. However, though increased from the original baseline, Bobby’s overall repertoire of acceptable foods at mealtime still is “way below” what his family would consider nutritionally acceptable. Sensory integration re-evaluation and consultation with a nutritionist is being recommended. The possibility of a behavioral pattern which has become ingrained should also be contemplated.

Bobby’s other goals related to somatodyspraxia-related occupational performance problems were successfully addressed over the next 24 months, and Bobby was discharged from OT at the end of 3rd grade.

An in-depth scholarly discussion of this case by Ricardo C. Carrasco, Ph.D., OTR, FAOTA will be published in the next issue.

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From the Editor

I am very pleased to be the new editor of the SI Quarterly. It is my pledge to do the following:

- return the quarterly to a regular publication schedule
- provide high quality articles and information for all of our readers
- have the Quarterly serve as a forum for exchange of ideas about the treatment and theory of sensory modulation problems and sensory integration dysfunction.

To do this we need writers. As you can see by this edition, many types of submissions are appropriate, among them are:

- treatment ideas
- articles on theory
- articles on application
- new modalities
- research reports
- book reviews
- case presentations
- tips from and for parents
- questions/answers
- updates on clinics around the world
- international news
- etc. etc. etc.

Submission ideas are only limited by your imagination. If you are not sure if your writing is ‘good enough,’ give it a try anyway. We will work with you through the editing process to get your point across to the reading audience in the best way possible. Please submit to: jkimball@mailbox.une.edu or mail to: Dr. Judith Kimball Occupational Therapy Department University of New England 11 Hills Beach Rd Biddeford, ME 04005

Phone inquiries: 207-283-0170 X2234

I know you will enjoy this issue of the SI Quarterly. Coming in the next issue is a scholarly critique of Susan Stallings-Sahler’s CASE PRESENTATION done by Ricardo Carrasco, and a case presentation highlighting the use of Cortical Electrical Stimulation (CES) by Renee Okoye. We are sure you will look forward to reading both of these excellent submissions.

We wish to thank Vital Links and Vital Sounds for the financial support of this issue!

Judith G. Kimball, PhD, OTR/L, FAOTA

Editor
Wisdom from the Past for Current Issues

Dr. A. Jean Ayres was not only the recognized original architect of the body of information referred to as sensory integration theory and treatment, but she was an inspiration, a mentor and role model. What follows is a reprint of a response she made to a critique of sensory integration as a ‘controversial’ treatment for children with learning disabilities. She offers some insights, clarifications and many pithy observations that are as meaningful today as when the response was published by Academic Therapy in 1977.

While recognition and acceptance of sensory integrative occupational therapy as an approach to treatment has vastly improved, there are still many who continue to criticize research results and disparage the concepts even in the face of obvious, life changing improvements on the part of clients. Perhaps Dr. Ayres comments will give us encouragement to pursue the clinical truths that she pioneered and upon which others have built.

Eileen Richter

A Response to Defensive Medicine
by A. Jean Ayres

A critique which ignores the results of scientific inquiry and distorts the material reviewed is suspect. The book Sensory Integration and Learning Disorders, to which Robert L. Sieben, MD, makes reference, was prepared after research demonstrated with acceptable statistical probability that children with certain types of learning disorders who received sensory integrative therapy and special education gained more academically than a matched control group receiving special education only (Ayres, 1972).

Subsequent research has further defined the neurobehavioral concomitants that identify the learning disability which is most apt to respond to sensory integrative therapy and also suggests the disability least likely to be responsive. The second study demonstrated, again with statistical significance, that learning disabled children with hyporesponsive postrotary nystagmus and who received sensory integrative therapy and special education were more apt to gain academically than a matched control group receiving special education only. Furthermore, learning-disabled children with hyporeactivity to the vestibular input were less likely to gain from special educational procedures alone than were those learning-disabled children without attenuated nystagmus (Ayres, in press). The vestibular nuclei and the connections that produce postrotary nystagmus lie in the brain stem.

Dr. Sieben errs in assuming the theoretical foundation of sensory integrative therapy implicates the brain stem only. While these lower brain levels (not “sub-conscious”) are considered important, they have never been presented as the exclusive seat of all types of learning disorders. Nor has my research been the only one to result in emphasis on lower brain level dysfunction. Both the work of Julio de Quiros (1967) and of Jan Frank and Harold Levinson (1973) have identified extensive vestibular or vestibulo-cerebel-

continued on page 17
The courses listed below are offered by Sensory Integration International. Refer to page 13 for a schedule of dates and locations for the courses below. To register, use the form on page 14; for additional information or for new course information, please call 310/320-2335 or write to SII, 1514 Cabrillo Avenue, Torrance, CA 90501-2817.

### A Neurobiological Foundation for Sensory Integration (Theory)

Based on the work of Dr. A. Jean Ayres, this intensive 3-day course will provide you with a foundation for understanding the neurobiological principles of sensory integration. It is open to all interested education- and health-related professionals and parents. Because of the in-depth information provided, this course is an important foundation for understanding the SIPT and for completing the SIPT certification process.

**Objectives:**

- Describe the role of each sensory system in the development of body scheme, perceptual organization, motor skills, attention, emotion, self-esteem and cognition.
- Discuss the neurophysiological processes which contribute to sensory modulation and discrimination, postural control, praxis, lateralization of motor functions and hemispheric specialization.
- Identify evaluation methods and assessment tools currently available.
- Identify key constructs that guide sensory integrative intervention strategies.

### Intervention Strategies for Sensory Integration

This 3 day course is designed for occupational and physical therapists with a beginning to intermediate level of expertise in treatment utilizing a sensory integrative approach. Participants will be guided in the appropriate use of sensory integration procedures through lectures, and through videotaped treatment sessions by Dr. A. Jean Ayres and other expert clinicians. Small group case study discussions will allow participants to share expertise and develop intervention strategies. A variety of intervention ideas will be presented.

**Course objectives**

After attending this course participants will be able to:

- Assess the need for therapeutic intervention based on results of evaluation, parent and teacher reports and observations made in the clinic.
- Make the appropriate selection of activities, space and equipment for treatment of specific types of sensory integrative disorders and formulate plans for implementing group and individual programs.
- Develop goals and objectives related to Individual Educational Programs (IEPs) and justify the appropriate utilization of a sensory integrative approach within the school setting.
- Relate the SIPT to intervention and understand how SIPT results influence intervention planning.

### SIPT Certification Track

The Sensory Integration and Praxis Tests (SIPT), developed by A. Jean Ayres, Phd, OTR, is a comprehensive, standardized evaluation tool which measures the sensory integration processes that underlie learning and behavior. By showing how children organize and respond to sensory input, the SIPT helps pinpoint specific problems associated with learning disabilities, behavior problems and functional abilities. The entire SIPT battery can be given in about 2 hours. It is computer-scored by Western Psychological Services. For each child tested, a profile is issued that graphically summarizes the child’s performance. The report also provides helpful information for the child’s parents, such as descriptions of the individual tests and what they measure.

Those wishing to enhance their credibility and learn a marketable new skill, may become certified in the administration and interpretation of the Sensory Integration and Praxis Tests. Certification will provide a specialized credential that is recognized by professionals around the world.

**Step 1: SIPT Administration**

This 5 day course that offers intensive training in the administration of the SIPT. Small group sessions are incorporated into the course and practice time is scheduled to give participants ‘hands on’ opportunities to learn the test.

**Step 2: SIPT Interpretation**

This 3 day course is designed to teach participants the process of interpreting SIPT results, help them make appropriate recommendations and to prepare professional reports. Case studies, lectures, small group problem solving sessions and group discussions will be utilized to illustrate the process.

**Step 3: SIPT Competency Exam**

The exam has been developed according to accepted psychometric principles which allow for the objective assessment of the basic level of knowledge and skills a professional must possess to competently administer and interpret the Sensory Integration and Praxis Tests.

### Treatment Practicum

This is a five day, hands on experience that provides the occupational, physical or speech therapist with opportunities to practice and receive feedback about their treatment skills in a supportive environment. Discussions of current sensory integration theory and practice as well as related assessment and intervention principles and strategies will also assist in the development of observation and clinical reasoning skills.

This practicum is considered intermediate to advanced level. Participants should have a minimum of three years of pediatric experience including treatment of children with sensory processing disorders. Contact SII for details and registration materials.
## Sensory Integration International 2000-2001 Course Schedule

1514 Cabrillo Avenue • Torrance, CA 90501-2817 • 310/320-2335 • Fax: 310/320-9982

<table>
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### Course Faculty

- **theory**
  - Marie Anzalone, PhD, OTR, FAOTA
  - Peg Bledsoe, MA, OTR, FAOTA
  - Anita Bundy, ScD, OTR, FAOTA
  - Barbara Burris-Wavrek, MS, OTR
  - Kim Bryant, MS, OTR
  - Ricardo Carrasco, PhD, OTR/L, FAOTA
  - Steven J. Cool, PhD, FAAO
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  - Lisa Fox, OTR
  - Scott Fox, CCC-SLP
  - Sheila Frick, OTR
  - Barbara Friedman, MS, OTR/L
  - Jo Murphy Hyland, MS, OTR

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  - Mary Kawar, MS, OTR
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  - Kathryn Nicholson, OTR
  - Patricia Oetter, MA, OTR, FAOTA
  - Renée Okoye, MHS, OTR
  - Gretchen L. Reeves, PhD, OTR, FAOTA
  - Betsy Slavik, MHS, OTR

- **interpretation**
  - Karen, Spector, MS, OTR/L
  - Susan Stallings-Sahler, PhD, OTR, FAOTA
  - Ann Trecker, MS, OTR/L
  - Irene DeAquino Villar, PhD, OTR
  - Kay Walker, PhD, OTR
  - Noreen Wallace, OTR
  - Kristi K. Worrell, OTR
  - Susan Young, MS, OTR, FAOTA

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This issue made possible by the generous contribution of Vital Linkss and Vital Sounds
**Course Registration Form**

1514 Cabrillo Avenue • Torrance, CA 90501-2817 • 310/320-2335 • Fax: 310/320-9982

<table>
<thead>
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Name_________________________________________Title ____________________________________

Home # _________________________________ Home Fax # __________________________________

Home Address __________________________ City _____________________ State _____ Zip _______

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**SIPT Track**

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**Method of Payment**

- □ Enclosed is my check #____________ payable to Sensory Integration International (SII) in the amount of $___________.
  (if outside the United States, use international money order or international credit card)

- □ Mastercard □ Visa □ Money Order

- □ Charge $__________ in US funds to my credit card

#_________ - _________ - _________ - _________ Expires ______

Cardholder Name: __________________________________________

Authorized Signature _______________________________________

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For courses held at hotels, reservations must be made with the hotel 30 days prior to the scheduled course date.

**Fee Payment:** (course fees include course materials and breaks)

- □ I want to become a member of SII now and receive discounts on these and future courses. (See chart for dues information)

  **APPLICABLE DISCOUNTS**

  - □ Membership ($20 discount)
  - □ Early Bird (up to 4 weeks prior to course-$25 discount)
  - □ Check ($10 off registration fee when paid by check)
  - □ Student/Parent (1/2 of the non-member fee; applies only to Theory Course. No other discounts apply. For non-professional parents and full time students with verification of 12+ current semester units)

- □ This is a group (3 or more) registration

  - 2 day course deduct $20/person
  - 3 day course deduct $30/person
  - 5 day course deduct $40/person

---

**Cancellation/transfer and late fees**

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Date: ______________________
Sensory Integration International
Membership Registration Form

1514 Cabrillo Avenue • Torrance, CA 90501-2817 • 310/320-2335 • Fax: 310/320-9982

Date: ___________ ☐ New ☐ Renewal ___________

Name_________________________________________ Title ________________________________

Home # ____________________________ Home Fax # ____________________________

Home Address ___________________________ City __________________ State _____ Zip ______

Work # ____________________________ Work Fax # ____________________________

Work Address ___________________________ City __________________ State _____ Zip ______

E-mail Address ____________________________________ 1st choice of contact: ☐ Work ☐ Home

Membership Type Domestic International

• Lifetime $1500 $1500
• Contributing $100 $120
• Professional Organization
  1-5 members per year $275 $300
  6-10 members per year $500 $525
  11+ members per year $750 $775
• Professional
  1 year $60 $80
  2 years $110 $140
  3 years $150 $210
• Parent
  1 year $50 $60
  2 years $70 $90
  3 years $90 $120
• Student (full-time status with verification) $20 $30

Method of Payment

☐ Check ☐ Mastercard ☐ Visa ☐ Money Order

☐ Enclosed is my check # ___________ payable to Sensory Integration International (SII) in the amount of $___________.
(if outside the United States, use international money order or international credit card)

☐ Charge $__________ in US funds to my credit card #__________-__________-__________-__________ Expires _______ _____

   month/year

Cardholder Name: ___________________________ Authorized Signature __________________________

Spring/Summer 2000 15 Sensory Integration Quarterly
This issue made possible by the generous contribution of Vital Linkss and Vital Sounds
What’s Happening?

Our new millennium has started out with a bang. Each day general awareness regarding sensory integrative dysfunction among members of the public is growing. Keeping with our commitment to resources on sensory integration, we have expanded our course catalog, and relaunched the “Sensory Integration in the Schools” tape series. Our therapist locator on the internet receives over 500 inquiries per night, and we have added The Classified Age Educational Association of the Republic of China in Taiwan to our list of international affiliates. Over the past year, we were listed in the following publications as a resource - the August 1999 issue of “Business Week” magazine, in January 2000 an article appeared in the New York Times by Dr. T.B. Brazelton entitled, “Helping Son Control His Anger,” and the June 2000 “Parents” magazine ran an article entitled, “The Little Girl Who Hated Hugs.”

Resources for Parents and Families

We are very excited to be able to offer our first “Parent’s Course”. Several of these courses have been planned for the end of this year with more to follow in the year 2001! These courses will help parents and families and any other interested parties with children with sensory integration dysfunction learn about the disorder, the available treatment and meet others who are dealing with similar problems. Please check our schedule for more information. Don’t be left out, enroll now.

Gift Certificates from SII/The Ayres Clinic are now available for parents, grandparents, friends, professionals and anyone else interested in a great gift for birthdays, holidays, etc. Certificates may be used to help offset treatment expense, educational course expense, the new Parent’s Course, and publications purchased. This is a great way to show support of loved ones, friends, and anyone who might need SII/The Ayres Clinic services.

The “Parents Guide to Understanding Sensory Integration” is being translated into Spanish and should be available within the next few weeks. This is a great way for individuals to use their Gift Certificates.

Fund Raising Efforts

SII/The Ayres Clinic has introduced three new clubs. For donations of $5.00-$10.00 become a member of the Education (Hugs) Club; for donations of $10.00-$20.00 join the Treatment (Bolster) Club; for donations of $30.00-$40.00 join the Equipment (Ball Pool) Club, and for any amount above $50.00 join any of the above clubs. Tax deductible support of these clubs helps fund the following:

Education (Hugs) Club helps fund research in the cause of sensory integrative dysfunction.

Treatment (Bolster) Club helps fund the most up to date new treatment methods used in our clinic.

Equipment (Ball Pool) Club assist in purchasing new equipment, refurbish old equipment, and help purchase the equipment to be used with new treatment strategies (as with intensives).

Restoration Fund Drive

To help deal with the financial burdens facing the organization since 1996 (see last issue of the newsletter), the Executive Committee of the Board of Directors implemented the ‘SII/The Ayres Clinic Restoration Fund’. The following supporters became Year 2000 Patrons by their contribution of $500 or more:

Peg Bledsoe
Developmental Concepts

Steven J. Cool

Lisze & Glen Lee

Mary Kawar

Professional Development Programs

Nancy & Craig Shirley

Dove Rehab

The following supporters became Restoration Fund Contributors:

Lynette Burke

for Kids, Pediatric Occupational Therapy Services,PC

Thomas G. Hoel

Occupational Therapy Consultants, Inc.

Special Children Center

Therapeutic Specialists, Inc.

TherapyWorks, Inc.

Special Thanks

To everyone who supports our organization we wish to say a very special “Thank You” as we know without your support we could not go on.

A few individuals need to be thanked personally for contributions to painting the Ayres Clinic.

Ann Orozco for spearheading, contributing to and helping paint the Ayres Clinic. It looks very fresh and inviting.

Lisze & Glen Lee

Erick Leurs

TRW Employees

Hughes Employees

Call for SIPT Observers

SII is currently looking for individuals who are interested in becoming SIPT mechanics observers. This role is crucial to assuring quality and competency in SIPT administration which is a part of the unique SIPT Certification process. The qualifications for the SIPT Administration observer are: SIPT Certification, 2+ years experience using the SIPT, completion of at least 20 SIPT administrations, plus training with a qualified observer. Please fax SII (310-320-9982) to request an application. Deadline: October 1, 2000.

SII Instructor Openings

The role of the Education Committee of SII consists of refining, updating and improving the quality of current courses as well as developing new courses for the general public, parents, teachers, physicians, psychologists, OTs, PTs, SPLs, etc. SII receives numerous requests for SII Theory courses, SIPT Administration & Interpretation Courses and courses specifically related to parents, educators and other professionals.

If you or someone you know is interested in joining the SII faculty or has content ideas for other courses, please fax (310-320-9982) us for more information. Deadline: October 1, 2000.
A Common Misconception

That sensory integrative therapy focuses on the development of motor skills, including postural responses, is a common misconception assumed by those unaccustomed to thinking in terms of sensory processing mechanisms. Some learning disorders are associated with inefficiency in sensory processing, and it is on sensory input and its organizing mechanisms that sensory integrative therapy places emphasis. Movement produces sensations and helps organize it; for that reason it is used.

It is not claimed that developing postural skills in themselves develops academic skills. Improved postural responses are a “spin-off” from therapy for the learning-disabled child. It is the improved efficiency in processing vestibular and somatosensory input and systems related to them that is believed to enhance academic learning, if there is a disorder in those systems. If there is no dysfunction in processing of input over those sensory channels, therapy emphasizing activation of those systems could not be expected to change achievement that is dependent upon additional factors.

Perhaps Dr. Sieben’s reasoning stemmed from his associating the vestibular system solely with posture and balancing—a generally accepted relationship. That the vestibular system does enter into the processing of other types of sensory input has been hypothesized by this theoretical system, but not without supportive neurobiological evidence. It is admittedly not completely clear how this occurs, but neither is it clear how the brain “learns” to read. Yet, it does.

Dr. Sieben’s reasoning is flawed by lack of adequate “proof” of the effectiveness of the procedures he employs, yet he proposes medication as a means of controlling hyperactivity and makes other claims regarding use of drugs without citing any scientifically derived data to support his statements.

It is clear that Dr. Sieben’s knowledge of vestibular system is limited. A sophisticated neuroscientist would not refer to the brain stem as “the part of the nervous system which joins the brain to the spinal cord.” The brain stem is part of the brain. At any rate, to quibble over the brain levels at which dysfunction results in various types of learning disabilities is to misdirect energies.

A philosophy that can accept only specific research that failed to demonstrate support of the procedures. He is more guilty of failing to provide “proof” for his statements than are those he attacks.

Furthermore, he complains of money wasted on procedures not yet demonstrated effective, yet reports are prevalent that establishing a medication for a hyperactive child employs a trial-and-error approach. There are seldom objections to the resultant waste of money because most people accept the method as representative of the current state-of-the-art of medical care for hyperactive children.

A philosophy that can accept only drugs, exploring psychosocial matters, and special education as methods of coping with learning disabilities might be likened to that attitude which, many years ago, resisted the idea that physicians should wash their hands before delivering a child.

Problems are solved by a series of explorations, trials, gropings, and we hope, some productive research, all of which is dependent upon divergent thinking and practice. All professionals are limited in their knowledge and capacity to deal with the difficult problems presented by the child who cannot learn, but none is as limited as the person resistant to new ideas.

References


Sensory Comfort
Making Life More Comfortable for Children and Adults with Sensory Processing Differences

Sensory Comfort Catalog carries products such as socks without toe seams, noise reduction headphones, comfortable underwear, bed linens, tactile bath towels, toys, school products, informational books, videos and cassettes, music CDs and many other items selected especially for children and adults who have sensory processing differences! (Also called Sensory Integration Dysfunction).

Order our free catalog by calling 1-888-436-2622 or visit out web site at www.sensorycomfort.com

Sensory Comfort
Jeremiah Hart House* 405, The Hill * Portsmouth, NH 03801
Phone: 603-436-8797 * Fax: 603-436-8422

Spring/Summer 2000
This issue made possible by the generous contribution of Vital Linkss and Vital Sounds
INTERNATIONAL NEWS

International News from Europe about Sensory Integration Courses and Research, by Lynn J. Horowitz, MHS, OT, certified in SIPT, and SCSIT.

COURSES AND RESEARCH: Teachers of sensory integration courses from one country bring knowledge and experience to another country.

Anita Oosterbaan of the Netherlands and Grethe Wallentiensen of Norway, who is living in the Netherlands, are returning for a second working visit to Norway, for 4 days of courses in early June. These sessions have been organized by Sylvia van Zuiden of Norway and with the support of the Norwegian Occupational Therapy Association. There will be two groups of 23 occupational therapists attending.

With permission of Mary Sue Williams and Sherry Shellenberger, they will be presenting for a second group “How Does Your Engine Run?” For the therapists returning, they will evaluate how they adapted the “Engine” Program to the Norwegian settings and go on to delve into “Play and Sensory Integration”. This presentation will draw upon knowledge from Patti Oetter, Pat Wilbarger, Sheila Frick and Lynn Horowitz, and of course the presenting faculty. Both of these occupational therapists are teachers at the Transfer Group Rotterdam, a post-diploma higher educational institution which has incorporated the Netherlands Center of Sensory Integration into its course offerings.

The Sensory Integration Network (UK and Ireland) invited Sheila Frick to London to present her Therapeutic Listening in June.

Anita Bundy was this group’s guest for their study day last June. Her presentation was titled: “The Art of Assessment and Assessing Sensory Dysfunction without the Aid of the SIPT”. She used the ABC and the Brunincks Oseretsky as examples of tests which could be useful for identifying S.I. dysfunction. A schematic representation of hypothesized sites of S.I. dysfunction from the new edition of the S.I. Theory and Practice book was presented.

RESEARCH: Netherlands and America The Motor Observations, a revised and expanded version of the Clinical Observations, originally developed in America, has come back for a pilot project after major revisions in Netherlands. Presently in a research version, it has 74 items including those for tactile defensiveness, gravitational insecurity, and several items for neurodevelopmental reactions. Items are scored on a 5 point scale. It is a diagnostic test to be given in one hour. Presently normative data has been collected on 500+ Dutch children. Lynn J. Horowitz, MHS, OT and Dr. W.R.A. Duurkoop are the initial investigators, with consultative services from Dr. Mary Margaret Windsor. The U.S. pilot project was begun to collect data to determine if this test can be useful to therapists in the States. Pilot project data collectors were trained by Lynn J. Horowitz, supported by the team of Cheri Waide in Phoenix and Jackie Kilburn in Michigan.

Rega Shaefgen, who has a large Sensory Integration theory and therapy educational service in Bergen, Germany has also developed a clinical observation manual. Two presentations have been given in Leipzig, Germany at the German Association for Occupational Therapy in May describing its development. Plans are underway to collect German normative data.

News from your countries is really of great interest to the rest of the world. Please help us make the SI International organization even more International by sending your news for the next SI Quarterly to me E-mail: HYPERLINK mail to: lynnsi@worldonline.nl or to B. Klawuversstraat 5, 2082 GM Santpoort-Zuid, Netherlands.

Vital Links Workshops
Listening with the Whole Body
With Sheila M. Frick, OTR

This workshop will present a very specific model of treatment using the auditory system to promote integration and organization of attention, behavior and movement.

September 15-17  Detroit, MI
November 3-5  Los Angeles, CA
December 1-3  Phoenix, AZ
January 12-14, 2001  Orlando, FL
February 9-11, 2001  Dallas, TX
May 10-12, 2001  Milwaukee, WI
June 29-30, 2001  Albuquerque, NM

Contact Vital Links at 919-388-8865

September 24-25, 2000  Houston, TX
November 5 & 6, 2000  Chicago, IL

Treating Sensory Modulation Disorders: STEPSI
Clinical reasoning model for treating children with challenging behaviors who lack modulation of sensory stimuli. Model (STEPSI) for treatment planning, implementation and monitoring. STEPSI is a principle-based model that breaks down treatment into easily understandable components. Tracy Stackhouse, OTR, Julia Wilbarger, MS, OTR and Sharen Trunnell, OTR

October 29-30, 2000  New York, NY

Autistic Spectrum
The relationship between current research in neurology and clinical practice. Learn strategies to increase attention to task, help child become more successful in ADL and improve social interaction. Instructors: Margaret Bauman, MD & Rosemary White, OTR/L. Sunday & Monday

December 10, 11 & 12, 2000  New York, NY

The Whole Child
This new 3 day course combines sensory-motor-hormonal and immune function to address developmental disorders. Learn successful treatment strategies incorporating the S.A.N.E. Approach (Sleep, Activities, Nutrition and Environment) to address “The Whole Child”. Instructors: Anne Buckley-Reen, OTR and Debra L. Dickson, RPT

Contact: TSI (718)692-1929 or 888-7THERAPY or fax: (718) 338-3393. www.therapeuticservicesinc.com
The mission of Sensory Integration International is to promote understanding of sensory integration and its impact on everyday life.

Sensory integration is the brain’s ability to interpret and organize information from sensation for use. Sensation includes: vision, hearing, taste, smell, touch, balance, gravity, position and movement. Problems in sensory integration may result in learning problems, hyperactivity, distractibility, poor coordination and balance, contribute to difficulties at school, at home, at work and in play.

SII serves the general public as well as the healthcare and education communities by providing or supporting the following:

- Educational and training programs
- Information and educational materials
- Assessment and treatment services
- Networking of professionals, clients and families
- Sensory integration research

SII’s treatment and training center, The Ayres Clinic, continues the pioneering work of Dr. A. Jean Ayres in evaluation and treatment of children with sensory integrative dysfunction and in the development of sensory integration theory and its applications.

SII is committed to supporting the development of knowledge throughout the world. To that end international exchange of information and expertise is encouraged.

SII is a non-profit organization.

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Fax - (310) 320-9982
email - sensoryint@earthlink.net
Web site address -
www.sensoryint.com

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Address Correction Requested