New Body-Based Therapies

For Autism, ADD, and Other Childhood Disorders

Maya Muir

"Some days my own kids drive me nuts," says Patti Lans, O.T., in private practice at Albuquerque Therapy Services, New Mexico. "Then I say, wait a minute, what's happening here? It's too much noise, too much input—that's what is getting to me. And that's exactly the same response many of the 'autistic' children I treat feel all the time. Autism is just the extreme."

Ms. Lans uses two techniques, sensory integration therapy (SIT) and CranioSacral therapy (CST), in a very specialized approach to the damaged children who come her way. These techniques and others, such as Rolfing, contrast with many of the previous treatments for conditions such as autism, developmental delays, learning disabilities, attention deficit disorder (ADD), and sometimes attention deficit hyperactivity disorder (ADHD). Previously, behavioral and educational approaches bent on teaching practical skills have been the norm for autistic children and medication has been mandated for children with ADD or ADHD. But practitioners of new body-based approaches assume that these children act with their own logic that is a response to their experience of their bodies and of the world. If this experience can be decoded, the pain at the heart of it can be healed, and the child can be coaxed into a more normal framework.

Because each body-centered approach springs from a different discipline, each approach brings different insights and techniques to bear on treatment. Many practitioners employ several approaches, either in combination or drawing on whichever appears most useful for a particular child. Eminent child psychologist Stanley Greenspan, M.D., clinical professor of psychology, behavioral sciences, and pediatrics at George Washington University Medical School and a supervising child psychoanalyst at Washington Psychoanalytic Institute, both in Washington, D.C., now includes body-based techniques in his treatment of children to achieve what he calls an "integrated approach."

Sensory Integration

Jean Ayres, Ph.D., O.T.R., an occupational therapist, developed the theory of sensory integration based on an assessment of problems in neurologic development that create inabilities to process sense stimuli, whether these stimuli are vestibular, proprioceptive, or tactile.

"Some children I see are 'gravitationally insecure,' or what I call 'groundbound,'" says Ms. Lans. "Others are unable to screen out the visual or audial stimulation around them. We find some kids crave only pickle juice. Some are driven crazy by a grain of sand in [a sock]. Then there are the 'fussy babies'—the ones who scream for the first two years of their lives. Essentially, they don't feel secure in their own bodies."

When children cannot interpret their sensory experiences meaningfully, higher-order learning skills are difficult to master. Sensory integration therapy is designed to strengthen the brain's ability to handle and interpret the world, laying a foundation on which specific other skills can be more easily acquired.

Patty Oetter, M.A., O.T.R., F.A.O.T.A., now director of the Ayres Clinic in Torrance, California, learned of Dr. Ayres' work in the early 1960s while working in a psychiatric ward for children. "The kids there had a lot of motor problems," says Ms. Oetter. "They had a very hard time with many different kinds of sensation. I became convinced Jean Ayres was on to something." Ms. Oetter went to work with Dr. Ayres, joining the team that elaborated the theory of sensory integration and methods for evaluating children in light of it.

"Now we use the sensory integration and praxis tests, which have become very sophisticated and work well—for certain kinds of children," says Ms. Oetter. "For all children, we also draw out a sensory history, observe them clinically, and interview their caretakers."

"We watch to see what children choose when they play and how they are creative and use language," says Ms. Lans. "We ask their caregivers when children get tired, what foods and textures they like, what they avoid. What are their sleep patterns? Are they hard to wake up? Do they get locked into watching TV? Are transitions difficult?"

The design of treatment is very individual. "Each child's body knows what it needs," says Ms. Oetter. "Our job is to be silent, be with it, to help it do what it wants."

"Overall, we try to see that children have the opportunity to experience sensation in a safe way."

Frank Faustine, M.S., S.L.P., C.P.C., is a speech pathologist at Albuquerque Therapy Services, working with Ms. Lans. "Language is symbols, or codes, for ideas," says Mr. Faustine. "This population doesn't get that symbolic meaning well. So I work pragmatically to engage [these children]. I encourage them to interact with the environment, people, and objects.

"Many children, whether they have autism [or] developmental or psychological problems, rarely feel comfortable and safe," Mr. Faustine continues. "Therapists who go in with their own agenda[s] may violate the fragile sense of safety these children possess. I try to listen in all kinds of ways, including to their body language. Slowly, I become part of where they are in the environment.

"I provide stimulation, but only what feels safe," Mr. Faustine continues. "Because kids' greatest joy is through movement, which affects their arousal system, I use it often. Many of these kids have shut down so much. Movement wakes them up. Then they can use their whole brains and have fun. I tap into a lot of the joy there, which I bring out and shape into communicative function."

Dr. Ayres postulated that children experiencing sensory overload may develop "sensory defensiveness," or characteristic modes of coping, ranging all the way from avoidance of the source of pain to seeking it out.

Dr. Ayres developed pressure touch with joint compression to breach this defense, using tactile stimuli to affect the body's neural organization. In this protocol, a child's arms and legs are briskly but lightly brushed for two to three minutes every hour of the working day, followed by pressure on the joints. "It's a way to work on the nervous system," says Ms. Lans. "We think the sense receptors in the skin are alerted by it. The deep pressure is very grounding. Using both, we get optimal sensory input to the body."

Frank Faustine, M.S., S.L.P., C.P.C., Albuquerque Therapy Services, works with a patient.

In addition, treatment rooms are characteristically filled with soft pillows for jumping on, suspension equipment for swinging or climbing, and a multitude of textures for feeling. "Heavy work"—climbing, pushing, and pulling—is encouraged. Therapists often use music or, when they can, movement in water.

"Overall, we try to see that [children have] the opportunity to experience sensation in a safe way," says Ms. Oetter, "and to give them the comfort to take risks to deal with other issues."

The Controversy Over Sensory Integration

Sensory integration therapy has many passionate adherents, but it also has detractors. Even the latter admit that ideal studies comparing similar

"I teach children how to integrate into life."

Case Studies of Body-Based Therapies

Patty Lans Describes Sensory Integration Therapy

"We had a three-year-old girl come here for treatment who appeared 'autistic.' She didn't interact much and she was delayed in motor skills, cognition, speech, and language. She insisted on eating cheese puffs and almost nothing else and her bowels weren't working well. She had a characteristic high-pitched squeal, and often hit or bit.

"We found that one thing she liked was music, so we sang while we worked with her. We had her listen to music through earphones and had her pick the range of pitch and rhythm she was comfortable with. Slowly we worked with her to expand the range she could tolerate—like doing pushups for the eardrums.

"At the same time, we found she needed to do subtle work with her body on the ground. Then we got her moving around on the floor and using pillows, and finally up onto a swing. We did a brushing program with her and worked particularly to desensitize her mouth, which, like much of her body, was hypersensitive.

"Now she's in first grade. Although she's still a picky eater, the range of foods she eats is much broader. Her bowel problem is 75 percent improved. She almost never hits or bites anymore, and if she gets upset, we can pull her back from it. She's probably functioning at the level of an average four-year-old at problem solving and language, and that's a big improvement."

Frank Faustine Describes Sensory Integration Therapy

"We had one four-year-old boy, who was referred to us with a diagnosis of autism. It was obvious that he had some intelligence, but he spent all his time screaming and biting his mom. The first thing I did was get him to transfer his attention to me, so he kicked and bit me. Then I became safe to him. Mostly these kids attack who they feel safe with—just like a normal kid does. And that's the point, really, they are very close to normal.

"Then I redirected his aggression into play. We kicked together, which worked to transfer his energy from anger to play, meanwhile always talking to him, mapping words for him. Eventually we got to climbing and other kinds of movement, always looking back to be sure he felt safe, that he was ready to take these risks.

"That was 10 months ago. Now he's a happy kid, speaking in short sentences, ready for integration into a normal kindergarten. He's found a lot of joy in living and in communication.

"Strict behavior management works well to train children, but that's not what I'm aiming for. I teach children how to integrate into life."

Lee Nugan Describes CranioSacral Therapy

"We had a three-year-old girl with cerebral palsy come in for the 2-week intensive program here at the Upledger Institute. Her parents brought her in because of problems associated with her physical restrictions. During the craniosacral sessions, fierce anger at her mother arose. We all worked with her to help her release it. The anger kept coming up and being released through several sessions.

"The mother, who wasn't aware of what was happening in those sessions, said to us, 'I don't know what you're doing in there, but it's really changed my relationship with my daughter. She's not furious with me anymore.'"

CranioSacral Therapy for Cerebral Palsy

O. B., a four-year-old Russian boy, had suffered a birth trauma and had cerebral palsy that left his body too rigid even to crawl. Through the International Services of Hope, a medical relief agency, O. came to the United States for treatment. He found his way to the Upledger Institute's program for brain and spinal cord dysfunction for a 2-week intensive therapy program that included physical therapy, acupuncture, massage, play therapy, and CranioSacral therapy.

O.'s hands were so tight he could not pick anything up with them when he arrived. "During the course of the program I watched his hands become more open," says Susan Trider, P.T., director of the program. "He was soon reaching for toys and food. By the end of 2 weeks, he was able to sit cross legged and get up on his hands and knees in a crawling position, and there was a general decrease in his spasticity."

"Actually, there's an equal amount or more research on sensory intagration therapy that shows it *is* effective."

children treated with SIT to children treated with other modalities and untreated children are difficult. Children's conditions vary so widely that "similar" groups are difficult to find and controlling for normal maturation—which often brings improvement on its own—is impossible.

However, studies have been attempted and these studies provide fodder for considerable controversy. A metastudy of sensory integration's first decade was conducted in 1982 by Kenneth Ottenbacher, Ph.D., O.T.R., an assistant professor in the Occupational Therapy Program, University of Wisconsin–Madison. On the basis of 8 studies suitable for inclusion out of 49 reviewed, Dr. Ottenbacher concluded that "subjects in sensory integration therapy performed significantly better than members in control groups."[1]

A later (1992) study of 103 children at the Hospital for Sick Children in Toronto, Canada, compared children treated with integrative and motor therapies, concluding that both had positive effects on motor performance, but that motor therapy resulted in greater improvements.[2] In 1993, a report on efficacy studies in Toronto and Alberta led investigators to conclude that "sensory integration therapy is no better than more traditional treatment for children."[3]

The most negative assessment, however, was delivered in 1994 by Theodore Hoehn, Ph.D., a research associate at Vanderbilt University in Nashville, Tennessee, and Alfred Baumeister, Ph.D., a professor at Vanderbilt University. They strongly criticized the methodology of all previous studies of SIT that had positive findings and challenged many of the therapy's assumptions and achievements. For example, they studied Dr. Ayres' analysis that hyponystygmus (an involuntary lateral oscillation of the eyes) was an accurate indication of vestibular-system impairment in a child. If so, reasoned Drs. Hoehn and Baumeister, these children should be particularly aided by SIT. Yet in 5 out of 6 studies they reviewed, this was not the case. They concluded that "an obvious interpretation of [previous positive findings] is that the observed changes...were due to changes in extravestibular variables, to maturation, and/or non-specific treatment effects....There are absolutely no unique benefits to SIT."[4]

Birth Problems to Look For

Aspects of obstetrically complicated deliveries correlating with restricted craniosacral rhythms:

1. cesarean section, especially without labor
2. high forceps delivery
3. induction of labor for reasons other than inconvenience
4. fetal distress in utero
5. breech delivery
6. prolonged labor
7. precipitous labor
8. toxemia of pregnancy
9. severe trauma during pregnancy which results in pelvic fracture.

John E. Upledger, D.O., O.M.M., The Upledger Institute, Inc., with an adult patient. Photo © 1996, by Camera Graphics, North Palm Beach, Florida.

"Hyponystygmus? We've moved away from that as an outcome measure for SIT," says Sharon Cermack, Ph.D., professor of occupational therapy at Boston University in Massachusetts, who teaches SIT alongside other treatment modalities. "We're really looking now at improvement in the ways children function, instead.

"Actually, there's an equal amount or more research on SIT that shows it *is* effective," Dr. Cermack continues. "But there is some validity in criticisms of the method-

"Ten sessions of CranioSacral therapy have brought permanent, significant improvement to 80 percent of the dyslexic patients we've seen."

Lee Nugan, M.A., The Upledger Institute, Inc.

ology of some of the studies. For example, many studies have been small, but that's because it's very difficult and expensive to do a large study on this subject. Also, we haven't yet really answered the question of whom SIT is most effective for."

A study now under way at Children's Hospital in Denver, Colorado, is designed to answer methodologic questions of the past. Principal investigator Lucy Miller, O.T., Ph.D., will be measuring a number of physiologic factors before, during, and after 20 sessions of SIT in an effort to provide objective and replicable results. A control group will be comprised of children who receive no treatment, then they will be treated and monitored. A second group will receive placebo treatments. Thirty-five children will participate this year, with more to follow if funding allows. Several other similar studies are under consideration around the country, says Sharon Trunnell, O.T., a master clinician in the project. At the least, these studies should advance the debate over SIT's effectiveness.

Meanwhile, SIT is widely employed for a range of conditions. Dan Kerlinski, Ph.D., a child psychiatrist and assistant professor at the University of New Mexico in Albuquerque, primarily treats severely damaged children. "Brain development is so complex," Dr. Kerlinski says, "and so many things can go wrong with it, that—with the patients I see—I think it's overly optimistic to think that some SIT or CranioSacral therapy will do the trick. Neither is enough. SIT can bring about maybe a 5–20 percent improvement.

"However, I do recommend it," concludes Dr. Kerlinski. "I think patients should have the opportunity to experience those modalities."

CranioSacral Therapy

Trained in manipulation as an osteopath, John E. Upledger, D.O., O.M.M., the Upledger Institute, Inc., Palm Beach Gardens, Florida, developed CST after observing a pulse separate from the heart or breathing rate generated within membranes surrounding the skull and spinal cord. (The pulse is caused by the increase and decrease of cerebrospinal fluid that is created by the brain. This fluid builds up until the volume reaches a certain point; then it is drained into the bloodstream.)

His curiosity piqued, Dr. Upledger unearthed the work of an earlier osteopath, William Sutherland, D.O., who had experimented with pressures on different parts of the cranium. Putting this information together in the late 1970s, Dr. Upledger led a multidisciplinary team at the Osteopathic College at Michigan State University, East Lansing, to investigate further.

Dr. Upledger found that the craniosacral system could be palpated anywhere on the body, although the bones of the skull, sacrum, and coccyx were the easiest. He learned to interpret rate, amplitude, symmetry, and quality of the pulse to diagnose a number of conditions in the body.

The technique Dr. Upledger developed to manipulate this system was extremely gentle—usually less than 5 grams of pressure—primarily to adjust the bones of the skull to allow it to move freely in response to changes in pressure.

By removing restrictions on the craniosacral system, malfunctions in the central nervous system could be ameliorated, Dr. Upledger postulated. Moreover, given the central role of this system in running the body, many other conditions should be positively affected as well, particularly the body's ability to heal itself.

In 1985, Dr. Upledger founded the Upledger Institute to expand his practice and make training available. There, CS

"When undergoing CranioSacral therapy, children may experience strong emotions relating to their births, accidents, or other issues."

is now used to relieve pain and to treat traumatic brain and spinal-cord injuries, scoliosis, multiple sclerosis, orthopedic problems, chronic fatigue, and other conditions.

Many of Dr. Upledger's clients have been children with a variety of conditions. "We've had great success working with dyslexic and hyperkinetic kids," says Dr. Upledger. "Ten sessions of CST have brought permanent, significant improvement to 80 percent of the dyslexic patients we've seen."

For 3 years, Dr. Upledger studied children's behavior each year for half a year at the Genessee Intermediate School District Center for Autism in Flint, Michigan. Dr. Upledger postulated that many of the children's behaviors, which appear bizarre, were reasonable responses to their interior experiences. He observed that the areas of the cranium where children banged their heads were usually areas most restricted to normal craniosacral motion.[5] "The membrane in those kids was very tight, the craniosacral rhythm almost nonexistent," Dr. Upledger recalls. "But we found that when we performed an anterior–posterior adjustment, the patients voluntarily stopped their self-abuse. When they were laterally decompressed—on the temporal lobes which are the seat of emotions—they gained affect, and could express emotion."

In 1978, Dr. Upledger studied 203 grade school children, in whom he found a positive relationship between elevated total craniosacral motion restriction scores and behavior problems or learning disabilities.[6]

Craniosacral evaluation and therapy have also been applied to newborns with interesting results. In a review of 54 infants born in Waterville Osteopathic Hospital in Waterville, Maine, Catherine Kimball, D.O., found an overall correlation between abnormal craniosacral structural findings and shorter second stages of labor. Infants with precipitous births may particularly benefit from manipulation, says Dr. Kimball. "Early treatment of structural abnormalities may enhance brain and central nervous system function," Dr. Kimball concluded, "and therefore prevent various learning disabilities."

Lee Nugan, M.A., a psychotherapist at the Upledger Institute, counsels children who come there for CST, and she stresses that therapists are trained to handle the emotional issues that come up during therapy.

Often, children do react strongly. This is not surprising, says Dr. Upledger, who has come to believe that "organs, tissues, and perhaps even individual cells possess memory, emotional capacity, and intellect." Physical release may precipitate emotional release—and both components aid recovery, says Dr. Upledger. (Dr. Upledger has developed a procedure called SomatoEmotional Release,® but that protocol is beyond the scope of this article.)

"When undergoing CST, children may experience strong emotions relating to their births, accidents, or other issues," says Ms. Nugan. "Sometimes they even take on aspects [of] their parents' issues and pain. Children may go through their birth[s] again. You can tell by the positions they move into and the parent[s] will often say, 'That's exactly how the birth took place.'"

Briah Anson, M.A., Heartland Personal Growth Center, uses Rolfing on a patient. Photo by Steven Johnson.

Controversy and CranioSacral Therapy

Interestingly, much of the controversy surrounding CST has focused on Dr. Upledger's analysis of anatomy. In the

Recommended Reading and Watching

Growing Right with Rolfing [video]
By Briah Anson, M.A., 1996
Can be ordered from:
Heartland Personal Growth Center
4901 Main
Suite 406
Kansas City, MO 64112
(816) 931-0944

Sensory Integration and the Child
By Jean Ayres, Ph.D., O.T.R.
Los Angeles: Western Psychological Services, 1972

Bodywork: What Type of Massage to Get—and How to Make the Most of It
By Thomas Claire
New York: William Morrow, 1995
See Chapters 2 (Rolfing) and 13 (CranioSacral Therapy)

Sensory Integration: Theory and Practice
By A. Fisher and E. Bundy
Philadelphia: F.A. Davis Company, 1991

The Growth of the Mind and the Endangered Origins of Intelligence
By Stanley Greenspan, M.D.
Reading, MA: Addison Wesley Publishing Co., 1996

CranioSacral Therapy
By John E. Upledger, D.O., O.M.M., and Jon D. Vredevoogd, M.S.A.
Seattle: Eastland Press, 1983

Your Inner Physician and You
By John E. Upledger, D.O., O.M.M.
Berkeley, CA: North Atlantic Books and Palm Beach Gardens, FL: Upledger Institute Enterprises, 1991

United States, the bones of the skull had been thought to be immovable; nor was the existence of the craniosacral pulse suspected. Dr. Upledger's discoveries challenge accepted wisdom. A number of studies by investigators other than Dr. Upledger now support his contentions.[7–9]

As to studies to prove the efficacy of CST, Dr. Upledger demurs. "I'm not interested in working in double-blind situations," he says. "If I come into contact with someone who needs CranioSacral therapy, I'm not going to withhold it from him."

In the meantime, the Upledger Institute is flooded with referrals, many from M.D.s. And while there is some question as to whether CST is useful for as many complaints as Dr. Upledger believes it is, no one has accused it of harming anything other than patients' pocketbooks.

Rolfing or Structural Integration

A chemist and research scientist, Ida Rolfe, Ph.D., drew on osteopathy, chiropractic, yoga, and other forms of bodywork to develop her own systematic approach to restructuring the body by stretching the myofascia and guiding it into proper position. Muscle and connective tissue, pulled out of place by stress and accidents, drag bones, and eventually the posture of the whole body, out of alignment. Rolfing, or structural integration, frees the myofascia to release these distortions. The technique involves deep pressure by a therapist using hands and arms.

Patients often report vivid emotional memories while being Rolfed.

Patients often report vivid emotional memories while being Rolfed. "Emotions are intimately involved with our muscular tone," Dr. Rolfe said. "They reflect the state of balance or imbalance in our bodies."[10]

Dr. Rolfe employed her technique with children to improve the development of their bodies. Children are typically brought to Rolfers for physical problems. Less often, children are brought for autism, ADD or ADHD, or the other conditions discussed above, but as interest in bodywork rises, more clients of this kind seek Rolfers out.

Briah Anson, M.A., a certified advanced Rolfer and founder of the Heartland Personal Growth Center in Kansas City, Missouri, states: "Many of the children I've worked with were handicapped or had bodies that didn't form well. After 10 sessions (the Rolfe regimen) their IQ[s] may not have changed, but [these children] are usually far more responsive to their environment."

Ms. Anson is receiving more referrals of children with ADD or ADHD from psychologists these days. "In every case, these children become more focused and centered after treatment," she notes. In Portland, Oregon, Jan Rizzo, a certified advanced Rolfer also reports an upsurge of interest among parents of ADD children. "Rolfing addresses the symptoms of compensation, not their main problem," she says. "These kids need

Resources

The Rolfe Institute of Structural Integration
P.O. Box 1868
Boulder, CO 80306-1868
(800) 530-8875
Fax: (303) 449-5971
e-mail: Rolf_Institute@rolf.org

Sensory Integration International
1602 Cabrillo Avenue
Torrance, CA 90501-2819
(310) 320-9986
Fax: (310) 320-9934

The Upledger Institute, Inc.
11211 Prosperity Farms Road
Palm Beach Gardens, FL 33410-3487
(561) 622-4706
Fax: (561) 627-9231

For many children, finding the suitable "key" will unlock their capacities.

several levels of treatment, including nutritional counseling and craniosacral work."

An Integrated Approach: Dr. Stanley Greenspan

One might think Dr. Greenspan would be an unlikely advocate for body-based therapies for children with developmental delays, autism, etc. And, true to the psychiatric discipline, Dr. Greenspan believes that emotions serve as "the mind's primary architect." Yet, the therapy he engages in shares much with SIT practitioners.

"First we woo [autistic] children into relationships," says Dr. Greenspan. "We build on emotional exchanges with their caregivers, beginning with simple facial expressions." He describes Steven, a two-year-old boy who would engage only in rubbing one spot on the carpet. Dr. Greenspan asked his mother to sit down next to him and rub the carpet nearby. Within two days, the mother, with coaching, turned the rubbing into a game of cat-and-mouse, and the child was engaged on a new level.

Like Ms. Lans, Dr. Greenspan begins treatment by paying profound attention to what a child's behavior tells of his or her inner experience. "The first developmental level is making sense of sensations," says Dr. Greenspan. "We all have different experiences of our bodies. Severe emotional problems, even psychoses, may result from the failure to master this most elementary level of developmental tasks."

In the case of Steven, Dr. Greenspan concluded that the child used rubbing the carpet to comfort himself in a world with stimuli that he found to be overwhelming. Dr. Greenspan discovered that Steven was comfortable with a narrow band of sound and a firm touch on the back. He helped Steven's mother use those stimuli to build her relationship with her child until his range of tolerable sound and touch could be expanded slowly.

In a review of more than 200 children diagnosed as autistic, with whom Dr. Greenspan's group worked, most made some improvement in mental and emotional functioning when parents and therapists were able to provide suitable "keys" to working with the children. Between 58 and 78 percent made substantial improvements.[11]

Like SIT therapists, Dr. Greenspan holds that symptoms of children with ADD or ADHD may also spring from an oversensitivity to sights or sounds or their processing. For many children, therefore, finding the suitable "key" will unlock their capacities. Not surprisingly, Dr. Greenspan works with therapists who employ SIT, which he considers to be "very important for some children.

"There's a growing awareness in the field of child psychiatry and medicine that these are extremely complex problems we're dealing with," says Dr. Greenspan. "These children all have their own physical characteristics which lead to different patterns of social interaction, and these cause different emotional patterns. Only an integrated model that treats all these components will do the job." □

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