

New Possibilities

A revolutionary approach for transforming the lives of children with special needs



By Anat Baniel

A child is born. It is a miracle. For the first few weeks, the little one sleeps a lot, nurses, occasionally cries, and needs to be held and rocked. Her arms and legs move, and her body twitches—all involuntary movements. Soon her family notices she is doing things she was unable to do before. When she is picked up, she holds her head up by herself. She reaches out to touch her mother's face. She clings to a parent's finger or a small toy. She rolls over. By the time two years have passed, this little person can walk, talk,

even argue, and she continues to grow, learn, and change at an incredible rate.

As parents and caretakers, we provide for the child's needs and provide important support in her development. Yet, we have limited understanding of how these remarkable changes and developments come about, and we certainly have no direct control over when and how these developmental changes actually occur.

Sometimes this magnificent, spontaneous process of development does not take its normal course. Cerebral



palsy (CP), brain and nerve injury, autism, birth defects, genetic disorders, sensory integration disorders, and a host of known and unknown causes interfere with the child's ability to grow, learn, and perform like other children. The parents and therapists of these children are left with the question and challenge of how to best help their child.

Many traditional modalities—physical therapy, occupational therapy, medical intervention, as well as most massage and bodywork—tackle the child's limitations head-on and try to get them to do what they should be doing according to their age and developmental stage. When an eighteen-month-old child with CP can't sit up, she will most likely be repeatedly placed in a sitting position with the hope that she'll somehow get strong enough and develop the muscular coordination to do it herself. A ten-year-old boy who can't read gets hours of extra tutoring. The arm of a girl with brachial plexus injury is massaged and moved around in an effort to relax it and increase its range of motion.

With the Anat Baniel Method (ABM), a very different approach is taken. Rather than focus on the limitations and try to directly fix the presenting problem on the level of muscle, bone, joints, and soft tissue, the focus is shifted to where the most powerful solutions actually lie—with the brain. Built upon the work of Moshe Feldenkrais,

D.Sc., ABM works by communicating with the brain of the special needs child and facilitating the formation of new neural connections and patterns, irrespective of the cause of the child's limitations. As part of the work, nine requirements for the brain to form new and effective patterns of movement, thought, and feeling, are implemented. Noting that movement and awareness of self are primary tools for communicating with the brain and bringing about the potential for learning and change, I expanded the application of the same scientific

principles of Feldenkrais work to include not only body and movement, but also emotional, intellectual, and spiritual development.

We know from brain research and from anecdotal accounts how amazing, magnificent, and often surprising the brain is. We also know that the potential of the brain is much greater than any of us has manifested. With ABM, we know that to be true also for the brain of the special needs child. We call upon these potentials to help children with special needs surpass their current limitations.

Moving Beyond Limitation—Jasmine

Jasmine was ten months old when her mother brought her to me for the first time. She was born with her right forearm and hand missing. Her right arm ended at her elbow. The mother was concerned because Jasmine was not crawling. She had already seen a physical therapist who had tried to get her to crawl, but it didn't work. Jasmine found it upsetting and cried a lot.

I knew there was no way to "fix" the arm; it wasn't going to grow the missing parts. But at the same time, I knew that with some help, Jasmine's brain could figure out how to crawl despite her condition. Every newborn and infant learns to recognize their arms, hands, and the rest of their body through thousands of small movements and experiences. Even though the hands and arms are there from the beginning, in terms of the brain, their image develops gradually over time.

With her left hand and arm, Jasmine got to press on her mother's breast and feel the push back on her spine; she got to clench her fist and be touched by others, but not with her right arm. She got to experience very little with her right upper arm. For her brain, there really wasn't a right arm, so it couldn't figure out how to use it and place pressure and weight on both arms to find a way for her to crawl. In addition, since the arms were of different lengths, Jasmine's brain had to figure out a unique way to organize her whole body so she could crawl successfully.

With this understanding and knowing that Jasmine had a perfectly healthy brain, I set out to provide the child with experiences that would get her brain to recognize her right arm and connect it to the rest of her body.

After laying Jasmine on her left side on the work table, I immediately felt that the right side of her rib cage was stiffer and less developed than the left. I placed my right hand on the left side of Jasmine's spine, touching a couple of vertebrae, and tried to very gently and very slowly move them up just a bit. There was no movement—Jasmine's brain didn't recognize what it was that I was indicating for it to do. I continued to gently and slowly move Jasmine's spine, ribs, and pelvis in a variety of different ways until suddenly Jasmine's right shoulder began moving; Jasmine's brain began recognizing her right shoulder and arm. At that point, I gently twisted Jasmine's spine and rib cage to the right until the tip of her right elbow—the arm with the missing parts—began touching the table. This gave Jasmine's



Anat Baniel works with Isabel who has periventricular leukomalacia/cerebral palsy. "When she first came to me at 15 months old, she seemed frozen," Baniel says. "She was unable to roll over on her belly or back, she could not use her hands, her eyes were crossed, and she had no language. After the first lesson, she began rolling onto her belly and after the second lesson, she was able to roll onto her back." Here, Baniel slides Isabel's left knee up to indicate to her, and her brain, to come up on her knees. Isabel picks up on the non-verbal cue and brings herself up on her hands and knees. Photos by Joseph Feinstein.

brain new information about accomplishing this particular task with that arm.

I next rolled Jasmine on her back. I lifted her left hand toward the ceiling, pressing on it gently to remind Jasmine's brain of the experience of bearing weight. Then I lifted her right arm—the one with the missing parts—and gently tapped and pressed on the tip of the elbow, providing her with the same experience. In this way, I offered Jasmine's brain some of the missing information it required in order to put together what it needed for crawling. I did not know, nor was I concerned with the outcome—whether Jasmine would begin crawling or not. My job at that moment was to ensure information flow to Jasmine's brain until her brain popped up with a solution. I didn't know what was going to happen, but I knew for certain that if a solution was to be found it would have to come from Jasmine herself. I knew I was tapping into the magnificent potential of this child's brain, helping her create new possibilities and solutions for herself. Muscles, bones, joints, inner organs, and the vast inner chemistry of our lives, are all organized by the brain. And the brain needs information in order to grow and figure out how to manage the body.

Next, I rolled Jasmine onto her belly. She immediately placed her left hand on the table with the left elbow in the air, pushed on her left hand, lifted her head, slid her right elbow under her right shoulder, and came up on her knees. Her ribs and spine were twisted to the right, the way I had moved her earlier, so that her weight was

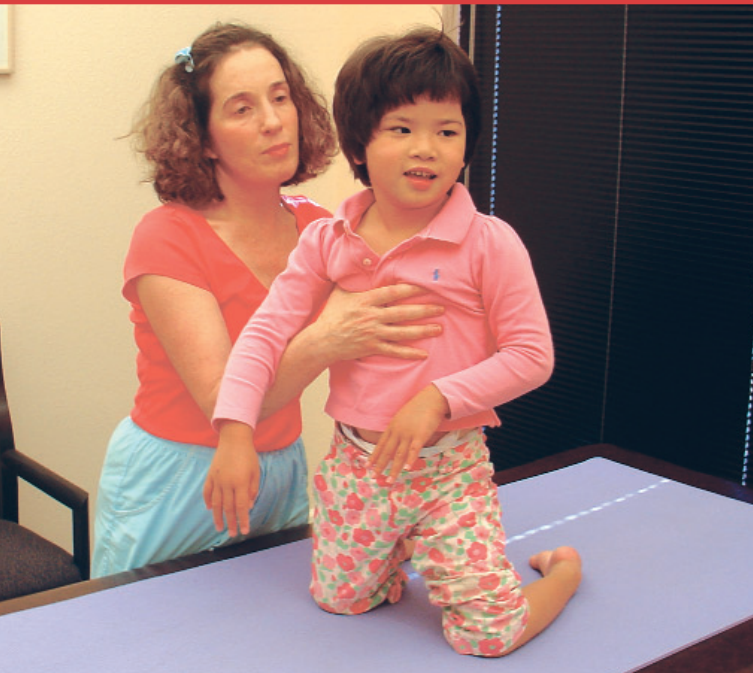
distributed evenly between her right and left arm, one leaning on her hand and the other on her elbow. A moment or two later Jasmine began crawling. It all happened in the span of 40 minutes.

The same kind of transformation that happened for Jasmine is readily available for other children with special needs suffering from a host of developmental delays. Any practitioner can utilize the skill-centered ABM to bring about transformational outcomes for their clients. First, however, it is important to understand that the changes need to occur in the brain and that our job as practitioners is to be a facilitator in the process and help the child's brain do its job well.

Process of Differentiation

The child with CP that can't reach out with his hand to grab a bottle has the same muscles, joints, and bones as the child who can do it. The difference lies in what we call the "process of differentiation in the brain." In a developing organism, differentiation implies the process by which cells and tissues develop increasingly specialized functioning and increased structural and functional complexity.

In the beginning, the baby's perceptions and movements are mostly undifferentiated. The brain sends messages to the muscles to contract in an indiscriminate manner. When the baby gets excited, all the flexors contract at the same time. The two hands mirror each other's movements. It is all or nothing. There is very lit-→



Baniel and Isabel work on her ability to stand using her back muscles, and not her arms as do most children with this condition. At left, Isabel shows a desire to stand, and comes up on her knees, but doesn't know how to continue the movement. At right, Baniel places both of Isabel's feet in a standing position, and has Isabel notice the movement and placement. "Anat has a wonderful and extraordinary ability, through observation, knowledge, and instinct, to exploit what a child can presently achieve to move them forward to the next level of physical and intellectual growth," says Isabel's parents, Trish Karlinksi and Barbara Austin.

tle control. As the child's brain begins to perceive differences in the sensations coming from his own body, his movements, and from the world around him, his brain begins the process of differentiation. It grows new connections between nerve cells, it develops the ability to excite smaller and finer muscle groups, rather than many muscles all at the same time, and it creates configurations of increasing complexity. To reach forward with the arm and get hold of a bottle is an incredibly refined and complex process that entails complex relationships between the muscles of the arm, shoulder, neck, eyes, lower back, rib cage, sternum, clavicles, and the timing of activating these different parts. Because most people can do this movement easily, there is a lack of appreciation of the required process to get there. (See sidebar on page 74 for a quick exercise in movement process.)

Illness, trauma, brain injury, or birth defects all interfere with the process of differentiation in the brain of the child with special needs. The host of symptoms and limitations these children have are a manifestation of this interference. When the practitioner helps the brain of the child resume this process successfully, the outcomes often mimic the miraculous.

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The Essentials

After years of working with Feldenkrais, and then working with children using my own ABM, I've identified nine requirements for successfully turning stimulation into information that the brain can use to differentiate and grow. I call these requirements "The Nine Essentials." Let's take a look at three of these essentials and specific tools practitioners can integrate with their own work for any child, any condition, at any time. The three essentials we'll be dealing with here are: variation, subtlety, and slow.

Variation: Variation creates opportunities for a child to perceive differences, providing new information the brain needs to differentiate and create more successful patterns than it presently knows. To provide variation, intentionally change

what you are doing with the child, making sure you avoid repeating the same action over and over again. For example, when you want the child to learn how to reach out and lift his arm, instead of trying to stretch it, you might help him first bend the arm a bit more and let go. As you're doing that, turn the child's head one way and then the other. Then help him bend and extend one of his legs at the same time that he extends →



Baniel helps Isabel "learn" to stand, showing her how to come further forward, bringing both arms forward, too.



Isabel brings her head forward to lean on her hands. As she does, her pelvis begins lifting up off the table.



Success. Isabel uses her back muscles to lift her head up and comes to a standing position.

and bends the arm. Vary the same actions with the child lying down on his back, on his side, while held in his mother's arms, and then sitting in a chair. Then do something very different, such as rolling the child from side to side, then come back to bending and straightening the child's arm and see if it is any easier. Variation turns the brain on. Be innovative. Introduce something completely new, or introduce many slight shifts and differences in whatever you are doing.

The more new variations the child experiences, the better and faster his brain can differentiate and form new solutions. The child learns how to learn. Without variation, we starve the brain of the new information it craves; no matter how hard the practitioner and child try, the outcomes will be very limited until you provide these variations. If the child is unable to do what the practitioner is trying to have him do, then something new needs to be introduced. If the child can already do what you are offering, it is time to move the child forward into his next level of functioning.

Michael Experiences Variation

Michael was thirteen months old when I first saw him. He was born with what his doctor called "dislocatable hip joints," meaning his hip sockets were not fully formed. Worried that the baby might dislocate his hips while moving, the doctor thought it best to restrict movement. Thus, at the age of three weeks, Michael was put in a full body cast, where he remained for nine months.

The cast not only stopped Michael from moving his hip joints—which didn't help correct them, it also stopped the movements a baby would normally experience of his spine, ribs, sternum, clavicles, abdomen, breathing, pelvis, and legs. In this way, Michael was denied most of the usual explorations of early infancy—variations of movement, sensations, and interactions with the world around him.

When the cast came off, Michael was unable to move. He was otherwise healthy, but his brain did not form the underlying patterns necessary for him to be able to have him roll over, crawl, come up to a sitting position, or stand up. He was irritable and deemed to be an "unhappy baby." Michael was unresponsive to his traditional physical therapist's efforts to get him to do what babies his age can normally do. Michael remained clueless as to how to move.

Knowing Michael's history, I began to very gently and slowly move him in an abundance of variations that his brain could easily grasp. I moved his pelvis forward and backward, right and left. I moved his lower back so that it arched and rounded, and gently turned his spine from side to side. I moved his pelvis in concert with his legs, arms, and head, always in a variety of configurations. I also did these movements with Michael in different positions: on his back, his right side, his left side, and his belly. The movements fed new information to his brain—information he literally didn't have to work with until then.

At first it felt like his brain and body had no idea how to do even these small movements, even with the guidance →

of my hands. But within minutes it was as if his brain literally woke up and started working with this new information. He quickly became more flexible and comfortable with these new movements and soon his lower back began arching powerfully.

The variations in our lesson gave Michael's brain the information it needed to begin a potent process of differentiation. Twenty minutes into the initial session, Michael began crawling on all fours for the first time in his life. To say the least, both the boy's mother and myself were astonished. After a few more lessons with me and lots of spontaneous movements and experiments on his own, Michael fully caught up to his age group.

Whatever modality you work in, there is always room for variation. If you have been trained to follow very specific routines, it might feel a bit scary at first, or even "wrong" to improvise and introduce variations. But as I always assure my practitioners, pay close attention to the child and the outcomes and be guided by your own observations of the child. By doing that, you will see the child improve right before your eyes.

Subtlety: When working with a child, it is of utter importance to avoid using excessive force as a means to try and get the child to perform a desired action. Using subtlety instead means you replace forcing, pushing, and trying hard with greater skill, fine distinctions, and gently executed change. Subtlety is important because it provides the child's brain with opportunities to detect

An Exercise in Movement

In either a sitting or standing position, put your right hand on your chest and then slowly move it forward and up as if reaching for some object a couple feet in front of you and above your head. Feel your right hand, arm, shoulder, upper chest, and lower back as you reach out. Bring your right hand back to your chest and now pull your belly in and round your back. Keep your back clearly rounded and try again to lift your right arm forward and up. Do you feel how much harder it is to do?

Just one shift in the way you organize yourself can make it so you can no longer lift your arm all the way up. Can you appreciate how many signals, and the degree of complexity, that the brain has to generate and manage? Think of the amazing processes your brain must go through, ensuring you don't lose balance and differentiating between all these movements, co-coordinating them with your tactile sensations and with your intentions of what you want to do with this "reaching out" movement. Consider the amount of information the brain must have at its disposal to do all this.

fine distinctions at emotional, intellectual, and movement levels. The ability to perceive subtle differences is the foundation of intelligence.

We humans are physiologically and neurologically structured so that the less intense the stimulus, the more we are able to perceive subtle differences. By the same token, the more intense the stimulus, the less we are able to perceive any differences at all. This is known as the Weber-Fechner Law. The louder the background noise, the less we are able to hear a soft sound such as a person whispering to us. When it is quiet, we can hear the softest sound. Similarly, when our bodies exert great efforts, we are unable to feel subtle changes and differences and thus the stimulation has no informational value for the brain.

Healthy newborns and young children touch delicately. They move with tiny expenditures of energy. They sense and feel strongly and vividly, which allows them to learn more than at any other time of their lives.

Katie Experiences Subtlety

Katie's story demonstrates the power of subtlety in providing new information the brain requires for improving functioning in special needs children.

Katie, diagnosed with cerebral palsy, was seven years old when I saw her for her first lesson. She was sitting in a wheelchair, and when she spoke, her head, arms, and hands twitched uncontrollably. I found out that Katie was unable to get in or out of her wheelchair by herself. Her parents told me that in physical therapy, and at home, Katie was working on learning to stand and walk. I asked the parents to place Katie in front of her walker. Katie somehow managed to grab on to the walker, her whole body tightening and contorting. Her legs got so tight that they crossed and she was unable to bear weight on her feet.

I immediately asked the parents to put Katie on my work table so that she could stop exerting such intense efforts that were only leading to failure. The parents told me they used to take Katie for therapy overseas where the therapist put weights on her ankles as Katie tried to crawl. Their theory was that this would make her back stronger. It was painfully clear to me that Katie's treatment had been seriously misguided, and Katie was terribly confused. Rather than providing her brain with delicate, subtle experiences so that she could feel herself and be able to figure out solutions, the constant forcing of the therapists had turned her into a non-learner. Even so, Katie's brain was ready and eager for new information.

I made sure everything I did with Katie was subtle—easy and gentle. I first put Katie on her stomach and moved her back gently and slowly. Katie was talking non-stop, expressing random incoherent ideas. I then moved Katie's right arm, connecting it to the movements in her back. After about ten minutes, Katie suddenly became very quiet. She began listening to her own body and what she was feeling as I moved her. For the first time in a long time Katie's brain was perceiving differences and getting the information it needed to begin differentiating and forming new patterns.

Katie continued to come for three to four lessons a week. After the first three weeks, her mother found Katie standing up by her desk playing with some toys. She'd gotten there all by herself. Katie's teachers commented on how much better she was doing. She was moved from remedial classes in reading and math to regular classes. Her arms and body stopped twitching when she talked and she was now expressing intelligent thoughts. Katie was clearly happier and enthusiastic about herself and her life.

When you work with children, make sure they are given, and they perceive, finer and increasingly subtle differences. This is important because the initial tendency, in the case of physical, psychological, or developmental challenges, is to force more and feel less. Achieving subtlety as a practitioner is simple and straight-forward. All you need to do is reduce the force you apply with your hands, elbows, shoulders, back, pelvis, and legs. You also need to reduce the force you use emotionally and mentally. It is then that you can perceive subtle differences within yourself and become more refined and creative.

Slow: Slow is what it says it is. It is when the practitioner intentionally slows down whatever she is doing with the child and makes sure the child is slowed down, too. Slow gets the brain's attention; fast only gets the brain to do what it already knows. Slowing down gives the brain the time it needs to feel and perceive differences and thus have new information with which to immediately begin the process of differentiation. By slowing down, especially when combined with reduced force, the child stops acting in a habitual or automatic way and instead becomes aware of what she is doing. That is how limitations are powerfully transformed into possibilities—and that is how we can access the remarkable resources available within the child and ourselves.

Jack Experiences Slow

When Jack was still a baby, he was diagnosed with autism. I began working with him when he was fifteen months old. He didn't speak and didn't respond to language. He played by himself and never sought closeness with his parents or anyone else. In the beginning, Jack squirmed continuously during his lessons. As the lessons progressed, he remained still for longer periods of time, paying more attention to what I was doing with him. During his fifth lesson, I noticed that Jack was interested in a large, stuffed dog sitting on a shelf in my office. I asked the boy's mother to bring the dog over and hold it close to Jack.

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I asked Jack to point to the dog's nose. He waited a few seconds and pointed with his right index finger precisely at the dog's nose. It was an important moment because it was the first time Jack had clearly indicated he under-

stood language. I then asked Jack where his nose was—no response. I asked him to point to Mommy's nose, which he did quickly and accurately. I asked Jack to point to my nose—also, not a problem. But his nose? Nothing.

The same happened with pointing to the mouth and eyes. At that point it was clear that Jack did not feel or know that he had a face. He did not have a

sense of himself. I lifted Jack's right hand and slowly brought it to gently touch and caress his mother's nose. Saying nothing, I slowly moved Jack's hand to touch and caress his own nose. We repeated the process, in complete silence, going back and forth moving Jack's hand slowly over his mother's and then his own mouth, cheek, eyes, forehead, and hair. Jack was transfixed. I once again asked Jack to touch the dog's nose—no problem. And then his own nose—no problem. Two days later, Jack said his first words.

Slowing down sounds easier than it is. It takes clear intention, skill, and control to slow down our actions. Stress, anxiety, ambition, the feeling of difficulty, and great challenge often result in hastened action that is also lacking in awareness and subtlety. When we, as practitioners and parents, learn how to slow down, the special needs child immediately exhibits more intelligence and a much-expanded ability to learn.

Many practitioners and parents have discovered the incredible outcomes a child experiences when the essentials are applied. When we tap into the potential of the human brain and its ability to right itself, the results are always greater than we expect. Every aspect of the child transforms. When as practitioners we join the child in this way, the possibilities are infinite. **M&B**

Anat Baniel trained with Moshe Feldenkrais, and in the early 1980s, her mentor handed over the care of children in his practice to Baniel. Based in Marin County, California, the Anat Baniel Method for Children evolved over the last twenty-plus years. Baniel is recognized internationally as a leading expert on improving the function of children with special needs. She developed a number of DVDs and CDs, including a three-day seminar for working with children, designed for therapists and parents. For a free DVD (while supplies last) showing Baniel's work with special needs children, or for information about workshops, trainings, and private lessons, call 800-386-1441, email info@anatbaniel-method.com or visit her website at www.anatbanielmethod.com. Copyright 2006 by Anat Baniel. All rights reserved. If you wish to reprint this article or portions thereof, contact the author, Anat Baniel, via e-mail anat@anatbanielmethod.com.