

## Mental Development: From Last to First

### STEVEN'S STORY

Geri had her worst nightmare when she was wide awake. "A significant part of your son's brain is very poorly developed. He will never be able to learn, may never walk, and will always require custodial care." The pediatric neurologist was compassionate and polite, but his words cut into her like a red-hot poker. Geri was devastated.

At the time, Geri and Lindy had two teenage daughters and a son Steven, age two. They were supportive parents and super achievers. Geri taught gifted children English in grades seven through nine, and had built a small jewelry business, specializing in diamonds, as her spare-time occupation. Lindy, a graphic artist, had built his own successful graphic-arts business. Both daughters were bright and did well in school. The girls were self-reliant, active in school, full of fun, and close to each other. Steven came along when the youngest daughter was nine.

Steven wasn't growing well; the family could see that themselves. Any child, including an Asian-Hawaiian child, should weigh double Steven's 19 pounds at two years old. "We all knew things weren't going well, but we had hope with a dash of denial thrown in. At age two, Steven could only drag himself around and make some noises," Lindy said, and then continued. "It was very depressing. The pediatrician had recommended him for the state tests, so we would know how much we could expect of him. In retrospect, the doctor was also helping us to face the situation more fully."

I.Q. tests are done by expert pediatric-neurologists. Although difficult to conduct at age two, Steven came in with a score of 50. Geri's professional education gave her a good understanding of these tests and she knew that, at best, the tests were off by ten points, so his I.Q. could also be 40 or 60. She knew from listening to the experts, that the most they could ever hope for was a ten-point gain; so, Steven's maximum IQ would be about 70 if everything went his way. A pretty bleak outlook by any standards. He could be trained, for instance, to polish cars or clean buildings, but that was about the extent of what they could hope for him.

"I was depressed all the time and cried a lot," Geri said. I'd be driving along and just start crying without even thinking about it. One day our daughter Terri changed things. She said, "Mom, you can't let them put Steven in a box at two-years-old. There's got to be more in his life than that. We must pull together and bring him along." Terri's optimism picked up Geri's spirits, but she still didn't know what to do.

Steven was receiving help from two experts: a physical therapist to help him use his muscles, and a speech therapist to try and develop his vocal capacity. Both were polite to Geri, but never very enthusiastic about Steven's progress.

The supervising pediatrician called on a nutritionist to help improve Steven's growth, as he was so small for his age. Steven would only drink his milk from a baby bottle—seven bottles a day! Both the doctor and nutritionist told Geri to feed him table food. What does table food mean when everyone is eating separately?

Geri asked the pediatrician if Steven was getting adequate nutrition from the milk. She laughed as she told me his reply: "Milk is nature's complete food, so it's all right." The pediatrician went further and told her not to bother with the baby vitamins any longer, because the amount of milk he was drinking would give him everything he needed. "The nutritionist confirmed all this, so I was confident," she said.

Geri was certain she was doing all she could for Steven, but was always looking for more. Her friends and colleagues were considerate and supportive. "When Steven was sitting in my office, they would say, "'Oh, what a well-behaved child.'" She continued, "I wanted to hear, 'Oh, what a bright, active child'." But everyone was trying to be complimentary and help us along. I'm thankful for that."

A close friend asked Geri to attend a nutrition luncheon one Saturday. The speaker was Barbara Lagoni, a dietitian, who was speaking on nutrition in general, and Shaklee products in particular. The friend told Geri she'd be able to get good answers from Barb.

"I didn't really have the time to go to this meeting, and knew I could see the staff nutritionist any time I wanted by just asking the pediatrician, but something in my subconscious told me to go." After the meeting, where Barbara discussed the need for protein and supplements, a question came to Geri's mind, but her Asian politeness kept her from asking it in public. So she tried to talk to Barb after the meeting was over.

"Although the speaker was mobbed after the meeting, a path cleared for me, and I got to ask her my question: Is milk really a complete food for my child?" Geri briefly explained Steven's situation. Barbara, clearly taken by the situation, gave the right answer in a very gentle way: "Nowadays, we realize that cow's milk can't possibly provide every thing a child of two years requires. There are too many critical nutrients missing." The answer, though short, gave Geri lots of food for thought.

That very night Geri purchased some Shaklee products and added protein and vitamins to Steven's milk. She pricked open lecithin and EPA, ground up Vita-Lea by putting it in a handkerchief and pounding it with a hammer, and stirred the mix into Steven's milk. Steven had no trouble drinking the nutrition-laced milk. In fact, he liked the protein flavor. "Now, looking back, it must have been a welcome change for him." She laughed and said, "Anything would probably taste good after seven bottles of plain milk."

Lindy proudly explained the results: "Within about two weeks we could see brightness in Steven's eyes, although we were hoping it wasn't in our minds. Up until then, his eyes were dull and not bright. They now took on a sparkle. After three months on the nutrition milk, as we called it, we had no doubts. Steven was definitely more alert. The girls could see it when they played with him. He wasn't dragging; he was trying to crawl. He acted curious and would look at things as if he was studying them. We knew the nutrition was doing something positive, as well as the physical and speech therapy. The therapists also seemed to have become more interested in Steven."

Six months after starting the Shaklee program, the physical therapist said Steven was progressing much more rapidly than she had ever expected. She thought Steven would not go far, but said he was showing good progress.

The speech therapist noticed some coherence and direction to his sound and observed more progress than his tests predicted. She said that Steven was trying to use his tongue to make sounds,

which was far more than they expected him to try. Geri told the therapists she felt the nutrition was definitely doing something and was helping Steven respond to their efforts better. "I got a polite smile from each therapist." She laughs now, in retrospect.

By this time, Steven was three and time to be tested again. These tests are administered annually to children, like Steven, by pediatric neurologists who specialize in child development. They carefully use the same tests and testing methods, so they can compare each child to thousands of other children with similar disabilities and in similar programs. After the test is scored and reviewed by a panel of experts, they can see how rapidly the child learns. This way, progress or the lack of it is not the figment of someone's imagination.

When Steven's rate of learning tapers off, the tests will show his decline early enough so his therapist won't frustrate him by pushing too hard. The testing allows Steven to develop to his potential and not aim for some arbitrary standard. Everyone wins when this system is used correctly.

Geri watched through a one-way mirror as Steven was given the 20-minute test by the pediatrician. "The doctor would work with Steven for a few minutes and then go to her desk for a different test. She did this four times. Finally, in an hour and a half, she finished. Steven didn't seem tired; in fact he seemed to enjoy the testing. I didn't know whether to be scared or happy. I was all nerves."

The doctor couldn't believe it was the same child. She was so enthusiastic about Steven that she walked Geri to the elevator and said: "We have to compile all the scores and you'll have the results in about three days."

The reason the doctor kept getting new tests was because the tests for retarded children didn't apply to Steven any longer. She kept trying slightly more advanced tests until she wound up using the test for normal children. The doctor realized that even though Steven couldn't speak, he could follow verbal instructions. The experts estimated his I.Q. at 103 to 106, based on these tests. Even with the ten point error range, this finding put Steven in the normal range! They could drop car polishing as his profession.

Lindy continues the story with a gleam in his eye. "Things had become very different at home. Steven had stopped dragging and started crawling. He was full of energy and had lots of stamina. At 37 pounds, he was now in the normal weight range for a three-year-old. His muscles had developed some tone, so his arms and legs took on form. He could actually get out a few words."

Steven was given exactly the same test program when he was four-years-old. These rigorously applied tests monitor his progress and continue to compare him to thousands of children. At this stage, his tests indicated he was progressing normally for his age.

Steven was put in a program for normal children. He now speaks in sentences of seven to ten words and uses pronouns. He can express abstract thoughts, which is a sure sign of a normal I.Q. Remember, intelligence is the ability to integrate information from diverse sources. That's what Steven was doing at that point.

At age four, Steven used a small walker to help himself get around, but most of the time at home, he stands and walks unassisted. With his normal I.Q., and continuing physical development, he'll be entering school along with children his own age. He'll be in a normal classroom with normal children.

Steven continues his nutrition program. His protein goes into his orange juice, which he swirls to keep it from settling out. His

supplements consist of children's Vita-Lea, lecithin, and EPA. Sometimes he takes more, but this group is his basic standby.

### WHOSE HEAD IS IT IN?

Steven's story depicts the strength of the human spirit. Give the body the right nourishment, and it will develop to its maximum potential. Nourishment, however, begins with the nutrients: protein, vitamins, and minerals. How fortunate that Geri went to Barbara Lagoni's seminar. Nourishment must also include nurturing by loving, caring, and supportive people. Steven had that in abundance.

I think his older sister stated it very clearly when she said to her mother, "Don't let Steven be boxed in. No one knows what his life will be like. He has human spirit just like all of us, and no one can stop that."

### SOME THOUGHTS

People can overcome many handicaps, as the brain has incredible recuperative powers. This story doesn't say, that with a little protein, the undeveloped part of Steven's brain developed all at once in a year. More likely, other parts of his brain took over for the undeveloped part or helped compensate for what that part should do. However, the development couldn't have happened as well, if at all, without the correct nourishment.

In recent years, research has shown that essential oils from lecithin and EPA are required for mental development. Indeed, papers have appeared in the medical journals that show children who don't get these oils are behind in their mental development. Some papers even suggest that these children have a deficiency. This trend indicates that these oils will achieve a much higher status in the future.

Does Steven require more of these oils than average? I don't know, but neither does anyone else, and it will be decades before researchers find out. In addition, some parts of the brain can use amino acids for nourishment. This has been proven time and again and Instant Protein, as well as milk, has amino acids. Therefore, did Steven's brain require more than it could get from milk and normal food? I'll bet it did. If his body didn't develop correctly, whose to say his digestive-absorptive system was spared? Without these organs working correctly, he couldn't be getting enough nourishment.

Is it in the heads of Geri and Lindy? If it is, you'd have to explain away to the experts who tested Steven, as well as the physical and speech therapists. Steven's now a normal young boy developing along with the rest of the kids his age.

### ABOUT THE AUTHOR

James Scala was educated at Columbia (B.A.), Cornell (Ph.D.), and Harvard (Post-doctoral studies) Universities.

He has spent his career in research, research management, and teaching. His accomplishments include over fifty published papers on research in nutrition, biochemistry, and biology. His teaching includes courses for undergraduate, graduate, medical, and dental school students.

As a research manager, Dr. Scala held positions at Procter and Gamble, Owens-Illinois, Unilever, General Foods, and was the Senior Vice-President of Scientific Affairs for the Shaklee Corporation. He now devotes his energies to writing and speaking for the general public.

Dr. Scala lives with his wife Nancy in Lafayette, California. For recreation, they sail the ketch La Scala from its home port on San Francisco Bay.