

# Building Herself a Better Brain

## Neurology Now

July/August 2007; Volume 3(4); p 13

**Barbara Arrowsmith Young** was labeled retarded when she was a student. So she built herself a better brain. In elementary school I could see everyone else learning how to read and write, but I couldn't, she recalls.

The teacher thought that Barbara was stupid and stubborn. I got the strap a number of times. So I learned to do things like put my thermometer on the radiator just long enough to stay home but not enough to be sent to the hospital.

Young also had a phenomenal memory and an iron will, and she got through by memorizing during lunch and after school. I hung in there with extra energy and brute force, Young says.



Still, thinking skills that most of us take for granted were alien to her. I had difficulty recognizing symbols and symbol patterns-what is now called dyslexia, Young remembers.

On a deeper level, Young's inability to understand the relationships between symbols meant that she had trouble understanding grammar, logic, cause and effect, and basic math concepts.

I had trouble attaching meaning and order to things, which made it difficult to interpret language, Young says. I would play conversations over and over in my mind to understand them, but you can't come back three hours later and contribute to a discussion. It was like functioning in lag time, and the world felt flat.

After struggling through the first few years of a graduate program in education, Young came across the work of neuroscientist Mark Rosenzweig, Ph.D. Rosenzweig had shown evidence of neuroplasticity in rats, and he said, 'Why can't we apply this to humans?' I was desperate to create exercises to stimulate my own brain function. Neuroplasticity is the theory that the nerve cells in our brains and nervous systems are malleable. Dr. Rosenzweig showed that the brain changes its structure with each different activity it performed.

Instead of practicing compensation, as many children with learning disabilities and victims of stroke are taught to do, Young created exercises to strengthen her weak areas. She read hundred of cards with clock faces showing different times on the front and the correct times on the backs. She shuffled the cards so she couldn't memorize them and attempted to tell the time as quickly as possible. At the end of several weeks, not only could she read clocks faster than the average person, she started to understand what people were saying as they said it.

Young eventually opened the Arrowsmith School ([arrowsmithschool.org](http://arrowsmithschool.org)) based on the principles she learned. Her success gives hope to people with learning disabilities as well as to victims of stroke and other brain injuries. And for that, Barbara Arrowsmith Young is our kind of woman.