

BRAIN EXERCISES OFFER HOPE

(By Gail Johnson. Published in The Georgia Straight. November 2009)



Melanie Lewis and her husband started to worry about their son when he was about three years old. His speech was delayed and he had trouble staying focused on anything for long. He lacked coordination, and he started having seizures. The family spent the next several years going from doctor to doctor, only to wind up with a handful of prescriptions and little hope.

"When he was eight-and-a-half he started having seizures of a different sort," Lewis says on the line from her home in Harrogate, England. "We saw pediatricians and neurologists who gave us a phenomenally gloomy prognosis and basically just racked up the dosage of his drugs. It was a time of fairly major disillusionment in the medical system."

This is coming from someone who's a doctor herself and one who's married to a surgeon-turned-lawyer. Lewis says she and her husband have always taken a "proactive" approach to their son's health, having tried everything from nutritional supplements to therapeutic horseback riding, along with Ritalin and anticonvulsant medication, to help him.

It wasn't until they found Vancouver psychologist Paul Swingle, who specializes in neurotherapy, via the Internet and travelled here twice, that they obtained any relief for Martin, now 10.

"I had never even heard of neurotherapy at all in this country," Lewis says. "I trolled his website, and it just made complete and utter sense to me."

Neurotherapy emerged in the 1970s as a drug-free procedure that purports to diagnose and treat a variety of conditions, including autistic-spectrum disorders, attention-deficit-hyperactivity disorder, epilepsy, addiction, fibromyalgia, and depression, as well as stroke and brain injury.

The treatment involves normalizing, modifying, and optimizing brain functioning, Swingle explains in his Melville Street office. "All symptoms and behaviours are associated with brain activity," says Swingle, a former psychiatry lecturer at Harvard medical school and former chair of the University of Ottawa's child psychology department. "We find areas that are not functioning efficiently." Similar to physical exercises that enhance the body's muscles, neurotherapy "exercises" those weak areas to improve their efficacy.

Treatment begins with the measurement of brainwaves using an electroencephalograph. Swingle says that specific brainwave patterns are associated with certain physical and mental states. For instance, if the brain produces excessive theta waves - which are linked with daydreaming - when you're trying to concentrate, you'll have difficulty focusing. (Drugs like Ritalin are given to kids to improve concentration.)

People genetically predisposed to alcoholism are often lacking theta waves at the back of the brain, and people with depression often show more beta activity over the right, frontal part of the brain, than the left.

The predominant form of neurotherapy is neurofeedback. It provides a person with a direct feedback – for example, sounds or visual images on a computer monitor or vibration on the skin - about the state of particular brainwave activity. If a person hears a tone when the brain is working more efficiently than before, he will use that information to learn how to increase the time the brain functions well.

"Self-regulation" of brain activity via neurotherapy, Swingle notes, can be compared to the way yogis practice meditation to achieve profoundly relaxed states, using the power of the mind to influence its own activity.

Kids can learn to regulate their brainwaves by playing a type of video game with their brain only, Swingle explains in *Biofeedback for the Brain: How Neurotherapy Effectively Treats Depression, ADHD, Autism, and More* (Rutgers, 2008). "A brain-controlled PacMan game is often a popular and effective reward," he writes. "Using rewards of sounds and game like computer images that provide information about successful brain regulation allows the person to learn what concentration feels like and, better yet, how to sustain that mental state."

Neurotherapy can also use harmonic sounds, cranial and audiovisual stimulators, and acupuncture routines. Once brainwaves are stable, they stay that way, so treatment is finite and relapses are rare, Swingle says. Usually, sessions at his office, which cost about \$105, take place weekly. (Martin Lewis had intensive, daily treatments over a short period of time to diminish the costs of staying away from home.)

Swingle says misconceptions related to neurotherapy abound. "People think we're going to zap their brain," he says. "The most critical aspect is the intake assessment: people expect they're going to have to spend one or two sessions telling me their tale of woe. We don't ask why they're sitting in front of us. We do the brain analysis and tell them."

He knows that many health practitioners reject the field's legitimacy. Take Chapel Hill, North Carolina, retired psychiatrist Stephen Barrett, who operates the Quackwatch website. He states there that "a comprehensive review has concluded that none of these claims [of neurotherapy's benefits] is supported by well-designed studies."

Swingle says skeptics "dogmatically embrace very narrow beliefs". "There's nothing alternative about it," he says of neurofeedback, adding that it was used on the winning World Cup soccer team in 2006 and was considered its "secret weapon".

Lewis says that although she was initially apprehensive about the idea of flying halfway around the world for a therapy she wasn't familiar with, the effects on her son have astounded her. "Within five days, he was off Ritalin," she says. "He'd been on it since age five. He hasn't had Ritalin since. That was a profound change."

Martin still takes anticonvulsant drugs for his seizures, but since undergoing neurotherapy, his dosage has been cut in half. Lewis says though her son still has a long way to go, she's seen drastic improvements in his behaviour, cognitive function, and social skills. "As a parent, if your child is being offered no help from the traditional medical route, you will try anything," she says. "This has changed our child's life, and ours as well."