

# Archives

Deseret News Archives,  
Friday, July 17, 1998

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## Therapy may offer hope in trauma, mental disorders

*Neurofeedback is called way to train the brain*

**By Sharon M. Haddock, Staff Writer**

Train the brain while watching Pacman eat up dots?

Help traumatized children overcome the learning disorders and emotional damage by simply sitting the child in a chair to watch a television screen?

According to those who work at the Cascade Center for Family Growth in Orem, affiliated with EEG Spectrum out of California, neurofeedback can do all that - and more.

By hooking a patient up to a pair of sensors that attach to the scalp, technician Carol Cadina can help define a problem in the brain and work it out through amplified signals to a computer - sort of a high-tech brain biofeedback therapy.

When a patient is making progress, that's reflected in the video screen he or she is watching.

If Pacman keeps moving and keeps swallowing the dots, the exercise is working, taking the patient through various frequency levels and stabilizing the brain.

If the screen volcano erupts, the goals set by Cadina have been met by the patient. The brain waves have found their way into an optimal state.

"We've been doing this since April 1995, and in this business since last March," said Larry Von Bleum, co-owner and clinical director of the center. "Our specialty is dealing with traumatized kids."

Cadina demonstrates the neuro-feedback process on her adopted foster daughter, Cindy.

Cindy was severely abused as a young child and subsequently didn't begin to speak until she was 5.

Through neurofeedback sessions, Cindy has learned to speak, control some of her seizure activity, improve her learning abilities and advance her social skills.

She can now speak in complete sentences and do story problems.

She doesn't mind the sessions. In fact, she thinks they're fun. There's no pain or sensation that she can feel. She just relaxes and stays focused on the puzzles and mazes on the screen.

"She's just calm and focused. The brain does the rest," Cadina said.

"This is a case of the less you do, the better," Von Bleum said. "You can't consciously control

your EKG, your brain waves."

Yet by amplifying the feedback and working with the brain's impulses, patients with attention deficit disorder, for instance, can be taught to sustain attention, control impulses, respond consistently and increase the speed of response.

Patients suffering from post-traumatic stress disorder can work through their distress. Bipolar patients can be helped as well as adults and children diagnosed with clinical depression.

Twenty to 60 of the 30-minute sessions generally are required for moderate to severe problems. A few insurance companies help pay for the treatment if combined with regular psychotherapy. Sessions cost \$50 each.

Some consider the treatment controversial because they say not enough research has been conducted on the results. Indeed, even practitioners aren't entirely sure how the process works. Others are concerned with bypassing the psychological treatment for emotional and personality disorders.

Von Bleum says the research that has been done absolutely verifies how effective and powerful the neurofeedback therapy is. An early pioneer in neurobiology, UCLA professor Barry Serman found that cats and monkeys could be trained to control brain waves.

In humans, he achieved a 60 percent reduction in seizures in 60 percent of his patients.

A colleague, Joel Lubar of the University of Tennessee, discovered that hyperactivity decreased in patients being treated for epilepsy. Lubar created the protocol now used for ADD patients.

But the best evidence is right in front of him as a pair of Romanian orphans learn to overcome difficulties created by a lack of bonding when they were infants or when he sees a patient like Cindy learn to talk and interact.

Oftentimes, the parents have been ready to give up before they discovered neurofeedback therapy, said Von Bleum.

"It's wonderful to see the hope back in the parents' eyes," he said.