



Brain Games

Doctors Using Power of the Mind to Treat Common Childhood Disorders

By Marc Levenson, Tech Live



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— There are many ways to play videogames, but at a clinic near San Francisco, 12-year-old Kayla Slofkosky never touches a joystick.

She plays videogames with her head or, more accurately, by using her mind. The technology is not just fun and games, but an innovative alternative to drug therapy for Attention Deficit Disorder, hyperactivity, and even behavioral disorders such as Tourette's Syndrome.

"When you try to explain it to people," said her mother, Kristi, "it kind of even sounds a little silly ... but it seems to work."

The concept is called neurofeedback (sometimes called biofeedback), which theoretically trains the mind to function at a wavelength that helps kids pay attention instead of jumping from one thing to another.

Using this method, doctors wire children's heads with sensors that can read faint brain signals, which in turn can command a computer. By simply using their minds, children can play games such as darts or bowling, or even watch a DVD movie.

A Game of Concentration

It induces them to use the part of their brain that is the most deficient when it comes to focus and concentration. The theory is that the kids with the disorders are using a part of their brain that puts their emotions into overdrive. But if they can train themselves to use a more efficient part of their brain, they will be able to focus and concentrate more and not misbehave as much.

Dr. Ali Hashemian, a behavioral scientist and director of The Center for Attention and Achievement, says that so far, the treatment his center is providing is showing good results. "The studies have shown that over a number of sessions," he said, "this becomes a pattern of behavior that stays with them for a very long time."

Does the treatment work? Kayla says it does. "I used to ... take like 300 hours on my homework," the young girl said. Since going through treatment, "I take, like, only two to three."

Disorders such as ADD are commonly treated with prescription drugs, among them Ritalin, a stimulant that ironically helps tone down a child's edgy behavior. But those drugs have come under fire by parents who worry about side effects.

Not Everyone's Convinced

The neurofeedback technology, while nothing new, is still failing to convince the medical establishment, however.

Peter Stavinoha, a neuropsychologist at the University of Texas Southwestern in Dallas, admits neurofeedback looks promising. But, he said, "It's not convincing yet in terms of the evidence that's been produced in order to have me sending my patients there routinely."

Yet hundreds of clinics nationwide offer neurofeedback to treat not just hyperactivity or Tourette's, but in some cases even epilepsy. It's a huge market, because hundreds of thousands of children are diagnosed each year with conditions routinely treated medically or with prescription drugs.

Hashemian foresees neurofeedback winning over more parents. He says that when you use your head, even to play a videogame, "you know how powerful your mind is."