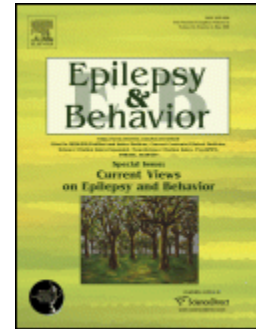


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Hypnosis Helped Physicians Pinpoint Cause of Children's Seizures

It was no way for an 11-year-old to live. For a month the boy had endured daily episodes of uncontrollable jerking and foaming at the mouth, and his physicians at Lucile Packard Children's Hospital were concerned that the boy had epilepsy. Before starting the boy on a lifetime of anti-seizure medications, though, they turned to an unconventional diagnostic tool: hypnosis.

"Children are highly suggestible and they have great imaginations," said Packard Children's child psychiatrist Richard Shaw, MD. "We've found that if we suggest that they are going to have one of their events while they are in a hypnotic trance, they will usually have one."

But wait. Aren't physicians supposed to try to STOP seizures rather than searching for new ways to cause them? In a word, yes. But in order to treat seizures effectively, doctors must learn which parts of the brain are causing the trouble. Many children who seem to be having epileptic seizures are actually having an involuntary physical reaction to psychological stress in their lives. These events require a vastly different treatment than do true epileptic seizures.

The only way to pinpoint the true cause is to monitor the child's brain activity during an event. Connecting a panel of electrodes to a child's scalp is relatively easy and painless. Conducting a "seizure watch" of indefinite length is another matter.

"It's very difficult for parents to spend three or four days in the hospital hoping their child has a seizure," said Packard Children's chief of pediatric neurology, Donald Olson, MD. "It puts them in a very uncomfortable place emotionally." Furthermore, some hospitalized children, removed from the very stressors that may be causing the events, never have a seizure-like event.

Hypnosis can speed the process considerably, say Shaw and Olson. Together with former medical student Neva Howard, they tested the procedure on nine children between the ages of 8 to 16 whose seizure-like events included twitching, loss of consciousness, shaking, jerking and falling. Their results were published online in January in *Epilepsy & Behavior*. The physicians needed to know whether these were true epileptic events, which are best treated by medication, or non-epileptic events caused by psychological stress or other neurological problems.

"We can't always distinguish epileptic from non-epileptic events visually, or through descriptions by family or friends," said Olson, an associate professor of neurology, of neurosurgery and of pediatrics at the Stanford University School of Medicine. "But regardless of the cause, these are disabling, life-altering events that need to be treated."

The authors believe that, although hypnosis may not work for every child, the technique is an important tool that can speed proper diagnosis and treatment for children suffering from seizurelike events.

To hypnotize the subjects, Shaw, an associate professor of psychiatry and behavioral sciences and of pediatrics at the School of Medicine, first used a combination of deep breathing and progressive muscle relaxation to induce a state of relaxation and deep focused attention in the subjects. He then used a combination of imagery and suggestion to induce one of their typical seizure-like events.

Children typically visualize being at one of their favorite places—for one teen, it was on a beach in the Bahamas. After a hypnotic trance was established, Shaw would then direct the child to recall the feelings or events that usually precede a typical seizure. Electrodes on the child's scalp recorded their brain activity during the session.

In eight out of nine cases, Shaw could successfully trigger a seizure-like event with this procedure. After an appropriate monitoring interval, Shaw then directed the hypnotized child to "return" to his or her favorite place and the episode would stop. Using this technique, the physicians found that all eight of the subjects were experiencing non-epileptic events.

"We had a number of clues that these particular children might not have epilepsy," said Olson, "but hypnosis helped us confirm our suspicions." Physicians begin to suspect causes other than epilepsy if an individual has a variety of episodes, if the person's cognition is unaffected despite frequent seizures or if the person has a pre-existing psychiatric diagnosis.

Were the kids in the study relieved to find they didn't have epilepsy? "Yes and no," said Shaw. "It's important to explain very clearly that although these events are psychologically based, they are completely out of a child's control." He and Olson compare the events, which are a type of condition called conversion disorder, to other well-known ways that stress and emotions affect other bodily functions, such as migraines, ulcers and blushing.

Stanford is part of an ongoing multi-center study of these non-epileptic events to better understand their causes and possible treatments. For now, Shaw often couples psychotherapy with self-hypnosis lessons to teach children how to avoid the events.

"When they're feeling out of control, this is a tool they can use. They know that they were able to 'turn off' an event during the initial hypnosis, and that gives them confidence to try it themselves," said Shaw.

In general, people are growing more comfortable with the idea of hypnosis in a medical setting, said Olson. "The first reaction of many people may be to equate hypnosis with some sort of black magic. But once we explain the reasons and benefits, they're very accepting."

Adapted from materials provided by [Stanford University Medical Center](#).