

Behavior therapy effective in reducing tics in children with Tourette syndrome, study finds

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Tourette syndrome, a neurological disorder characterized by tics like grimacing, blinking and vocalizations, is normally treated in children and teens with one of several antipsychotic medications. But such drugs usually don't eliminate all the tics, and worse, they can often have side effects, acting as sedatives, causing weight gain and impairing cognitive function.

Now, a multisite study led by a UCLA researcher has developed an effective, non-medication treatment for children and adolescents with Tourette's and related tic disorders that has shown improvement similar to that found in recent anti-tic medication studies.

Lead study author John Piacentini, a UCLA professor of psychiatry and his colleagues at seven sites around the nation found that a specialized form of [behavior therapy](#) called comprehensive behavioral intervention for tics, or CBIT, significantly reduced chronic tics and tic-related problems in children and adolescents.

Almost 53 percent of children receiving CBIT were rated as significantly improved, compared with 19 percent of those receiving a comparison treatment, and the degree of improvement with CBIT was similar to that found in recent anti-tic medication studies.

The study appears in the May 19 issue of the [Journal of the American Medical Association](#) (*JAMA*).

Tourette syndrome, which affects approximately six out of every 1,000 children and adolescents, is a chronic neurological disorder characterized by motor and vocal tics, including eye blinking, facial grimacing, head jerking, throat clearing, sniffing and grunting. Although the repetition of curse words is often portrayed as the defining feature of the syndrome, cursing is an uncommon symptom and is not required for diagnosis of the disorder.

"Besides its physical manifestations, Tourette syndrome can cause a number of other problems," Piacentini said. "It is often associated with other [psychiatric problems](#), difficulties in school, work and social functioning, and, in severe cases, can be disabling.

"Historically, Tourette syndrome has been treated with [antipsychotic medications](#), which reduce tics but are associated with side effects that often limit their usefulness in children. So the development of an effective non-medication treatment for children with this disorder is a major therapeutic advance," he said.

CBIT is built on the observation that tics are preceded by unwanted feelings or sensations which in turn are temporarily relieved by the tics. In this treatment, children learned to recognize when a tic was about to occur and to engage in a voluntary action incompatible with the tic until the unwanted sensation passed.

In addition, parents were taught how to promote these management strategies in their children and to minimize stressful situations in their children's environments associated with tic worsening.

In the multisite study, 126 children between the ages of 9 and 17 with moderate to severe Tourette syndrome or Chronic Tic Disorder were randomly assigned to CBIT or to a supportive counseling and education program about Tourette syndrome. Approximately one-third of the

children entered the study on a stable dose of anti-tic medication.

The study showed that CBIT resulted in a significantly greater reduction in tic severity and tic-related problems than the supportive counseling. Almost 53 percent of children receiving CBIT were rated as significantly improved, compared with 19 percent of those receiving the comparison treatment.

The degree of improvement with CBIT was similar to that found in recent anti-tic medication studies. Benefits were observed in both children who were on a tic medication and children not on medication. Adverse treatment effects, including tic worsening, were rare in both CBIT and supportive counseling. Treatment gains for CBIT were maintained over time, with 87 percent of available responders showing continued benefits six months after treatment had ended.

"The fact that CBIT works about as well as the standard medications for tics but without the negative side effects greatly expands the available treatment options for chronic tic disorders," said Susanna Chang, a UCLA assistant professor of psychiatry and a study author. "Importantly, CBIT also emphasizes the development of skills that foster autonomy and empowerment, allowing for patients and their families to take a more active role in treatment than previously indicated."

Piacentini noted that additional studies are underway using neuroimaging and other neuroscientific techniques to examine the brain mechanisms underlying how CBIT might work. In addition, investigators are currently working with the Tourette Syndrome Association and the U.S. Centers for Disease Control and Prevention to teach CBIT to clinicians who treat children with tic disorders and to develop new versions of CBIT for use with younger [children](#) and by nurses and other health care professionals.

Provided by University of California - Los Angeles

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