

Deep brain stimulation may be effective treatment for Tourette's syndrome

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Deep brain stimulation may be a safe and effective treatment for Tourette syndrome, according to research published in the October 27, 2009, print issue of *Neurology*.

"Our findings hold promise for helping people with severe Tourette syndrome, who are in need of new treatment options to improve their quality of life," said study author Andrea Cavanna, MD, of the University of Birmingham, in the United Kingdom.

It is estimated that two million Americans are affected by Tourette syndrome, which is a [neurological disorder](#) characterized by uncontrolled movements and [vocalizations](#), or tics, lasting more than a year. The first symptoms of Tourette syndrome are almost always noticed in childhood and some common tics include eye blinking, facial grimacing, shoulder shrugging and head or shoulder jerking. People who have Tourette syndrome often also have obsessive-compulsive disorder (OCD), depression, anxiety or [attention deficit hyperactivity disorder](#) ([ADHD](#)).

The study involved 15 people with severe Tourette syndrome and OCD who were an average age of 30 and continued to have severe symptoms after trying medications and psychobehavioral treatments. They also had high levels of depression and anxiety at the start of the study. The participants were followed and tested for two years after [deep brain stimulation](#), which involves a surgically implanted brain pacemaker that sends electrical impulses to certain parts of the brain.

The study found that the participants experienced 52 percent fewer tics on average and a 26 to 33 percent improvement in the symptoms of OCD, depression and anxiety two years after deep brain stimulation began. Deep brain stimulation had no significant effect on thinking abilities in the study.

"Despite having only 15 patients in this study, it is the largest to date on the effectiveness of deep brain stimulation as a treatment for Tourette syndrome," said Cavanna. "The results showed that all 15 people who were assessed after two years' treatment experienced improvements in disabling tics and neurological problems, which is encouraging. Unfortunately three patients from the original group of 18 were no longer part of the study at follow up and this limits the ability to generalize our findings. More research needs to be done to confirm that deep brain stimulation is a safe and effective treatment for Tourette syndrome."

Deep brain stimulation is FDA approved for the treatment of essential tremor, Parkinson's disease and dystonia.

Source: American Academy of Neurology ([news](#) : [web](#))

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