

Fading memory from early dementia? Deep brain stimulation might help

Deep brain stimulation (DBS) is an established treatment for several medical conditions, including epilepsy, Parkinson's disease and obsessive-compulsive disorder. It involves implanting electrodes in certain areas of the brain to deliver electrical pulses that disrupt abnormal brain activity.

Researchers have also begun to study DBS as a possible way to help people with Alzheimer's disease.

The hope is that, when given during the early stages of Alzheimer's, DBS may slow the progression of memory loss.

So far, studies have been testing the effects of stimulating a brain area called the fornix — a bundle of nerve fibers that is a key part of the brain's memory circuits. Research has shown that the fornix is damaged in people with milder Alzheimer's, and it's thought that DBS might improve the functioning of that faulty circuitry.

The results, however, have been mixed: Some study patients have shown evidence of a slowdown in memory loss, while others have not.

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The goal, [Dr. Andreas] Horn said, is to fine-tune DBS targeting in the brain — from something of a “fuzzy” area to more precise sites.

“We’re not suggesting a new treatment strategy. We’re suggesting a more refined one,” said Horn, who is based at the Center for Brain Circuit Therapeutics at Brigham and Women's Hospital in Boston.

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