# Study: Deep Brain Stimulation Slows Alzheimer's Decline

Patients with surgical implant retain functionality longer, improve quality of life

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The Ohio State University Wexner Medical Center

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### **NEWS PACKAGE**

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SUGGESTED TEASE	A PROMISING NEW THERAPY MAY SLOW THE PROGRESSION OF ALZHEIMER'S DISEASE. COMING UP, HOW ELECTRICAL STIMULATION IS USED TO HELP PATIENTS KEEP THEIR INDEPENDENCE LONGER.
ANCHOR LEAD	MORE THAN FIVE MILLION AMERICANS SUFFER FROM ALZHEIMER'S DISEASE <sup>2</sup> , AND UNTIL THERE IS A CURE, ALL THEIR LOVED ONES CAN DO IS CARE FOR THEM AS THE DISEASE RUNS ITS COURSE.  BUT NOW, A NEW STUDY¹ IS EXAMINING HOW ELECTRICALLY STIMULATING THE FRONTAL LOBES OF THE BRAIN CAN HELP SLOW THE PROGRESSION OF ALZHEIMER'S, GIVING PRECIOUS TIME BACK TO PATIENTS AND THEIR CARETAKERS.  BARB CONSIGLIO HAS THE DETAILS.
(PACKAGE START)	(Alata Osural) (O
CG: Courtesy: The Ohio State University Wexner Medical Center	(Nats - Sound) :02
:00 - :03 Shots of LaVonne and Tom looking at photo album Closeup of LaVonne	FOR 65 YEARS, LAVONNE AND TOM MOORE HAVE BEEN INSEPARABLE. BUT WHEN LAVONNE BECAME INCREASINGLY FORGETFUL, THEIR DOCTOR CONFIRMED THEIR WORST FEARS. :08
CG: Tom Moore Husband of Alzheimer's patient LaVonne Moore	"Yes, LaVonne, you have Alzheimer's, and we can't do anything about it. Well, that's not a satisfactory answer."
Shots of patient and Dr. Scharre	FINALLY THEY MET DOCTOR DOUGLAS SCHARRE WHO ENROLLED LAVONNE IN A STUDY AT THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER. UNLIKE MOST ALZHEIMER'S TREATMENTS, IT WASN'T FOCUSED ON IMPROVING MEMORY, BUT RATHER, FUNCTIONALITY. :14
CG: Dr. Douglas Scharre	"We don't have a lot to treat with problem solving, making

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## Ohio State Wexner Medical the right decision, using good judgment, you know, Center planning skills.":07 SO IN A MEDICAL FIRST FOR ALZHEIMER'S Shots of surgery TREATMENT. WIRES WERE SURGICALLY IMPLANTED INTO PATIENTS' FRONTAL LOBES, THE REGION OF Animation of deep brain THE BRAIN RESPONSIBLE FOR THOSE TYPES OF stimulation EXECUTIVE AND COGNITIVE FUNCTIONS. THEN A BATTERY PACK IN THEIR CHEST SENDS ELECTRICAL CURRENTS THROUGH THE WIRES IN A PROCESS CALLED DEEP BRAIN STIMULATION. :14 "They had increased focus, increased attention.":03 Dr. Scharre (CG'd earlier) THE STUDY THAT PUBLISHED ONLINE IN THE JOURNAL OF ALZHEIMER'S DISEASE FOUND ALL Shots of Dr. Scharre looking at THREE PATIENTS WHO RECEIVED DEEP BRAIN brain scans STIMULATION SLOWED THE PROGRESSION OF THEIR SYMPTOMS. AND TWO OF THE THREE REGRESSED SIGNIFICANTLY SLOWER THAN A TYPICAL ALZHEIMER'S PATIENT WHEN COMPARED Shot of LaVonne playing piano TO A MATCHED COMPARISON GROUP. :15 (nats of piano):02 **INCLUDING LAVONNE.:11** "LaVonne has had Alzheimer's probably longer than Tom Moore (CG'd earlier) anybody else I know, and that sounds negative, but on the other hand, that's good.":07 THREE AND A HALF YEARS LATER SHE'S STILL Shots of LaVonne playing piano ABLE TO PLAY HER FAVORITE HYMNS. AND TOM SAYS HE'LL DO WHATEVER HE CAN TO KEEP THE Shot of anniversary pictures MUSIC GOING.:07 Many times that's very important for patients to hold onto Dr. Scharre (CG'd earlier) that as long as they can.":06 "We will be together as long as possible....count on it. Tom Moore (CG'd earlier) (LaVonne turns to Tom and laughs. "That's the story.") Yeah. :11 Shots of Tom and LaVonne AT OHIO STATE WEXNER MEDICAL CENTER, THIS IS BARB CONSIGLIO REPORTING. :03 walking down hallway (PACKAGE END) -----RESEARCHERS SAY THEY'RE ALSO EXPLORING **ANCHOR TAG** NON-SURGICAL WAYS SUCH AS FOCUSED ULTRASOUND TO STIMULATE THE FRONTAL LOBE

TO CREATE LESS-INVASIVE TREATMENT OPTIONS TO SLOW DOWN SYMPTOMS OF ALZHEIMER'S

		DISEASE.	
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#### **SOCIAL MEDIA**

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Researchers <u>@OSUWexMed</u> use electrical stimulation of the brain to slow the progression of Alzheimer's symptoms. <u>bit.ly/2Drzzin</u>

While most Alzheimer's treatments focus on memory, a new study at The Ohio State University Wexner Medical Center focused on functionality. See how deep brain stimulation may help slow the progression of Alzheimer's and allow patients to retain their cognitive abilities longer. bit.ly/2Drzzin

#### **EXTRA BITES**

Dr. Scharre says the effects of DBS lasted a long time: "This study was for at least 18 months, so this was a long-term study, not just sort of a brief window, so it had a prolonged effect on these patients."

Dr. Scharre says using your brain helps with functionality: "We always tell our patients, you know, use it or lose it. In other words, activate your brain, socialize, do puzzles, you know, be active."

# CG: Dr. Douglas Scharre Ohio State Wexner Medical Center

Dr. Scharre says DBS stimulates circuits that control behavior: "The purpose would be help those circuits that modulate our behavior, modulate our focus and attention, modulate our problem solving abilities."

Dr. Scharre says the frontal lobe controls functional tasks: "Modulating the frontal circuits and the frontal networks for these behavioral and executive functionings is a very worthwhile endeavor to continue studying and to continue to do more research in that area."

Dr. Scharre talks about the future of brain stimulation: "We're also looking at other ways to modulate and stimulate and/or inhibit in the right areas in the right parts of the brain to help with the symptoms of Alzheimer's Disease."

Tom says he'll do anything to forestall LaVonne's decline: "So we're doing anything and everything we possibly can to forestall the inevitable."

# CG: Tom Moore Husband of Alzheimer's patient

Tom says LaVonne didn't want others to go through this: "After she realized she had this and realized she was going downhill was, almost her words word for word, 'I will do anything to help others not go through what I am going through."

CG: Thomas Moore Husband of Alzheimer's patient Tom says LaVonne is doing well three years after surgery: This was done in about 2014, and here we are three and a half years later, and she's doing pretty well."

#### References

<sup>1</sup>Deep Brain Stimulation of Frontal Lobe Networks to Treat Alzheimer's Disease, Journal of Alzheimer's Disease, January 30, 2018. Online:

https://content.iospress.com/articles/journal-of-alzheimers-disease/jad170082

<sup>2</sup>Alzheimer's Disease Fact Sheet, National Institute on Aging, National Institutes of Health, August, 2016. Online: <a href="https://www.nia.nih.gov/health/alzheimers-disease-fact-sheet">https://www.nia.nih.gov/health/alzheimers-disease-fact-sheet</a>

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