

BRAIN UPDATE

JUMP-STARTING THE BRAIN'S MEMORY

Dementia patients may benefit from stimulation

Promising new research suggests electrical brain stimulation—via an implanted “pacemaker” in the brain—may be a key to improving memory in patients with Alzheimer’s disease and other forms of dementia.

Neuroscientists at the University of Pennsylvania have shown for the first time that stimulating the brain when it’s foggy can significantly boost memory function. Conversely, stimulating the brain when it’s sharp can impair thinking skills.

“Our study shows the timing of stimulation is crucial,” said psychologist Michael Kahana, who led the research team. The findings, reported in the journal *Current Biology*, were hailed as a breakthrough.

Researchers tested 150 patients receiving epilepsy treatment at nine medical centers around the country. Patients were asked to study and recall lists of words while receiving brain stimulation from electrodes already implanted in their brains as part of their care.

The team hopes to start clinical trials with memory-impaired populations, which would po-

tentially include those with Alzheimer’s disease.

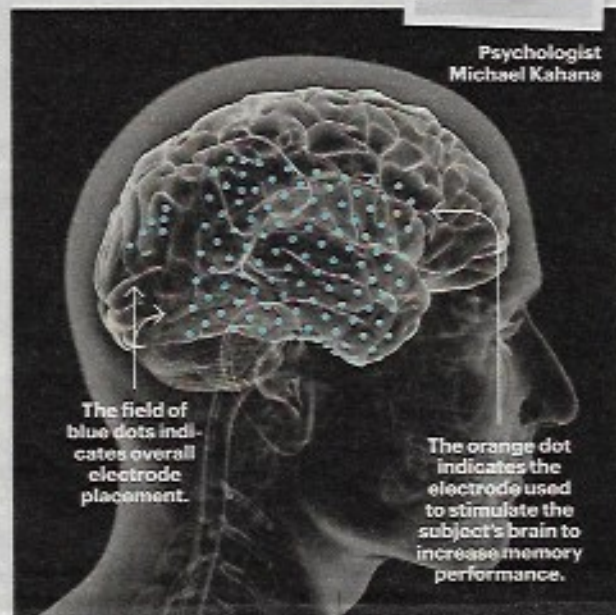
“We would need to develop a fully implantable brain stimulator, capable of rapidly decoding brain states and using those states to guide when and where to apply stimulation,” Kahana said.

While conceding this sounds fanciful, he believes it’s possible to achieve the goal in the next few years.

“We’re all in a race against time here—every one of us,” Kahana said.



Psychologist Michael Kahana



STUDY

ALZHEIMER'S DEATHS SOAR

A new federal study shows a startling rise in deaths caused by Alzheimer’s disease in recent decades. While researchers don’t yet know why it is happening, they recommend providing more support to caregivers who are helping patients

to cope with the neurological disease’s ravages.

The data, published by the Centers for Disease Control and Prevention (CDC), shows that between 1999 and 2014 the number of deaths from Alzheimer’s climbed from 16.5 per 100,000 Americans to 25.4 per 100,000. The data was adjusted to account for an aging population.

Alzheimer’s was listed as the cause of nearly 94,000 deaths in 2014, according to the CDC. But other sources estimate that Alz-

heimer’s is a leading factor in as many as 500,000 deaths a year, many attributed to pneumonia, heart disease and other causes.

CDC epidemiologist Christopher A. Taylor, the study’s lead author, said the rise may be linked in part to increased awareness of Alzheimer’s disease among doctors, making it more likely that the disease is correctly diagnosed as the cause of death. The higher Alzheimer’s toll may also be related to increases in life expectancy, Taylor said.

MEDICAL
CLIENTS
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BILLS

More than 100 million Americans spend a significant amount of their income on out-of-pocket costs for health care. A sign of the heavy burden faced by millions of older Americans, a study has found.

Not counting Medicare premiums, beneficiaries spent an average of \$3,024 a year to supplement their Medicare coverage in 2014, according to a study by the Commonwealth Fund, a private nonprofit foundation that advocates for independent research on health issues. A study of Medicare recipients spent 20 percent of their household income on health care.

The group’s report says the findings warn of rising health care costs for high consumer groups, along with gaps in coverage for such things as dental and vision care. “We need to highlight the need for a more comprehensive approach reform,” the group cautions. “It comes with a price tag to rein in federal spending and to reduce deficits.”

Medicare coverage is expected to lose its force many of the states are expected to dig deep into their own pockets, causing a hardship for the modest means, the report says. “Out-of-pocket costs can easily add up to thousands of dollars per year.” Of the \$3,024 spent last year by consumers, more than a third of it went to cost sharing for prescriptions and hospital care, and 39 percent toward private services Medicare doesn’t cover, including long-term care.