

## Doctor says, 'I think we're going to cure Alzheimer's disease, and we're not far away from it'

## June 7 2013, by Nancy Churnin

Alzheimer's disease is on the rise, but researchers like Dr. Michael Devous expect the numbers to shift into reverse. "I think we're going to cure Alzheimer's disease, and we're not far away from it," said Devous, a professor and director of the NeuroImaging Core for the Alzheimer's Disease Center at the University of Texas Southwestern Medical Center.

"Ten years ago I didn't think so, but we've made tremendous progress," he said. "We haven't done it. We haven't cured anyone from this disease yet, but I'm hopeful that the trials we've started will change the course of this disease in a positive way."

It's a rare burst of good news for this specific disease. According to an April study published in the *New England Journal of Medicine*, Alzheimer's, the most common form of dementia or memory loss that typically worsens over time, is now the sixth-leading cause of death in the United States.

It has surpassed cancer and heart disease to become America's costliest disease, affecting more than 5.4 million Americans with about 4.1 million requiring intensive care that totals \$200 billion a year. Patients live an average of four to eight years after an Alzheimer's diagnosis, but some live as long as 20 years, with 75 percent of those with Alzheimer's going to a nursing home by age 80.



Current treatments may temporarily ease symptoms but don't slow the disease down, which can lead to patients losing recognition of loved ones, the ability to speak or recall the names for objects and mastery of simple life skills.

Researchers, however, find hope in three promising approaches: healthful lifestyle changes, genetic testing to identify those at higher risk and removal of amyloid plaque.

While the precise role of plaque is still being studied, it's known that these deposits of apparently <u>toxic protein</u> peptide settle between the brain's <u>nerve cells</u> and are found disproportionately in people with Alzheimer's, according to the National Institutes of Health National Institute on Aging.

Adding to the optimism is the Texas Alzheimer's Research and Care Consortium, which pools efforts from Texas institutions, including University of Texas Southwestern Medical Center at Dallas and the University of North Texas Health Science Center in Fort Worth, and features collaborative studies with the University of Texas at Dallas Center for BrainHealth and Center for Vital Longevity and the Cooper Clinic in Dallas.

For Devous, the game changer came last year with the Food and Drug Administration's approval of Amyvid, an amyloid imaging agent that allows researchers to track plaque in positron emission tomography scans.

So far, he's learned that plaque removal doesn't help those in advanced stages of Alzheimer's, probably because at that point, the plaque has already done irreversible damage.

That has turned his team's focus to finding and removing plaque from



those who don't have symptoms or are in the early stages of the disease.

"There's a mild cognitive impairment which precedes dementia," Devous said. "We are having clinical trials to see if removing plaque will keep them from getting worse and maybe even allow them to get better."

Lifestyle changes can also slow or prevent the growth of plaque, says Dr. Mary Quiceno, a neurologist and director of the Cognitive and Memory Disorders Clinic at the Alzheimer's Disease Center at the University of Texas Southwestern.

Conversely, plaque buildup can be accelerated by high blood pressure, arterial sclerosis, strokes, clogged arteries, concussions, inflammation and diabetes.

"All of us are at risk, and all of us can do something about it," Quiceno said.

Underscoring a new understanding that what's good for the heart is good for the brain, an April study in the Archives of Neurology found that those who follow the Mediterranean diet experience less blood vessel damage in the brain than those who consume red meats, saturated fats and refined grains.

Quiceno also said exercise is also drawing attention from researchers as a deterrent.

"Exercise has a direct effect on brain-cell growth, particularly in the hippocampus," an area of the brain that plays an important role in memory, she said. "It's something we need to emphasize earlier with our kids."

Those who are fit at midlife have a lower risk of developing Alzheimer's



disease and other dementias later, according to a study that followed more than 19,000 men and women over a period of 24 years, published in the February Annals of Internal Medicine by the Cooper Institute in collaboration with the University of Texas Southwestern and Cooper Clinic.

Getting adequate sleep, socializing and building cognitive reserve by learning new things can lower the risk for Alzheimer's, too, Quiceno said.

For some, however, genetics can trump even the best efforts.

The Alzheimer's Prevention Initiative, an international collaborative effort run by the Banner Alzheimer Institute in Phoenix, is studying people at genetic risk for developing Alzheimer's in their 40s and 50s, as well as people at genetic risk for the more common Alzheimer's that occurs later in life.

Individuals at genetic risk for early-onset Alzheimer's represent less than 1 percent of all Alzheimer's cases, but they offer an accelerated look at how the disease can progress as the amyloid plaque starts forming in their brains in their late 20s and early 30s, said Jessica Langbaum, a principal scientist and associate director of the initiative.

"That's the hope - that the lessons we learn from people who carry this rare genetic mutation will be applicable to other individuals," she said.

One way people can help speed progress toward a cure is to volunteer for studies. Langbaum is hoping to register 250,000 people at registry.endalznow.org by 2015. Devous is also looking for volunteers at the school's Alzheimer's Disease Center at utsouthwestern.edu/adc or 214-648-0563.



The other important thing people can do is to go to their doctors at the first sign of dementia, Devous said.

"I want people to know they should see their doctor as soon as they think they have a problem," he said. "We have good diagnostic techniques, and it's an opportunity to see if the problem could be due to something that is treatable, whether by medical intervention or by better nutrition and lifestyle choices."

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## TOP 5 TIPS FOR BRAIN HEALTH

Talk: Socialization may help preserve cognitive function and improve mental health.

Think: Continuing to learn can help improve processing speed, working memory and attention.

Exercise: It stimulates brain-cell growth and decreases risk for high blood pressure and diabetes.

Eat: Put baked or broiled fish on the menu at least once a week for omega-3 essential fatty acids, which prevent or slow dementia.

Sleep: It improves memories, which consolidate during sleep, and lowers stress.

SOURCE: UTSW neurologist Dr. Mary Quiceno

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