

Study Offers Hint of Hope for Staving Off Dementia in Some People

People who received intensive treatment for hypertension were less likely to develop minor cognitive problems than those receiving standard treatment.



By Pam Belluck

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In dementia research, so many paths have led nowhere that any glimmer of optimism is noteworthy.

So some experts are heralding the results of a large new study, which found that people with hypertension who received intensive treatment to lower their blood pressure were less likely than those receiving standard blood pressure treatment to develop minor memory and thinking problems that often progress to dementia.

The study, published Monday in JAMA, is the first large, randomized clinical trial to find something that can help many older people reduce their risk of mild cognitive impairment — an early stage of faltering function and memory that is a frequent precursor to Alzheimer’s disease and other dementias.

The results apply only to those age 50 or older who have elevated blood pressure and who do not have diabetes or a history of stroke. But that’s a condition affecting a lot of people — more than 75 percent of people over 65 have hypertension, the study said. So millions might eventually benefit by reducing not only their risk of heart problems but of cognitive decline, too.

“It’s kind of remarkable that they found something,” said Dr. Kristine Yaffe, a professor of psychiatry and neurology at University of California San Francisco, who was not involved in the research. “I think it actually is very exciting because it tells us that by improving vascular health in a comprehensive way, we could actually have an effect on brain health.”

The research was part of a large cardiovascular study called Sprint, begun in 2010 and involving more than 9,000 racially and ethnically diverse people at 102 sites in the United States. The participants had hypertension, defined as a systolic blood pressure (the top number) from 130 to 180, without diabetes or a history of stroke.

These were people who could care for themselves, were able to walk and get themselves to doctors' appointments, said the principal investigator, Dr. Jeff D. Williamson, chief of geriatric medicine and gerontology at Wake Forest School of Medicine.

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The primary goal of the Sprint study was to see if people treated intensively enough that their blood pressure dropped below 120 would do better than people receiving standard treatment which brought their blood pressure just under 140. They did — so much so that in 2015, the trial was stopped because the intensively treated participants had significantly lower risk of cardiovascular events and death that it would have been unethical not to inform the standard group of the benefit of further lowering their blood pressure.

But the cognitive arm of the study, called Sprint Mind, continued to follow the participants for three more years even though they were no longer monitored for whether they continued with intensive blood pressure treatment. About 8,500 participants received at least one cognitive assessment.

The primary outcome researchers measured was whether patients developed “probable dementia.” Fewer patients did so in the group whose blood pressure was lowered to 120. But the difference — 149 people in the intensive-treatment group versus 176 people in the standard-treatment group — was not enough to be statistically significant.

But in the secondary outcome — developing mild cognitive impairment or MCI — results did show a statistically significant difference. In the intensive group, 287 people developed it, compared to 353 people in the standard group, giving the intensive treatment group a 19 percent lower risk of mild cognitive impairment, Dr. Williamson said.

Because dementia often develops over many years, Dr. Williamson said he believes that following the patients for longer would yield enough cases to definitively show whether intensive blood pressure treatment helps prevent dementia too. To find out, the Alzheimer's Association said Monday it would fund two more years of the study.

“Sprint Mind 2.0 and the work leading up to it offers genuine, concrete hope,” Maria C. Carrillo, the association's chief science officer, said in a statement. “MCI is a known risk factor for dementia, and everyone who experiences dementia passes through MCI. When you prevent new cases of MCI, you are preventing new cases of dementia.”

Dr. Yaffe said the study had several limitations and left many questions unanswered. It's unclear how it applies to people with diabetes or other conditions that often accompany high blood pressure. And she said she would like to see data on the participants older than 80, since some

studies have suggested that in people that age, hypertension might protect against dementia.

The researchers did not specify which type of medication people took, although Dr. Williamson said they plan to analyze by type to see if any of the drugs produced a stronger cognitive benefit. Side effects of the intensive treatment stopped being monitored after the main trial ended, but Dr. Williamson said the biggest negative effect was dehydration.

Dr. Williamson said the trial has changed how he treats patients, offering those with blood pressure over 130 the intensive treatment. “I’ll tell them it will give you a 19 percent lower chance of developing early memory loss,” he said.

Dr. Yaffe is more cautious about changing her approach. “I don’t think we’re ready to roll it out,” she said. “It’s not like I’m going to see a patient and say ‘Oh my gosh your blood pressure is 140; we need to go to 120.’ We really need to understand much more about how this might differ by your age, by the side effects, by maybe what else you have.”

Still, she said, “I do think the take-home message is that blood pressure and other measures of vascular health have a role in cognitive health,” she said. “And nothing else has worked.”

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