



Could Gut Bacteria Be Linked to Dementia Risk?

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THURSDAY, Jan. 31, 2019 (HealthDay News) -- People with dementia show a different makeup in the bacteria dwelling in their guts, a preliminary study finds -- raising questions about whether the "bugs" play some role in the brain disease.

Researchers in Japan found that compared with dementia-free older adults, those with the disease typically had a very different gut "microbiome." The term refers to the trillions of bacteria and other microbes dwelling in the digestive system.

As recent studies have been revealing, those gut bugs do more than aid digestion. They appear to affect a range of bodily functions, from immune defenses to the production of vitamins, anti-inflammatory compounds and even chemicals that relay messages among brain cells.

Researchers have also found that the makeup of the gut microbiome is linked to risks for various conditions, such as obesity, asthma and type 1 diabetes.

Those studies do not prove that gut bacteria directly contribute to, or protect against, those diseases, however. And neither does the new study, experts stressed.

The study found only that a group of dementia patients had different gut microbes from dementia-free adults, said Mary Sano, director of the Alzheimer's Disease Research Center at Mount Sinai in New York City.

"You'd expect to see a lot of differences between those two groups of people," said Sano, who was not involved in the study.

And it's very possible, she said, that the dementia was the cause of the gut differences, not the result. For example, diet is critical in the makeup of gut bacteria, and people with dementia often have changes in appetite and end up malnourished.

Keith Fargo is director of scientific programs and outreach for the Alzheimer's Association. He made the same point.

"At this point, we don't know that this association is causal," said Fargo, who was not involved in the study. "We don't know which came first -- the dementia or the differences in the gut microbiome."

The findings are scheduled to be presented at an American Stroke Association conference in Honolulu next week. Research reported at meetings should be considered preliminary until published in a peer-reviewed journal.

For the study, Dr. Naoki Saji and colleagues at the National Center for Geriatrics and Gerontology in Obu, Aichi, Japan, analyzed stool samples from 128 older adults -- with and without dementia.

In general, the investigators found, dementia patients had higher concentrations of certain compounds -- including ammonia, indole and phenol -- but lower levels of Bacteroides.

Bacteroides are a group of bacteria that can be beneficial in the gut because they crowd out "bad," infection-causing bugs.

For now, Fargo said, the relationship between the gut microbiome and disease is an interesting, "burgeoning" area of research. But whether the microbes have any direct effect on dementia risk is unknown.

Other recent studies have looked at whether chronic infection has any connection to dementia. Just last week, researchers reported finding the bacteria that causes gum disease in the brains of people with Alzheimer's.

In tests of mice, they showed that the bacteria could travel from the mouth to the brain, where they attacked nerve cells.

Still other research has found particularly high levels of certain strains of herpes virus in the brains of people with Alzheimer's.

It all raises the possibility that "external organisms" might play some role in dementia, according to Fargo. But, he stressed, no one yet knows what's going on.

Sano agreed. She said that although the presence of certain infectious bugs has been linked to dementia, it might not be the infections, themselves, that matter. Gum disease bacteria and herpes viruses are extremely common, Sano pointed out. So carrying those bugs, alone, is not the critical factor.

Instead, Sano speculated, there may be something about the body's general response to "insult or injury" that is the real problem.

Fargo recommended that people focus on lifestyle factors that have been solidly tied to better brain health: Get regular exercise, don't smoke and eat a heart-healthy diet.

He also pointed to the importance of keeping blood pressure down. A major trial published this week found that "intensive" blood pressure control -- below 120 mm Hg - - lowered older adults' risk of developing milder problems with memory and thinking.

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Sources 

SOURCES: Mary Sano, Ph.D., director, Alzheimer's Disease Research Center, Icahn School of Medicine at Mount Sinai, New York City; Keith Fargo, Ph.D., director, scientific programs and outreach, Alzheimer's Association, Chicago; Feb. 6, 2019 presentation, American Stroke Association International Stroke Conference, Honolulu



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