

Alzheimer's Patients Mimic Emotions of Those Around Them: Study Findings may have implications for caregivers



By Steven Reinberg

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TUESDAY, May 28 (HealthDay News) -- People with Alzheimer's disease or early thinking and memory problems tend to mirror the emotions of those around them, researchers find.

This transfer of emotions, known as emotional contagion, appears heightened in people with Alzheimer's and related mental decline, according to the University of California, San Francisco (UCSF) team. And it can be important in the management of these patients, they added.

"Calm begets calm," said Dr. Sam Gandy, associate director of the Mount Sinai Alzheimer's Disease Research Center in New York City, who was not involved in the study.

Emotional contagion is a rudimentary form of empathy, enabling people to share and experience other people's emotions, said lead researcher Virginia Sturm, an assistant professor in the UCSF department of neurology.

"It's a way by which emotions travel across people quickly and even without awareness," explained Sturm. This process can shape behaviors and cause changes in the brain, she added.

In the early stages of Alzheimer's disease and in people with mild thinking and memory problems, emotional contagion increases, the researchers found. It is even more apparent in people with dementia, they noted.

"In Alzheimer's disease and other dementia we think some people may have an increased sensitivity to other people's emotions," Sturm said.

"As their memory and thinking abilities decline, it seems this is accompanied by the enhancement of other emotional processes," she said.

This means that if caregivers are anxious or angry, their patients will pick up and copy these emotions.

On the other hand, if the caregiver is calm and happy, patients will emulate these positive emotions, Sturm said.

"This is a way Alzheimer's patients connect with others, even though they don't have an understanding of the social situation," she said. "In order to manage

patients, it might be that the caregivers being calm and happy would go a long way in keeping their patient calm and happy."

Alzheimer's disease is an age-related brain disorder that begins slowly and gradually robs people of their ability to lead their everyday lives. In the United States, one-third of the nation's seniors die with Alzheimer's or another type of dementia, according to the Alzheimer's Association.

The study, published online May 27 in the *Proceedings of the National Academy of Sciences*, involved 237 adults. Sixty-two patients had mild memory and thinking problems and 64 had Alzheimer's disease. The others were mentally healthy. Participants took tests to identify depression and other mental health problems and also underwent MRI scans to identify changes in the brain related to emotional contagion.

The researchers found higher emotional contagion in those with mild mental impairment and Alzheimer's disease, compared with those who did not have these conditions.

This growth of emotional contagion paralleled the increase in damage to the right temporal lobe of the brain, reflecting biological changes in the neural system, the study found.

"The right temporal lobe is important for different aspects of emotion and social behavior," Sturm said.

Depression was also greater among those with mild mental impairment and Alzheimer's disease, the study found.

From a neurologist's perspective, "it is extraordinary that something so complex as emotional perception can be controlled by such a localized part of the brain,"

Gandy said.

"Also, classically it has been the frontal lobe damage that leads to emotional disturbance," Gandy added. "Now we know the temporal lobes can play similar roles."

More information

For more information on Alzheimer's disease, visit the [Alzheimer's Association](#).

SOURCES: Virginia Sturm, Ph.D., assistant professor, department of neurology, University of California, San Francisco; Sam Gandy, M.D., associate director, Mount Sinai Alzheimer's Disease Research Center, New York City; May 27, 2013, *Proceedings of the National Academy of Sciences*, online

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