

# Risk of dementia doubles for elderly patients hospitalized with infections, study finds

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Elderly patients who were hospitalized with infections, such as pneumonia, were more than twice as likely to develop dementia than those who did not have an infection, according to a University of Pittsburgh study, which also found that patients with dementia may be more susceptible to infection. The results of the study, funded by the National Heart, Lung, and Blood Institute (NHLBI), part of the National Institutes of Health, are available online and published in the September 1st edition of the *American Journal of Respiratory and Critical Care Medicine*.

"These findings explain in part why seemingly healthy older adults progress to a state of disability following infection and how a single episode of infection may lead to [cognitive decline](#) in [older adults](#)," said Sachin Yende, M.D., senior author of the study and associate professor in the Department of Critical Care Medicine at the University of Pittsburgh School of Medicine. "Most people think infection is a short-term illness, but patients who look and feel recovered may have downstream consequences."

The researchers examined data from 5,888 participants over age 65, in four areas: Forsyth County, North Carolina; Sacramento County, California; Washington County, Maryland; and Pittsburgh, Pennsylvania, from 1989 through 1999; 639 were hospitalized with pneumonia at least once. Pneumonia is the most common infection leading to hospitalization in the United States, but the study found that any type of infection in the elderly can accelerate the onset of dementia.

Dementia is a broad term for [loss of memory](#) and other cognitive skills severe enough to impact daily life. Dementia, which is not part of normal aging, is caused by damage to [brain cells](#) that affect thinking, behavior and feelings.

For reasons that the researchers do not yet understand, patients who showed signs of impaired cognitive function before their hospitalizations had an 11 percent higher risk for pneumonia and other infections than those with healthy cognitive function.

"Even a small change in cognition predisposed patients to pneumonia. Once they had an infection, they were at a higher risk for worsening of cognitive function and dementia. This cycle could perpetuate and ultimately lead to disability and loss of independence," said Faraaz Shah, M.D., lead author of the study.

The researchers stress that future research should examine mechanisms for the bidirectional relationship between dementia and infection to develop interventions that reduce infection and its consequent disability.

Provided by University of Pittsburgh Medical Center

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