

Microbleeds, diminished cerebral blood flow in cognitively normal older patients

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A small imaging study suggests cortical cerebral microbleeds in the brain, which are the remnant of red blood cell leakage from small vessels, were associated with reduced brain blood flow in a group of cognitively normal older patients, according to an article published online by *JAMA Neurology*.

Cerebral microbleeds (CMBs) are a common finding in [magnetic resonance imaging](#) of elderly patients. Some previous research has suggested an association between CMBs and cognitive deficits, although the mechanism is not clear. Some studies also have suggested CMBs may be related to abnormal [cerebral blood flow](#), although those abnormalities had not been reported for healthy patients with incidental CMBs.

William E. Klunk, M.D., Ph.D., of the University of Pittsburgh, and colleagues used imaging to study 55 cognitively normal individuals (average age nearly 87) to examine CMBs and cerebral [blood flow](#), among other things.

The authors found CMBs in 21 of the 55 participants (38 percent) for a total of 54 CMBs. Cortical CMBs in the brain were associated with reduced cerebral blood flow in multiple regions, according to the results.

"In cognitively normal elderly individuals, incidental CMBs in cortical locations are associated with widespread reduction in resting state-CBF [cerebral blood flow]. Chronic hypoperfusion [insufficient blood flow] may put these people at risk for neuronal injury and neurodegeneration.

Our results suggest that resting-state CBF is a marker of CMB-related small-vessel disease," the study concludes.

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