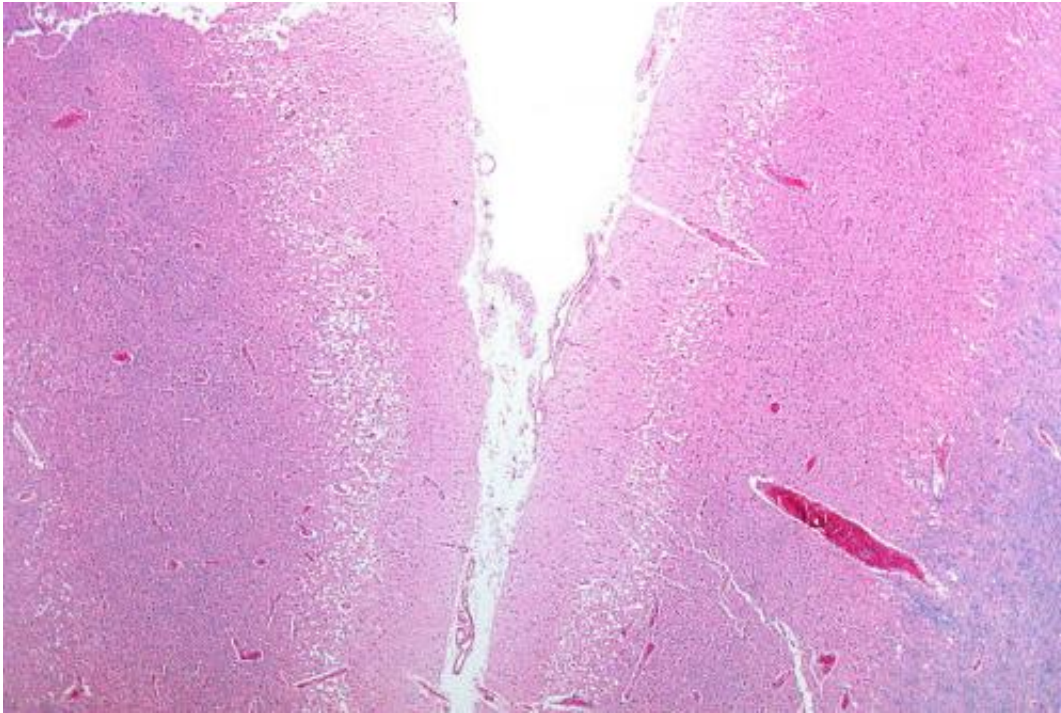


# Can work stress be linked to stroke?

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

Having a high stress job may be linked to a higher risk of stroke, according to an analysis of several studies. The meta-analysis is published in the Oct. 14, 2015, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

"Having a lot of job stress has been linked to heart disease, but studies on job stress and stroke have shown inconsistent results," said Dingli Xu,

MD, with Southern Medical University in Guangzhou, China. "It's possible that high stress jobs lead to more unhealthy behaviors, such as poor eating habits, smoking and a lack of exercise."

The analysis looked at all of the available research on job strain and stroke risk. The six studies analyzed involved a total of 138,782 participants who were followed for three to 17 years.

Jobs were classified into four groups based on how much control workers had over their jobs and how hard they worked, or the psychological demands of the job. The job demands included time pressure, mental load and coordination burdens. Physical labor and total number of hours worked were not included.

Passive jobs were those with low demand and low control. Examples include janitors, miners and other manual laborers. Low stress jobs are those with low demand and high control. Examples are natural scientists and architects. High stress jobs, which are high demand and low control, are found in the service industry and include waitresses and nursing aides. Active jobs with high demand and high control include doctors, teachers and engineers. In the six studies, the percentage of those with high stress jobs ranged from 11 percent to 27 percent of participants.

The analysis found that people with high stress jobs had a 22 percent higher risk of stroke than those with low stress jobs. Women with high stress jobs had a 33 percent higher risk of stroke than women with low stress jobs. People with high stress jobs were 58 percent more likely to have an ischemic stroke than those with low stress jobs. Ischemic stroke, which is the most common type of stroke, is caused by blockage of blood flow. People in passive and active jobs did not have any increased risk of stroke.

The researchers calculated that 4.4 percent of the [stroke](#) risk was due to

the high stress jobs. For women, that number increased to 6.5 percent.

"Based on this study, it is reasonable to consider testing interventions aimed at increasing job control, such as decentralization of decision-making and flexibility in job structure, such as telecommuting. If effective, such workplace changes could have a major public health impact," said Jennifer J. Majersik, MD, MS, with the University of Utah in Salt Lake City and a member of the American Academy of Neurology, who wrote a corresponding editorial.

Xu said limitations of the research were that job stress was measured at only one point in time and that other factors, such as high blood pressure or high cholesterol, were not adequately adjusted for in the original studies.

Provided by American Academy of Neurology

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