

Study: Risk factors on rise among people with 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

Despite prevention efforts, researchers have found a significant increase over a 10-year period in the percentage of people with stroke who have high blood pressure, diabetes, smoking and other risk factors for stroke. The study is published in the October 11, 2017, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

"An estimated 80 percent of all first strokes are due to [risk factors](#) that can be changed, such as [high blood pressure](#), and many efforts have been made to prevent, screen for and treat these risk factors. Yet we saw a widespread increase in the number of [stroke](#) patients with one or more risk factors," said study author Fadar Oliver Otite, MD, ScM, of the University of Miami Miller School of Medicine and member of the American Academy of Neurology. "These alarming findings support the call for further action to develop more effective methods to prevent and control these risk factors to reduce [stroke risk](#)."

For the study, researchers examined a public database of U.S. hospitalizations, and identified 922,451 adult hospitalizations for ischemic stroke between 2004 and 2014. An [ischemic stroke](#) is caused by a blockage in a blood vessel, such as a blood clot.

Of those stroke cases, 93 percent of people had one or more risk factors, which increased from 88 percent in 2004 to 95 percent in 2014. The prevalence of [high cholesterol](#) more than doubled during the study period, from 29 percent to 59 percent. The prevalence of diabetes increased by 22 percent, from 31 percent to 38 percent. The prevalence of high blood pressure increased by 15 percent, from 73 percent to 84 percent. And the prevalence of [drug abuse](#) doubled, from 1.4 percent to 2.8 percent. These risk factors varied by age, race and sex.

Researchers found that the incidence of high blood pressure in [stroke hospitalizations](#) increased annually by 1 percent, diabetes increased by 2 percent, high cholesterol by 7 percent, smoking by 5 percent and drug abuse by 7 percent. Additionally, kidney failure increased annually by 13 percent, plaque buildup in the carotid artery by 6 percent and coronary artery disease by 1 percent. The proportion of people with multiple risk factors also increased over time.

While the study did not examine reasons for the increase, researchers say

improved screening and detection of some risk factors may have played a role.

Otite said, "While we have made great strides in reducing the proportion of people who die from stroke, we still have progress to make on preventing stroke and better controlling these risk factors."

Limitations of the study include that the definitions of some risk factors may have changed over time and therefore risk factors may not have been recorded consistently. Also, increased prevalence of high cholesterol could be related to more testing being done after studies showed the benefits of statins for stroke prevention.

Provided by American Academy of Neurology

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