

1 in 7 strokes occurs during sleep, many go without clot-busting treatment

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Approximately 14 percent of all strokes occur during sleep, preventing many from getting clot-busting treatment, according to a study published in the May 10, 2011, print issue of *Neurology*, the medical journal of the American Academy of Neurology.

"Because the only treatment for [ischemic stroke](#) must be given within a few hours after the first symptoms begin, people who wake up with [stroke symptoms](#) often can't receive the treatment since we can't determine when the symptoms started," said study author Jason Mackey, MD, of the University of Cincinnati and a member of the American Academy of Neurology. "Imaging studies are being conducted now to help us develop better methods to identify which people are most likely to benefit from the treatment, even if symptoms started during the night."

The study examined all cases of ischemic stroke in people age 18 and older seen in hospital emergency departments in the Greater Cincinnati/Northern Kentucky region over one year. The majority of strokes are ischemic strokes caused by blocked [blood flow](#) in the brain.

Of the 1,854 ischemic strokes in the study, 273, or 14 percent, were "wake-up strokes," where the person woke up with stroke symptoms. By extrapolating that number to the general U.S. population, the researchers estimate that approximately 58,000 people in the United States go to the [emergency department](#) with a wake-up stroke in a year.

The researchers compared those with wake-up strokes to those who were awake when their stroke symptoms started. There were no differences between the two groups in terms of sex, whether they were married or were living with someone, and their [stroke risk factors](#) such as [high blood pressure](#), diabetes, smoking or [high cholesterol](#).

There were minor statistically significant differences in age and the severity of the stroke. People with wake-up strokes were an average of 72 years old, compared to 70 for non-wake-up strokes. Those with wake-up strokes had an average score of four on a test of stroke severity, compared to a three for those with non-wake-up strokes. Scores ranging from one to four indicate mild strokes.

The researchers also analyzed whether those with wake-up strokes would have been eligible for the clot-busting drug tissue plasminogen activator, or tPA, if the time of stroke onset had been available. Of the 273 wake-up strokes, at least 98 would have been eligible for treatment.

"This is a group of patients that should be a focus for future studies," Mackey said. "It's likely that some of these strokes occurred immediately prior to awakening, and people would benefit from treatment."

The American Academy of Neurology, an association of 24,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care.

A neurologist is a doctor with specialized training in diagnosing, treating and managing disorders of the brain and nervous system such as Alzheimer's disease, [stroke](#), migraine, multiple sclerosis, brain injury, Parkinson's disease and epilepsy.

Provided by American Academy of Neurology

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