

Stroke complications may subtract additional two years of healthy life

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Complications shortly after a stroke deprive patients of about two years of healthy life — in addition to the toll of stroke, according to research reported in *Stroke: Journal of the American Heart Association*.

Findings from the Complication in [Acute Stroke](#) Study (COMPASS) are based on data from more than 1,200 patients (average age 66) treated at four South Korean university hospitals in 2004-05. All patients had an [acute ischemic stroke](#), which results when a blood vessel supplying the brain is blocked.

Researchers gauged the impact of [stroke](#) and its complications using disability-adjusted life years (DALY) measures of age, gender and disability level. DALY combines years of life lost with years of healthy life lost due to disability. They calculated DALY lost due to stroke and additional DALY lost due to stroke complications.

The average DALY lost for stroke survivors was 3.82 years. When researchers assessed the effect of complications after stroke, they found that average DALY for those without complications was 3.10 years. However, patients suffering any of a range of complications — about a third of all subjects — lost an average of 5.21 DALY, a difference of 2.1 healthy life years.

Other research gauging stroke's burden has focused either on loss of potential life or loss of function. "This study delineates the burden of post-stroke complications with a more comparable and more

understandable scale — healthy life years lost," said Keun-Sik Hong, M.D., Ph.D., lead author of the study and associate professor at Inje University in South Korea.

DALY, a measure of global disease burden devised by the World Health Organization, can yield consistent comparisons between the impact of stroke and other medical conditions and provide insights on treatments' benefits. "Accordingly, this scale helps public health policy decision-makers to allocate limited resources based on a more scientific judgment," Hong said.

Almost 34 percent of patients experience some complication within four weeks of their stroke, including stroke progression, pneumonia, urinary tract infection, additional stroke, seizure, or heart attack.

Patients with one complication lost 1.52 additional DALY on average, while patients with two or more complications lost 2.69 DALY.

Almost half the complications developed within two days of the stroke, including half the cases of pneumonia and 65 percent of the instances of ischemic stroke progression, Hong said.

Among limitations of the study:

- It may underestimate the frequency of complications because patients whose stroke had occurred up to a week earlier were included, even though they weren't yet subject to hospital observation and care.
- Researchers didn't measure various cognitive and emotional outcomes of stroke.

- The findings might not apply broadly to the Korean stroke population, or others, because patients were receiving care only in university hospital settings in [South Korea](#).

Having a simple measure to convey the burden of post-stroke complications and the importance of best-practice care can greatly impact hospital and public health decision-making, the researchers said. Formal screening for dysphagia, a swallowing disorder that often results from stroke, can cut risk of developing pneumonia in half. Patients who are spared pneumonia avoid a potential average loss of 2.14 disability-adjusted life years.

Other components of organized stroke care include early rehabilitation and prevention of deep vein thrombosis, clotting in the deep veins such as in the legs, which has potentially fatal complications.

"All of these efforts can lead to better stroke outcome," Hong said.

More information: Life after stroke - www.strokeassociation.org/press-releases/2010-07-01-1?identifier=3030386

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