



## AAN 65<sup>th</sup> ANNUAL MEETING ABSTRACT

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**Abstract Title:** Depression Is Associated With Higher Risk of Death Among Stroke Survivors

**Press Release Title:** Depressed Stroke Survivors May Face Triple the Risk of Death

**Objective:** To determine if depression after stroke is linked to increased risk for all-cause and stroke mortality.

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**Background:** Up to one in three individuals with stroke develop depression. Although numerous studies have shown a link between depression and mortality after myocardial infarction; the association between depression and mortality among stroke survivors has not been evaluated.

**Design/Methods:** The association between depressive symptoms (score  $\geq 16$  on 20-item CES-D scale) and all-cause and stroke mortality were assessed among participants in the NHANES I Epidemiologic Follow-up Study (NHFES), a cohort of persons who participated in NHANES I in 1971-1975, were interviewed in 1982-1984 and followed through 1992. Cox proportional hazards regression was used to calculate multivariate-adjusted hazard ratios (HRs) of death for 4 groups: (i) with stroke, without depression ( $n=73$ ); (ii) with stroke, with depression ( $n=48$ ); (iii) without stroke, without depression ( $n=8,138$ ); and (iv) without stroke, with depression ( $n=2,291$ ), adjusting for demographic (age, sex and race) and socioeconomic (education level, income level and marital status) factors.

**Results:** In unadjusted analysis, individuals with stroke and depression had over 4-fold higher odds of all-cause mortality (HR 4.23, 95% CI 2.71-6.59) than those with neither condition. Adjustment for sociodemographic factors attenuated the effect (HR 2.86, 95% CI 1.76-4.64). Individuals with both stroke and depression had a higher risk of stroke mortality in both unadjusted and adjusted analyses (HR 4.06, 95% CI 2.08-7.89 and 3.69, 95% CI 1.66-8.22) than those with neither condition.

**Conclusions:** Stroke survivors with depression are ~3 times more likely to die of all causes and ~4 times more likely to die from stroke than those without stroke or depression. These findings highlight the importance of screening for and treating depression among stroke survivors.