

## STROKE

### Stress increases risk of ischemic stroke

The relationship between psychological stress and physical illness is becoming ever clearer, with new research revealing that self-perceived psychological stress lasting 1 year or more significantly increases the risk of ischemic stroke. “A novel finding was that the association between stress and stroke risk differed by ischemic stroke subtype: while the association was present in large-vessel disease, small-vessel disease and cryptogenic stroke, it was not observed for cardioembolic stroke,” reports lead author Katarina Jood (University of Gothenburg, Sweden).

The consecutive study compared 600 patients aged 18–69 years with acute ischemic stroke with 600 controls who were matched for age and sex. By use of a single-item questionnaire, the participants retrospectively assessed the degree of stress that they had experienced over the previous 5 years. A definite and significant

independent association was observed between ischemic stroke and permanent self-perceived psychological stress lasting 1 year or more. The multivariate adjusted odds ratio (OR) for ischemic stroke of all causes was 3.49 (95% CI 2.06–5.93). The figures were then further broken down according to stroke subtype. This analysis showed that the greatest OR was for cryptogenic stroke (OR 4.03), followed by large-vessel disease (OR 3.91) and small-vessel disease (OR 3.20). The risk of cardioembolic stroke was not found to be significantly associated with stress (OR 1.48).

“Our results agree with a prospective study of middle-aged men [that used] the same assessment questionnaire, which found that subjects who reported permanent stress during the previous 5 years were at increased risk of stroke after 12 years of follow-up,” explains

“...the association between stress and stroke risk differed by ischemic stroke subtype...”

Jood. The previous study was not powered to distinguish between ischemic and hemorrhagic stroke, whereas the current findings support an independent association between self-perceived stress and different ischemic stroke types in both men and women. “Future studies are required to further investigate the role of stress as a risk factor for stroke and to give an insight into which subcomponents of perceived stress are most important—for that we will need to develop more-elaborate measures of psychological stress,” concludes Jood.

*Kathryn Senior*

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