

10 factors associated with 90% risk of stroke

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(PhysOrg.com) -- McMaster University researchers have found there are 10 risk factors that determine almost all risks of stroke world-wide.

Authors Martin O'Donnell and Salim Yusuf, professors at the Michael G. DeGroote School of Medicine, along with colleague investigators of the INTERSTROKE study, found the following 10 risk factors to be significantly associated with 90 per cent of the risk of [stroke](#):

- high blood pressure,
- smoking,
- waist-to-hip ratio (abdominal obesity),
- diet,
- physical activity,
- lipids (fats),
- diabetes mellitus,
- alcohol intake,
- stress and depression,
- heart disorders.

The study of 6,000 people in 22 countries is being published online today and then in an upcoming publication of the prestigious journal *The Lancet*. It will also be discussed by the authors at the World Congress of Cardiology in Beijing today. The study was coordinated by the Population Health Research Institute at McMaster University and Hamilton Health Sciences.

Stroke is the second leading cause of death worldwide, and the leading

cause of acquired disability in adults in most regions. The contribution of various risk factors to the burden of stroke worldwide is unknown, particularly in countries of low and middle income where the largest burden of stroke occurs.

Collectively, the risk factors accounted for 90 per cent of the population-attributable risks for all stroke. These risk factors were all significant for ischaemic stroke (caused by a blood clot blocking a blood vessel in the brain), whereas high blood pressure, smoking, waist-to-hip ratio, diet, and alcohol intake were significant risk factors for intracerebral haemorrhagic stroke (bleeding into the brain tissue). The ratio of bad to good blood lipids (apolipoproteins) was an important risk factor for ischemic stroke but not for haemorrhagic stroke.

The authors highlight that nine of ten risk factors (not including cardiac disorders) in INTERSTROKE are the same as in INTERHEART, a study also led by Yusuf which looked at risk factors for heart attacks.

The investigators are currently undertaking the second phase of INTERSTROKE, which aims to include 20,000 participants.

"The findings confirm that stroke prevention programs targeting these common [risk factors](#) will have a significant impact in reducing the incidence of disease," said Antoine Hakim, CEO and scientific director of the Canadian Stroke Network.

Provided by McMaster University

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