Frequent sauna bathing reduces risk of stroke
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Frequent sauna bathing is associated with a reduced risk of stroke, according to a new international study. In a 15-year follow-up study, people taking a sauna four to seven times a week were 61 per cent less likely to suffer a stroke than those taking a sauna once a week. This is the first prospective large-scale study on this topic, and the findings were reported in *Neurology*.

Stroke is one of the leading causes of disability worldwide, placing a heavy human and economic burden on societies. The reduced risk associated with sauna bathing was found by a team of scientists from the Universities of Eastern Finland, Bristol, Leicester, Emory, Cambridge and Innsbruck.

The findings are based on the population-based Kuopio Ischaemic Heart Disease Risk Factor (KIHD) study and involved 1,628 men and women aged 53 to 74 years living in the eastern part of Finland. Based on their frequency of taking traditional Finnish sauna baths (relative humidity 10-20 per cent), the study participants were divided into three groups: those taking a sauna once a week, those taking a sauna two to three times a week, and those taking a sauna four to seven times a week.

The more frequently saunas were taken, the lower was the risk of stroke. Compared to people taking one sauna session per week, the risk was decreased by 14 per cent among those with two to three sessions and 61 per cent among those with four to seven sessions. The association persisted even when taking into account conventional stroke risk factors, such as age, sex, diabetes, **body mass index**, blood lipids, alcohol consumption, physical activity and socio-economic status. The strength of association was similar in men and women.

Lead researcher Dr Setor Kunutsor, from Bristol Medical School: Translational Health Sciences at the University of Bristol's Musculoskeletal Research Unit, said "The findings are very significant and highlight the multiple health benefits of taking frequent sauna baths."

Previous results from the KIHD study at the University of Eastern Finland have shown that frequent sauna bathing also significantly reduces the risk of cardiovascular and all-cause mortality. According to the researchers, mechanisms driving the association of sauna bathing with reduced stroke may include a reduction in blood pressure, stimulation of immune system, a positive impact on the autonomic nervous system, and an improved cardiovascular function. In a recent experimental study, the same group of scientists also showed that sauna bathing has acute effects on the stiffness of the arterial wall, hence influencing blood pressure and cardiac function parameters.

Kunutsor noted that the study is observational, and does not show a cause-and-effect relationship between sauna use and lower stroke risk. It only shows an association. A limitation of the study was that the study was based on traditional Finnish saunas and the results cannot be applied to other...
types of heat therapy such as infrared heat exposure, steam rooms and hot tubs. Kunutsor also said that since only a few people in the study never took saunas, the researchers could not compare people who used saunas to people who never used saunas.

Evidence suggests some people should not use saunas, including people who recently had a heart attack and those with unstable angina, or chest pain. Elderly people with low blood pressure should use caution when taking a sauna.

**More information:** 'Sauna bathing reduces the risk of stroke in Finnish men and women: A prospective cohort study' by Kunutsor, Setor; Khan, Hassan; Zaccardi, Francesco; Laukkanen, Tanjaniina; Willeit, Peter; Laukkanen, Jari A. *Neurology*, 2018.

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