**LIFESTYLE FACTORS AND THE RISK OF STROKE**

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Background: The role of lifestyle factors in explaining the risk of stroke has been suggested, but the joint relationship between healthy lifestyle and antihypertensive treatment with stroke risk is unclear.

Aim: To examine the individual and joint effects of healthy lifestyle factors and antihypertensive treatment on total and type-specific stroke risk among36,686 Finnish participants who were 25 to 74 years old and free of coronary heart disease and stroke at baseline.

Methods: Baseline measurement of lifestyle indicators including smoking, body mass index, physical activity during occupation, commuting and leisure time, alcohol consumption, and vegetable consumption were used to predict incident stroke.

The study population was classified into five groups according to their BP status at baseline: normotensive participants, hypertensive people unaware of their hypertensive status and untreated, hypertensive people aware of their hypertensive status but untreated, hypertensive patients treated with antihypertensive drugs and controlled, and hypertensive patients treated with antihypertensive drugs but not controlled.

The Cox proportional hazards model was used to evaluate the associations between healthy lifestyle factors and hypertension subgroups with stroke risk. Incidence of stroke was obtained through computerized register linkage from the National Hospital Discharge Register and the Finnish Death Register.

Results: During a mean follow-up of 13.7 years, 1,478 people developed an incident stroke event (1,167 ischemic and 311 hemorrhagic). The risk of stroke was significantly decreased in people adhered to ≥3 healthy lifestyle factors

(never smoking, normal weight, moderate/high level of physical activity, vegetable consumption ≥3 times/week, and light/moderate alcohol drinking) compared with those adhered to <3 healthy lifestyle factors and this association was present among participants with different hypertensive status. The risk of stroke was significantly increased in all hypertensive subgroups compared with the normotensive group. Compared with hypertensive subjects who did not use antihypertensive drugs and were adhered to ≥3 healthy lifestyle factors, the multivariable-adjusted hazard ratios in hypertensive subjects who used antihypertensive drugs and were adhered to <3 healthy lifestyle factors were 1.39 (95% CI 1.04-1.86) for total stroke, 1.42 (1.03-1.97) for ischemic stroke, 1.37 (0.72-2.58) for hemorrhagic stroke in men, and 2.27 (1.71-3.01) for total stroke, 2.31 (1.69-3.16) for ischemic stroke, 2.21 (1.16-4.23) for hemorrhagic stroke in women, respectively. Only hypertensive men but not women who used antihypertensive drugs and were adhered to ≥3 healthy lifestyle factors had decreased risks of total and ischemic stroke compared with those who did not use antihypertensive drugs and were adhered to <3 healthy lifestyle factors.

Conclusions**:**The present study demonstrates our study demonstrates that a healthy lifestyle significantly decreases the risks of total, ischemic and hemorrhagic stroke in different hypertensive status in both men and women. A healthy lifestyle may be more effective in preventing stroke than antihypertensive treatment in hypertensive subjects.