ONLINE SUPPLEMENT

Supplemental Methods: Study design, population, and assessment of covariates in the Kailuan study

Study design and population of the Kailuan study
The Kailuan study is a prospective cohort study, designed to investigate the risk factors for common non-communicable diseases. All 155,418 residents aged 18 years or older who lived in the Kailuan community, Tangshan city, China, were invited to participate in 2006. A total of 101,510 participants (81,110 men and 20,400 women, aged 18-98 years old) agreed to participate and completed the first survey between June 2006 and October 2007(baseline, referred to as "2006 survey" in the manuscript). There were no major demographic differences between those who agreed to participate in the study and those who declined to participate; except for a small variation in sex distribution (79.9% of participants were men, whereas 85.9% of all Kailuan company employees were men). All participants underwent questionnaire assessments, physical examination and laboratory tests in the 11 hospitals which were responsible for healthcare of this community. These questionnaire assessments, physical examination and laboratory tests repeated biennially through to 2012-2013. The study was approved by the Ethics Committee of the Kailuan Medical Group and the Brigham and Women's Hospital, Boston. All participants gave their written informed consent.

There were 5154(5.36%) participants who became lost to follow-ups due to migrations or other reasons. We included them in the analyses because they contributed person-time, as detailed in the statistical analysis section.

Assessment of covariates
Briefly, data on age, sex, smoking, alcohol intake, sodium intake, physical activity, education level, monthly income, and past medical history (e.g., hypertension, diabetes, deep venous thrombosis or pulmonary infarction, heart valve disease, atrial fibrillation or flutter, and active treatments such as hypoglycemic, antihypertensive, aspirin, and lipid-lowering medications) were collected using a self-reported questionnaire. Diagnosis of atrial fibrillation or flutter was made on 12-lead electrocardiogram and history. Height, weight, and blood pressure were assessed by trained nurses during the surveys. Body mass index was calculated as weight (kilogram)/ height (meter)^2. Total cholesterol, triglycerides, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, creatinine, and high sensitive C-reactive protein were assessed by auto analyzer (Hitachi 747; Hitachi, Tokyo, Japan) at the central laboratory of Kailuan hospital. Estimated glomerular filtration rate was calculated by the Chronic Kidney Disease Epidemiology Collaboration creatinine equation.

Supplemental Table Ⅰ. Sensitivity analyses of updated cumulative average fasting blood glucose concentration and risk of intracerebral hemorrhage

	<4.00 mmol/L	4.00-5.59 mmol/L	5.60-6.09 mmol/L	6.10-6.99 mmol/L	≥7.00 mmol/L
Original model	2.04(1.23-3.38)	1.00	0.98(0.78-1.22)	1.31(1.02-1.69)	1.59(1.26-2.02)
Sensitivity analyses					
Model 1	2.00(1.21-3.32)	1(reference)	0.96(0.77-1.21)	1.31(1.01-1.68)	1.60(1.27-2.02)
Model 2	2.05(1.24-3.40)	1(reference)	0.98(0.78-1.23)	1.33(1.03-1.71)	1.59(1.25-2.02)
Model 3	2.43(1.28-4.61)	1(reference)	0.99(0.76-1.31)	1.31(0.96-1.80)	1.39(1.00-1.91)

* adjusted for age (year), sex, smoking (current, past, or never), alcohol intake (never, past, light, moderate, or heavy), education (illiteracy/elementary school, middle school, or college/university), physical activity (never, sometimes, or active), average monthly income of each family member (<500, 500-2999, or ≥3000¥), sodium intake (≥10.0, 6.0-9.9, or <6.0 gram/day), updated use of antihypertensive, aspirin, hypoglycemic, and lipid-lowering medications (yes/no for each), and updated cumulative average body mass index (≥30.0, 25.0-29.9, or <25.0 kg/m2), triglycerides(quintile), high-density lipoprotein cholesterol(quintile), low-density lipoprotein cholesterol(quintile), high sensitive C-reactive protein (<1.00, 1.00-2.99, or≥3.00mg/ml), systolic blood pressure(quintile), diastolic blood pressure(quintile), and estimated glomerular filtration rate(quintile).

Model1 further included 1536 participants with history of MI or cancer at baseline to the original cohort.

Model2 excluded 7 cases without autopsy or CT/MRI

Model3 restricted the analyses to 73,687 participants with complete data on all covariates

Supplemental Table II. Adjusted hazard ratio[*] of intracerebral hemorrhage(ICH), according to hematoma location[†]

	<4.00 mmol/L	4.00-6.09 mmol/L	≥ 6.10 mmol/L
Deep[‡]			
# of Case	8	259	103
Incidence rate, per 1000 person-year	1.52	0.39	0.71
Hazard Ratios	2.12(1.04-4.33)	1.00	1.36(1.05-1.77)
Non-deep[§]			
# of Case	2	46	13
Incidence rate, per 1000 person-year	0.38	0.07	0.09
Hazard Ratios	2.13(0.50-9.04)	1.00	1.02(0.49-2.12)

[*] Model adjusted for age (year), sex, smoking (current, past or never), alcohol intake (never, past, light, moderate or heavy), education (illiteracy/elementary school, middle school, or college/university), physical activity (never, sometimes, or active), average monthly income of each family member (<500, 500-2999, or≧3000¥), sodium intake (≧10.0, 6.0-9.9, or <6.0 gram/day), updated use of antihypertensive, aspirin, hypoglycemic, and lipid-lowering medications (yes/no for each), and updated cumulative average body mass index (≧30.0, 25.0-29.9, or <25.0 Kg/m^2), triglycerides(quintile), high-density lipoprotein cholesterol(quintile), low-density lipoprotein cholesterol(quintile), high sensitive C-reactive protein (<1.00, 1.00-2.99, or≧3.00mg/ml), systolic blood pressure(quintile), diastolic blood pressure(quintile), and estimated glomerular filtration rate(quintile).

[†] six cases with deep and non-deep hematoma at the same time.

[‡] Including basal, ganglia, thalami hematoma, cerebellar and brainstem hematoma

[§] Including lobar hematoma

Supplemental Table III. Adjusted hazard ratio of intracerebral hemorrhage, according to baseline and updated fasting blood glucose concentration, respectively

	<4.00 mmol/L	4.00-5.59 mmol/L	5.60-6.09 mmol/L	6.10-6.99 mmol/L	≥ 7.00 mmol/L
	Fasting blood glucose concentration in baseline				
# of Case / population	35/4290	436/63342	90/12181	89/7622	105/8675
Incidence rate, per 1000 person-year	0.95	0.81	0.87	1.39	1.46
Multivariate-adjusted hazard ratio *	1.07(0.75-1.51)	1.00	1.44(1.14-1.82)	1.43(1.12-1.83)	1.46(1.13-1.88)
	Most recent fasting blood glucose concentration				
# of Case / population	19/1676	424/56648	88/15028	77/9602	147/13156
Incidence rate, per 1000 person-year	1.38	0.88	0.69	0.94	1.33
Multivariate-adjusted hazard ratio †	1.24(0.78-1.96)	1.00	0.69(0.55-0.87)	0.88(0.69-1.13)	1.24(0.99-1.56)

* Model adjusted for age (year), sex, smoking (current, past or never), alcohol intake (never, past, light, moderate or heavy), education (illiteracy/elementary school, middle school, or college/university), physical activity (never, sometimes, or active), average monthly income of each family member (<500, 500-2999, or ≥3000¥), sodium intake (≥10.0, 6.0-9.9, or <6.0 gram/day), body mass index (≧30.0, 25.0-29.9, or <25.0 Kg/m2), use of antihypertensive, aspirin, hypoglycemic, and lipid-lowering medications (yes/no for each), systolic blood pressure(quintile), diastolic blood pressure(quintile), triglycerides(quintile), high-density lipoprotein cholesterol(quintile), low-density lipoprotein cholesterol (quintile), estimated glomerular filtration rate(quintile), and high sensitive C-reactive protein (<1.00, 1.00-2.99, or ≥3.00mg/ml) at baseline.

† Model adjusted for age (year), sex, smoking (current, past or never), alcohol intake (never, past, light, moderate or heavy), education (illiteracy/elementary school, middle school, or college/university), physical activity (never, sometimes, or active), average monthly income of each family member (<500, 500-2999, or≥3000¥), sodium intake (≥10.0, 6.0-9.9, or <6.0 gram/day) in baseline, and the most recent use of antihypertensive, aspirin, hypoglycemic, and lipid-lowering medications (yes/no for each), body mass index (≥30.0, 25.0-29.9, or <25.0 Kg/m2), triglycerides(quintile), high-density lipoprotein cholesterol(quintile), low-density lipoprotein cholesterol (quintile), estimated glomerular filtration rate(quintile), systolic blood pressure(quintile), diastolic blood pressure(quintile), and high sensitive C-reactive protein (<1.00, 1.00-2.99, or ≥3.00mg/ml).