ONLINE SUPPLEMENT

Fasting and Post-Glucose Load Measures of Insulin Resistance and Risk of Ischemic Stroke in Older Adults

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This online supplement contains one supplemental table, **Table S1**, Associations of Gutt insulin sensitivity index and its individual components with incident ischemic stroke, prior to interim development of diabetes during follow-up, Cardiovascular Health Study, 1989-2007 (n = 3,442; strokes = 389).

Supplemental Table

Table S1. Associations of Gutt insulin sensitivity index and its individual components with incident ischemic stroke, prior to interim development of diabetes during follow-up, Cardiovascular Health Study, 1989-2007 (n = 3,442; strokes = 389)*

		Rate per	Unadjusted		Adjusted 1‡		Adjusted 2§	
Measure†	Strokes	1,000 PY	RR	(95% CI)	RR	(95% CI)	RR	(95% CI)
Gutt index (mg·L2/mmol·mU·min)								
>77 to 218.2	84	7.6	1.00	(ref)	1.00	(ref)	1.00	(ref)
>60 to 77	86	8.1	1.07	(0.79, 1.45)	1.08	(0.80, 1.46)	1.02	(0.75, 1.38)
>47 to 60	107	10.4	1.38	(1.04, 1.84)	1.37	(1.03, 1.83)	1.24	(0.93, 1.67)
25.8 to 47	112	12.4	1.66	(1.25, 2.21)	1.58	(1.19, 2.11)	1.35	(1.00, 1.82)
p for trend				<0.001		0.001		0.03
Fasting glucose (mmol/L)#								
3.2 to 5.2	110	9.2	1.00	(ref)	1.00	(ref)	1.00	(ref)
>5.2 to 5.4	98	10.0	1.09	(0.83, 1.43)	1.08	(0.82, 1.43)	1.08	(0.82, 1.42)
>5.4 to 5.8	105	9.8	1.07	(0.82, 1.40)	0.99	(0.75, 1.30)	0.92	(0.70, 1.21)
>5.8 to 6.9	76	9.1	1.00	(0.75, 1.34)	0.95	(0.71, 1.28)	0.84	(0.62, 1.14)
p for trend				0.98		0.64		0.18
Fasting insulin (pmol/L)#								
20.8 to 62.5	119	10.0	1.00	(ref)	1.00	(ref)	1.00	(ref)
>62.5 to 83.3	97	8.6	0.86	(0.66, 1.12)	0.86	(0.66, 1.13)	0.81	(0.62, 1.07)
>83.3 to 111.1	88	9.3	0.94	(0.71, 1.24)	0.98	(0.74, 1.29)	0.88	(0.66, 1.17)
>111.1 to 722.3	85	10.3	1.04	(0.78, 1.37)	1.10	(0.83, 1.46)	0.94	(0.70, 1.27)
p for trend				0.61		0.34		0.91
2-hour glucose (mmol/L)#								
2.1 to 5.8	81	7.2	1.00	(ref)	1.00	(ref)	1.00	(ref)
>5.8 to 7.0	90	8.5	1.19	(0.88, 1.61)	1.23	(0.91, 1.67)	1.13	(0.84, 1.54)
>7.0 to 8.4	94	9.1	1.28	(0.95, 1.72)	1.32	(0.97, 1.78)	1.18	(0.87, 1.61)
>8.4 to 11.0	124	14.1	2.00	(1.51, 2.65)	1.84	(1.38, 2.45)	1.58	(1.18, 2.12)
p for trend				<0.001		<0.001		0.002
2-hour insulin (pmol/L)#								
34.7 to 270.9	85	7.5	1.00	(ref)	1.00	(ref)	1.00	(ref)
>270.9 to 437.5	89	8.8	1.18	(0.87, 1.58)	1.20	(0.89, 1.62)	1.14	(0.84, 1.54)

>437.5 to 687.6	112	11.3	1.51	(1.14, 2.01)	1.50	(1.12, 1.99)	1.36	(1.02, 1.82)
>687.6 to 2,778.0	103	10.6	1.42	(1.06, 1.89)	1.40	(1.04, 1.87)	1.23	(0.91, 1.66)
p for trend				0.01		0.02		0.19
Body weight (kg)								
34.8 to 60	99	10.2	1.00	(ref)	1.00	(ref)	1.00	(ref)
>60 to 70	108	9.8	0.96	(0.73, 1.27)	0.97	(0.73, 1.28)	0.93	(0.70, 1.24)
>70 to 80	91	8.4	0.82	(0.62, 1.09)	0.85	(0.62, 1.17)	0.80	(0.58, 1.10)
>80 to 146.5	91	9.6	0.95	(0.71, 1.26)	1.03	(0.74, 1.44)	0.91	(0.65, 1.28)
p for trend				0.51		0.98		0.48

* Of 3,442 participants, 231 developed diabetes during follow-up, of which 28 subsequently had incident ischemic stroke. Therefore, the analysis only includes person time that accrued prior to interim development of diabetes, and 389 strokes that occurred prior to interim development of diabetes. Abbreviations: PY, person years; RR, relative risk; CI, confidence interval.

† For each measure, the reference category was the least insulin resistant quartile (highest quartile for Gutt index; lowest quartilefor each component).

‡ Adjusted for age, sex, race, estimated glomerular filtration rate, coronary heart disease, congestive heart failure, atrial fibrillation, and peripheral arterial disease.

§ Adjusted for all of the above plus systolic blood pressure, antihypertensive medication use, triglyceride, HDL cholesterol, and LDL cholesterol.

Conversions: insulin, μU/mL = (pmol/L)/6.945; glucose, mg/dL = (mmol/L)/0.0555.