

Supplemental Table 1. Characteristics of the study sample by diabetes onset group.

Characteristics*	Age of Onset <55 years (n=201)	Age of Onset 55-64 years (n=255)	Age of Onset ≥65 years (n=801)	Never Diabetes (n=4514)
Examinations, n	9.1±5.2	11.8±6.4	17.7±8.2	12.8±6.6
Age at baseline, years	40.6±7.4	41.8±7.7	42.0±8.2	44.8±8.3
Age at death, years	71.2±8.4	75.2±8.3	86.3±8.3	79.2±10.4
Women (%)	93 (46)	99 (39)	434 (54)	2468 (55)
Body mass index, kg/m ²	28.8±5.9	28.7±5.2	26.0±4.4	25.4±3.9
Current smoker (%)	108 (54)	147 (58)	385 (48)	2393 (53)
Fasting blood glucose, mg/dL	169±72	130±47	102±15	93±9
Non-fasting blood glucose, mg/dL	127±54	96±22	88±18	85±16
Cholesterol, mg/dL	221±50	221±44	217±45	223±44
HDL cholesterol, mg/dL	42±14	43±15	48±16	51±16
Hypertension (%)	116 (58)	155 (61)	354 (44)	2204 (49)
Use of anti-hypertensive therapy (%)	17 (8)	23 (9)	32 (4)	214 (5)
Use of statins (%)	2 (1)	5 (2)	4 (0.5)	23 (1)

Data are shown as n (%) or mean ± SD.

Values displayed are from the first examination cycle where these were available, except for the age at death and the age of diabetes onset.

Supplemental Table 2. Comparison of the disease duration between those who died from cardiovascular disease vs those who died from non-cardiovascular death

	Cardiovascular Deaths	Coronary Deaths	Non-cardiovascular Deaths
Characteristic	Mean duration of diabetes \pm SD (No. Deaths)	Mean duration of diabetes \pm SD (No. Deaths)	Mean duration of diabetes \pm SD (No. Deaths)
Age of diabetes onset			
<55 years	22.5 \pm 8.6 (N=94)	21.1 \pm 7.9 (N=59)	22.6 \pm 9.0 (N=107)
55-64 years	13.4 \pm 7.7 (N=114)	11.5 \pm 7.2 (N=66)	16.2 \pm 9.0 (N=141)
\geq 65 years	7.5 \pm 5.6 (N=239)	7.9 \pm 5.7 (N=104)	7.4 \pm 6.(N=562)
Overall	12.2 \pm 9.1 (N=104)	12.3 \pm 8.6 (N=229)	11.0 \pm 9.1 (N=810)
<i>P-value</i>	0.02 (for cardiovascular deaths vs. non-cardiovascular deaths comparison)	0.0004 (for coronary deaths vs. non-cardiovascular deaths comparison)	Reference

Supplemental 3. Odds ratio for stroke death versus non-cardiovascular death.

		Stroke Deaths		
No. Deaths		Odds Ratios (95%CI)		
Characteristic		Unadjusted	Age of death and sex-adjusted	Multivariable adjusted*
Age of diabetes onset				
<55 years	5	3.49 (1.36-9.01)	3.24 (1.23-8.55)	2.15 (0.35-13.17)
55-64 years	6	3.18 (1.33-7.61)	3.18 (1.32-7.65)	2.74 (0.69-10.84)
≥65 years	8	1.06 (0.50-2.28)	1.17 (0.53-2.56)	1.05 (0.43-2.56)
No diabetes	42	referent	referent	referent
<i>P trend</i>		<0.0001	<0.01	0.29

*Multivariable models are adjusted for age at death, sex, smoking status, systolic blood pressure, body mass index, and total cholesterol, use of antihypertensive medications, use of statins, and duration of diabetes (covariates are from first examination at which data were available).

Supplemental Table 4. Odds ratio for cardiovascular versus non-cardiovascular deaths, adjusting for covariates assessed at the last examination.

Characteristic	CVD Deaths		CHD Deaths		Stroke Deaths	
	No. Deaths	Odd Ratio (95%CI)	No. Deaths	Odd Ratio (95%CI)	No. Deaths	Odd Ratio (95%CI)
Age of diabetes onset						
<55 years	94	1.78 (1.08-2.93)	59	1.75 (0.96-3.21)	5	1.59 (0.24-10.50)
55-64 years	114	1.59 (1.10-2.31)	66	1.56 (1.00-2.43)	6	1.78 (0.43-7.29)
≥65 years	239	1.13 (0.91-1.40)	104	1.10 (0.82-1.46)	8	0.72 (0.29-1.78)
No diabetes	1375	Referent	732	Referent	42	Referent
<i>P</i> trend		<i>0.013</i>		<i>0.044</i>		<i>0.481</i>

Multivariable models are adjusted for age at death, sex, smoking status, hypertension, body mass index, and total cholesterol, use of antihypertensive, use of statins, and duration of diabetes (covariates are from the last examination, prior to death, at which data were available)

Supplemental Table 5. Odds ratio for cardiovascular or coronary death (versus non-cardiovascular death) based on diabetes age of onset, adjusting for risk factors and socio-economic status.

Characteristic	Cardiovascular Deaths		Coronary Deaths	
	No. Deaths	Odds Ratio (95%CI)	No. Deaths	Odds Ratio (95%CI)
	Multivariable adjusted		Multivariable adjusted	
Age of diabetes onset				
<55 years	85	1.93 (1.11 - 3.33),	50	1.72 (0.87 - 3.42)
55-64 years	94	1.63 (1.08 - 2.47)	54	1.55 (0.94 - 2.58)
≥65 years	207	1.14 (0.91 - 1.43)	85	0.97 (0.71 - 1.33)
Never diabetes	1168	referent	631	referent
<i>P</i> trend		0.01		0.007

Multivariable models adjusted for age at death, sex, smoking status, systolic blood pressure, body mass index, total cholesterol, use of anti-hypertensives, use of statins, education, occupation and duration of diabetes, based on data from the first examination at which assessment data were available.

Supplemental Table 6. Characteristics of the offspring participants according to parental diabetes-onset age

Characteristic	Parental Diabetes Status			<i>P</i> value
	Parents without Diabetes (n=1720)	Late-Onset Diabetes in ≥1 Parent (n=321)	Early-Onset Diabetes in 1 Parent* (n=82)	
Age, years	33.8±9.5	31.9±9.8	33.8±8.6	0.003
Women (%)	882 (51)	154 (48)	36 (44)	0.26
Body mass index, kg/m ²	24.7±4.1	25.3±4.9	26.1±4.0	0.001
Systolic blood pressure, mm Hg	121±15	121±16	126±15	0.01
Diastolic blood pressure, mm Hg	79±10	79±11	83±10	0.006
Current smoker (%)	734 (43)	128 (40)	36 (44)	0.62
Total cholesterol, mg/dL	195±38	195±41	197±33	0.87
HDL cholesterol, mg/dL	52±16	50±15	48±15	0.002
Fasting blood glucose, mg/dL	100±9	101±11	102±9	0.03

Data are n (%) or mean (SD). Abbreviations: HDL, high density lipoprotein. Characteristics are from the first examination at which data were available. Characteristics are from the first examination at which data were available.

*Including one early-onset only, or one early-onset plus one late-onset (there were no families with early-onset diabetes in both parents).

Supplemental Table 7. Incident diabetes in offspring by diabetes age-of-onset in parents, according to offspring age bands.

Age Band	Person-Years	Incident DM	No DM in Parents	Late DM in ≥ 1 Parents	Early DM in 1 Parent [†]
<55 years	41804.3	63			
Unadjusted model			1.00 [referent]	2.29 (1.20-4.39)	6.84 (3.51-13.30)
Multivariable-adjusted model*			1.00 [referent]	2.28 (1.57-3.31)	3.12 (1.68-5.80)
≥ 55 years	26192.3	149			
Unadjusted model			1.00 [referent]	2.05 (1.09-3.88)	5.43 (2.87-10.29)
Multivariable-adjusted model*			1.00 [referent]	2.25 (1.51-3.36)	2.48 (1.23-5.01)

Abbreviations: DM, diabetes.

*Adjusted for date of birth, sex, body mass index, smoking status

[†]Including 1 parent with early-onset diabetes or 1 with early-onset plus 1 with late-onset diabetes (there were no families with early-onset diabetes in both parents).

Supplemental Table 8. Incident diabetes in offspring by diabetes age-of-onset in parents, with early-onset defined as age <50 years.

	Parental Diabetes Status		
	Parents without Diabetes (n=1715)	Late-Onset Diabetes in ≥1 Parents (n=356)	Early-Onset Diabetes in 1 Parent (n=33) †
No. with incident diabetes	136	59	12
Person-years of follow-up	55336	11255	956
Incidence per 1000 person-years (95% CI)	25 (21, 29)	52 (41, 68)	125 (71, 221)
Hazard ratio (95% CI)			
Unadjusted model	1.00 [referent]	2.20 (1.56 - 3.11) ‡	5.70 (2.97 - 10.92) ‡
Multivariable-adjusted model*	1.00 [referent]	2.23 (1.55 - 3.21) ‡	4.13 (1.80 - 9.49) ‡

CI, confidence interval.

*Adjusted for age, sex, body mass index, and smoking status.

†Including 1 early-onset parent or 1 early-onset plus 1 late-onset parent.

‡ $P < 0.001$