

Supplementary Table 3. Risk of diabetes mellitus for time-varying resting heart rate by univariate and multivariate time-varying Cox regression analysis in male

Variable	Univariate		Model 1		Model 2	
	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value
Time-varying RHR, bpm					NA	NA
<60	0.849 (0.699–1.031)	0.099	0.816 (0.667–0.997)	0.047	NA	NA
60–69	Reference		Reference		NA	NA
70–79	1.075 (0.848–1.362)	0.551	0.700 (0.523–0.937)	0.017	NA	NA
≥80	1.809 (1.278–2.559)	0.001	2.195 (1.514–3.183)	<0.001	NA	NA
ΔRHR, bpm			NA	NA		
≥5 drop	0.887 (0.722–1.089)	0.251	NA	NA	0.602 (0.471–0.770)	<0.001
<5 change	Reference		NA	NA	Reference	
≥5 increase	0.999 (0.824–1.211)	0.992	NA	NA	1.057 (0.869–1.285)	0.582
Change in RHR, continuous	1.006 (0.996–1.016)	0.272	1.026 (1.015–1.036)	<0.001	NA	NA
Time-varying RHR, continuous	1.018 (1.008–1.028)	0.001	NA	NA	1.010 (0.998–1.022)	0.105
Age	0.992 (0.983–1.002)	0.105	0.988 (0.977–0.999)	0.030	0.986 (0.975–0.997)	0.016
Area, rural vs. urban	1.053 (0.900–1.233)	0.519	1.127 (0.909–1.396)	0.276	1.185 (0.959–1.464)	0.115
BMI						
Lean vs. normal	0.792 (0.387–1.620)	0.522	1.120 (0.540–2.322)	0.760	1.181 (0.570–2.447)	0.655
Overweight vs. normal	1.348 (1.053–1.726)	0.018	1.596 (1.218–2.092)	0.001	1.649 (1.258–2.161)	<0.001
Obese vs. normal	2.733 (2.219–3.367)	<0.001	2.853 (2.249–3.620)	<0.001	2.886 (2.273–3.664)	<0.001
Physical activity	0.999 (0.994–1.003)	0.535	0.999 (0.994–1.004)	0.809	0.998 (0.992–1.004)	0.501
Smoking						
Past vs. never	1.340 (1.054–1.703)	0.017	1.248 (0.978–1.592)	0.075	1.264 (0.991–1.612)	0.059
Current vs. never	1.521 (1.208–1.916)	<0.001	1.309 (1.030–1.663)	0.028	1.322 (1.041–1.680)	0.022
Current drinker	0.933 (0.759–1.148)	0.513	1.137 (0.919–1.408)	0.238	0.888 (0.718–1.099)	0.276
SBP	1.017 (1.012–1.022)	<0.001	1.019 (1.014–1.025)	<0.001	1.019 (1.014–1.025)	<0.001
Antihypertensive drug	1.610 (1.351–1.919)	<0.001	1.273 (1.052–1.541)	0.013	1.278 (1.057–1.546)	0.011
CKD	1.267 (0.943–1.702)	0.116	1.065 (0.781–1.452)	0.691	1.087 (0.800–1.477)	0.593
CVD	1.335 (0.924–1.929)	0.124	1.110 (0.754–1.634)	0.597	1.169 (0.799–1.710)	0.421
HbA1c	2.173 (2.083–2.266)	<0.001	2.651 (2.494–2.817)	<0.001	2.546 (2.403–2.697)	<0.001
Total cholesterol	1.004 (1.001–1.006)	0.002	1.001 (0.999–1.003)	0.376	1.001 (0.999–1.004)	0.306

Model 1 included area, and time-updated variables which were age, BMI, physical activity, smoking, drinking, SBP, antihypertensive drug use, CKD, CVD, HbA1c, total cholesterol, and change in RHR; Model 2 included area and time-updated variables which were age, BMI, physical activity, smoking, drinking, SBP, antihypertensive drug use, CKD, CVD, HbA1c, total cholesterol, and RHR.

HR, hazard ratio; CI, confidence interval; RHR, resting heart rate; NA, not applicable; ΔRHR, change in resting heart rate; BMI, body mass index; SBP, systolic blood pressure; CKD, chronic kidney disease; CVD, cardiovascular disease; HbA1c, glycosylated hemoglobin.