

Supplementary Table 4. Risk of diabetes mellitus for time-varying resting heart rate by univariate and multivariate time-varying Cox regression analysis in female

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	0.865 (0.712–1.052)	0.147	0.819 (0.665–1.010)	0.062	NA	NA
60–69	Reference		Reference		NA	NA
70–79	1.089 (0.877–1.353)	0.438	1.126 (0.892–1.422)	0.320	NA	NA
≥80	2.356 (1.743–3.182)	<0.001	2.224 (1.562–3.165)	<0.001	NA	NA
Change in RHR, continuous	1.011 (1.001–1.021)	0.027	1.015 (1.004–1.027)	0.006	NA	NA
ΔRHR, bpm			NA	NA		
≥5 drop	1.099 (0.910–1.326)	0.328	NA	NA	0.806 (0.651–0.998)	0.048
<5 change	Reference		NA	NA	Reference	
≥5 increase	1.374 (1.155–1.634)	<0.001	NA	NA	1.218 (1.008–1.471)	0.041
Time-varying RHR, continuous	1.024 (1.014–1.034)	<0.001	NA	NA	1.026 (1.014–1.039)	<0.001
Age	1.026 (1.018–1.035)	<0.001	0.991 (0.980–1.001)	0.081	0.990 (0.980–1.000)	0.059
Area, rural vs. urban	1.439 (1.237–1.674)	<0.001	0.878 (0.720–1.069)	0.195	0.874 (0.719–1.063)	0.179
BMI						
Lean vs. normal	0.729 (0.268–1.980)	0.535	0.918 (0.334–2.525)	0.868	0.906 (0.330–2.488)	0.848
Overweight vs. normal	1.935 (1.501–2.493)	<0.001	2.525 (1.896–3.363)	<0.001	2.510 (1.892–3.331)	<0.001
Obese vs. normal	3.617 (2.906–4.501)	<0.001	3.548 (2.760–4.561)	<0.001	3.525 (2.751–4.517)	<0.001
Physical activity	1.002 (0.997–1.006)	0.435	1.003 (0.997–1.008)	0.307	1.003 (0.998–1.008)	0.285
Smoking						
Past vs. never	1.667 (1.118–2.486)	0.012	1.490 (0.984–2.257)	0.059	1.430 (0.944–2.166)	0.091
Current vs. never	1.479 (0.937–2.334)	0.093	1.810 (1.112–2.945)	0.017	1.837 (1.158–2.914)	0.010
Current drinker	1.068 (0.908–1.257)	0.427	1.147 (0.963–1.368)	0.124	1.181 (0.992–1.407)	0.062
SBP	1.023 (1.020–1.027)	<0.001	1.011 (1.006–1.016)	<0.001	1.011 (1.006–1.015)	<0.001
Antihypertensive drug	2.351 (2.024–2.732)	<0.001	1.297 (1.089–1.544)	0.004	1.311 (1.103–1.558)	0.002
CKD	1.590 (1.292–1.956)	<0.001	1.289 (1.035–1.606)	0.023	1.260 (1.014–1.567)	0.037
CVD	2.266 (1.684–3.049)	<0.001	1.335 (0.972–1.834)	0.074	1.320 (0.962–1.811)	0.085
HbA1c	3.721 (3.516–3.938)	<0.001	5.024 (4.596–5.493)	<0.001	5.079 (4.651–5.546)	<0.001
Total cholesterol	1.004 (1.002–1.007)	<0.001	1.000 (0.998–1.002)	0.969	1.000 (0.998–1.002)	0.854

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 pressure; CKD, chronic kidney disease; CVD, cardiovascular disease; HbA1c, glycosylated hemoglobin.