

Supplemental Table 1 Incidence rate of incident prediabetes.

PP	Participants (n)	prediabetes events (n)	Cumulative incidence (95%CI) (%)	Per 100,000 person-year
Total	182672	20284	11.10 (10.96–11.25)	3532.68
Q1	39914	3560	8.92(8.64–9.20)	2779.24
Q2	47771	4525	9.47 (9.21–9.73)	2999.95
Q3	43811	4740	10.82 (10.53–11.11)	3470.06
Q4	51176	7459	14.58 (14.27–14.88)	4701.37
P for trend			<0.001	<0.001

PP: pulse pressure, CI: confidence interval

Supplemental Table 2 The results of the univariate analysis

	Statistics	HR (95%CI)	P value
Gender			<0.001
Male	96966 (53.082%)	ref	
Female	85706 (46.918%)	0.627 (0.609, 0.645)	<0.001
Age(years)	40.832 ± 11.864	1.033 (1.032, 1.034)	<0.001
Drinking status			
Current-drinker	2924 (1.601%)	ref	
Ex-drinker	22634 (12.391%)	0.770 (0.701, 0.846)	<0.001
Never- drinker	157114 (86.009%)	0.607 (0.556, 0.663)	<0.001
Smoking status			
Current-smoker	29424 (16.108%)	ref	
Ex-smoker	6566 (3.594%)	0.896 (0.834, 0.963)	0.003
Never-smoker	146682 (80.298%)	0.714 (0.691, 0.739)	<0.001
Family history of diabetes			0.350
No	179039 (98.011%)	ref	
Yes	3633 (1.989%)	1.054 (0.965, 1.153)	0.24372
SBP (mmHg)	117.428 ± 15.208	1.026 (1.025, 1.027)	<0.001
DBP (mmHg)	73.492 ± 10.572	1.029 (1.028, 1.030)	<0.001
PP (mmHg)	43.936 ± 10.595	1.025 (1.023, 1.026)	<0.001
BMI (kg/m ²)	22.976 ± 3.259	1.124 (1.120, 1.129)	<0.001
AST(U/L)	23.591 ± 12.164	1.005 (1.005, 1.006)	<0.001
ALT (U/L)	23.232 ± 21.734	1.003 (1.003, 1.004)	<0.001
HDL-C (mmol/L)	1.372 ± 0.307	0.739 (0.707, 0.773)	<0.001
TG (mmol/L)	1.267 ± 0.934	1.200 (1.192, 1.208)	<0.001
LDL-C (mmol/L)	2.685 ± 0.671	1.280 (1.256, 1.305)	<0.001
TC (mmol/L)	4.661 ± 0.882	1.220 (1.202, 1.238)	<0.001
BUN (mmol/L)	4.602 ± 1.167	1.136 (1.124, 1.149)	<0.001
SCr (umol/L)	69.565 ± 15.522	1.006 (1.006, 1.007)	<0.001
FPG (mmol/L)	4.765 ± 0.487	5.711 (5.513, 5.916)	<0.001

PP: pulse pressure, SBP systolic blood pressure, DBP diastolic blood pressure, BMI body mass index, ALT alanine aminotransferase, AST aspartate aminotransferase, HDL-C high-density lipoprotein cholesterol, LDL-C low-density lipoprotein cholesterol, TC total cholesterol, TG triglycerides, Scr serum creatinine, BUN blood urea nitrogen, FPG fasting plasma glucose

Supplemental Table 3 Relationship between PP and prediabetes in different sensitivity analyses

Exposure	Model I (HR,95%CI, P)	Model II (HR,95%CI, P)
PP	1.011 (1.009, 1.013) <0.001	1.008 (1.007, 1.010) <0.001
PP (Quintile)		
Q1	Ref	Ref
Q2	1.055 (0.999, 1.115) 0.055	1.040 (0.993, 1.090) 0.097
Q3	1.166 (1.104, 1.232) <0.001	1.123 (1.072, 1.177) <0.001
Q4	1.310 (1.244, 1.379) <0.001	1.228 (1.175, 1.285) <0.001
P for trend	<0.001	<0.001

Model I was sensitivity analysis in participants without BMI \geq 25kg/m². We adjusted gender, age, family history of diabetes, drinking status, smoking status, TC, TG, HDL-C, LDL-C, AST, ALT, SCr, BUN, and FPG.

Model II was sensitivity analysis in participants without age \geq 60 years. We adjusted gender, family history of diabetes, drinking status, smoking status, BMI, TC, TG, HDL-C, LDL-C, AST, ALT, SCr, BUN, and FPG.

HR, hazard ratios; CI, confidence; Ref: reference; PP: pulse pressure

Supplemental Table 4 Variables included age, gender, smoking status, BMI, family history of diabetes, and drinking status interacted with PP

Characteristic	P-value
Age	<0.001
Gender	<0.001
BMI	<0.001
Family history of diabetes	<0.001
Smoking status	<0.001
Drinking status	<0.001

Supplemental Table 5 Effect size of PP on prediabetes in prespecified and exploratory subgroups

Characteristic	No of participants	HR (95%CI)	P value	P for interaction
Age, years				0.134
<60	165813	1.008 (1.006, 1.009)	<0.001	
≥60	16859	1.010 (1.007, 1.013)	<0.001	
Gender				<0.001
Male	96966	1.006 (1.004, 1.008)	<0.001	
Female	85706	1.011 (1.009, 1.013)	<0.001	
BMI (kg/m ²)				<0.001
<25	135554	1.012 (1.010, 1.014)	<0.001	
≥25	47118	1.006 (1.004, 1.008)	<0.001	
Smoking status				0.008
Current smoker	29424	1.005 (1.002, 1.008)	<0.001	
Ever smoker	6566	1.007 (1.001, 1.013)	0.021	
Never smoker	146682	1.010 (1.008, 1.011)	<0.001	
Drinking status				0.271
Current drinker	2924	1.014 (1.006, 1.022)	<0.001	
Ever drinker	22634	1.007 (1.004, 1.010)	<0.001	
Never drinker	157114	1.009 (1.007, 1.010)	<0.001	
Family history of diabetes				0.062
No	179039	1.009 (1.007, 1.010)	<0.001	
Yes	3633	1.001 (0.992, 1.009)	0.907	

Note 1: The above model was adjusted for gender, age, family history of diabetes, drinking status, smoking status, BMI, TC, TG, HDL-C, LDL-C, AST, ALT, SCr, BUN, and FPG.

Note 2: The model is not adjusted for the stratification variable in each case.

Supplemental Table 6 Relationship between PP and the incident prediabetes in pre-imputation data and imputed datasets

Exposure	Pre-imputation	Imputation	P-value
Participants	182672	182672	
Gender			1.000
Male	96966 (53.082%)	96966 (53.082%)	
Female	85706 (46.918%)	85706 (46.918%)	
Age(years)	40.832 ± 11.864	40.832 ± 11.864	1.000
Drinking status			<0.001
Current-drinker	978 (1.932%)	2924 (1.601%)	
Ex-drinker	7340 (14.501%)	22634 (12.391%)	
Never- drinker	42299 (83.567%)	157114 (86.009%)	
Smoking status			<0.001
Current-smoker	9609 (18.984%)	29424 (16.108%)	
Ex-smoker	2104 (4.157%)	6566 (3.594%)	
Never-smoker	38904 (76.860%)	146682 (80.298%)	
Family history of diabetes			1.000
No	179039 (98.011%)	179039 (98.011%)	
Yes	3633 (1.989%)	3633 (1.989%)	
BMI (kg/m ²)	22.976 ± 3.259	22.976 ± 3.259	1.000
AST(U/L)	23.685 ± 12.404	23.591 ± 12.164	0.075
ALT (U/L)	23.219 ± 21.739	23.232 ± 21.734	0.854
HDL-C (mmol/L)	1.378 ± 0.308	1.372 ± 0.307	<0.001
TG (mmol/L)	1.268 ± 0.934	1.267 ± 0.934	0.889
LDL-C (mmol/L)	2.739 ± 0.669	2.685 ± 0.671	<0.001
TC (mmol/L)	4.663 ± 0.883	4.661 ± 0.882	0.630
BUN (mmol/L)	4.604 ± 1.165	4.602 ± 1.167	0.630
SCr (umol/L)	69.628 ± 15.507	69.565 ± 15.522	0.228
FPG (mmol/L)	4.765 ± 0.487	4.765 ± 0.487	1.000