

Supplementary materials

Table S1. Factors associated with CHD in men in the baseline survey of the Beijing Health Management Cohort.

	OR	95% CI of OR		<i>p</i>
Age	1.053	1.048	1.058	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	0.986	0.834	1.166	0.870
Q3	0.913	0.773	1.080	0.288
Q4	0.846	0.714	1.004	0.055
Smoke status (n, %)				
Never smoke	Ref	NA	NA	NA
Quit smoke	1.607	1.373	1.882	<0.001
Current smoke	0.949	0.843	1.067	0.380
Alcohol drink (n, %)				
Never	Ref	NA	NA	NA
Ever	1.031	0.896	1.187	0.665
Night sleep duration				
< 5 h	1.320	1.055	1.651	0.015
5-7 h	1.227	1.090	1.381	0.001
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	1.234	1.075	1.417	0.003
Seldom	1.139	1.000	1.299	0.051
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	1.104	0.985	1.238	0.090
Sweet food	0.971	0.831	1.136	0.717
Red meat	1.230	1.089	1.389	0.001
Pickled food	1.056	0.854	1.305	0.616
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	1.146	0.538	2.438	0.724
Meatarian	1.009	0.849	1.198	0.922
Prefer vegetarian food	1.122	0.903	1.395	0.299
Eating speed				
Very fast	1.551	1.263	1.903	<0.001
A little bit fast	1.296	1.159	1.450	<0.001
Normal speed	Ref	NA	NA	NA
Slow	0.767	0.630	0.934	0.008
Psychological character				
Positive and optimistic	0.496	0.399	0.616	<0.001
Emotional	1.040	0.819	1.320	0.747

Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.775	0.623	0.963	0.021
Hypertension	2.131	1.918	2.367	<0.001
Hyperuricemia	1.022	0.923	1.131	0.678
TyG				
Q1	Ref	NA	NA	NA
Q2	1.483	1.233	1.782	<0.001
Q3	2.118	1.769	2.535	<0.001
Q4	3.334	2.777	4.002	<0.001

BRI: body roundness index; TyG index: triglyceride-glucose index; HDL: high-density lipoprotein. OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quartiles of the variable. CHD: coronary heart disease.

Table S2. Factors associated with CHD in women in the baseline survey of the Beijing Health Management Cohort.

	OR	95% CI of OR		<i>p</i>
Age	1.071	1.065	1.076	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	1.130	0.907	1.409	0.276
Q3	1.246	1.007	1.542	0.043
Q4	1.097	0.879	1.369	0.412
Alcohol drink (n, %)				
Never	Ref	NA	NA	NA
Ever	0.529	0.237	1.184	0.122
Night sleep duration				
< 5 h	1.409	1.115	1.780	0.004
5-7 h	1.181	1.034	1.348	0.014
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	1.458	1.255	1.694	<0.001
Seldom	1.259	1.095	1.448	0.001
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	0.985	0.848	1.143	0.841
Sweet food	1.018	0.868	1.195	0.823
Red meat	1.214	1.033	1.425	0.018
Pickled food	1.001	0.729	1.373	0.997
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	0.532	0.211	1.342	0.181
Meatarian	1.103	0.830	1.466	0.500
Prefer vegetarian food	0.976	0.809	1.177	0.800
Eating speed				
Very fast	1.102	0.704	1.724	0.671
A little bit fast	1.289	1.128	1.472	<0.001
Normal speed	Ref	NA	NA	NA
Slow	0.873	0.741	1.027	0.101
Psychological character				
Positive and optimistic	0.451	0.353	0.577	<0.001
Emotional	0.816	0.633	1.053	0.118
Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.651	0.509	0.833	0.001
Hypertension	1.814	1.606	2.049	<0.001
Hyperuricemia	1.198	1.053	1.363	0.006
TyG				
Q1	Ref	NA	NA	NA

Q2	1.922	1.489	2.480	<0.001
Q3	2.307	1.798	2.961	<0.001
Q4	4.885	3.798	6.283	<0.001
TyG-to-HDL Ratio				
Q1	Ref	NA	NA	NA
Q2	1.090	0.916	1.298	0.330
Q3	1.122	0.946	1.332	0.186
Q4	1.527	1.293	1.803	<0.001

BRI: body roundness index; TyG index: triglyceride-glucose index; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quartiles of the variable. CHD: coronary heart disease.

Table S3. Factors associated with stroke in men in the baseline survey of the Beijing Health Management Cohort.

	OR	95% CI of OR		P
Age	1.031	1.025	1.037	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	0.992	0.795	1.237	0.942
Q3	1.118	0.900	1.388	0.314
Q4	1.094	0.877	1.365	0.424
Smoke status (n, %)				
Never smoke	Ref	NA	NA	NA
Quit smoke	1.245	1.008	1.537	0.042
Current smoke	0.740	0.633	0.866	<0.001
Alcohol drink (n, %)				
Never	Ref	NA	NA	NA
Ever	1.083	0.895	1.310	0.414
Night sleep duration				
< 5 h	1.235	0.921	1.656	0.158
5-7 h	1.156	0.993	1.346	0.062
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	1.296	1.085	1.547	0.004
Seldom	1.079	0.907	1.284	0.389
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	0.919	0.790	1.069	0.274
Sweet food	1.186	0.985	1.428	0.072
Red meat	0.964	0.821	1.133	0.658
Pickled food	1.218	0.941	1.575	0.134
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	1.079	0.386	3.011	0.885
Meatarian	1.101	0.894	1.356	0.365
Prefer vegetarian food	1.440	1.109	1.869	0.006
Eating speed				
Very fast	1.346	1.046	1.733	0.021
A little bit fast	1.078	0.933	1.245	0.306
Normal speed	Ref	NA	NA	NA
Slow	0.592	0.446	0.786	<0.001
Psychological character				
Positive and optimistic	0.565	0.431	0.741	<0.001
Emotional	0.952	0.704	1.288	0.751
Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.843	0.643	1.104	0.215

Hypertension	1.956	1.704	2.245	<0.001
Hyperuricemia	2.662	2.330	3.041	<0.001
TyG				
Q1	Ref	NA	NA	NA
Q2	0.950	0.765	1.181	0.647
Q3	1.284	1.042	1.582	0.019
Q4	1.299	1.043	1.618	0.020

BRI: body roundness index; TyG index: triglyceride-glucose index; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quartiles of the variable.

Table S4. Factors associated with stroke in women in the baseline survey of the Beijing Health Management Cohort.

	OR	95% CI of OR		<i>P</i>
Age	1.019	1.014	1.025	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	1.079	0.904	1.288	0.398
Q3	1.120	0.933	1.344	0.224
Q4	1.182	0.968	1.442	0.101
Alcohol drink (n, %)				
Never	Ref	NA	NA	NA
Ever				0.090
Night sleep duration				
< 5 h	1.007	0.749	1.353	0.963
5-7 h	1.127	0.987	1.287	0.076
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	0.950	0.810	1.113	0.522
Seldom	0.993	0.858	1.150	0.930
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	0.999	0.857	1.164	0.986
Sweet food	1.139	0.976	1.329	0.099
Red meat	1.031	0.869	1.223	0.726
Pickled food	0.821	0.597	1.128	0.224
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	0.696	0.256	1.895	0.478
Meatarian	0.846	0.632	1.133	0.261
Prefer vegetarian food	1.167	0.960	1.418	0.122
Eating speed				
Very fast	0.849	0.518	1.392	0.517
A little bit fast	1.091	0.947	1.256	0.227
Normal speed	Ref	NA	NA	NA
Slow	1.029	0.873	1.214	0.733
Psychological character				
Positive and optimistic	0.698	0.537	0.905	0.007
Emotional	1.133	0.865	1.485	0.364
Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.907	0.698	1.179	0.467
Hypertension	1.186	1.009	1.393	0.039
Hyperuricemia	1.347	1.159	1.565	<0.001
TyG				
Q1	Ref	NA	NA	NA

Q2	1.129	0.950	1.343	0.169
Q3	1.084	0.904	1.299	0.383
Q4	1.122	0.917	1.374	0.264

BRI: body roundness index; TyG index: triglyceride-glucose index; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quartiles of the variable.

Table S5. Age-stratified analysis of the association between BRI, TyG index and CVDs in different sexes.

Age groups	<40		40~59			≥ 60			
Men	OR	95% CI	OR	95% CI	OR	95% CI			
CVD									
BRI groups									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	0.825	0.632	1.076	1.152	0.941	1.411	0.763	0.541	1.075
Q3	0.901	0.688	1.179	1.134	0.928	1.387	0.712	0.512	0.990
Q4	0.874	0.663	1.150	1.113	0.905	1.369	0.708	0.511	0.982
TyG index									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.383	1.017	1.880	1.092	0.888	1.344	1.256	0.920	1.713
Q3	2.091	1.543	2.833	1.465	1.201	1.786	1.725	1.262	2.359
Q4	2.772	2.013	3.816	1.945	1.587	2.384	2.023	1.462	2.799
CHD									
BRI groups									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	0.885	0.619	1.265	1.118	0.891	1.402	0.645	0.449	0.929
Q3	0.805	0.556	1.166	1.076	0.859	1.348	0.603	0.425	0.855
Q4	0.774	0.533	1.123	1.007	0.799	1.270	0.616	0.437	0.869
TyG index									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.717	1.088	2.71	1.238	0.969	1.582	1.729	1.213	2.466
Q3	2.549	1.624	4.003	1.750	1.385	2.211	2.247	1.567	3.222
Q4	4.597	2.902	7.282	2.683	2.117	3.401	2.773	1.913	4.020
Stroke									
BRI groups									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	0.819	0.571	1.174	1.18	0.849	1.641	0.769	0.422	1.402
Q3	1.138	0.804	1.612	1.186	0.855	1.644	0.924	0.532	1.605
Q4	1.066	0.744	1.529	1.282	0.918	1.789	0.797	0.458	1.389
TyG index									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.183	0.803	1.743	0.923	0.678	1.257	0.598	0.355	1.006
Q3	1.725	1.179	2.526	1.005	0.745	1.356	1.318	0.826	2.103
Q4	1.961	1.306	2.943	0.99	0.725	1.352	1.084	0.655	1.793

Women**CVD**

BRI groups

Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.147	0.927	1.419	1.032	0.828	1.286	0.858	0.540	1.363
Q3	1.201	0.950	1.518	1.073	0.864	1.333	0.997	0.654	1.521
Q4	1.439	1.106	1.871	1.188	0.947	1.491	0.841	0.552	1.282

TyG index

Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.297	1.050	1.604	1.392	1.11	1.746	1.230	0.723	2.093
Q3	1.227	0.969	1.555	1.633	1.307	2.039	1.311	0.796	2.161
Q4	1.970	1.504	2.579	2.479	1.971	3.118	2.137	1.291	3.536
CHD									
BRI groups									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	0.912	0.571	1.456	1.066	0.786	1.446	1.048	0.64	1.716
Q3	0.804	0.483	1.339	1.184	0.882	1.59	1.078	0.684	1.699
Q4	0.960	0.565	1.633	1.213	0.894	1.645	0.932	0.592	1.467
TyG index									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	2.427	1.387	4.248	1.886	1.332	2.671	1.074	0.622	1.854
Q3	2.580	1.414	4.708	2.474	1.765	3.468	1.073	0.643	1.79
Q4	10.901	6.035	19.692	5.292	3.771	7.426	1.884	1.126	3.154
Stroke									
BRI groups									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.198	0.947	1.514	0.974	0.731	1.299	0.437	0.185	1.035
Q3	1.271	0.981	1.647	0.97	0.728	1.293	0.684	0.334	1.399
Q4	1.622	1.211	2.173	0.992	0.728	1.352	0.688	0.339	1.398
TyG index									
Q1	Ref	NA	NA	Ref	NA	NA	Ref	NA	NA
Q2	1.178	0.938	1.481	1.106	0.835	1.466	1.206	0.458	3.173
Q3	1.109	0.859	1.431	1.167	0.883	1.544	1.052	0.422	2.627
Q4	1.228	0.897	1.681	1.062	0.783	1.441	1.514	0.604	3.791

BRI: body roundness index; TyG index: triglyceride-glucose index; CVD: cardiovascular disease; CHD: coronary heart disease; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quartiles of the variable.

Table S6. Basic characteristics of the study population without taking medication on treating diabetes and dyslipidemia.

Characteristics	Men (n=32407)		Women (n=35502)		Overall (n=67909)		p
Age (n, %)	42.20	12.62	40.78	12.12	41.46	12.38	<0.001
18-	4693	14.48	5952	16.77	10645	15.68	<0.001
30-	11266	34.76	13335	37.56	24601	36.23	
40-	7965	24.58	8523	24.01	16488	24.28	
50-	5434	16.77	4689	13.21	10123	14.91	
60-	1991	6.14	2078	5.85	4069	5.99	
≥70	1058	3.26	925	2.61	1983	2.92	
BMI (mean (SD))	26	3.68	23.03	3.51	24.46	3.89	
WC (mean (SD))	88.88	11.07	75.05	9.79	81.72	12.51	
BRI (mean (SD))	3.7	1.3	2.83	1.07	3.25	1.26	
Smoke status (n, %)							
Never smoke	17164	52.96	29960	84.39	47124	69.39	
Quit smoke	1819	5.61	128	0.36	1947	2.87	
Current smoke	8611	26.57	443	1.25	9054	13.33	
Alcohol drink (n, %)							
Never	24285	74.94	30328	85.43	54613	80.42	
Ever	3309	10.21	203	0.57	3512	5.17	
Night sleep duration (n, %)							
< 5 h	1233	3.80	1210	3.41	2443	3.60	
5-7 h	17098	52.76	18621	52.45	35719	52.6	
> 7 h	9263	28.58	10700	30.14	19963	29.40	
Times of sleep late per week							
Often	10049	31.01	10466	29.48	20515	30.21	
Seldom	9075	28.00	10761	30.31	19836	29.21	
Never	8470	26.14	9304	26.21	17774	26.17	
Dietary preference							
Salty food	7671	23.67	5935	16.72	13606	20.04	
Sweet food	3954	12.20	5448	15.35	9402	13.84	
Red meat	6860	21.17	4543	12.80	11403	16.79	
Pickled food	1891	5.84	1492	4.20	3383	4.98	
Dietary pattern							
No special	23082	71.23	26188	73.76	49270	72.55	
Vegan	106	0.33	139	0.39	245	0.36	
Meatarian	3129	9.66	1774	5.00	4903	7.22	
Prefer vegetarian food	1277	3.94	2430	6.84	3707	5.46	
Eating speed (n, %)							
Very fast	1672	5.16	552	1.55	2224	3.27	
A little bit fast	9509	29.34	7052	19.86	16561	24.39	
Normal speed	13682	42.22	17998	50.70	31680	46.65	
Slow	2731	8.43	4929	13.88	7660	11.28	

Psychological character**(n, %)**

Positive and optimistic	14582	45.00	14396	40.55	28978	42.67
Emotional	2746	8.47	5086	14.33	7832	11.53
Passive and depressed	1535	4.74	1767	4.98	3302	4.86
Dispassionate	8731	26.94	9282	26.15	18013	26.53
SBP (mean (SD))	127.52	15.45	116.5	16.03	121.81	16.69
DBP (mean (SD))	77.47	11.19	69.45	10.09	73.31	11.36
TC (median (IQR))	4.91	1.20	4.82	1.21	4.86	1.20
TG (median (IQR))	1.31	1.02	0.86	0.6	1.04	0.86
LDL (median (IQR))	2.92	0.97	2.69	0.97	2.80	1.00
HDL (median (IQR))	1.14	0.32	1.45	0.42	1.29	0.44
FPG (median (IQR))	5.11	0.64	4.88	0.53	4.98	0.60
SUA (median (IQR))	397	111	281	83	332	133
Hypertension (n, %)	8690	26.82	4152	11.70	12842	18.91
Hyperuricemia (n, %)	12739	39.31	4610	12.99	17349	25.55
CHD (n, %)	1175	3.63	1089	3.07	2264	3.33
Stroke (n, %)	872	2.69	1252	3.53	2124	3.13
CVD (n, %)	1809	5.58	2216	6.24	4025	5.93

BMI: body mass index, kg/m²; WC: waist circumference; BRI: body roundness index; SBP: systolic blood pressure, mmHg; DBP: diastolic blood pressure, mmHg; TC: total cholesterol, mmol/L; TG: triglycerides, mmol/L; HDL: high-density lipoprotein, mmol/L; LDL: low-density lipoprotein, mmol/L; FPG: fasting plasma glucose; SUA: serum uric acid; CHD: coronary heart disease; CVD: cardiovascular disease.

Table S7. Factors associated with CVD in men without taking medication on treating diabetes and dyslipidemia.

	OR	95% CI of OR		<i>p</i>
Age	1.038	1.033	1.043	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	0.952	0.805	1.126	0.564
Q3	0.935	0.790	1.107	0.439
Q4	0.852	0.716	1.014	0.071
Smoke status (n, %)				
Never smoke	Ref	NA	NA	NA
Quit smoke	1.318	1.094	1.587	0.004
Current smoke	0.789	0.694	0.898	<0.001
Alcohol drink (n, %)				
Never	Ref	NA	NA	NA
Ever	1.024	0.870	1.205	0.776
Night sleep duration				
< 5 h	1.307	1.024	1.668	0.032
5-7 h	1.147	1.010	1.301	0.034
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	1.345	1.160	1.559	<0.001
Seldom	1.038	0.896	1.202	0.618
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	1.028	0.908	1.164	0.660
Sweet food	1.140	0.977	1.330	0.095
Red meat	1.132	0.993	1.291	0.064
Pickled food	1.068	0.862	1.323	0.546
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	1.483	0.673	3.267	0.328
Meatarian	1.043	0.878	1.239	0.630
Prefer vegetarian food	1.284	1.013	1.626	0.038
Eating speed				
Very fast	1.556	1.265	1.914	<0.001
A little bit fast	1.260	1.117	1.420	<0.001
Normal speed	Ref	NA	NA	NA
Slow	0.677	0.538	0.852	<0.001
Psychological character				
Positive and optimistic	0.522	0.418	0.651	<0.001
Emotional	1.026	0.803	1.310	0.840
Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.795	0.637	0.992	0.043

Hypertension	1.850	1.657	2.065	<0.001
Hyperuricemia	1.643	1.479	1.826	<0.001
TyG				
Q1	Ref	NA	NA	NA
Q2	1.172	0.977	1.406	0.087
Q3	1.784	1.498	2.125	<0.001
Q4	2.331	1.943	2.797	<0.001

BRI: body roundness index; TyG: triglyceride-glucose index; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quantiles of the variable. CVD: cardiovascular disease.

Table S8. factors associated with CVD in women without taking medication on treating diabetes and dyslipidemia.

	OR	95% CI of OR		<i>p</i>
Age	1.039	1.035	1.044	<0.001
BRI groups				
Q1	Ref	NA	NA	NA
Q2	1.080	0.927	1.259	0.324
Q3	1.126	0.964	1.316	0.134
Q4	1.139	0.963	1.347	0.129
Alcohol drink				
Never	Ref	NA	NA	NA
Ever	0.281	0.103	0.765	0.013
Night sleep duration				
< 5 h	1.139	0.902	1.439	0.275
5-7 h	1.062	0.949	1.190	0.293
> 7 h	Ref	NA	NA	NA
Times of sleep late per week				
Often	1.203	1.051	1.377	0.007
Seldom	1.186	1.046	1.345	0.008
Never	Ref	NA	NA	NA
Dietary preference				
Salty food	1.034	0.909	1.175	0.614
Sweet food	1.157	1.015	1.318	0.029
Red meat	1.197	1.042	1.375	0.011
Pickled food	0.857	0.662	1.110	0.243
Dietary pattern				
No special	Ref	NA	NA	NA
Vegan	0.530	0.214	1.312	0.170
Meatarian	1.004	0.799	1.262	0.971
Prefer vegetarian food	1.180	1.000	1.393	0.050
Eating speed				
Very fast	0.918	0.619	1.363	0.673
A little bit fast	1.162	1.032	1.308	0.013
Normal speed	Ref	NA	NA	NA
Slow	0.947	0.819	1.095	0.461
Psychological character				
Positive and optimistic	0.537	0.438	0.659	<0.001
Emotional	0.903	0.730	1.118	0.351
Passive and depressed	Ref	NA	NA	NA
Dispassionate	0.707	0.575	0.869	0.001
Hypertension	1.283	1.130	1.456	<0.001
Hyperuricemia	1.240	1.096	1.403	<0.001
TyG				
Q1	Ref	NA	NA	NA

Q2	1.261	1.079	1.474	0.004
Q3	1.343	1.146	1.573	<0.001
Q4	1.950	1.646	2.311	<0.001

BRI: body roundness index; TyG: triglyceride-glucose index; OR: odds ratio; CI: confidence interval. Q1 to Q4 represented the first to the fourth quantiles of the variable. CVD: cardiovascular disease.