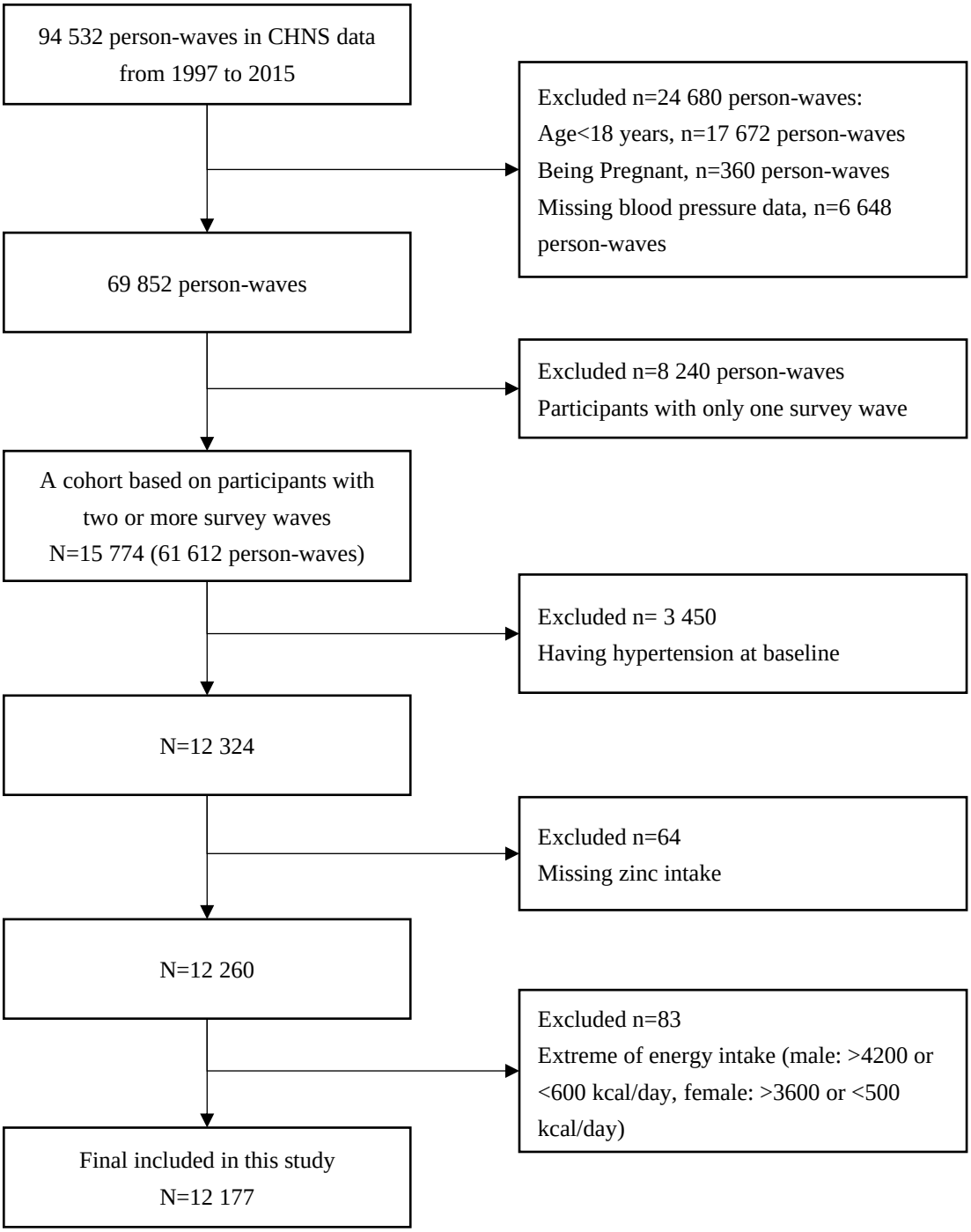

Fig. S1. Flow chart of study participants.

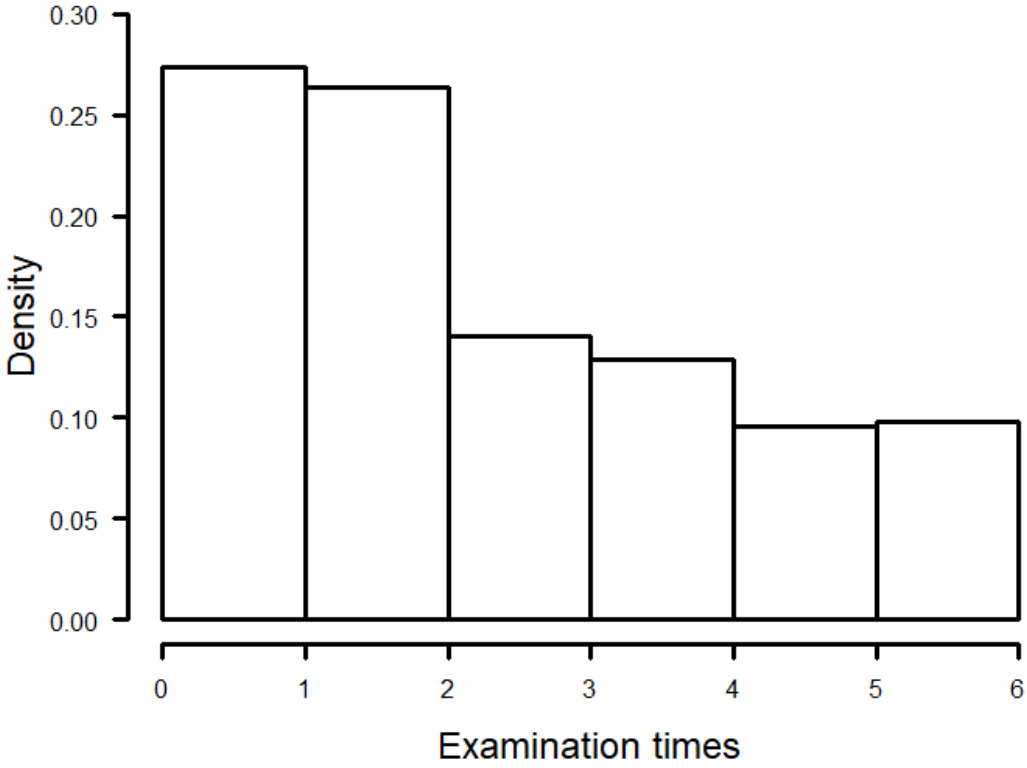

Fig. S2. Distribution of the number of dietary zinc intake examination cycles.

Table S1. Population characteristics by quartiles of dietary zinc intake.

Characteristics	Zinc intake, mg/day				*P* value
	Q1 (<9.9)	Q2 (9.9 -<11.0)	Q3 (11.0-<12.2)	Q4 (⩾12.2)	
Dietary intake					
Seafood, g/day	12.3 (22.2)	16.5 (23.6)	19.8 (25.2)	24.1 (29.7)	< 0.001
Nut, g/day	3.0 (9.3)	3.0 (8.6)	3.4 (9.3)	4.2 (12.3)	< 0.001
Red meat, g/day	47.1 (45.3)	56.9 (45.6)	71.5 (49.2)	97.6 (64.4)	< 0.001
Whole grain, g/day	23.5 (48.9)	18.0 (39.9)	14.4 (41.1)	13.5 (35.8)	< 0.001
Vitamin A, μg/day	340.8 (259.3)	412.5 (335.8)	490.8 (357.2)	669.4 (751.1)	< 0.001
Riboflavin, mg/day	0.7 (0.2)	0.7 (0.2)	0.8 (0.3)	0.9 (0.4)	< 0.001
Niacin, mg/day	12.4 (4.6)	13.6 (4.0)	15.1 (4.1)	17.7 (5.4)	< 0.001
Vitamin C, mg/day	77.4 (40.5)	81.4 (40.1)	84.7 (38.0)	98.8 (63.6)	< 0.001
Copper, mg/day	1.8 (0.7)	1.9 (0.6)	2.0 (0.7)	2.2 (0.9)	< 0.001
Magnesium, mg/day	289.7 (91.1)	292.0 (85.4)	302.9 (92.5)	324.7 (114.8)	< 0.001
Iron, mg/day	20.0 (6.6)	20.7 (6.4)	22.1 (6.8)	24.9 (9.8)	< 0.001

Variables are presented as Mean (SD) or n (%).

Table S2. The association between dietary zinc intake and different components of new-onset hypertension.

Zinc intake, mg/day	N	Cases (Incidence rate*)	Adjusted Models* HR (95%CI)	*P* value
Physician-diagnosed hypertension				
<10.9	5864	372(8.0)	0.89 (0.80–0.99)	0.039
≥10.9	6232	454(9.4)	1.16 (1.12–1.21)	< 0.001
Use of antihypertensive treatment				
<10.9	5866	238(5.1)	0.91 (0.80–1.05)	0.197
≥10.9	6236	228(5.9)	1.19 (1.13–1.24)	< 0.001
SBP ≥140 and/or DBP ≥90 mmHg				
<10.9	5899	1865(39.9)	0.93 (0.88–0.98)	0.008
≥10.9	6278	2058(42.5)	1.13 (1.11–1.16)	< 0.001

*Adjusted for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), as well as energy intake.

Table S3. The association between dietary zinc intake and new-onset hypertension, with further adjustment for the main dietary sources of zinc or other nutrients.

Zinc, mg/day	N	Cases (Incidence rate*)	Model 1 HR (95%CI)	P value	Model 2 HR (95%CI)	P value
<10.9	5899	2034(43.6)	0.98 (0.93–1.03)	0.364	0.89 (0.85–0.95)	< 0.001
≥10.9	6278	2235(46.1)	1.15 (1.12–1.17)	< 0.001	1.14 (1.11–1.16)	< 0.001

Model 1: adjusted for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), as well as energy intake, as well as aquatic, nut, red meat, vegetable, legume, and whole grain intake.

Model 2: adjusted for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), as well as energy intake, as well as vitamin A, riboflavin, niacin, vitamin C, copper, magnesium, iron and sodium intake.

Table S4. The association between dietary zinc intake and new-onset hypertension, with further adjustment for physical activity and estimated glomerular filtration rate.

Zinc, mg/day	N	Cases (incidence rate*)	Model 1 HR (95%CI)	P value	Model 2 HR (95%CI)	P value
<10.9	5899	2034(43.6)	0.88 (0.82–0.93)	< 0.001	0.91 (0.85–0.97)	0.004
≥10.9	6278	2235(46.1)	1.21 (1.18–1.24)	< 0.001	1.19 (1.16–1.23)	< 0.001

Model 1: adjusted for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), energy intake, as well as physical activity levels.

Model 2: adjusted for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), energy intake, as well as estimated glomerular filtration rate (eGFR).

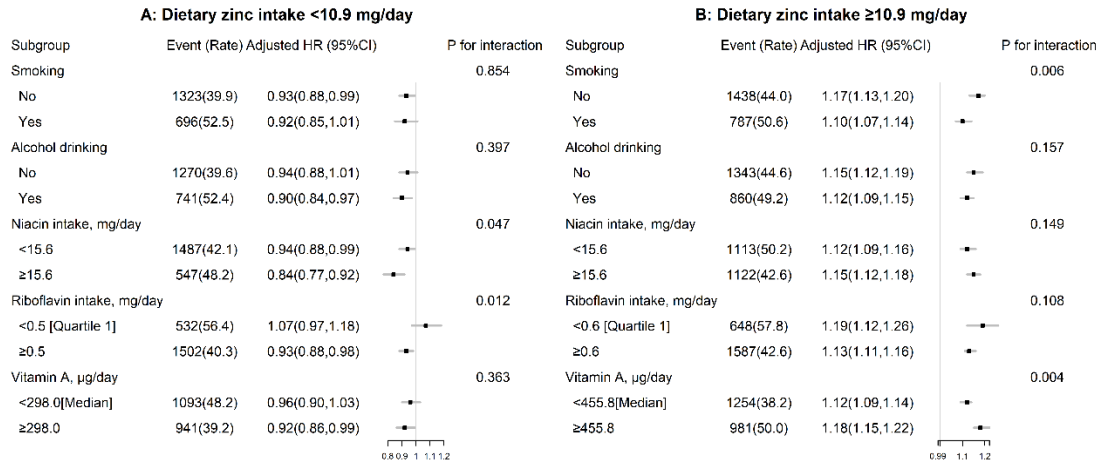

Fig. S3. Stratified analyses by potential effect modifiers for the association between dietary zinc intake and new-onset hypertension in various subgroups divided by 10.9 mg/day. (A: zinc intake <10.9 mg/day, B: zinc intake ≥10.9 mg/day).

Incident rate is presented as per 1000 person-years of follow-up.

Adjusted, if not stratified, for age, sex, body mass index (BMI), smoking and drinking status, systolic blood pressure (SBP), diastolic blood pressure (DBP), education levels, occupations, urban or rural residence, sodium-to-potassium intake ratio (Na/K), as well as energy intake.