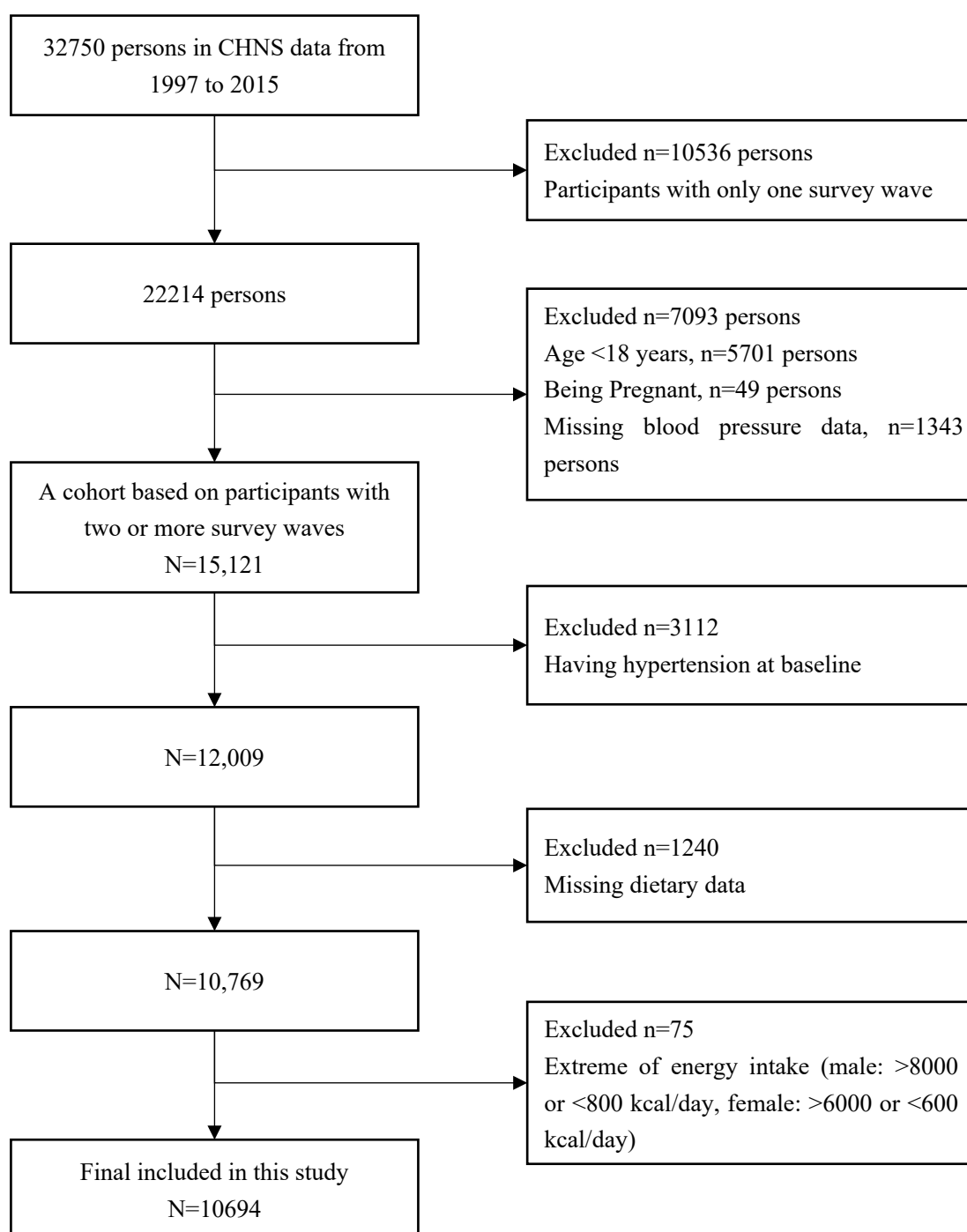


Supplementary Figure 1. Flow chart of study participants.



Supplementary Table 1. Interaction between DII and covariate on new-onset hypertension.

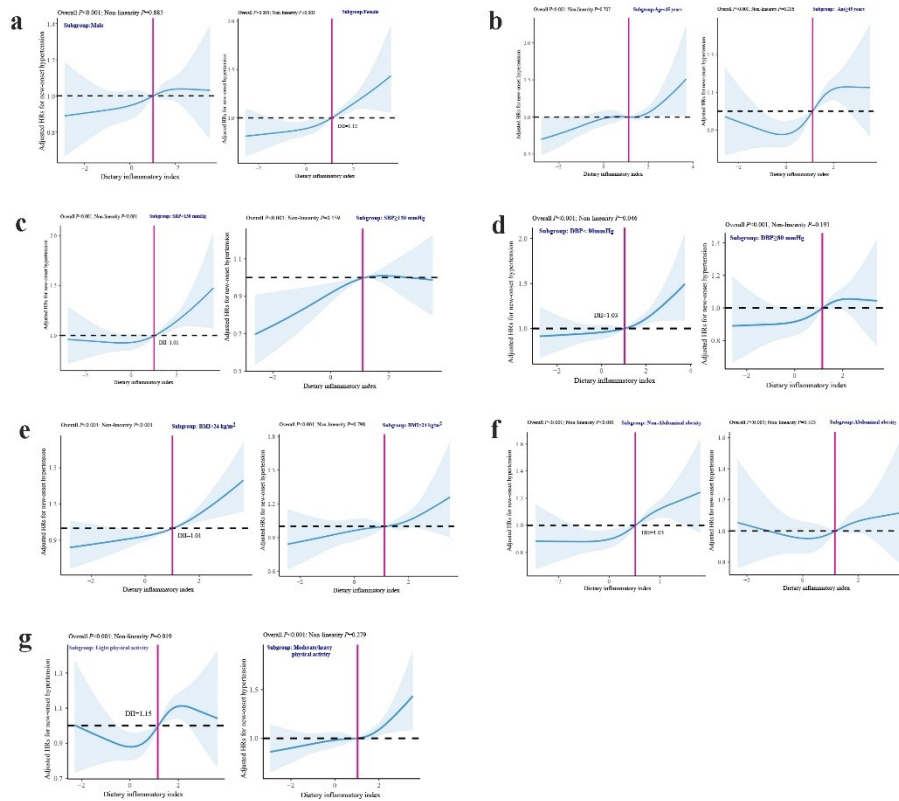
Covariate	DII	HR (95%CI)	<i>P</i>	RERI	AP	S
Gender						
Male	Higher	Ref		0.11 (-0.10,0.33)	0.21 (-0.18,0.60)	0.80 (0.54,1.18)
Female	Higher	0.89 (0.76,1.04)	0.149			
Male	Lower	1.00 (0.87,1.13)	0.918			
Female	Lower	0.74 (0.63,0.86)	<0.001			
Age, years						
≥45 years	Higher	Ref		-0.01 (-0.58,0.57)	-0.01 (-0.21,0.20)	1.00 (0.72,1.38)
<45 years	Higher	0.47 (0.41,0.53)	<0.001			
≥45 years	Lower	0.92 (0.81,1.06)	0.248			
<45 years	Lower	0.41 (0.36,0.47)	<0.001			
SBP, mmHg						
≥130 mmHg	Higher	Ref		-0.06 (-0.54,0.42)	-0.02 (-0.20,0.16)	0.96 (0.73,1.27)
<130 mmHg	Higher	0.75 (0.61,0.9)	0.004			
≥130 mmHg	Lower	1.05 (0.80,1.38)	0.723			
<130 mmHg	Lower	0.66 (0.54,0.81)	<0.001			
DBP, mmHg						
≥80 mmHg	Higher	Ref		-0.03 (-0.38,0.32)	-0.01 (-0.18,0.15)	0.97 (0.72,1.32)
<80 mmHg	Higher	0.66 (0.57,0.76)	<0.001			
≥80 mmHg	Lower	0.96 (0.82,1.11)	0.562			
<80 mmHg	Lower	0.59 (0.51,0.67)	<0.001			
BMI, kg/m²						
≥24 kg/m ²	Higher	Ref		-0.02 (-0.34,0.30)	-0.01 (-0.19,0.17)	0.98 (0.66,1.44)
<24 kg/m ²	Higher	0.67 (0.58,0.79)	<0.001			
≥24 kg/m ²	Lower	0.98 (0.83,1.14)	0.757			
<24 kg/m ²	Lower	0.58 (0.50,0.68)	<0.001			
Abdominal obesity						
Yes	Higher	Ref		-0.01 (-0.30,0.29)	-0.01 (-0.18,0.15)	0.99 (0.53,1.86)
No	Higher	0.99 (0.86,1.16)	0.959			
Yes	Lower	0.99 (0.85,1.17)	0.965			
No	Lower	0.86 (0.74,1.01)	0.058			

HR: hazard ratio; RERI: Relative Excess Risk of Interaction, AP: Attributable Proportion, S:

Synergy

Index

Supplementary Figure 2. The relationship of DII with risk of new-onset hypertension in various subgroups.



a: grouping by gender; **b:** grouping by age; **c:** grouping by the level of baseline systolic blood pressure; **d:** grouping by the level of baseline diastolic blood

pressure; **e**: grouping by the level of body mass index; **f**: grouping by abdominal obesity; **g**: grouping by physical activity levels. Multivariable-adjusted HRs (blue solid lines) and 95% CIs (blue shadow) for risk of new-onset hypertension according to DII score among whole population. The median intakes were set as references (black dotted line) (HR=1.00). The solid pink line represents the line where the point corresponding to the value of the DII in the curve is located when HR=0.

Supplementary Table 2. HRs (95% CI) of new-onset hypertension according to the quartiles of DII¹ after excluding the individuals with diabetes at baseline.

□	Quartiles of DII ²				<i>P</i> for trend	Continuous DII
	Q1 (<0.28)	Q2 (0.28 to <1.08)	Q3 (1.08 to <1.85)	Q4 (≥1.85)		
Case	841	883	970	924		
Person-years	22830	23436	22947	20893		
Case/1000 person-years	36.8	37.7	42.3	44.2		
Crude Model ^a	1(ref)	1.04 (0.95,1.14)	1.17 (1.07,1.28)	1.23 (1.13,1.35)	0.001	1.08 (1.05,1.11)
Model 1 ^b	1(ref)	1.00 (0.91,1.08)	1.11 (1.01,1.21)	1.16 (1.06,1.28)	0.002	1.06 (1.03,1.09)
Model 2 ^c	1(ref)	1.00 (0.91,1.10)	1.10 (0.99,1.20)	1.17 (1.06,1.28)	0.001	1.06 (1.03,1.09)
Model 3 ^d	1(ref)	1.02 (0.93,1.13)	1.06 (0.97,1.17)	1.14 (1.03,1.25)	0.046	1.05 (1.02,1.08)
Model 4 ^e	1(ref)	1.02 (0.93,1.13)	1.06 (0.97,1.17)	1.14 (1.04,1.26)	0.042	1.05 (1.02,1.08)

¹DII: dietary inflammatory index.

²Q = quartile, Q1 denotes the first quartile of DII, i.e., P25, indicates participants having the lowest DII values, the least pro-inflammatory level; Q2 denotes the second quartile, i.e., P50; Q3 denotes the third quartile, i.e., P75 and Q4 the highest quartile of DII. the most pro- inflammatory level

^aCrude Model: not adjusted.

^bModel 1 adjusted for age, gender.

^cModel 2 adjusted for age, gender, residence, education, physical activity level, smoking, alcohol drinking.

^dModel 3 adjusted for age, gender, residence, education, physical activity level, smoking, alcohol drinking, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure.

^cModel 4 adjusted for age, gender, residence, education, physical activity level, smoking, alcohol drinking, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, sodium to potassium intake ratio, as well as energy, fat, protein, carbohydrate intake.

Supplementary Table 3. The relationship of DII¹ with risk of different components of new-onset hypertension.

□	Quartiles of DII ²				<i>P</i> for trend	Continuous DII
	Q1 (<0.28)	Q2 (0.28 to <1.08)	Q3 (1.08 to <1.85)	Q4 (≥1.85)		
Physician-diagnosed hypertension						
Case (incidence rate [†])	81 (4.6)	97 (5.7)	78 (4.9)	105 (7.4)		
Crude Model ^a	1 (Ref)	1.05 (0.86,1.27)	1.01 (0.83,1.23)	1.11 (0.91,1.35)	0.745	1.06 (1.00,1.13)
Model 1 ^b	1 (Ref)	1.04 (0.86,1.26)	0.98 (0.81,1.20)	1.08 (0.89,1.32)	0.788	1.05 (0.99,1.12)
Model 2 ^c	1 (Ref)	1.06 (0.87,1.29)	0.97 (0.79,1.18)	1.11 (0.91,1.26)	0.555	1.05 (0.99,1.12)
Model 3 ^d	1 (Ref)	1.11 (0.90,1.35)	0.96 (0.78,1.18)	1.12 (0.91,1.38)	0.354	1.05 (0.98,1.12)
Model 4 ^e	1 (Ref)	1.08 (0.88,1.34)	0.94 (0.76,1.16)	1.09 (0.89,1.35)	0.497	1.04 (0.97,1.11)
SBP ≥140 and/or DBP ≥90 mmHg						
Case (incidence rate [†])	688 (38.8)	722 (42.5)	728 (45.5)	756 (53.0)		
Crude Model ^a	1 (Ref)	0.98 (0.89,1.080)	1.09 (0.991,1.203)	1.18 (1.07,1.30)	0.001	1.06 (1.03,1.09)
Model 1 ^b	1 (Ref)	0.99 (0.90,1.0911)	1.09 (0.99,1.19)	1.18 (1.087,1.30)	0.001	1.06 (1.03,1.09)
Model 2 ^c	1 (Ref)	0.98 (0.89,1.08)	1.08 (0.98,1.19)	1.18 (1.07,1.30)	0.001	1.06 (1.03,1.09)
Model 3 ^d	1 (Ref)	1.01 (0.92,1.12)	1.05 (0.95,1.16)	1.15 (1.04,1.27)	0.023	1.04 (1.01,1.08)
Model 4 ^e	1 (Ref)	1.02 (0.92,1.12)	1.05 (0.95,1.16)	1.16 (1.04,1.28)	0.022	1.04 (1.01,1.08)

¹DII: dietary inflammatory index.

²Q = quartile, Q1 denotes the first quartile of DII, i.e., P25, indicates participants having the lowest DII values, the least pro-inflammatory level; Q2 denotes the second quartile, i.e., P50; Q3 denotes the third quartile, i.e., P75 and Q4 the highest quartile of DII. the most pro- inflammatory level

†Incidence rates per 1000 person years.

^aCrude Model: not adjusted.

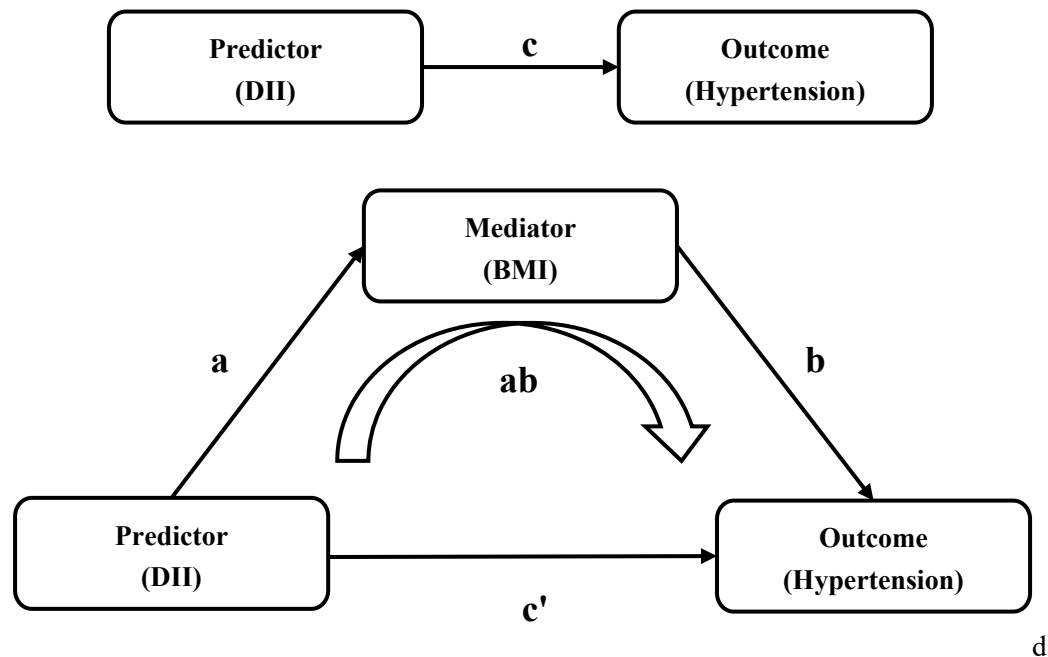
^bModel 1 adjusted for age, gender.

^cModel 2 adjusted for age, gender, residence, education, occupation, physical activity level, smoking, alcohol drinking.

^dModel 3 adjusted for age, gender, residence, education, occupation, physical activity level, smoking, alcohol drinking, self-reported diabetes, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure.

^eModel 4 adjusted for age, gender, residence, education, occupation, physical activity level, smoking, alcohol drinking, self-reported diabetes, body mass index, waist circumference, systolic blood pressure, diastolic blood pressure, sodium to potassium intake ratio, as well as energy, fat, protein, carbohydrate intake.

Supplementary Figure 3. Illustrates the output model for the mediation effect of BMI. Path c represents the total effect between DII and hypertension. Path ab represents the indirect effect between DII and hypertension. Path a represents the relationship between DII, and BMI and path b shows the relationship between BMI and hypertension. Path c' represents the direct effect between DII and hypertension.



Supplementary Table 4. Mediation analysis of BMI on the relationship between DII and hypertension by

Parameters	Total	Male	Female
Total effect c	0.040 (0.01,0.079)*	-0.008 (-0.062,0.047)	0.087 (0.031,0.143)*
Indirect effect path ab	0.005 (-0.001,0.011)	0.009 (0.003,0.017)*	-0.002 (-0.012,0.007)
path a	0.051 (-0.010,1.111)	0.129 (0.042,0.214)*	-0.020 (-0.104,0.065)
path b	0.091 (0.077,0.105)*	0.072 (0.052,0.092)*	0.105 (0.087,0.124)*
Direct effect path c'	0.036 (-0.003,0.075)	-0.017 (-0.072,0.038)	0.090 (0.034,0.147)*

Adjusted for age, gender, residence, education, physical activity level, smoking, alcohol drinking, self-reported diabetes, baseline systolic blood pressure, baseline diastolic blood pressure, sodium to potassium intake ratio, as well as energy, fat, protein, carbohydrate intake.

* $P < 0.05$.

Supplementary Table 5. Dietary intakes of energy and energy-adjusted dietary intakes

(per 1000 kcal)

Nutrients	Non-hypertension	New-onset hypertension	<i>P</i>
Energy (kcal)	2138.23±664.86	2264.54±656.55	<0.001
Carbohydrate (g/1000 kcal)	142.63±32.60	148.30±32.52	<0.001
Protein (g/1000 kcal)	30.78±7.05	32.41±8.03	<0.001
Fat (g/1000 kcal)	30.58±13.49	32.75±13.57	<0.001
Cholesterol (mg/1000 kcal)	280.61±26.50	315.82±33.25	0.001
MUFAs ¹ (g/1000 kcal)	3.60±0.45	3.88±0.52	0.770
PUFAs ² (g/1000 kcal)	3.00±0.70	5.51±0.89	<0.001
Saturated fatty acid (g/1000 kcal)	11.13±1.02	12.10±1.23	0.030
Fiber (g/1000 kcal)	11.86±1.63	9.22±1.52	0.405
Vitamin A (RAE/1000 kcal)	407.93±73.20	458.80±283.01	0.593
Vitamin B1 (mg/1000 kcal)	0.41±0.16	0.42±0.15	0.898
Vitamin B2 (mg/1000 kcal)	0.41±0.21	0.43±0.22	0.796
Vitamin C (mg/1000 kcal)	50.26±36.38	47.33±32.23	0.020
Alcohol (g/1000 kcal)	1.23±0.82	2.37±1.15	0.005

¹MUFAs: monounsaturated fatty acids; ²PUFAs: polyunsaturated fatty acids.