SUPPLEMENTARY TABLE 1. Variance Inflation Factor (VIF) Collinearity Screening.

VIF	Ln-magnesium	Ln-copper
Gender	1.2	1.2
Race	1.1	1.1
Age	1	1
PIR	1.1	1.1
BMI	1.1	1.1
Education level	1.3	1.2
Physical activity	1	1
Smoking	1.2	1.2
Drinking	1.2	1.2
Hypertension	1.1	1.1
Hypercholesterolemia	1	1
Diabetes	1.1	1.1
Heart attack	1.1	1.1

PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 2. Threshold Effect Analysis of Model 2.

	Ln-copper		Ln-magnesium	
Exposure	**OR (95% CI)**	**P-value**	**OR (95% CI)**	***p* -value**
Model 1				
A straight-line effect	0.730 (0.598, 0.892)	0.002	0.677 (0.543, 0.845)	0.0006
Model 2				
Fold points (K)	0.751		6.141	
Less than the K-segment effect 1	0.684 (0.550, 0.851)	0.0006	0.629 (0.499, 0.792)	< 0.0001
Greater than the K-segment effect 2	1.231 (0.613, 2.471)	0.560	3.368 (0.783, 14.480)	0.103
Effect size difference of 2 versus 1	1.800 (0.828, 3.912)	0.138	5.357 (1.163, 24.679)	0.031
Equation predicted values at break points	-2.859 (-3.041, -2.676)		-2.887 (-3.064, -2.710)	
Log likelihood ratio tests		0.170		0.052

OR, odds ratio; CI: confidence interval.

SUPPLEMENTARY TABLE 3. Threshold Effect Analysis of Model 3.

	Ln-copper		Ln-magnesium	
Exposure	**OR (95% CI)**	***p* -value**	**OR (95% CI)**	***p* -value**
Model 1				
A straight-line effect	0.752 (0.616, 0.918)	0.005	0.704 (0.564, 0.879)	0.002
Model 2				
Fold points (K)	0.751		6.140	
Less than the K-segment effect 1	0.708 (0.569, 0.882)	0.002	0.654 (0.518, 0.824)	0.0003
Greater than the K-segment effect 2	1.192 (0.594, 2.392)	0.621	3.408 (0.784, 14.805)	0.102
Effect size difference of 2 versus 1	1.683 (0.775, 3.655)	0.188	5.214 (1.120, 24.273)	0.035
Equation predicted values at break points	-2.859 (-3.041, -2.676)		-2.886 (-3.063, -2.709)	
Log likelihood ratio tests		0.220		0.056

OR, odds ratio; CI: confidence interval.

SUPPLEMENTARY TABLE 4. Threshold Effect Analysis of Model 4.

	Ln-copper		Ln-magnesium	
Exposure	**OR (95% CI)**	***p* -value**	**OR (95% CI)**	***p* -value**
Model 1				
A straight-line effect	0.784 (0.640, 0.959)	0.018	0.749 (0.597, 0.939)	0.012
Model 2				
Fold points (K)	0.751		6.141	
Less than the K-segment effect 1	0.743 (0.595, 0.929)	0.009	0.693 (0.547, 0.879)	0.003
Greater than the K-segment effect 2	1.164 (0.569, 2.382)	0.678	3.819 (0.836, 17.451)	0.084
Effect size difference of 2 versus 1	1.566 (0.706, 3.476)	0.270	5.509 (1.122, 27.053)	0.036
Equation predicted values at break points	-2.859 (-3.041, -2.676)		-2.887 (-3.064, -2.710)	
Log likelihood ratio tests		0.297		0.055

OR, odds ratio; Cl: confidence interval.

SUPPLEMENTARY TABLE 5. The Associations of Dietary Copper Intake, Along with GNRI and SIRI, with Stroke Risk.

	OR (95% CI), *p* -value
Exposure	**Model 5**
Ln-copper	0.765 (0.607, 0.963) 0.023
Ln-copper quartile	
Q1	Ref
Q2	0.811 (0.637, 1.033) 0.089
Q3	0.917 (0.717, 1.172) 0.488
Q4	0.724 (0.547, 0.959) 0.025
P for trend	0.067
SIRI	0.002
GNRI	0.011
GNRI categorical	
< 98	Ref
≥ 98	0.027

OR, odds ratio; 95% Cl, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. GNRI, geriatric nutritional risk index; SIRI, systemic inflammation response index. Model 5 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; copper intake/total energy intake; prescription medication use; dietary supplements. Copper intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
OR, odds ratio; Cl: confidence interval; PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 6. The Associations of Dietary Magnesium Intake, Along with GNRI and SIRI, with Stroke Risk.

	OR (95% CI), *p* -value
Exposure	**Model 6**
Ln-magnesium	0.732 (0.567, 0.945) 0.017
Ln-magnesium quartile	
Q1	Ref
Q2	0.751 (0.588, 0.958) 0.021
Q3	0.909 (0.706, 1.171) 0.461
Q4	0.761 (0.565, 1.024) 0.071
P for trend	0..172
SIRI	0.002
GNRI	0.012
GNRI categorical	
< 98	Ref
≥ 98	0.029

OR, odds ratio; 95% Cl, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. GNRI, geriatric nutritional risk index; SIRI, systemic inflammation response index. Model 6 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; magnesium intake/total energy intake; prescription medication use; dietary supplements. Magnesium intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
OR, odds ratio; Cl: confidence interval; PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 7. The Associations Between Dietary Copper Intake and SIRI.

	β (95% CI), *p* -value
Exposure	**Model 5**
Ln-copper	-0.074 (-0.140, -0.008) 0.029
Ln-copper quartile	
Q1	Ref
Q2	-0.018 (-0.089, 0.052) 0.608
Q3	-0.079 (-0.151, -0.007) 0.032
Q4	-0.082 (-0.160, -0.005) 0.037
p for trend	0.013

β, β coefficients; 95% Cl, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. SIRI, systemic inflammation response index. Model 5 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; copper intake/total energy intake; prescription medication use; dietary supplements. Copper intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
Cl: confidence interval; PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 8. The Associations Between Dietary Magnesium Intake and SIRI.

	β (95% CI), *p* -value
Exposure	**Model 6**
Ln-magnesium	-0.185 (-0.276, -0.095) < 0.001
Ln-magnesium quartile	
Q1	Ref
Q2	-0.052 (-0.125, 0.022) 0.168
Q3	-0.134 (-0.213, -0.054) 0.001
Q4	-0.150 (-0.245, -0.054) 0.002
p for trend	< 0.001

β, β coefficients; 95% Cl, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. SIRI, systemic inflammation response index. Model 6 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; magnesium intake/total energy intake; prescription medication use; dietary supplements. Magnesium intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 9. The Associations Between Dietary Copper Intake and GNRI.

	β (95% CI), *p* -value
Exposure	**Model 5**
Ln-copper	0.300 (0.015, 0.584) 0.039
Ln-copper quartile	
Q1	Ref
Q2	0.174 (-0.130, 0.478) 0.261
Q3	0.336 (0.025, 0.647) 0.034
Q4	0.251 (-0.081, 0.583) 0.138
p for trend	0.083

β, β coefficients; 95% Cl, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. GNRI, geriatric nutritional risk index. Model 5 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; copper intake/total energy intake; prescription medication use; dietary supplements. Copper intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 10. The Associations Between Dietary Magnesium Intake and GNRI.

	β (95% CI), *p* -value
Exposure	**Model 6**
Ln-magnesium	1.857 (1.470, 2.244) < 0.001
Ln-magnesium quartile	
Q1	Ref
Q2	0.557 (0.243, 0.872) < 0.001
Q3	1.014 (0.672, 1.356) < 0.001
Q4	1.394 (0.984, 1.804) < 0.001
p for trend	< 0.001

β, β coefficients; 95% CI, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. GNRI, geriatric nutritional risk index. Model 6 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack; magnesium intake/total energy intake; prescription medication use; dietary supplements. Magnesium intake/total energy intake: the proportion of metal intake relative to total energy intake, to further consider the confounding effects of total energy intake.
PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 11. The Associations of Dietary Copper and Magnesium Intake, Along with GNRI and SIRI, with Stroke Risk.

	OR (95% CI), *p* -value			
Exposure	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Ln-Copper	0.624 (0.512, 0.760) < 0.001	0.721 (0.585, 0.888) 0.002	0.743 (0.603, 0.914) 0.005	0.764 (0.618, 0.943) 0.012
Ln-copper quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.752 (0.595, 0.949) 0.016	0.813 (0.642, 1.031) 0.087	0.829 (0.654, 1.051) 0.121	0.838 (0.658, 1.066) 0.150
Q3	0.769 (0.610, 0.969) 0.026	0.860 (0.677, 1.092) 0.216	0.887 (0.697, 1.128) 0.327	0.921 (0.721, 1.175) 0.506
Q4	0.563 (0.438, 0.723) < 0.001	0.679 (0.522, 0.885) 0.004	0.698 (0.536, 0.909) 0.008	0.731 (0.559, 0.956) 0.022
p for trend	< 0.001	0.009	0.018	0.053
Ln-magnesium	0.550 (0.444, 0.681) < 0.001	0.664 (0.528, 0.837) < 0.001	0.690 (0.548, 0.870) 0.002	0.726 (0.573, 0.920) 0.008
Ln-magnesium quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.621 (0.490, 0.787) < 0.001	0.651 (0.512, 0.828) < 0.001	0.665 (0.522, 0.846) < 0.001	0.673 (0.527, 0.859) 0.001
Q3	0.730 (0.581, 0.916) 0.007	0.831 (0.657, 1.052) 0.124	0.856 (0.676, 1.085) 0.198	0.886 (0.697, 1.127) 0.326
Q4	0.521 (0.406, 0.668) < 0.001	0.643 (0.494, 0.837) 0.001	0.668 (0.513, 0.870) 0.003	0.715 (0.547, 0.935) 0.014
p for trend	< 0.001	0.007	0.016	0.066
SIRI	1.169 (1.102, 1.239) < 0.001	1.161 (1.093, 1.233) < 0.001	1.149 (1.082, 1.221) < 0.001	1.109 (1.042, 1.179) 0.001
GNRI	0.959 (0.942, 0.976) < 0.001	0.968 (0.951, 0.986) < 0.001	0.972 (0.954, 0.990) 0.002	0.976 (0.959, 0.994) 0.010
GNRI categorical				
< 98	Ref	Ref	Ref	Ref
≥ 98	0.557 (0.434, 0.716) < 0.001	0.634 (0.491, 0.819) < 0.001	0.670 (0.517, 0.869) 0.002	0.744 (0.571, 0.968) 0.028

OR, odds ratio; 95% CI, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. GNRI, geriatric nutritional risk index; SIRI, systemic inflammation response index. Model 1 adjust for: none. Model 2 adjust for: gender; age; race; education level; and PIR. Model 3 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status. Model 4 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack.
PIR, poverty-income ratio; BMI, body mass index.

SUPPLEMENTARY TABLE 12. The Associations Between Dietary Copper and Magnesium Intake and GNRI.

	β (95% CI), *p* -value			
Exposure	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Ln-copper	1.021 (0.778, 1.264) < 0.001	0.541 (0.288, 0.795) < 0.001	0.497 (0.246, 0.748) < 0.001	0.455 (0.205, 0.706) < 0.001
Ln-copper quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.481 (0.171, 0.791) 0.002	0.238 (-0.070, 0.546) 0.130	0.255 (-0.049, 0.560) 0.101	0.222 (-0.082, 0.526) 0.152
Q3	0.863 (0.554, 1.172) < 0.001	0.454 (0.142, 0.767) 0.004	0.432 (0.122, 0.741) 0.006	0.388 (0.079, 0.696) 0.014
Q4	1.130 (0.820, 1.439) < 0.001	0.511 (0.190, 0.832) 0.002	0.486 (0.168, 0.804) 0.003	0.435 (0.118, 0.753) 0.007
***p* for trend**	< 0.001	< 0.001	0.002	0.004
Ln-magnesium	1.473 (1.201, 1.746) < 0.001	0.869 (0.580, 1.158) < 0.001	0.804 (0.517, 1.091) < 0.001	0.747 (0.460, 1.034) < 0.001
Ln-magnesium quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.563 (0.254, 0.872) < 0.001	0.341 (0.033, 0.648) 0.030	0.305 (0.001, 0.609) 0.049	0.276 (-0.027, 0.579) 0.074
Q3	1.089 (0.781, 1.398) < 0.001	0.660 (0.347, 0.973) < 0.001	0.596 (0.286, 0.906) < 0.001	0.549 (0.240, 0.859) < 0.001
Q4	1.384 (1.076, 1.693) < 0.001	0.721 (0.399, 1.044) < 0.001	0.650 (0.329, 0.970) < 0.001	0.594 (0.274, 0.914) < 0.001
***p* for trend**	< 0.001	< 0.001	< 0.001	< 0.001

β, β coefficients; 95% CI, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. Model 1 adjust for: none. Model 2 adjust for: gender; age; race; education level; and PIR. Model 3 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status. Model 4 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack. PIR, poverty-income ratio; BMI, body mass index; GNRI, geriatric nutritional risk index.

SUPPLEMENTARY TABLE 13. The Associations Between Dietary Copper and Magnesium Intake and SIRI.

	β (95% CI), *p* -value			
Exposure	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Ln-copper	0.012 (-0.046, 0.071) 0.674	-0.103 (-0.161, -0.044) <0.001	-0.091 (-0.150, -0.033) 0.002	-0.082 (-0.141, -0.024) 0.006
Ln-copper quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.025 (-0.049, 0.099) 0.507	-0.025 (-0.096, 0.046) 0.492	-0.020 (-0.091, 0.051) 0.579	-0.015 (-0.086, 0.056) 0.680
Q3	0.015 (-0.059, 0.088) 0.699	-0.092 (-0.165, -0.020) 0.012	-0.081 (-0.153, -0.008) 0.029	-0.072 (-0.144, 0.000) 0.050
Q4	0.017 (-0.057, 0.091) 0.656	-0.112 (-0.186, -0.037) 0.003	-0.101 (-0.175, -0.026) 0.008	-0.088 (-0.162, -0.014) 0.020
***p* for trend**	0.737	<0.001	0.003	0.007
Ln-magnesium	0.032 (-0.033, 0.097) 0.335	-0.115 (-0.182, -0.048) <0.001	-0.100 (-0.167, -0.032) 0.004	-0.084 (-0.151, -0.017) 0.014
Ln-magnesium quartile				
Q1	Ref	Ref	Ref	Ref
Q2	0.033 (-0.041, 0.107) 0.387	-0.035 (-0.106, 0.037) 0.340	-0.027 (-0.098, 0.044) 0.450	-0.024 (-0.094, 0.047) 0.513
Q3	0.006 (-0.068, 0.080) 0.868	-0.108 (-0.180, -0.035) 0.004	-0.094 (-0.166, -0.022) 0.011	-0.084 (-0.156, -0.012) 0.023
Q4	0.051 (-0.023, 0.125) 0.176	-0.102 (-0.177, -0.027) 0.007	-0.086 (-0.161, -0.011) 0.025	-0.069 (-0.144, 0.005) 0.069
***p* for trend**	0.287	0.002	0.008	0.027

β, β coefficients; 95% CI, 95% confidence interval. Q1, Quartile 1; Q2, Quartile 2; Q3, Quartile 3; Q4, Quartile 4. Model 1 adjust for: none. Model 2 adjust for: gender; age; race; education level; and PIR. Model 3 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status. Model 4 adjust for: gender; age; race; education level; PIR; BMI; physical activity duration; smoking status; drinking status; diabetes; hypertension; hypercholesterolemia; heart attack. PIR, poverty-income ratio; BMI, body mass index; SIRI, systemic inflammation response index.