**Online Supplement**

Table S1: Baseline participants’ characteristics (Mean and SD or percentage) by baseline total dairy intake, excluding observations with anti-hypertensive medication use during the follow-up (2,075 participants with 6,661 observations) \*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Total dairy intake at baseline |  |  |
|  | <1 servings/day | 1 to <3 servings/day | ≥3 servings/day | *P* |
| Number of participants | 837 | 1015 | 223 |  |
|  | Mean or Percentage | SD | Mean or Percentage | SD | Mean or Percentage | SD |  |
| Age (years)  | 51.9 | 8.6 | 51.9 | 9.4 | 51.7 | 9.9 | 0.94 |
| Men (%) | 41.6 |  | 43.3 |  | 45.7 |  | 0.50 |
| BMI (kg/m2) | 26.0 | 4.4 | 26.5 | 4.4 | 26.6 | 4.6 | 0.01 |
| Regular cigarette smokers (%) | 23.7 |  | 19.3 |  | 14.3 |  | <0.001 |
| Physical activity index | 34.6 | 6.1 | 35.0 | 6.4 | 35.2 | 6.0 | 0.05 |
| DGAI score | 8.5 | 2.6 | 8.6 | 2.5 | 8.2 | 2.5 | 0.05 |
| Total cholesterol (mmol/L) | 5.28 | 0.99 | 5.23 | 0.96 | 5.16 | 0.82 | 0.26 |
| HDL-cholesterol (mmol/L) | 1.37 | 0.40 | 1.35 | 0.40 | 1.30 | 0.36 | 0.08 |
| Triacylglycerol (mmol/L) | 1.48 | 1.11 | 1.47 | 1.27 | 1.36 | 0.68 | 0.84 |
| Glucose (mmol/L) | 5.24 | 0.93 | 5.32 | 1.03 | 5.49 | 2.02 | 0.10 |
| Systolic blood pressure (mmHg) | 116.2 | 11.9 | 116.5 | 11.8 | 116 | 11.8 | 0.79 |
| Diastolic blood pressure (mmHg) | 71.28 |  | 71.3 | 8.3 | 71.0 | 7.8 | 0.88 |
| Diabetics (%) | 1.9 |  | 3.1 |  | 4.0 |  | 0.14 |
| Cholesterol-lowering meds users (%) | 5.3 |  | 4.2 |  | 1.3 |  | 0.04 |
| Users of hormone replacement therapy or oral conceptive (%) | 14.3 |  | 14.3 |  | 12.1 |  | 0.67 |
| Dietary intake |  |  |  |  |  |  |  |
|  Total energy (kJ) | 6793.6 | 2422.1 | 8163.4 | 2525.5 | 10429.5 | 3045.5 | <0.001 |
|  Fish (grams/week) | 216.8 | 183.0 | 241.8 | 205.7 | 229.0 | 184.0 | 0.02 |
|  Meat (grams/week) | 811.9 | 528.5 | 899.2 | 571.1 | 1042.1 | 672.4 | <0.001 |
|  Whole grain (grams/week) | 325.4 | 435.4 | 437.3 | 463.7 | 504.2 | 480.6 | <0.001 |
|  Refined grain (grams/week) | 545.5 | 384.2 | 579.2 | 398.1 | 672.3 | 466.6 | <0.001 |
|  Fruits and vegetables (grams/week) | 3125.6 | 1927.5 | 3772.7 | 2135.7 | 4198.5 | 2531.7 | <0.001 |
|  Alcohol (grams/week) | 1122.3 | 2282.7 | 1010 | 1933 | 836.3 | 1635.2 | 0.05 |
|  Caffeinated coffee (grams/week) | 3244.1 | 2719.6 | 3024.4 | 2695.7 | 3026.9 | 2795.9 | 0.20 |
|  Dairy intake  |  |  |  |  |  |  |  |
|  Total dairy (servings/day) | 0.5 | 0.3 | 1.7 | 0.6 | 3.9 | 1.0 | <0.001 |
|  High-fat dairy (servings/week) | 2.4 | 1.7 | 4.9 | 3.7 | 10.6 | 9.5 | <0.001 |
|  Low-fat dairy (servings/week) | 1.5 | 1.7 | 7 | 4.8 | 16.5 | 8.7 | <0.001 |
|  Cheese (servings/week) | 1.6 | 1.4 | 3 | 2.5 | 5.7 | 5.5 | <0.001 |
|  Yoghurt (servings/week) | 0.3 | 0.7 | 1.2 | 1.9 | 1.9 | 3.7 | <0.001 |
|  Skim/low-fat milk (servings/week) | 1.1 | 1.4 | 5.5 | 4.6 | 13.9 | 8.7 | <0.001 |
|  Whole milk (servings/week) | 0.3 | 0.8 | 0.8 | 2.3 | 2.5 | 6.8 | <0.001 |
|  Fluid milk (servings/week) | 1.3 | 1.5 | 6.3 | 4.4 | 16.4 | 9.1 | <0.001 |
| Fermented milk products (servings/week) | 2.4 | 1.9 | 4.9 | 3.3 | 8.3 | 6.8 | <0.001 |
| Cream and Butter (servings/week) | 6.1 | 10.2 | 5.5 | 8.9 | 5.9 | 9.6 | 0.98 |

\* We defined participants’ baseline exam as their first appearance during exams 5 through 7. Comparisons between groups were tested using Kruskal-Wallis test or one-way ANOVA for continuous variables, or by chi-square test for categorical variables. Total dairy include skim/low-fat milk, whole milk, sherbet/ice-milk, ice cream, yoghurt, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Low-fat dairy include skim/low-fat milk, sherbet/ice-milk, and yoghurt. High-fat dairy include whole milk, ice cream, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Fluid milk include skim/low-fat milk and whole milk. According to the definition by the USDA MyPlate Dairy Group (28)and the Dietary Guidelines for Americans(29), milk products with little to no calcium (e.g. cream cheese, cream, and butter) are not included in the Dairy Group. Therefore, for the current study, we did not include cream, sour cream, cream cheese, and butter in any of the dairy groups. However, for the purpose of comparison, we created a separate group “Cream and butter” by summing the intake of these four milk products. Additionally, the “Fermented milk products” group includes sour cream, yoghurt, cottage/ricotta cheese, cream cheese, and other cheese (e.g. American, cheddar, etc.). For all dairy/milk products, we used unit “servings” to facilitate the comparisons across different diary/milk products. The conversion algorithm between “serving” and “gram” is: 1 serving skim/low-fat milk = 245 grams; 1 serving whole milk = 244 grams; 1 serving cream = 15 grams; 1 serving sour cream = 12 grams; 1 serving sherbet/ice-milk = 96 grams; 1 serving ice-cream = 66 grams; 1 serving yoghurt =227 grams; 1 serving cottage/ricotta cheese = 105 grams; 1 serving cream cheese = 28 grams; 1 serving other cheese (e.g. American, cheddar, etc) = 28 grams; 1 serving butter = 5 grams.

Table S2: Annualised change of systolic blood pressure across groups of dairy and milk products consumption (2,292 participants with 7,921 observations)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Groups of dairy consumption |  |  |
|  | <1 servings | 1 to <3 servings | ≥3 servings | *Ptrend* |
| Total dairy (servings/day)  | 0.639 (0, 0.998) \* | 1.634 (1.000, 2.998) | 3.534 (3.000, 7.531) |  |
|  N † | 1937 | 3149 | 543 |  |
|  | Mean ‡ | SE | Mean | SE | Mean | SE |  |
|  Model  § | 0.85 | 0.06 | 0.58 | 0.04 | 0.29 | 0.11 | <0.001 |
|  |  |  |  |  |  |  |  |
| Total low-fat/fat-free dairy (servings/week) | 0.235 (0, 0.970) | 1.970 (1.000, 2.985) | 7.000 (3.000, 49.235) |  |
|  N  | 1109 | 861 | 3659 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.95 | 0.08 | 0.63 | 0.09 | 0.56 | 0.04 | <0.001 |
|  |  |  |  |  |  |  |  |
| Total high-fat dairy (servings/week) | 0.705 (0, 0.970) | 2.000 (1.000, 2.985) | 5.235 (3.000, 44.470) |  |
|  N  | 659 | 1642 | 3328 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.83 | 0.11 | 0.61 | 0.06 | 0.63 | 0.04 | 0.38 |
|  |  |  |  |  |  |  |  |
| Fluid milk (servings/week) | 0.235 (0, 0.970) | 1.735 (1.000, 2.985) | 6.250 (3.000, 43.500) |  |
|  N  | 1268 | 916 | 3445 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.84 | 0.07 | 0.69 | 0.08 | 0.56 | 0.04 | <0.001 |
|  |  |  |  |  |  |  |  |
| Whole milk (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 4.250 (3.000, 29.750) |  |
|  N  | 4973 | 300 | 356 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.65 | 0.03 | 0.62 | 0.15 | 0.58 | 0.14 | 0.61 |
|  |  |  |  |  |  |  |  |
| Skim/low-fat milk (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 6.250 (3.000, 42.000) |  |
|  N  | 1627 | 882 | 3120 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.83 | 0.06 | 0.65 | 0.08 | 0.55 | 0.04 | <0.001 |
|  |  |  |  |  |  |  |  |
| Cheese (servings/week) | 0.500 (0, 0.970) | 2.000 (1.000, 2.985) | 4.250 (3.000, 42.000) |  |
|  N  | 1393 | 1845 | 2391 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.76 | 0.07 | 0.60 | 0.06 | 0.62 | 0.05 | 0.23 |
|  |  |  |  |  |  |  |  |
| Yoghurt (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 3.868 (3.000, 24.500) |  |
|  N  | 3779 | 1022 | 828 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.71 | 0.04 | 0.49 | 0.08 | 0.53 | 0.09 | 0.02 |
|  |  |  |  |  |  |  |  |
| Cream and butter (servings/week) | 0.470 (0, 0.970) | 1.940 (1.000, 2.985) | 7.970 (3.000, 70.985) |  |
|  N  | 1762 | 1155 | 2712 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.65 | 0.06 | 0.71 | 0.07 | 0.62 | 0.05 | 0.45 |
|  |  |  |  |  |  |  |  |
| Fermented milk products (servings/week) | 0.705 (0, 0.970) | 2.000 (1.000, 2.985) | 5.660 (3.000, 42.470) |  |
|  N  | 615 | 1428 | 3586 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 1.02 | 0.11 | 0.68 | 0.07 | 0.57 | 0.04 | 0.001 |

\* Median intake (range) for all such values. Total dairy include skim/low-fat milk, whole milk, sherbet/ice-milk, ice cream, yoghurt, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Low-fat dairy include skim/low-fat milk, sherbet/ice-milk, and yoghurt. High-fat dairy include whole milk, ice cream, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Fluid milk includes skim/low-fat milk and whole milk. According to the definition by the USDA MyPlate Dairy Group (28)and the Dietary Guidelines for Americans(29), milk products with little to no calcium (e.g. cream cheese, cream, and butter) are not included in the Dairy Group. Therefore, for the current study, we did not include cream, sour cream, cream cheese, and butter in any of the dairy groups. However, for the purpose of comparison, we created a separate group “Cream and butter” by summing the intake of these four milk products. Additionally, the “Fermented milk products” group includes sour cream, yoghurt, cottage/ricotta cheese, cream cheese, and other cheese (e.g. American, cheddar, etc.). For all dairy/milk products, we used unit “servings” to facilitate the comparisons across different diary/milk products. The conversion algorithm between “serving” and “gram” is: 1 serving skim/low-fat milk = 245 grams; 1 serving whole milk = 244 grams; 1 serving cream = 15 grams; 1 serving sour cream = 12 grams; 1 serving sherbet/ice-milk = 96 grams; 1 serving ice-cream = 66 grams; 1 serving yoghurt =227 grams; 1 serving cottage/ricotta cheese = 105 grams; 1 serving cream cheese = 28 grams; 1 serving other cheese (e.g. American, cheddar, etc) = 28 grams; 1 serving butter = 5 grams.

† N: number of observations of the change of systolic blood pressure

‡ Mean annualised change of systolic blood pressure (mmHg) for all such values

§ Model: adjusted for sex, age, smoking status, physical activity, anti-hypertensive medication use and systolic blood pressure at the beginning of each exam-interval, and average total energy intake, caffeine coffee intake and DGAI sub-score (i.e. DGAI score excluding sub-scores for assessing the consumption amount of milk and milk products and the likelihood of choosing low-fat milk and milk products) during each exam-interval. Of note, results stayed similar when further adjusted for BMI, diabetic status, triacylglycerols, TC/HDL ratio, cholesterol-lowering medication use, or the usage of hormone replacement therapy and oral contraceptive medication at the beginning of each exam-interval

Table S3: Annualised change of diastolic blood pressure across groups of dairy and milk products consumption (2,292 participants with 7,921 observations)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Groups of dairy consumption  |  |  |
|  | <1 servings | 1 to <3 servings | ≥3 servings | *Ptrend* |
| Total dairy (servings/day)  | 0.639 (0, 0.998) \* | 1.634 (1.000, 2.998) | 3.534 (3.000, 7.531) |  |
|  N † | 1937 | 3149 | 543 |  |
|  | Mean ‡ | SE | Mean | SE | Mean | SE |  |
|  Model 1 § | 0.22  | 0.04 | 0.13 | 0.03 | 0.03 | 0.07 | 0.01 |
|  |  |  |  |  |  |  |  |
| Total low-fat/fat-free dairy (servings/week) | 0.235 (0, 0.970) | 1.970 (1.000, 2.985) | 7.000 (3.000, 49.235) |  |
|  N  | 1109 | 861 | 3659 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.23 | 0.05 | 0.18 | 0.05 | 0.12 | 0.03 | 0.03 |
|  |  |  |  |  |  |  |  |
| Total high-fat dairy (servings/week) | 0.705 (0, 0.970) | 2.000 (1.000, 2.985) | 5.235 (3.000, 44.470) |  |
|  N  | 659 | 1642 | 3328 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.15 | 0.06 | 0.13 | 0.04 | 0.16 | 0.03 | 0.69 |
|  |  |  |  |  |  |  |  |
| Fluid milk (servings/week) | 0.235 (0, 0.970) | 1.735 (1.000, 2.985) | 6.250 (3.000, 43.500) |  |
|  N  | 1268 | 916 | 3445 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.22 | 0.04 | 0.17 | 0.05 | 0.12 | 0.03 | 0.04 |
|  |  |  |  |  |  |  |  |
| Whole milk (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 4.250 (3.000, 29.750) |  |
|  N  | 4973 | 300 | 356 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.16 | 0.02 | 0.13 | 0.09 | 0.05 | 0.09 | 0.23 |
|  |  |  |  |  |  |  |  |
| Skim/low-fat milk (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 6.250 (3.000, 42.000) |  |
|  N  | 1627 | 882 | 3120 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.19 | 0.04 | 0.19 | 0.05 | 0.12 | 0.03 | 0.11 |
|  |  |  |  |  |  |  |  |
| Cheese (servings/week) | 0.500 (0, 0.970) | 2.000 (1.000, 2.985) | 4.250 (3.000, 42.000) |  |
|  N  | 1393 | 1845 | 2391 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.15 | 0.04 | 0.16 | 0.04 | 0.15 | 0.03 | 0.96 |
|  |  |  |  |  |  |  |  |
| Yoghurt (servings/week) | 0 (0, 0.735) | 1.735 (1.000, 2.985) | 3.868 (3.000, 24.500) |  |
|  N  | 3779 | 1022 | 828 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.17 | 0.03 | 0.12 | 0.05 | 0.10 | 0.05 | 0.18 |
|  |  |  |  |  |  |  |  |
| Cream and butter (servings/week) | 0.470 (0, 0.970) | 1.940 (1.000, 2.985) | 7.970 (3.000, 70.985) |  |
|  N  | 1762 | 1155 | 2712 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.12 | 0.04 | 0.18 | 0.05 | 0.16 | 0.03 | 0.61 |
|  |  |  |  |  |  |  |  |
| Fermented milk products (servings/week) | 0.705 (0, 0.970) | 2.000 (1.000, 2.985) | 5.660 (3.000, 42.470) |  |
|  N  | 615 | 1428 | 3586 |  |
|  | Mean | SE | Mean | SE | Mean | SE |  |
|  Model  | 0.18 | 0.07 | 0.14 | 0.04 | 0.15 | 0.03 | 0.83 |

\* Median intake (range) for all such values. Total dairy include skim/low-fat milk, whole milk, sherbet/ice-milk, ice cream, yoghurt, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Low-fat dairy include skim/low-fat milk, sherbet/ice-milk, and yoghurt. High-fat dairy include whole milk, ice cream, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Fluid milk includes skim/low-fat milk and whole milk. According to the definition by the USDA MyPlate Dairy Group (28)and the Dietary Guidelines for Americans(29), milk products with little to no calcium (e.g. cream cheese, cream, and butter) are not included in the Dairy Group. Therefore, for the current study, we did not include cream, sour cream, cream cheese, and butter in any of the dairy groups. However, for the purpose of comparison, we created a separate group “Cream and butter” by summing the intake of these four milk products. Additionally, the “Fermented milk products” group includes sour cream, yoghurt, cottage/ricotta cheese, cream cheese, and other cheese (e.g. American, cheddar, etc.). For all dairy/milk products, we used unit “servings” to facilitate the comparisons across different diary/milk products. The conversion algorithm between “serving” and “gram” is: 1 serving skim/low-fat milk = 245 grams; 1 serving whole milk = 244 grams; 1 serving cream = 15 grams; 1 serving sour cream = 12 grams; 1 serving sherbet/ice-milk = 96 grams; 1 serving ice-cream = 66 grams; 1 serving yoghurt =227 grams; 1 serving cottage/ricotta cheese = 105 grams; 1 serving cream cheese = 28 grams; 1 serving other cheese (e.g. American, cheddar, etc) = 28 grams; 1 serving butter = 5 grams.

† N: number of observations of the change of diastolic blood pressure

‡ Mean annualised change of diastolic blood pressure (mmHg) for all such values

§ Model: adjusted for sex, age, smoking status, physical activity, anti-hypertensive medication use and systolic blood pressure at the beginning of each exam-interval, and average total energy intake, caffeine coffee intake and DGAI sub-score (i.e. DGAI score excluding sub-scores for assessing the consumption amount of milk and milk products and the likelihood of choosing low-fat milk and milk products) during each exam-interval. Of note, results stayed similar when further adjusted for BMI, diabetic status, triacylglycerols, TC/HDL ratio, cholesterol-lowering medication use, or the usage of hormone replacement therapy and oral contraceptive medication at the beginning of each exam-interval

Table S4: Hazard ratio (95%CI) of incident hypertension with each one serving per day/week increasing consumption of dairy foods (2,210 participants, i.e. excluding participants who did not come back after their baseline exams) \*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Model 1 † | Model 2 ‡ | Model 3 § |
|  | β | HR (95%CI) | P | β | HR (95%CI) | P | β | HR (95%CI) | P |
| Total dairy (serving/day) | -0.096 | 0.91 (0.85, 0.98) | 0.009 | -0.083 | 0.92 (0.86, 0.99) | 0.03 | -0.091 | 0.91 (0.85, 0.98) | 0.01 |
|  |  |  |  |  |  |  |  |  |  |
| Total high-fat dairy (serving/week) | -0.023 | 0.98 (0.96, 0.995) | 0.01 | -0.031 | 0.97 (0.95, 0.99) | 0.002 | -0.032 | 0.97 (0.95, 0.99) | 0.002 |
|  |  |  |  |  |  |  |  |  |  |
| Fluid milk (serving/week) | -0.004 | 1.00 (0.98, 1.01) | 0.49 | -0.002 | 1.00 (0.99, 1.01) | 0.70 | -0.003 | 1.00 (0.99, 1.01) | 0.60 |
|  |  |  |  |  |  |  |  |  |  |
| Whole milk (serving/week) | -0.004 | 1.00 (0.97, 1.03) | 0.81 | -0.016 | 0.98 (0.95, 1.02) | 0.32 | -0.011 | 0.99 (0.96, 1.02) | 0.51 |
|  |  |  |  |  |  |  |  |  |  |
| Cheese (serving/week) | -0.022 | 0.98 (0.95, 1.00) | 0.10 | -0.024 | 0.98 (0.95, 1.00) | 0.08 | -0.027 | 0.97 (0.95, 1.00) | 0.06 |
|  |  |  |  |  |  |  |  |  |  |
| Yoghurt (serving/week) | -0.083 | 0.92 (0.88, 0.96) | <0.001 | -0.068 | 0.93 (0.89, 0.98) | 0.004 | -0.066 | 0.94 (0.89, 0.98) | 0.005 |
|  |  |  |  |  |  |  |  |  |  |
| Fermented milk products (serving/week) | -0.034 | 0.97 (0.95, 0.99) | 0.001 | -0.033 | 0.97 (0.95, 0.99) | 0.003 | -0.034 | 0.97 (0.95, 0.99) | 0.002 |
|  |  |  |  |  |  |  |  |  |  |
| Total low-fat/fat-free dairy (serving/week) ║ | -0.024 | 0.98 (0.96, 0.997) | 0.03 | -0.021 | 0.98 (0.96, 1.00) | 0.05 | -0.023 | 0.98 (0.96, 0.999) | 0.04 |
|  Multiplicative term of low-fat/fat-free dairy and follow-up time | 0.003 | 1.00 (1.00, 1.01) | 0.06 | 0.003 | 1.00 (1.00, 1.01) | 0.04 | 0.003  | 1.003 (1.000, 1.006) | 0.04 |
|  |  |  |  |  |  |  |  |  |  |
| Skim and low-fat milk (serving/week) ║ | -0.028 | 0.97 (0.95, 0.996) | 0.02 | -0.026 | 0.97 (0.95, 0.998) | 0.03 | -0.028 | 0.97 (0.95, 0.996) | 0.02 |
|  Multiplicative term of skim/low-fat milk and follow-up time | 0.004 | 1.00 (1.00, 1.01) | 0.01 | 0.004 | 1.004 (1.001, 1.008) | 0.009 | 0.004 | 1.004 (1.001, 1.008) | 0.01 |
|  |  |  |  |  |  |  |  |  |  |
| Cream and butter (serving/week) ║ | -0.025 | 0.98 (0.96, 0.99) | 0.006 | -0.032 | 0.97 (0.95, 0.99) | <0.001 | -0.030 | 0.97 (0.95, 0.99) | 0.002 |
|  Multiplicative term of cream/butter and follow-up time | 0.003 | 1.00 (1.00, 1.01) | 0.03 | 0.003 | 1.003 (1.000, 1.005) | 0.04 | 0.003 | 1.003 (1.000, 1.005) | 0.03 |

\* Dairy/milk products consumption was calculated by using the cumulative average consumption before the onset of incident hypertension or before the end of the study, and entered into models as a continuous, time-varying variable. Total dairy include skim/low-fat milk, whole milk, sherbet/ice-milk, ice cream, yoghurt, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Low-fat dairy include skim/low-fat milk, sherbet/ice-milk, and yoghurt. High-fat dairy include whole milk, ice cream, cottage/ricotta cheese, and other cheese (e.g. American, cheddar, etc). Fluid milk includes skim/low-fat milk and whole milk. According to the definition by the USDA MyPlate Dairy Group (28)and the Dietary Guidelines for Americans(29), milk products with little to no calcium (e.g. cream cheese, cream, and butter) are not included in the Dairy Group. Therefore, for the current study, we did not include cream, sour cream, cream cheese, and butter in any of the dairy groups. However, for the purpose of comparison, we created a separate group “Cream and butter” by summing the intake of these four milk products. Additionally, the “Fermented milk products” group includes sour cream, yoghurt, cottage/ricotta cheese, cream cheese, and other cheese (e.g. American, cheddar, etc.). For all dairy/milk products, we used unit “servings” to facilitate the comparisons across different diary/milk products. The conversion algorithm between “serving” and “gram” is: 1 serving skim/low-fat milk = 245 grams; 1 serving whole milk = 244 grams; 1 serving cream = 15 grams; 1 serving sour cream = 12 grams; 1 serving sherbet/ice-milk = 96 grams; 1 serving ice-cream = 66 grams; 1 serving yoghurt =227 grams; 1 serving cottage/ricotta cheese = 105 grams; 1 serving cream cheese = 28 grams; 1 serving other cheese (e.g. American, cheddar, etc) = 28 grams; 1 serving butter = 5 grams.

† Model 1: adjusted for sex, baseline age; time-varying total energy intake; and the multiplicative term of follow-up time with age

‡ Model 2: adjusted for sex, baseline age; time-varying smoking status, physical activity, total energy intake, DGAI subscore (i.e. DGAI score excluding sub-scores for assessing the consumption amount of milk and milk products and the likelihood of choosing low-fat milk and milk products), and caffeine coffee intake; and the multiplicative terms of follow-up time with age and physical activity

§ Model 3: adjusted for sex, baseline age; time-varying smoking status, physical activity, total energy intake, DGAI subscore (i.e. DGAI score excluding sub-scores for assessing the consumption amount of milk and milk products and the likelihood of choosing low-fat milk and milk products), caffeine coffee intake, and BMI; and the multiplicative terms of follow-up time with age and physical activity.

║ The hazard of incident hypertension are non-proportional by the consumption of total low-fat/fat-free dairy, skim/low-fat milk, or cream/butter (i.e. Cox proportional assumption is violated).