Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix. Description of Diet Data Harmonization Methodology

The following 6 cohorts were included for harmonization in this study: the Atherosclerosis Risk in Communities (ARIC) Study, Coronary Artery Risk Development in Young Adults (CARDIA) Study, Framingham Heart Study (FHS), Framingham Offspring Study (FOS), Jackson Heart Study (JHS), and Multi-Ethnic Study of Atherosclerosis (MESA).

Dietary assessment tool and validation

Five of the 6 included cohorts used a food frequency questionnaire (FFQ) to collect dietary intake while the CARDIA study[1] used an approximately 700-item diet history (Harmonization Table 1). The number of FFQ food items varied from 66 in the ARIC[2] to 158 in the JHS.[3] The Willett FFQ was the most commonly used tool. All these 6 cohorts published validation studies for their dietary assessment tools (Harmonization Table 2),[1,3-6] except that the MESA study adapted its FFQ from the Insulin Resistance Atherosclerosis Study (IRAS) and the validation study was conducted in the IRAS as well.[6] Most cohorts applied multiple 24-hour recalls to evaluate the validity of FFQs or diet history. Modest correlation between two dietary assessment tools was seen with the majority of the energy adjusted correlation coefficients falling between 0.3 and 0.7.

Harmonization steps

First, we obtained diet data from the Biologic Specimen and Data Repository Information Coordinating Center (BioLINCC) at the National Heart, Lung, and Blood Institute (NHLBI) website. All LRPP cohorts were funded by the NHLBI and these cohorts regularly uploaded study data sets and/or bio-specimens to the BioLINCC.

Second, we created a data dictionary which included a list of 52 key food groups and 65 nutrients (Harmonization Tables 3 and 4). The food grouping rationale is also shown. All cohorts' diet data were harmonized according to this data dictionary.

Third, we started to clean and harmonize diet data cohort by cohort. Consumption of foods was converted into estimated daily servings. Due to the discrepancies of the size of one serving across different cohorts, we created a common scale for conversion (Harmonization Table 5). One serving size units were adapted from the serving sizes in the Willett's FFQ.[7] The mid-point of the consumption frequency was used for calculation (Harmonization Table 6). For example, 2-3 times per month was equal to 0.08 time per day

and 3-4 times per week was equal to 0.5 time per day. Generally, small, medium, large, and extra-large serving size were assigned a weight of 0.5, 1.0, 1.5, and 2, respectively.

Fourth, we excluded participants with missing dietary data and participants with daily energy intake <500 kcal and >6 000 kcal.

Fifth, after constructing all foods and nutrients shown in Harmonization Tables 3 and 4, we computed three diet quality indices: alternate Mediterranean (aMED) diet,[8] Dietary Approaches to Stop Hypertension (DASH) diet,[9] and alternate Healthy Eating Index 2010 (aHEI-2010).[10] We created two versions of aMED and DASH using cohort-specific quantiles and quantiles based on all cohorts combined. For aHEI-2010, cohort-specific deciles of sodium consumption were used.

Harmonization eTable 1. Characteristics of Dietary Intake Assessment in 6 LRPP Cohorts

Cohort	Dietary assessment tool	Dietary components	Time period covered	data collection visit and year	nutrient database	Source FFQ
ARIC	66-item semi-quantitative FFQ[2]	9 frequencies and reference portion size	Past year	Visit 1 (1986-89) Visit 3 (1993-1995)	Harvard Nutrient Database	FFQ modified based on the 61-item Willett FFQ[11]
CARDIA	Approximately 700-item Diet history[1]	3 frequencies with participants reported serving size	Past 28 days	Visit 1 (1985-86) Visit 4 (1992-93) Visit 7 (2005-06)	NDSR	Quantitative assessment.
FHS	126-item FFQ[12]	7 frequencies with reference portion size	Past year	Visit 20 (1986-90) Visit 21 (1988-92) Visit 22 (1990-94)	USDA and Harvard Nutrient database	Using Willett FFQ[7]
FOS	126-item FFQ[13]	9 frequencies with reference portion size	Past year	Visit 5 (1991-95) Visit 6 (1995-98) Visit 7 (1998-2001)	USDA and Harvard Nutrient database	Using Willett FFQ[7]
JHS	158-item regional FFQ[3]	10 frequencies with 4 portion sizes	Past year	Visit 1 (2000-04)	NDSR	Adapted from the 283-item Delta NIRI FFQ[3]
MESA	120-item FFQ[14]	9 frequencies with 3 portion sizes	Past year NDSR	Visit 1 (2000-02)		Adapted from the FFQ in the Insulin Resistance Atherosclerosis Study[6]

ARIC, Atherosclerosis Risk in Communities; CARDIA, Coronary Artery Risk Development in Young Adults; FFQ, food frequency questionnaire; FHS, Framingham Heart Study; FOS, Framingham Offspring Study; JHS, Jackson Heart Study; MESA, Multi-Ethnic Study of Atherosclerosis; NDSR, Nutrition Data System for Research; USDA, United States Department of Agriculture.

Harmonization eTable 2. Correlation Coefficients of Selected Nutrients From the Published Validation Studies

Cohort	Validation method	Race/ethnicity	Type of CC	Energy	Protein	Carboh ydrate	Fat	PUFA	Fiber	Vitamin A	Vitamin C	Calcium	Potassium
ARIC[4]	Same FFQ three years later	White men	Energy adjusted reliability coefficient	0.68	0.54	0.47	0.45	0.44	0.57	0.38	0.42	0.57	0.47
		White women		0.50	0.55	0.42	0.41	0.37	0.52	0.46	0.40	0.56	0.59
		Black men		0.48	0.44	0.24	0.55	0.46	0.53	0.46	0.19	0.38	0.70
		Black women		0.41	0.45	0.31	0.40	0.38	0.31	0.31	0.25	0.19	0.34
CARDIA[1]	Seven 24-hour recalls	White men	Energy adjusted Pearson CC corrected for intra-individual variability	0.76	0.37	0.79	0.87	0.75	NA	0.70	NA	0.80	0.80
		White women		0.51	0.88	0.89	0.56	0.34	NA	0.90	NA	0.66	0.68
		Black men		0.50	0.19	0.43	0.10	0.66	NA	0.47	NA	0.68	0.83
		Black women		0.26	0.28	-0.22	0.02	0.01	NA	0.63	NA	0.67	0.65
FHS, FOS[5]	3-day food record	Men	Energy unadjusted Spearman rank correlation coefficient	0.45	0.16	0.44	0.33	0.38	0.55	NA	NA	NA	NA
		Women		0.42	0.12	0.51	0.42	0.29	0.46	NA	NA	NA	NA
JHS[3]	Four 24-hour recalls	Men	Energy adjusted deattenuated Pearson CC	0.41	0.39	0.70	0.49	0.33	0.43	0.42	0.55	0.48	0.37
		Women		0.33	0.37	0.44	0.39	0.30	0.44	0.27	0.49	0.49	0.40
MESA[6]	Eight 24-hour recalls	Women	Energy adjusted Pearson CC	0.36	NA	0.37	0.44	0.25	NA	0.40	0.75	NA	NA

ARIC, Atherosclerosis Risk in Communities; CARDIA, Coronary Artery Risk Development in Young Adults; CC, correlation coefficient; FFQ, food frequency questionnaire; FHS, Framingham Heart Study; FOS, Framingham Offspring Study; JHS, Jackson Heart Study; MESA, Multi-Ethnic Study of Atherosclerosis; NA, not available; PUFA, polyunsaturated fat.

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Groups	Included Foods
Vegetable Group	
Green leafy	Kale, other greens (mustard, chard, collard, etc.), Bok Choy, spinach, iceberg or head lettuce, romaine or leaf lettuce, cilantro, arugula
Cruciferous	Broccoli, cauliflower, all cabbages including chinese cabbage, coleslaw, brussels sprouts
Dark green	Green leafy vegetables + broccoli
Orange	Carrots, carrot juice, yams, sweet potatoes, winter squash (acorn, butternut, spaghetti, pumpkin, etc.), calabaza
Tomato	Tomatoes, tomato juice, v8 juice, tomato sauce, salsa, picante or taco sauce, tomato paste, diced tomatoes
Legume	Dried beans, baked beans, refried beans, mature lima beans, black bean, dried peas (blacked-eyed, split), lentils, hummus, chick peas
Soy	Soy, tofu, edamame, soy nuts, textured vegetable protein
Potato	White potatoes (boiled, mashed, baked), excluding sweet potatoes French fries, fried potatoes
Other starchy	Green peas, green lima beans, corn, plantain, parsnip, cassava, yucca
Fermented/pickled	Sauerkraut, Kim Chi, tempe, miso, all pickled vegetables (cucumber, pepper, onion, etc.)
Other	Eggplant, zucchini or other summer squash, leek, celery, string beans, mixed vegetables, vegetable soup, green, yellow, or red peppers, onions, cucumbers, mushrooms, radishes, rutabaga, beets, kohlrabi, jicama, turnip, asparagus
Total	Green leafy + cruciferous + orange + tomato + legume + soy + other starchy + other
Fruit group[a]	
Citrus	Orange, grapefruit
Non-citrus	All other fruits
Total	Citrus + non-citrus
Grain group	
Whole grains	Dark bread, whole grain cereal, popcorn, cooked oatmeal, wheat germ, bran, brown rice
Refined grains	Cookies, donuts, pie, cake, white bread, muffins, rolls, white rice, biscuits, pizza, pancake, waffle, pasta
Total	Whole grains +refined grains
Meat group	
Pork	Chops, ribs, roast
Beef	Steak, stew, roast, and meat in hamburger
Lamb	Legs, ribs, roast
Game	Venison, squirrel

Groups	Included Foods
Meat group (cont)	
Organ	Liver, heart, kidney, tripes
Poultry	Chicken, turkey (not fried)
Fried chicken	Fried chicken at home or fast-food restaurant
Total red meat	Pork + beef + lamb + game, but excluding organ
Total poultry	Poultry + fried chicken
Processed meat	Sausage, bacon, ham, lunch meat, hot dog
Fish group	
Fatty fish	Tuna, salmon, sardine, mackerel, swordfish, including canned fatty fish and fish sandwich
Non-fatty fish	Other white meat fish, including fish sandwich
Shellfish	Shrimp, lobster, scallop, clam, mussel, including sandwich
Total fish	Fatty fish + non-fatty fish + shellfish
Eggs	Exclude egg substitute
Nuts and seeds	Peanut, tree nuts, including nut from nut butter
Dairy product	
Whole milk	Exclude flavored milk beverages
Non-whole milk	1% reduced, 2% reduced, fat free, skim milk
Low fat cheese	Cottage or ricotta
High fat cheese	All other cheese
Yogurt	Many FFQs did not distinguish low fat versus high fat yogurt
Dairy desserts	Ice cream, pudding, sherbet, ice milk, frozen yogurt
Cream	Cream or sour cream
Low fat dairy	Non-whole milk + low fat cheese + yogurt
High fat dairy	Whole milk + high fat cheese + cream
Beverages	
Fruit juice[a]	<100% fruit juice or without information to verify 100% fruit juice
Sugar sweetened	Cola, Pepsi, 7-up, Dr. Pepper, ginger ale
Artificially sweetened	Diet or low calorie, or zero calorie coke, 7-up
Coffee	Coffee with or without caffeine
Tea	All tea drinks
Wine	Red wine, white wine
Beer	All beers but excluding fruit beers
Liquor	Vodka, gin, Whisky

[a] It is really difficult to distinguish 100% fruit juice from <100% fruit juice. Thus, we do not include fruit juice into total fruit group. We place it into a separate fruit juice group under beverages.

Harmonization eTable 4. Key Nutrients in the LRPP

List of nutrients
Energy (kcal)
% Calories from fat (%)
% Calories from protein (%)
% Calories from carbohydrate (%)
% Calories from alcohol (%)
Total Fat (g)
Total Carbohydrate (g)
Total Protein (g)
Animal Protein (g)
Vegetable Protein (g)
Total sugars (g)
Added sugars (g)
Alcohol (g)
Cholesterol (Mg)
Total Saturated Fatty Acid(SFA) (g)
Total Monounsaturated Fatty Acid(MUFA) (g)
Total Polyunsaturated Fatty Acid(PUFA) (g)
Total Trans-Fatty Acids(TRANS) (g)
Omega 3 fatty acids (g)
Fructose (g)
Total Dietary Fiber (g)
Soluble Dietary Fiber (g)
Insoluble Dietary Fiber (g)
Vitamin D (Mcg)
Calcium (Mg)
Phosphorous (Mg)
Magnesium (Mg)
Iron (Mg)
Zinc (Mg)
Sodium (Mg)
Potassium (Mg)
Caffeine (Mg)
Water (g)

Individual fatty acids

SFA 4:0(butyric acid) (g)
SFA 6:0(caproic acid) (g)
SFA 8:0(caprylic acid) (g)
SFA 10:0(capric acid) (g)
SFA 12:0(lauric acid) (g)
SFA 14:0(myristic acid) (g)
SFA 16:0(palmitic acid) (g)
SFA 17:0(margaric acid) (g)
SFA 18:0(stearic acid) (g)
SFA 20:0(arachidic acid) (g)
SFA 22:0(behenic acid) (g)
MUFA 14:1(myristoleic acid (g)
MUFA 16:1(palmitoleic acid) (g)
MUFA 18:1(oleic acid) (g)

List of nutrients

MUFA 20:1(gadoleic acid) (g)
MUFA 22:1(erucic acid) (g)
PUFA 18:2(linoleic acid) (g)
PUFA 18:3(linolenic acid) (g)
PUFA 18:4(parinaric acid) (g)
PUFA 20:4(arachidonic acid) (g)
PUFA 20:5(eicosapentaenoic acid [EPA]) (g)
PUFA 22:5(docosapentaenoic acid [DPA]) (g)
PUFA 22:6(docosahexaenoic acid [DHA]) (g)
TRANS 16:1(trans-hexadecenoic acid) (g)
TRANS 18:1(trans-octadecenoic acid) (g)
TRANS 18:2(trans-octadecadienoic acid) (g)

Branched chain amino acids

Isoleucine (g)
Leucine (g)
Valine (g)

Aromatic amino acids

Phenylalanine (g)
Tyrosine (g)
Tryptophan (g)

Harmonization eTable 5. One Serving Size Reference and Conversion Table[a]

	LRPP serving size	NDSR serving size	Conversion factor
Beverages			
Coffee or tea	8 oz or 1 cup	8 oz	1
Soft drink or <100% fruit juice	12 oz or 1 can or 1 bottle	8 oz	0.67
Beer	12 oz or 1 bottle or 1 can	12 oz	1
Wine	5 oz or 1 middle glass	5 oz	1
Liquor	1.5 oz or 1 shot	1.5 oz	1
Vegetables			
Leafy	1 cup	1 cup	1
Other vegetables cooked or not cooked	0.5 cup, or 1 tomato, 1 ear of corn, 4 sticks of celery or carrot	0.5 cup or 1 median	1
Tomato sauce or salsa	0.5 cup	0.5 cup	1
Juice (tomato, carrot)	4 oz or 1 small glass	4 oz	1
Fruits			
Chopped or processed fruit (canned, frozen, etc.) or berries or grapes	0.5 cup	0.5 cup	1
Grapefruit	0.5	0.5	1
Other Fresh fruit	1 median	1 median	1
Raisin or dried fruits	1 oz or small pack	0.25 cup	1
Cantaloupe	0.25 melon	NA	1
Other melon	1 slice	NA	1
100% fuit juice	4 oz or 1 small glass	4 oz	1
Nuts, legumes			
Nut	1 oz or 1 small pack	0.5 oz	0.5
Peanut butter	1 tablespoon	1 tablespoon	1
Legume or dried beans	0.5 cup	0.5 cup	1
Meat and egg			
Red meat	4 oz	1 oz	0.25
Poultry	4 oz	1 oz	0.25
Hamburger (i.e., beef)	1 patty	1 oz	0.25
Bacon, lunch meat or Sausage	2 slices or pieces or links	1 oz	0.5
Hot dog	1 piece	1 oz	0.5
Fish	3 oz	1 oz	0.33
Egg	1	1	1
Dairy products			
Milk	8 oz or 1 cup	1 cup	1
Cottage or ricotta	0.5 cup	2 cups cottage, 0.5 cup ricotta	1.5
Other cheese	1 oz or 1 slice	1.5 oz natural, 2 oz processed	1.5
Ice cream	1 cup	0.5 cup	0.5
Yogurt	1 cup	1 cup	1
Cream	1 tablespoon	1 tablespoon	1
Sherbet or ice milk	1 cup	0.5 cup	0.5
Fats			
Butter or margarine	1 pat or 1 teaspoon	1 teaspoon	1
Mayonnaise	1 tablespoon	15 grams	1

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	LRPP serving size	NDSR serving size	Conversion factor
Vegetable oil or other cooking oil	1 teaspoon	1 teaspoon	1
Salad dressing	2 tablespoons	30 grams	1
Bread, cereal, starchy			
Cereal	1 cup	0.5 cup	0.5
Bread	1 slice	1 slice	1
English muffins, bagels, Rolls	1	0.5	0.5
Muffins, biscuit	1	1	1
Crackers, triscuits, wheat thins	6	1 oz	1
Pancakes or waffles	2 small pieces	38 grams	0.67
Rice, pasta, other grains	1 cup	0.5 cup	0.5
Tortillas	2	1 oz	0.5
French fries	6 oz or 1 serving	70 grams or 0.5 cup	0.41
Chips	1 small bag or 1 oz	1 oz	1
Potato	1 median or 1 cup mashed	1 median or 0.5 cup chopped/in default form	0.75
Pizza	2 slices	NA	1
Sweets, baked goods, miscellaneous			
Chocolate or candy bar	1 bar or piece	40 grams	1
Candy without chocolate	1 oz or 1 package	40 grams	1
Cookie, brownie, pie, donut, sweet roll, cake	1 piece or 1 slice	No single standard	1
Jams, jellies, syrup, honey	1 tablespoon	2 tablespoons for syrup and 1 for others	1
Popcorn	3 cups	1 oz	1
Bran or wheat germ	1 tablespoon	16 grams	1

[a] The choice of the LRPP serving size is generally based on the Willett FFQ (version 2007). If NA from the NDSR Food Group Serving Count document, we assume the NDSR uses the Willett's serving sizes.

Harmonization eTable 6. An Example for Conversion Between Reported Consumption Frequencies and Daily Amount for Data Analysis

FFQ Response	Rare Or Never	1 Per Montl	2-3 Per Month	1 Per Week	2 Per Week	3-4 Per Week	5-6 Per Week	1 Per Day	2+ Per Day
Daily frequency	0	0.03	0.08	0.14	0.29	0.5	0.79	1	2

eReferences for Harmonization Methodology Description

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eTable 1. Characteristics of the Study Participants According to Different Levels of Dietary Cholesterol Consumption (mg/day)

	<100	≥100 and <200	≥200 and <300	≥300 and <400	≥400
Sample size	1989	8999	8411	4807	5409
Age, mean (SD), y	57.7 (10.9)	54.7 (11.1)	52.5 (12.2)	50.5 (13.4)	43.5 (16.0)
Sex, No. (%)					
Men	669 (33.6)	3322 (36.9)	3623 (43.1)	2363 (49.2)	3322 (61.4)
Women	1320 (66.4)	5677 (63.1)	4788 (56.9)	2444 (50.8)	2087 (38.6)
Race/ethnicity, No. (%)					
White	1154 (58.0)	6160 (68.4)	5739 (68.2)	2987 (62.1)	2364 (43.7)
Black	512 (25.7)	2149 (23.9)	2229 (26.5)	1545 (32.1)	2769 (51.2)
Hispanic	191 (9.6)	422 (4.7)	281 (3.3)	195 (4.1)	221 (4.1)
Chinese	132 (6.6)	268 (3.0)	162 (1.9)	80 (1.7)	55 (1.0)
Education level, No. (%)					
Less than high school	420 (21.1)	1587 (17.6)	1394 (16.6)	898 (18.7)	947 (17.5)
High school	544 (27.4)	2624 (29.2)	2318 (27.6)	1220 (25.4)	1459 (27.0)
Some college or more	1025 (51.5)	4788 (53.2)	4699 (55.9)	2689 (55.9)	3003 (55.5)
Smoking status, No. (%)					
Non-smoker	1110 (55.8)	4857 (54.0)	4476 (53.2)	2436 (50.7)	2564 (47.4)
Current smoker	307 (15.4)	1720 (19.1)	1767 (21.0)	1131 (23.5)	1605 (29.7)
Former smoker	572 (28.8)	2422 (26.9)	2168 (25.8)	1240 (25.8)	1240 (22.9)
BMI, mean (SD), kg/m^2	27.0 (5.3)	27.3 (5.3)	27.8 (5.7)	28.1 (5.7)	27.7 (6.3)
SBP, mean (SD), mmHg	123.6 (21.0)	122.1 (19.1)	121.8 (18.9)	121.5 (19.0)	119.8 (17.5)
HDL-C, mean (SD), mg/dL	52.5 (15.6)	52.2 (16.0)	51.4 (16.0)	50.7 (15.7)	50.2 (14.5)
Non-HDL-C, mean (SD), mg/dL	154.9 (43.1)	155.2 (42.5)	154.3 (42.9)	150.8 (42.0)	143.1 (40.5)
Diabetes, No. (%)	171 (8.6)	757 (8.4)	816 (9.7)	494 (10.3)	489 (9.0)
Antihypertensive medication use, No (%)	682 (34.3)	2764 (30.7)	2315 (27.5)	1254 (26.1)	1131 (20.9)
Lipid-lowering medication use, No. (%)	261 (13.1)	715 (7.9)	405 (4.8)	189 (3.9)	170 (3.1)
Hormone replacement therapy use, No. (%)	295 (14.8)	1173 (13.0)	890 (10.6)	416 (8.7)	281 (5.2)
Total energy, median (IQR), kcal/day	902 (742-1143)	1300 (1059-1589)	1695 (1393-2031)	2041 (1671-2473)	2793 (2223-3508)
Eggs, median (IQR), number/day	0 (0-0.07)	0.07 (0-0.14)	0.14 (0.08-0.43)	0.43 (0.25-0.50)	0.79 (0.43-1.08)
Alcohol, median (IQR), g/day	0 (0-2.2)	0.1 (0-6.2)	0.5 (0-7.8)	0.9 (0-9.1)	2.1 (0-12.3)
aHEI-2010 score[a], mean (SD)	46.1 (9.8)	45.3 (10.1)	44.3 (10.2)	43.8 (10.8)	44.1 (11.5)

aHEI, alternate Healthy Eating Index; BMI, body mass index; HDL-C, high density lipoprotein cholesterol; IQR, interquartile range; SBP, systolic blood pressure; SD, standard deviation.

[a] Unprocessed red meat and processed meat were excluded from the calculation because they are cholesterol-containing foods. The original version of the aHEI-2010 score has a range of 0-110 points. The aHEI-2010 score in this study had a range of 0-100 points due to the removal of the meat item.

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eTable 2. Characteristics of the Study Participants According to Different Levels of Egg Consumption (number/day)

	0	<0.5	≥0.5 and <1	≥1 and <2	≥2
Sample size	4320	19580	2964	2186	565
Age, mean (SD), y	54.9 (11.0)	52.6 (12.6)	45.0 (17.0)	46.5 (14.6)	42.8 (15.9)
Sex, No. (%)					
Men	1729 (40.0)	8348 (42.6)	1575 (53.1)	1244 (56.9)	403 (71.3)
Women	2591 (60.0)	11232 (57.4)	1389 (46.9)	942 (43.1)	162 (28.7)
Race/ethnicity, No. (%)					
White	2851 (66.0)	13144 (67.1)	1351 (45.6)	857 (39.2)	201 (35.6)
Black	1153 (26.7)	5108 (26.1)	1313 (44.3)	1275 (58.3)	355 (62.8)
Hispanic	239 (5.5)	833 (4.3)	189 (6.4)	42 (1.9)	7 (1.2)
Chinese	77 (1.8)	495 (2.5)	111 (3.7)	12 (5.4)	2 (0.4)
Education level, No. (%)					
Less than high school	990 (22.9)	3124 (16.0)	380 (12.8)	609 (27.9)	143 (25.3)
High school	1266 (29.3)	5433 (27.7)	689 (23.2)	610 (27.9)	167 (29.6)
Some college or more	2064 (47.8)	11023 (56.3)	1895 (63.9)	967 (44.2)	255 (45.1)
Smoking status, No. (%)					
Non-smoker	2272 (52.6)	10455 (53.4)	1511 (51.0)	961 (44.0)	244 (43.2)
Current smoker	877 (20.3)	4009 (20.5)	750 (25.3)	691 (31.6)	203 (35.9)
Former smoker	1171 (27.1)	5116 (26.1)	703 (23.7)	534 (24.4)	118 (20.9)
BMI, mean (SD), kg/m^2	27.2 (5.3)	27.7 (5.6)	27.5 (6.2)	28.1 (6.4)	27.5 (6.3)
SBP, mean (SD), mmHg	123.0 (20.3)	121.7 (18.8)	119.2 (17.4)	121.8 (18.9)	120.7 (18.3)
HDL-C, mean (SD), mg/dL	51.6 (16.3)	51.5 (15.8)	51.3 (14.7)	50.5 (15.2)	49.3 (14.5)
Non-HDL-C, mean (SD), mg/dL	160.4 (44.2)	153.0 (42.2)	138.7 (37.8)	147.0 (41.6)	143.2 (42.2)
Diabetes, No. (%)	410 (9.5)	1714 (8.8)	271 (9.1)	281 (12.9)	51 (9.0)
Antihypertensive medication use, No (%)	1408 (32.6)	5368 (27.4)	661 (22.3)	593 (27.1)	116 (20.5)
Lipid-lowering medication use, No. (%)	429 (9.9)	1092 (5.6)	166 (5.6)	41 (1.9)	12 (2.1)
Hormone replacement therapy use, No. (%)	468 (10.8)	2220 (11.3)	228 (7.7)	119 (5.4)	20 (3.5)
Total energy, median (IQR), kcal/day	1389 (1056-1819)	1624 (1232-2106)	2192 (1635-2913)	2224 (1651-3100)	2853 (2147-3855)
Dietary cholesterol, median (IQR), mg/day	142 (101-194)	226 (166-296)	419 (346-522)	504 (406-647)	891 (746-1104)
Alcohol, median (IQR), g/day	0 (0-5.6)	0.6 (0-7.7)	1.7 (0-10.8)	0.2 (0-9.4)	2.5 (0-12.3)
aHEI-2010 score[a], mean (SD)	44.9 (10.2)	44.7 (10.3)	46.1 (11.2)	41.8 (11.3)	42.4 (12.4)

aHEI, alternate Healthy Eating Index; BMI, body mass index; HDL-C, high density lipoprotein cholesterol; IQR, interquartile range; SBP, systolic blood pressure; SD, standard deviation.

[a] Unprocessed red meat and processed meat were excluded from the calculation because they are cholesterol-containing foods. The original version of the aHEI-2010 score has a range of 0-110 points. The aHEI-2010 score in this study had a range of 0-100 points due to the removal of the meat item.

eTable 3. Unadjusted Incidence Rate of Events Overall and by Subtype

	Number of events	Follow-up years	Incident per 1000 person years (95% CI)
Incident CVD[a]	5400	497 317	10.9 (10.6-11.2)
Coronary heart disease	2088	497 317	4.2 (4.0-4.4)
Stroke	1302	497 317	2.6 (2.5-2.8)
Heart failure	1897	497 317	3.8 (3.6-4.0)
Other CVD deaths	113	497 317	0.2 (0.2-0.3)
All-cause mortality	6132	524 376	11.7 (11.4-12.0)
CVD mortality[b]	1500	524 376	2.9 (2.7-3.0)
Non-CVD mortality	4632	524 376	8.8 (8.6-9.1)

[a] Only the first event was included in the competing risk context.

[b] Included fatal events from coronary heart disease, stroke, and heart failure, and other CVD causes.

eTable 4. Energy-Adjusted Pearson Correlation Between Dietary Cholsterol or Egg Consuption With Other Dietary Factors

	Dietary cholsterol		Egg	
	Coefficient	*P*	Coefficient	*P*
Total fat	0.45	<0.0001	0.24	<0.0001
Saturated fat	0.40	<0.0001	0.18	<0.0001
MUFA	0.43	<0.0001	0.25	<0.0001
PUFA	0.11	<0.0001	0.10	<0.0001
Trans fat	0.25	<0.0001	0.13	<0.0001
Animal protein	0.48	<0.0001	0.14	<0.0001
Fiber	-0.21	<0.0001	-0.16	<0.0001
Sodium	0.18	<0.0001	0.14	<0.0001
Potatoes	-0.07	<0.0001	-0.04	<0.0001
Vegetables excluding potatoes	0.01	0.32	-0.02	0.0002
Fruits	-0.09	<0.0001	-0.06	<0.0001
Eggs	0.83	<0.0001	1.00	<0.0001
Unprocessed red meat	0.27	<0.0001	0.04	<0.0001
Processed meat	0.23	<0.0001	0.22	<0.0001
Poultry	0.18	<0.0001	-0.02	0.0003
Fish	0.20	<0.0001	0.01	0.03
Dairy products	-0.01	0.18	-0.09	<0.0001
Whole grains	-0.11	<0.0001	-0.04	<0.0001
Refined grains	-0.02	0.005	0.04	<0.0001
Nuts and seeds	-0.11	<0.0001	-0.05	<0.0001
Sugar sweetened beverages	-0.14	<0.0001	-0.02	0.002
aHEI-2010 score[a]	-0.03	<0.0001	-0.08	<0.0001

aHEI, alternate Healthy Eating Index; MUFA, monounsaturated fat; PUFA, polyunsaturated fat.

[a] Unprocessed red meat and processed meat were excluded from the calculation because they are cholesterol-containing foods.

eTable 5. Associations Between Dietary Cholesterol Consumption and Incident CVD and All-Cause Mortality, Based on Various Increment Units for Dietary Cholesterol Consumption

Each xx mg additional consumption per day	Incident CVD HR (95% CI)[a]	All-cause mortality HR (95% CI)[a]
50	1.03 (1.01-1.04)	1.03 (1.02-1.04)
100	1.05 (1.03-1.08)	1.06 (1.03-1.08)
150	1.08 (1.04-1.12)	1.09 (1.05-1.12)
200	1.11 (1.06-1.17)	1.12 (1.07-1.17)
250	1.14 (1.08-1.21)	1.15 (1.08-1.21)
300	1.17 (1.09-1.26)	1.18 (1.10-1.26)
350	1.20 (1.11-1.31)	1.21 (1.12-1.31)
400	1.24 (1.12-1.36)	1.24 (1.14-1.36)
450	1.27 (1.14-1.41)	1.28 (1.16-1.41)
500	1.30 (1.16-1.47)	1.31 (1.18-1.47)
550	1.34 (1.17-1.53)	1.35 (1.20-1.52)
600	1.37 (1.19-1.59)	1.39 (1.22-1.58)

CI, confidence interval; HR, hazard ratio. Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality.

[a] Adjusted for age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more), total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).

eTable 6. Associations Between Egg Consumption and Incident CVD and All-Cause Mortality, Based on Various Increment Units for Egg Consumption

Each additional xx number of eggs consumed per week	Each additional xx number of eggs consumed per day	Incident CVD HR (95% CI)[a]	All-cause mortality HR (95% CI)[a]
1	0.14	1.02 (1.01-1.03)	1.02 (1.01-1.03)
2	0.29	1.03 (1.01-1.05)	1.04 (1.02-1.06)
3	0.43	1.05 (1.02-1.08)	1.07 (1.04-1.09)
4	0.57	1.07 (1.03-1.11)	1.09 (1.05-1.13)
5	0.71	1.09 (1.04-1.14)	1.11 (1.06-1.16)
6	0.86	1.11 (1.04-1.17)	1.13 (1.08-1.20)
7	1	1.12 (1.05-1.20)	1.16 (1.09-1.23)
8	1.14	1.14 (1.06-1.24)	1.18 (1.10-1.27)
9	1.29	1.16 (1.07-1.27)	1.21 (1.12-1.31)
10	1.43	1.18 (1.07-1.30)	1.23 (1.13-1.35)
11	1.57	1.20 (1.08-1.34)	1.26 (1.14-1.39)
12	1.71	1.22 (1.09-1.37)	1.29 (1.16-1.43)
13	1.86	1.24 (1.10-1.41)	1.32 (1.17-1.48)
14	2	1.27 (1.10-1.45)	1.34 (1.19-1.52)

CI, confidence interval; HR, hazard ratio. Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality that were further stratified by sex to satisfy proportional hazards assumption.

[a] Adjusted for age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more), total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).

eTable 7. Key Characteristics Between the Included and Excluded Participants

	Included (n=29 615)	Excluded (n=4882)
Age, mean (SD), y	51.6 (13.5)	54.4 (20.3)
Sex, No. (%)		
Male	13 299 (44.9)	2288 (46.9)
Female	16 316 (55.1)	2594 (53.1)
Race/ethnicity, No. (%)		
White	18 404 (62.1)	2516 (51.5)
Black	9204 (31.1)	2075 (42.5)
Hispanic	1310 (4.4)	185 (3.8)
Chinese	697 (2.4)	106 (2.2)
Some college or more, No. (%)	16 204 (54.7)	2038 (43.6)
Current smoker, No. (%)	6529 (22.1)	1021 (21.3)
BMI, mean (SD), kg/m^2	27.6 (5.7)	27.7 (6.2)
SBP, mean (SD), mm Hg	121.6 (18.9)	127.3 (22.6)
Total cholesterol, mean (SD), mg/dL	203.4 (40.8)	196.7 (42.5)
Use of antihypertensive medications, No. (%)	8146 (27.5)	1497 (32.1)
Use of lipid-lowering medications, No. (%)	1740 (5.9)	343 (7.5)

BMI, body mass index; SBP, systolic blood pressure; SD, standard deviation.

eTable 8. Associations of Dietary Cholesterol or Egg Consumption With Incident CVD and All-Cause Mortality, With Missing Data Imputed by Multiple Imputation by Chained Equations

	Dietary cholesterol and Incident CVD HR (95% CI)[b]	Dietary cholesterol and all-cause mortality HR (95% CI)[b]	Egg and incident CVD HR (95% CI)[b]	Egg and all-cause mortality HR (95% CI)[b]
n=34 017[a]	1.14 (1.06-1.21)	1.13 (1.06-1.20)	1.05 (1.02-1.09)	1.08 (1.05-1.11)

CI, confidence Interval; HR, hazard ratio. Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality that were further stratified by sex to satisfy proportional hazards assumption when determining the association between egg consumption and all-cause mortality.

[a] 480 participants with prevalent CVD were excluded.

[b] Adjusted for age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more), total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n). HRs (95% CIs) were based on each additional 300 mg of dietary cholesterol or half an egg consumed per day.

eTable 9. Associations of Dietary Cholesterol or Egg Consumption With Incident CVD and All-Cause Mortality, After Excluding Specific Cohort(s)

Cohort(s) dropped	Remaining sample size	Dietary cholesterol and Incident CVD HR (95% CI)[a]	Dietary cholesterol and all-cause mortality HR (95% CI)[a]	Egg and incident CVD HR (95% CI)[a]	Egg and all-cause mortality HR (95% CI)[a]
ARIC	15 905	1.20 (1.07-1.34)	1.17 (1.06-1.29)	1.09 (1.02-1.16)	1.11 (1.05-1.18)
CARDIA	25 383	1.18 (1.10-1.28)	1.18 (1.10-1.26)	1.06 (1.02-1.10)	1.07 (1.04-1.11)
FHS	29 106	1.18 (1.09-1.27)	1.18 (1.11-1.27)	1.06 (1.02-1.10)	1.08 (1.05-1.12)
FOS	26 662	1.17 (1.09-1.26)	1.17 (1.10-1.25)	1.06 (1.03-1.10)	1.07 (1.04-1.11)
FHS&FOS	26 153	1.18 (1.09-1.27)	1.17 (1.10-1.26)	1.06 (1.03-1.10)	1.08 (1.04-1.11)
JHS	27 302	1.17 (1.09-1.26)	1.18 (1.11-1.26)	1.06 (1.03-1.10)	1.08 (1.04-1.11)
MESA	23 717	1.15 (1.06-1.24)	1.18 (1.10-1.27)	1.05 (1.01-1.09)	1.07 (1.04-1.10)

ARIC, Atherosclerosis Risk in Communities; CARDIA, Coronary Artery Risk Development in Young Adults; CI, confidence interval; FHS, Framingham Heart Study; FOS, Framingham Offspring Study; HR, hazard ratio; JHS, Jackson Heart Study; MESA, Multi-Ethnic Study of Atherosclerosis.

Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality that were further stratified by sex to satisfy proportional hazards assumption when determining the association between egg consumption and all-cause mortality.

[a] Adjusted for age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more), total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n). HRs (95% CIs) were based on each additional 300 mg of dietary cholesterol or half an egg consumed per day.

eTable 10. Associations Between Dietary Cholesterol Consumption (mg/day) and Incident CVD and All-Cause Mortality, Based on Convenient Cutoffs

	<100 n=1989	≥100 and <200 n=8999	≥200 and <300 n=8411	≥300 and <400 n=4807	≥400 n=5409	P for trend
Incident CVD						
Model 1	Ref	1.00 (0.89-1.13)	1.07 (0.95-1.20)	1.19 (1.05-1.35)	1.24 (1.09-1.42)	<0.0001
Model 2	Ref	1.00 (0.89-1.13)	1.06 (0.93-1.20)	1.18 (1.03-1.35)	1.21 (1.04-1.41)	0.0001
Model 3	Ref	0.97 (0.86-1.09)	0.99 (0.87-1.12)	1.10 (0.96-1.26)	1.12 (0.96-1.31)	0.005
All-cause mortality						
Model 1	Ref	0.97 (0.87-1.08)	1.03 (0.92-1.15)	1.15 (1.02-1.29)	1.26 (1.12-1.42)	<0.0001
Model 2	Ref	0.95 (0.85-1.06)	0.99 (0.88-1.11)	1.08 (0.95-1.22)	1.17 (1.01-1.34)	<0.0001
Model 3	Ref	0.93 (0.84-1.04)	0.95 (0.84-1.06)	1.02 (0.90-1.16)	1.09 (0.95-1.26)	0.004

Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality.

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

eTable 11. Associations Between Quintiles of Dietary Cholesterol Consumption (mg/day) and Incident CVD and All-Cause Mortality[a]

	Quintile 1 n=5920	Quintile 2 n=5925	Quintile 3 n=5923	Quintile 4 n=5926	Quintile 5 n=5921	P for trend
Incident CVD						
Model 1	Ref	1.04 (0.95-1.14)	1.08 (0.99-1.18)	1.16 (1.06-1.26)	1.26 (1.16-1.37)	<0.0001
Model 2	Ref	1.04 (0.95-1.14)	1.08 (0.99-1.19)	1.16 (1.05-1.27)	1.26 (1.13-1.40)	<0.0001
Model 3	Ref	1.03 (0.94-1.12)	1.02 (0.93-1.12)	1.10 (1.00-1.21)	1.21 (1.09-1.35)	0.0001
All-cause mortality						
Model 1	Ref	1.03 (0.95-1.12)	1.06 (0.97-1.15)	1.10 (1.02-1.20)	1.29 (1.19-1.40)	<0.0001
Model 2	Ref	1.02 (0.94-1.11)	1.04 (0.95-1.13)	1.07 (0.98-1.17)	1.23 (1.11-1.35)	<0.0001
Model 3	Ref	1.02 (0.94-1.11)	1.00 (0.92-1.09)	1.03 (0.94-1.13)	1.18 (1.07-1.30)	0.0004

Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality.

[a] The median dietary cholesterol consumption from Quintile 1 to Quintile 5 was 114, 174, 229, 300, and 453 mg/day.

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).

Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

eTable 12. Associations Between Number of Eggs Consumed per Day and Incident CVD and All-Cause Mortality, Based on Convenient Cutoffs

Cutoffs	0	<0.5	≥0.5 and <1	≥1 and <2	≥2	P for trend
N	n=4320	n=19 580	n=2964	n=2186	n=565	
Incident CVD						
Model 1	Ref	1.04 (0.97-1.12)	1.12 (0.98-1.27)	1.24 (1.11-1.39)	1.41 (1.15-1.73)	<0.0001
Model 2	Ref	1.02 (0.95-1.10)	1.05 (0.92-1.19)	1.14 (1.01-1.28)	1.24 (1.00-1.53)	0.007
Model 3	Ref	1.06 (0.98-1.14)	1.05 (0.92-1.20)	1.17 (1.04-1.31)	1.29 (1.04-1.59)	0.005
All-cause mortality						
Model 1	Ref	0.99 (0.93-1.06)	1.19 (1.05-1.33)	1.27 (1.15-1.41)	1.50 (1.25-1.81)	<0.0001
Model 2	Ref	0.97 (0.90-1.04)	1.08 (0.96-1.22)	1.14 (1.03-1.27)	1.25 (1.04-1.52)	<0.0001
Model 3	Ref	0.98 (0.92-1.05)	1.08 (0.96-1.22)	1.13 (1.01-1.25)	1.26 (1.05-1.53)	0.0002

Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality that were further stratified by sex to satisfy proportional hazards assumption.

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

eTable 13. Associations Between Quintiles of Egg Consumption per Day and Incident CVD and All-Cause Mortality[a]

N	Quintile 1 n=5839	Quintile 2 n=5894	Quintile 3 n=5764	Quintile 4 n=6919	Quintile 5 n=5199	P for trend
Incident CVD						
Model 1	Ref	1.01 (0.92-1.10)	1.02 (0.94-1.12)	1.09 (1.00-1.18)	1.22 (1.11-1.33)	<0.0001
Model 2	Ref	0.99 (0.91-1.09)	1.01 (0.93-1.11)	1.06 (0.97-1.15)	1.13 (1.03-1.23)	0.001
Model 3	Ref	1.04 (0.95-1.14)	1.05 (0.96-1.14)	1.06 (0.97-1.15)	1.14 (1.04-1.25)	0.006
All-cause mortality						
Model 1	Ref	0.94 (0.87-1.03)	0.98 (0.90-1.06)	1.07 (0.99-1.16)	1.22 (1.13-1.33)	<0.0001
Model 2	Ref	0.93 (0.85-1.01)	0.96 (0.88-1.04)	1.03 (0.95-1.11)	1.11 (1.02-1.20)	0.0001
Model 3	Ref	0.96 (0.88-1.05)	0.97 (0.90-1.06)	1.02 (0.94-1.10)	1.10 (1.01-1.19)	0.002

Incident CVD included fatal and nonfatal coronary heart disease, stroke, heart failure, and other CVD deaths. Cohort-stratified cause-specific hazard models were used for incident CVD. Cohort-stratified standard proportional hazard models were used for all-cause mortality that were further stratified by sex to satisfy proportional hazards assumption.

[a] The median egg consumption (number/day) from Quintile 1 to Quintile 5 was 0, 0.067, 0.143, 0.429, and 1.

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n).

Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive drugs (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering drugs (y/n).

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eTable 14. Associations of Dietary Cholesterol (300 mg/day) or Egg (half/day) Consumption With Incident CVD and All-Cause Mortality Using Cohort-Stratified Subdistribution Hazard Models[a]

	Dietary cholesterol consumption	Egg consumption
Incident CVD	1.14 (1.06-1.23)	1.05 (1.01-1.09)
Coronary heart disease	1.06 (0.94-1.19)	1.03 (0.97-1.09)
Stroke	1.22 (1.05-1.41)	1.09 (1.01-1.16)
Heart failure	1.13 (1.004-1.28)	1.03 (0.97-1.09)
All-cause mortality	1.18 (1.10-1.26)	1.08 (1.04-1.11)
Cardiovascular mortality	1.17 (1.02-1.35)	1.06 (0.996-1.13)
Non-cardiovascular mortality	1.14 (1.06-1.24)	1.06 (1.03-1.10)

[a] Cohort-stratified subdistribution hazard models were used for all outcomes except all-cause mortality for which cohort-stratified standard proportional hazard models were used. Estimates were adjusted for age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more), total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, alcohol consumption (gram), and use of hormone replacement therapy (y/n). HRs (95% CIs) were based on each additional 300 mg of dietary cholesterol or half an egg consumed per day.

eFigure 1. Association Between Each Additional 300 mg of Dietary Cholesterol Consumed per Day and Coronary Heart Disease

	Hazard ratio (95% CI)	
Model 1	1.13 (1.04-1.23)	
Model 2	1.10 (0.98-1.23)	
Model 3	1.12 (1.00-1.26)	
Model 2 + nutrients		
SFA	1.17 (1.03-1.33)	
SFA, unsaturated fat, trans fat	1.19 (1.04-1.35)	
Animal protein	1.04 (0.90-1.20)	
Fiber	1.12 (0.99-1.26)	
Sodium	1.08 (0.97-1.22)	
All previous nutrients	1.13 (0.97-1.32)	
Model 2 + cholesterol-containing foods		
Eggs	1.04 (0.84-1.29)	
Unprocessed red meat	1.09 (0.97-1.23)	
Processed meat	1.10 (0.98-1.24)	
Poultry	1.09 (0.97-1.23)	
Fish	1.10 (0.98-1.23)	
Total dairy products	1.10 (0.98-1.23)	
Eggs, total red meat*	0.99 (0.78-1.25)	
Poultry, fish, total dairy products	1.09 (0.97-1.22)	
Model 2 + dietary patterns		
aHEI-2010 score†	1.09 (0.98-1.23)	
DASH diet score†	1.11 (0.98-1.24)	
aMED diet score†	1.10 (0.98-1.23)	
9 food groups‡	1.15 (1.02-1.31)	

Hazard ratio: 0.7   1   1.2   1.4   1.8

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean dietary cholesterol consumption in the US was ~300 mg/day, based on the National Health and Nutrition Examination Survey 2013-14 data (reference No. 27 in the main manuscript).
Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).
* Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.
† Meat and fish were removed from calculating these dietary scores.
‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, and sugar sweetened beverages. Eggs, meat, and fish were not included because they are major sources of dietary cholesterol.

eFigure 2. Association Between Each Additional 300 mg of Dietary Cholesterol Consumed per Day and Stroke

	Hazard ratio (95% CI)
Model 1	1.17 (1.05-1.31)
Model 2	1.26 (1.09-1.46)
Model 3	1.24 (1.07-1.44)
Model 2 + nutrients	
SFA	1.30 (1.11-1.52)
SFA, unsaturated fat, trans fat	1.28 (1.08-1.50)
Animal protein	1.30 (1.09-1.55)
Fiber	1.25 (1.08-1.45)
Sodium	1.25 (1.08-1.45)
All previous nutrients	1.32 (1.10-1.60)
Model 2 + cholesterol-containing foods	
Eggs	1.19 (0.91-1.57)
Unprocessed red meat	1.22 (1.04-1.41)
Processed meat	1.23 (1.06-1.43)
Poultry	1.28 (1.10-1.48)
Fish	1.26 (1.09-1.46)
Total dairy products	1.26 (1.09-1.46)
Eggs, total red meat*	1.02 (0.75-1.38)
Poultry, fish, total dairy products	1.28 (1.11-1.48)
Model 2 + dietary patterns	
aHEI-2010 score†	1.25 (1.08-1.45)
DASH diet score†	1.26 (1.09-1.45)
aMED diet score†	1.25 (1.08-1.45)
9 food groups‡	1.34 (1.14-1.56)

Hazard ratio axis: 0.7, 1, 1.2, 1.4, 1.8

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean dietary cholesterol consumption in the US was ~300 mg/day, based on the National Health and Nutrition Examination Survey 2013-14 data (reference No. 27 in the main manuscript).

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
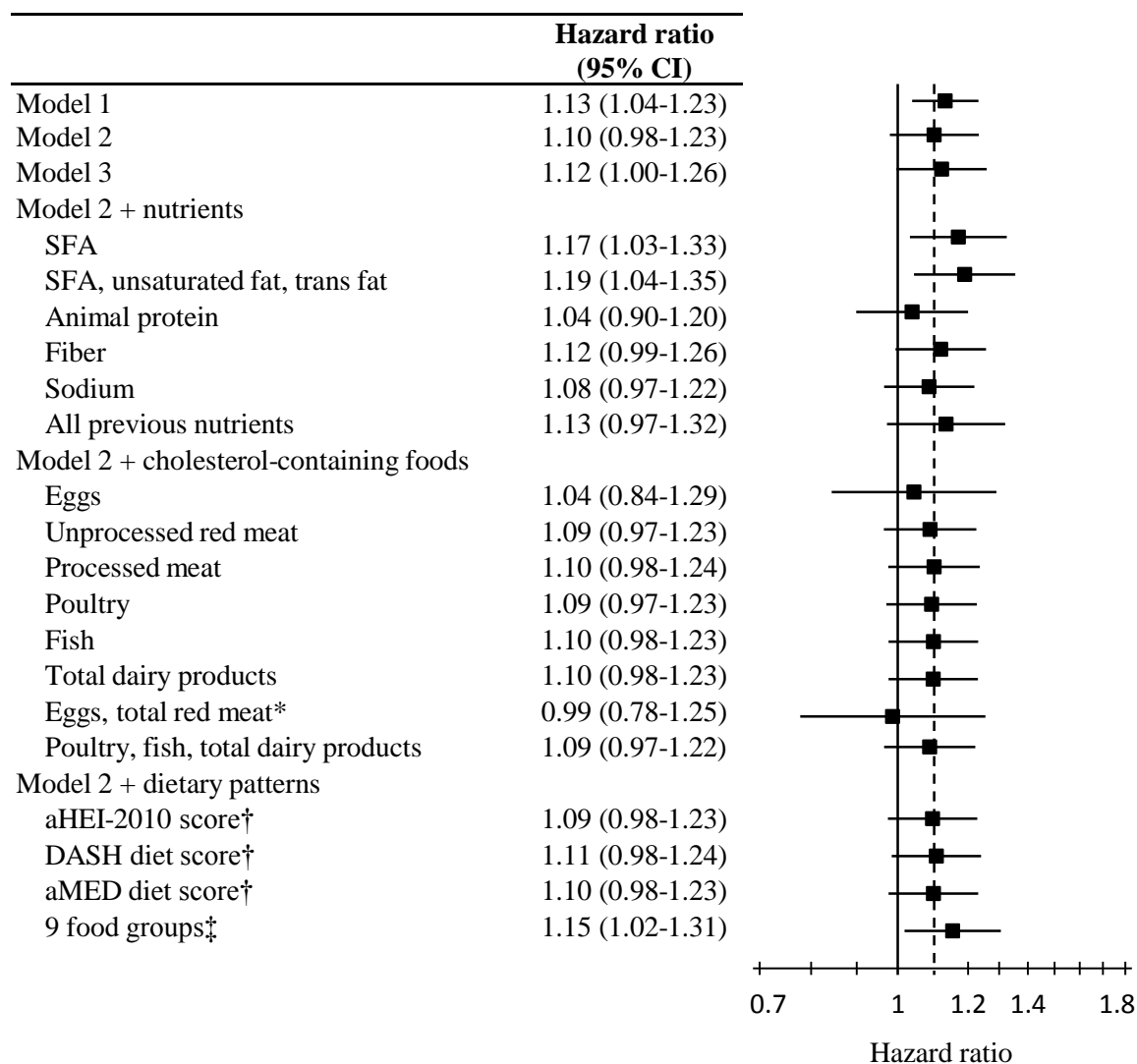
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

† Meat and fish were removed from calculating these dietary scores.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, and sugar sweetened beverages. Eggs, meat, and fish were not included because they are major sources of dietary cholesterol.

eFigure 3. Association Between Each Additional 300 mg of Dietary Cholesterol Consumed per Day and Heart Failure

	Hazard ratio (95% CI)
Model 1	1.23 (1.12-1.35)
Model 2	1.14 (1.05-1.24)
Model 3	1.11 (0.98-1.27)
Model 2 + nutrients	
SFA	1.21 (1.06-1.39)
SFA, unsaturated fat, trans fat	1.19 (1.03-1.37)
Animal protein	1.06 (0.91-1.23)
Fiber	1.27 (1.12-1.44)
Sodium	1.18 (1.04-1.34)
All previous nutrients	1.08 (0.92-1.27)
Model 2 + cholesterol-containing foods	
Eggs	1.37 (1.09-1.72)
Unprocessed red meat	1.19 (1.05-1.36)
Processed meat	1.19 (1.05-1.36)
Poultry	1.18 (1.04-1.34)
Fish	1.21 (1.07-1.37)
Total dairy products	1.20 (1.06-1.36)
Eggs, total red meat*	1.34 (1.03-1.73)
Poultry, fish, total dairy products	1.18 (1.04-1.34)
Model 2 + dietary patterns	
aHEI-2010 score†	1.22 (1.07-1.38)
DASH diet score†	1.23 (1.09-1.40)
aMED diet score†	1.22 (1.08-1.38)
9 food groups‡	1.23 (1.07-1.40)

Hazard ratio

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean dietary cholesterol consumption in the US was ~300 mg/day, based on the National Health and Nutrition Examination Survey 2013-14 data (reference No. 27 in the main manuscript).

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
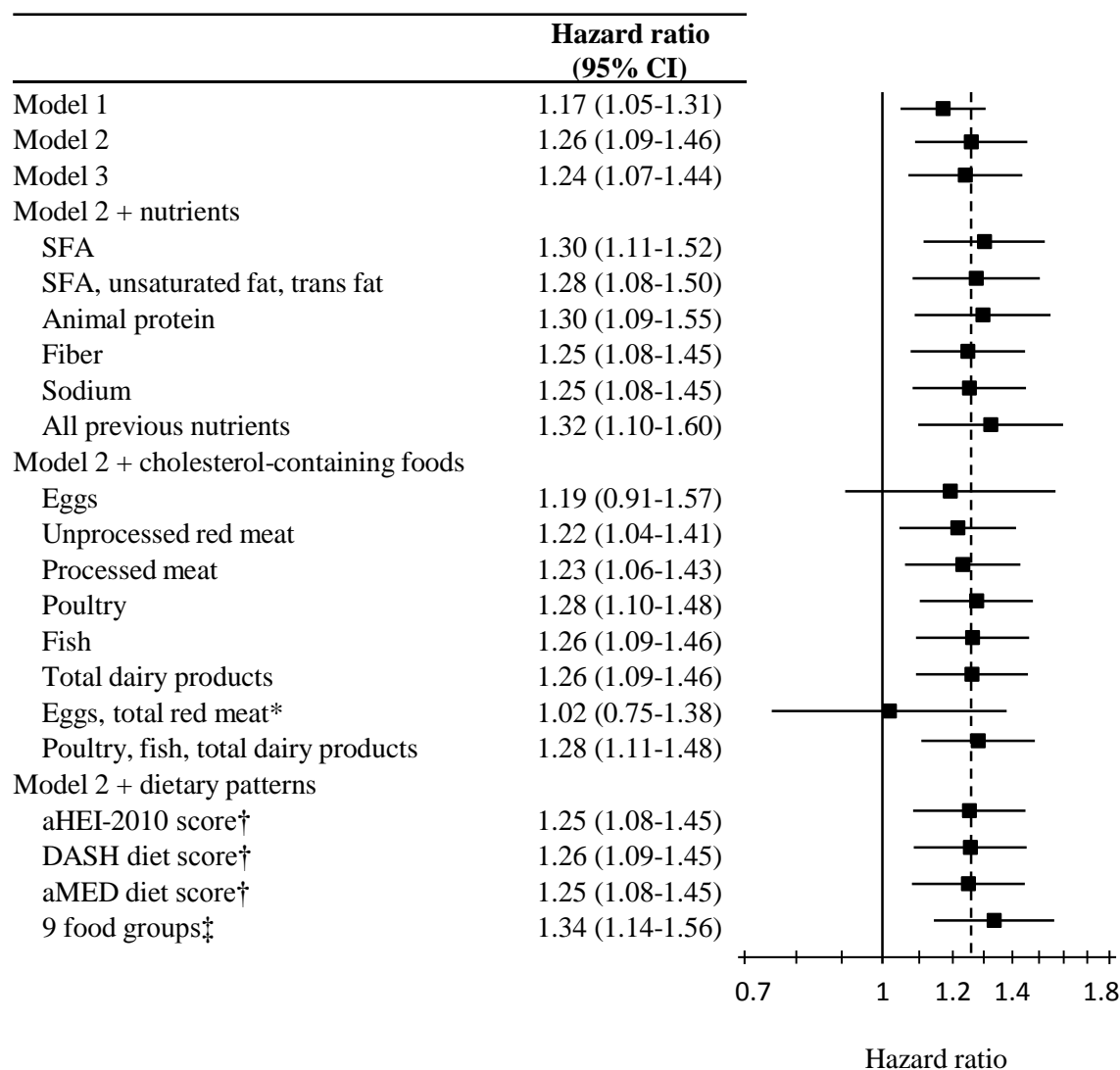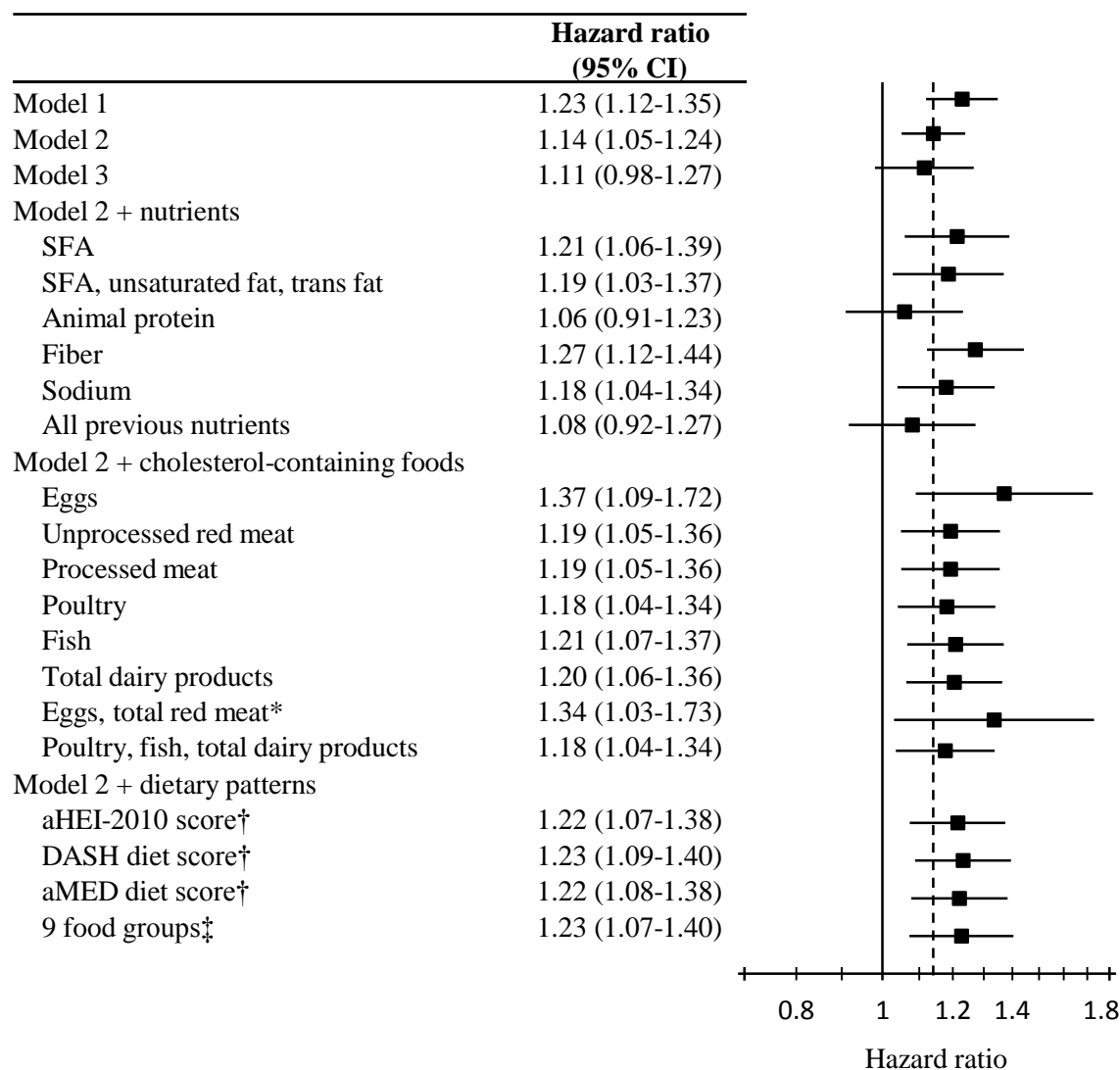
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

† Meat and fish were removed from calculating these dietary scores.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, and sugar sweetened beverages. Eggs, meat, and fish were not included because they are major sources of dietary cholesterol.

eFigure 4. Association Between Each Additional 300 mg of Dietary Cholesterol Consumed per Day and Cardiovascular Mortality

	Hazard ratio (95% CI)	
Model 1	1.23 (1.11-1.36)	
Model 2	1.22 (1.07-1.39)	
Model 3	1.22 (1.07-1.40)	
Model 2 + nutrients		
SFA	1.27 (1.10-1.47)	
SFA, unsaturated fat, trans fat	1.28 (1.10-1.49)	
Animal protein	1.07 (0.91-1.25)	
Fiber	1.27 (1.11-1.46)	
Sodium	1.19 (1.04-1.36)	
All previous nutrients	1.16 (0.98-1.38)	
Model 2 + cholesterol-containing foods		
Eggs	1.23 (0.95-1.59)	
Unprocessed red meat	1.19 (1.04-1.37)	
Processed meat	1.21 (1.06-1.39)	
Poultry	1.20 (1.05-1.38)	
Fish	1.22 (1.07-1.40)	
Total dairy products	1.21 (1.06-1.39)	
Eggs, total red meat*	1.13 (0.85-1.50)	
Poultry, fish, total dairy products	1.20 (1.05-1.38)	
Model 2 + dietary patterns		
aHEI-2010 score†	1.22 (1.07-1.40)	
DASH diet score†	1.25 (1.09-1.43)	
aMED diet score†	1.22 (1.07-1.39)	
9 food groups‡	1.26 (1.09-1.46)	

Hazard ratio (x-axis: 0.7, 1, 1.2, 1.4, 1.8)

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean dietary cholesterol consumption in the US was ~300 mg/day, based on the National Health and Nutrition Examination Survey 2013-14 data (reference No. 27 in the main manuscript).

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
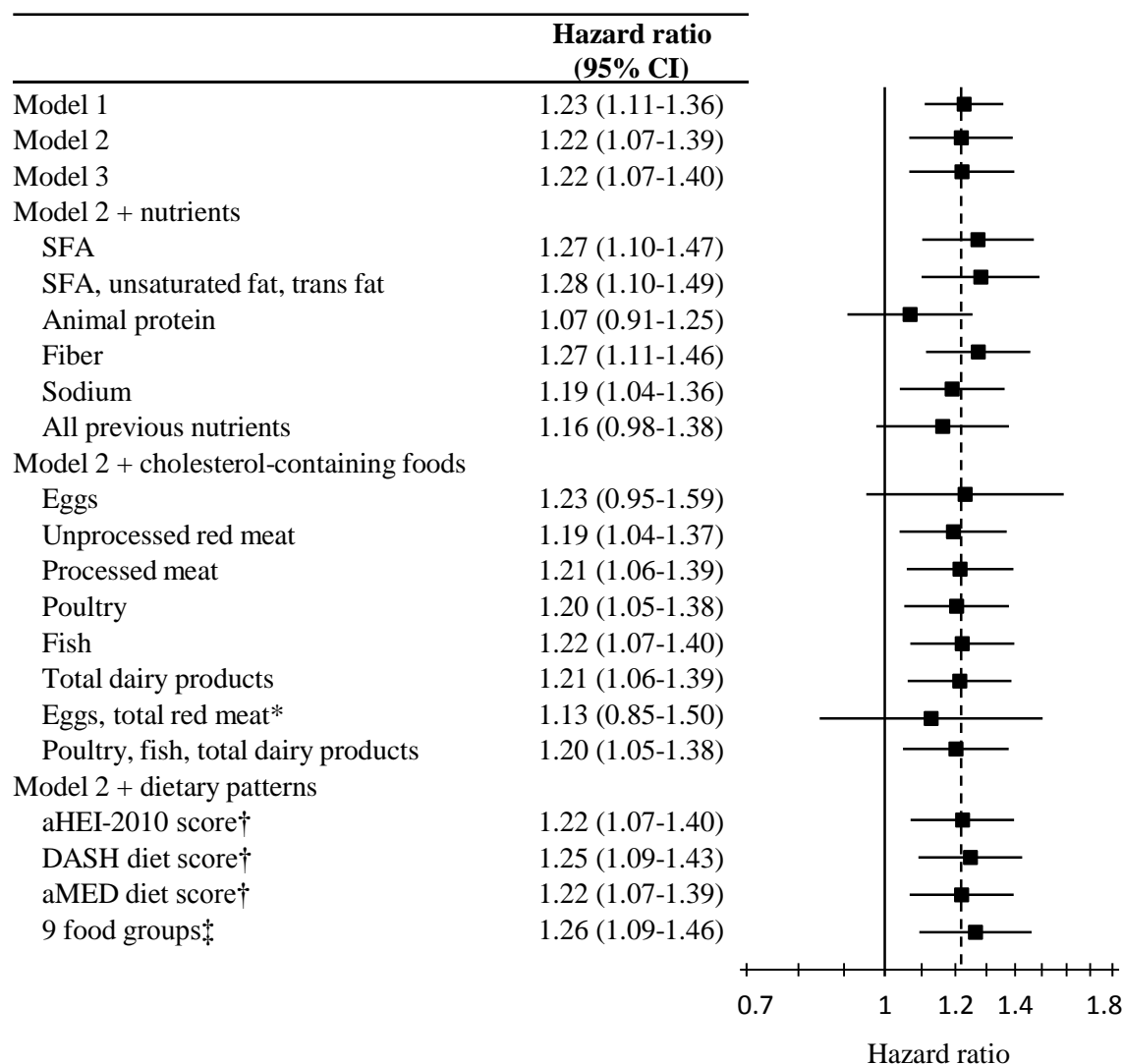
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

† Meat and fish were removed from calculating these dietary scores.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, and sugar sweetened beverages. Eggs, meat, and fish were not included because they are major sources of dietary cholesterol.

eFigure 5. Association Between Each Additional 300 mg of Dietary Cholesterol Consumed per Day and Noncardiovascular Mortality

	Hazard ratio (95% CI)	
Model 1	1.21 (1.14-1.28)	
Model 2	1.16 (1.08-1.26)	
Model 3	1.13 (1.04-1.22)	
Model 2 + nutrients		
SFA	1.16 (1.06-1.26)	
SFA, unsaturated fat, trans fat	1.16 (1.06-1.26)	
Animal protein	1.14 (1.04-1.26)	
Fiber	1.16 (1.08-1.26)	
Sodium	1.15 (1.07-1.25)	
All previous nutrients	1.14 (1.03-1.26)	
Model 2 + cholesterol-containing foods		
Eggs	1.10 (0.95-1.26)	
Unprocessed red meat	1.15 (1.07-1.25)	
Processed meat	1.13 (1.05-1.23)	
Poultry	1.18 (1.09-1.27)	
Fish	1.17 (1.09-1.26)	
Total dairy products	1.16 (1.08-1.25)	
Eggs, total red meat*	1.03 (0.88-1.21)	
Poultry, fish, total dairy products	1.18 (1.09-1.27)	
Model 2 + dietary patterns		
aHEI-2010 score†	1.16 (1.08-1.25)	
DASH diet score†	1.17 (1.08-1.26)	
aMED diet score†	1.16 (1.08-1.26)	
9 food groups‡	1.19 (1.09-1.29)	

Hazard ratio

0.7   1   1.2 1.4   1.8

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean dietary cholesterol consumption in the US was ~300 mg/day, based on the National Health and Nutrition Examination Survey 2013-14 data (reference No. 27 in the main manuscript).

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
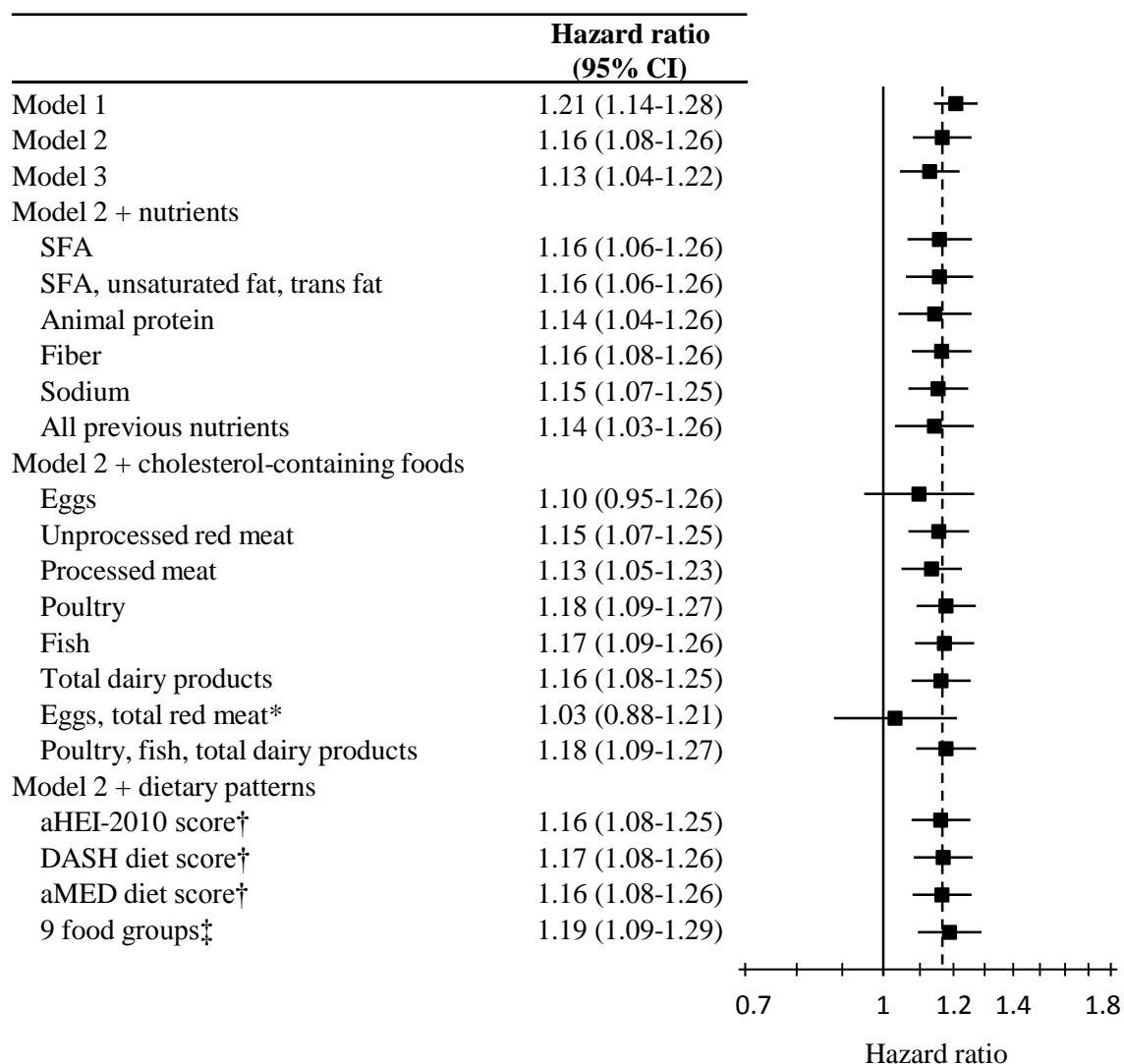
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

† Meat and fish were removed from calculating these dietary scores.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, and sugar sweetened beverages. Eggs, meat, and fish were not included because they are major sources of dietary cholesterol.

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eFigure 6. Association Between Each Additional Half an Egg Consumed per Day and Coronary Heart Disease

	Hazard ratio (95% CI)
Model 1	1.08 (1.03-1.14)
Model 2	1.05 (0.99-1.11)
Model 3	1.07 (1.01-1.12)
Model 2 + nutrients	
Dietary cholesterol	1.03 (0.93-1.14)
SFA, unsaturated fat, trans fat	1.06 (1.00-1.12)
Animal protein	1.03 (0.97-1.09)
Fiber	1.05 (1.00-1.11)
Sodium	1.04 (0.99-1.10)
All previous nutrients except dietary cholesterol	1.05 (0.99-1.11)
Model 2 + dietary patterns	
aHEI-2010 score*	1.04 (0.99-1.10)
DASH diet score*	1.05 (0.99-1.11)
aMED diet score*	1.05 (0.99-1.10)
Total red meat†	1.05 (0.99-1.11)
11 food groups‡	1.06 (1.00-1.12)
13 food groups§	1.06 (1.00-1.12)

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean egg consumption in the US was approximately half an egg per day, based on the National Health and Nutrition Examination Survey 2011-12 data (reference No. 28 in the main manuscript).

Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
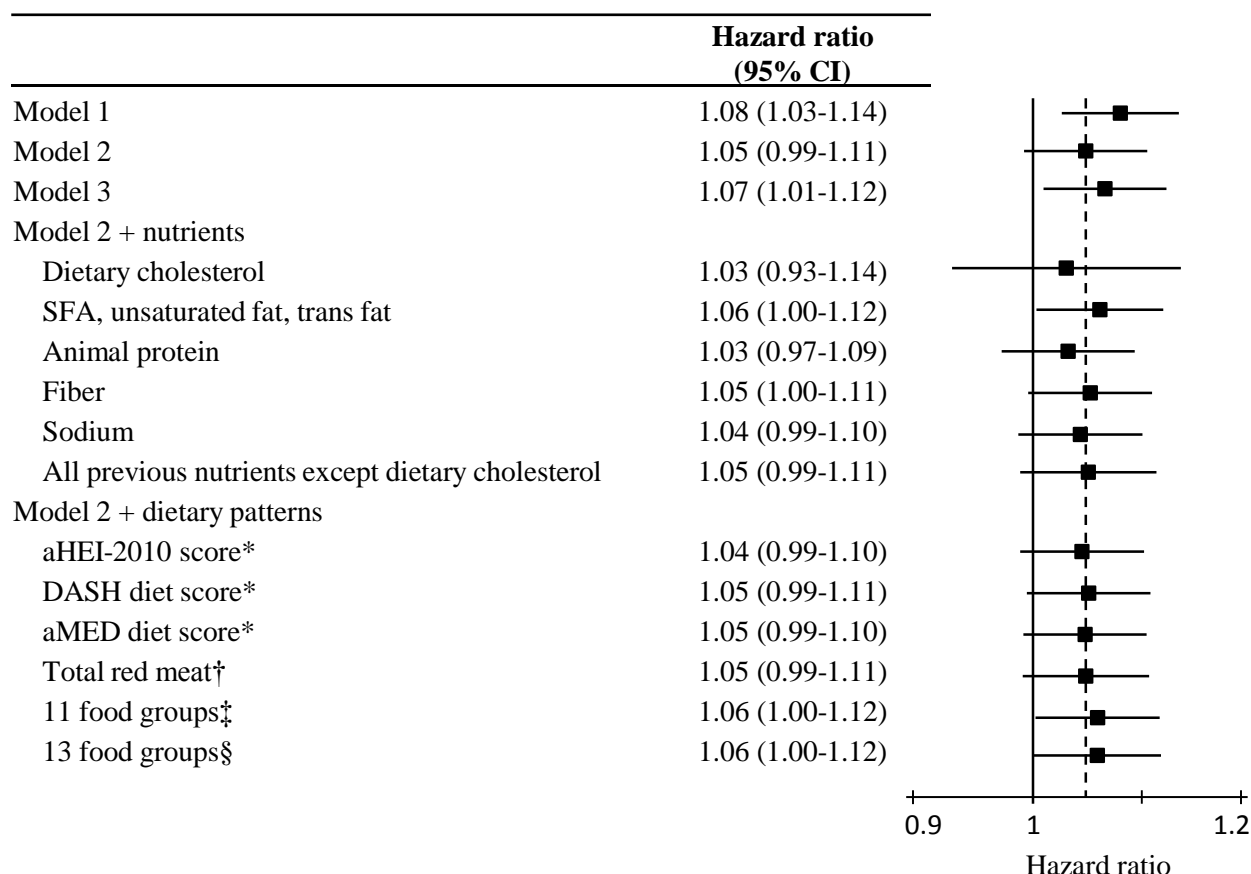
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Meat and fish were removed from calculating these dietary scores.

† Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, and fish and seafood.

§ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, fish and seafood, unprocessed red meat, and processed meat.

eFigure 7. Association Between Each Additional Half an Egg Consumed per Day and Stroke

	Hazard ratio (95% CI)
Model 1	1.12 (1.05-1.20)
Model 2	1.11 (1.03-1.18)
Model 3	1.10 (1.03-1.18)
Model 2 + nutrients	
Dietary cholesterol	1.03 (0.91-1.17)
SFA, unsaturated fat, trans fat	1.10 (1.03-1.18)
Animal protein	1.11 (1.03-1.19)
Fiber	1.10 (1.03-1.18)
Sodium	1.10 (1.03-1.18)
All previous nutrients except dietary cholesterol	1.10 (1.02-1.19)
Model 2 + dietary patterns	
aHEI-2010 score*	1.10 (1.03-1.18)
DASH diet score*	1.10 (1.03-1.18)
aMED diet score*	1.10 (1.03-1.18)
Total red meat†	1.10 (1.02-1.18)
11 food groups‡	1.11 (1.04-1.19)
13 food groups§	1.10 (1.03-1.19)

Hazard ratio

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean egg consumption in the US was approximately half an egg per day, based on the National Health and Nutrition Examination Survey 2011-12 data (reference No. 28 in the main manuscript).
Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).
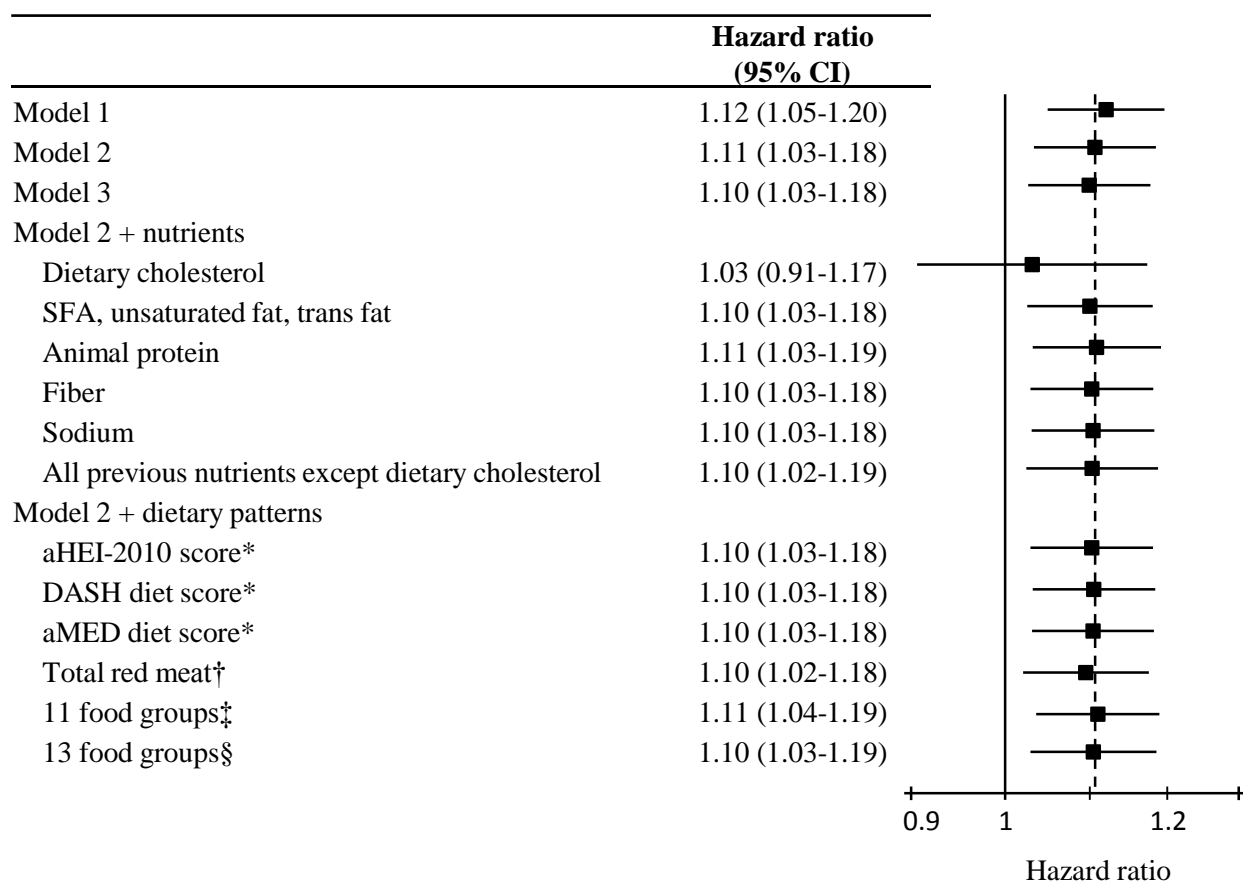* Meat and fish were removed from calculating these dietary scores.
† Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.
‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, and fish and seafood.
§ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, fish and seafood, unprocessed red meat, and processed meat.

eFigure 8. Association Between Each Additional Half an Egg Consumed per Day and Heart Failure

	Hazard ratio (95% CI)
Model 1	1.10 (1.04-1.16)
Model 2	1.06 (1.00-1.12)
Model 3	1.03 (0.97-1.09)
Model 2 + nutrients	
Dietary cholesterol	0.93 (0.84-1.04)
SFA, unsaturated fat, trans fat	1.04 (0.98-1.11)
Animal protein	1.04 (0.98-1.11)
Fiber	1.07 (1.01-1.13)
Sodium	1.04 (0.99-1.11)
All previous nutrients except dietary cholesterol	1.05 (0.99-1.11)
Model 2 + dietary patterns	
aHEI-2010 score*	1.06 (1.00-1.12)
DASH diet score*	1.07 (1.01-1.13)
aMED diet score*	1.06 (1.00-1.12)
Total red meat†	1.05 (0.99-1.11)
11 food groups‡	1.07 (1.01-1.13)
13 food groups§	1.06 (1.00-1.13)

0.8   1   1.2

Hazard ratio

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort-stratified cause-specific hazard models were applied. Mean egg consumption in the US was approximately half an egg per day, based on the National Health and Nutrition Examination Survey 2011-12 data (reference No. 28 in the main manuscript).
Model 1: age, sex, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).
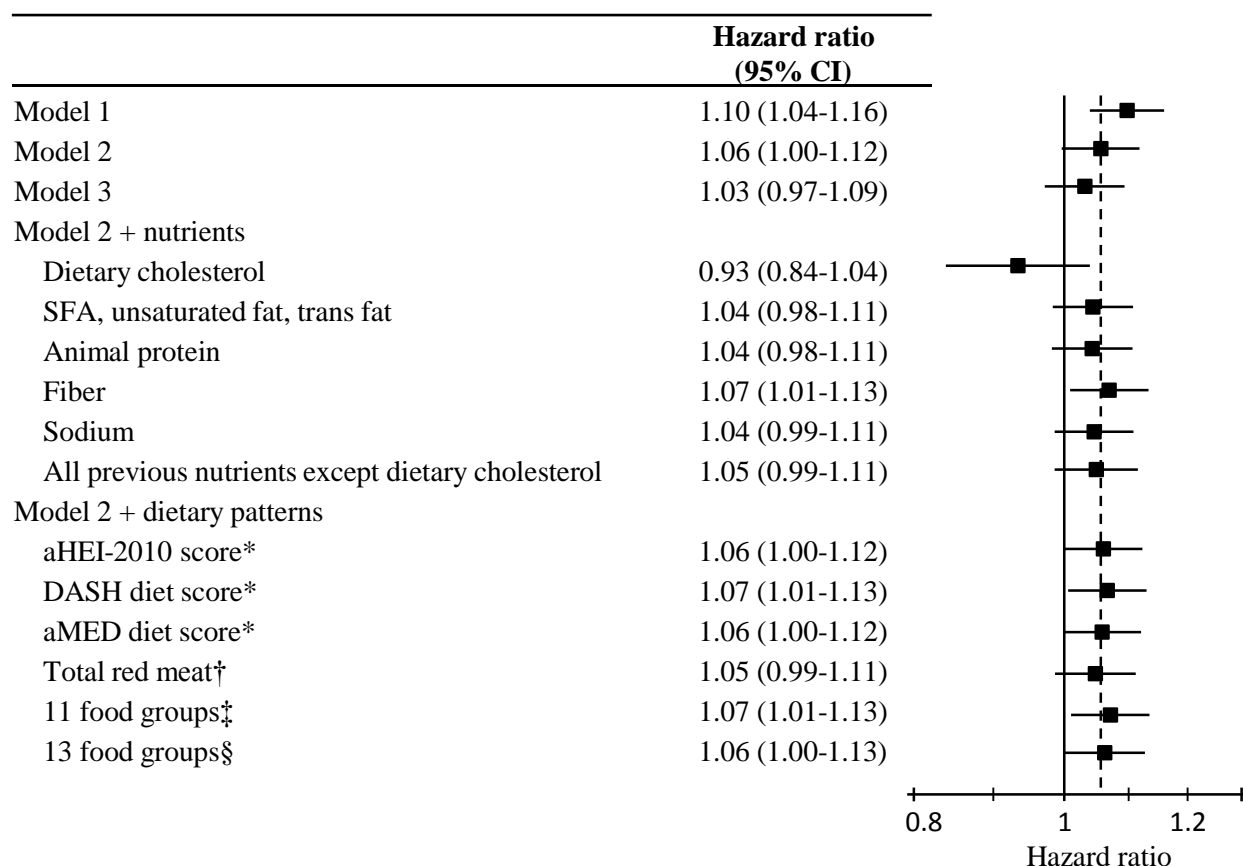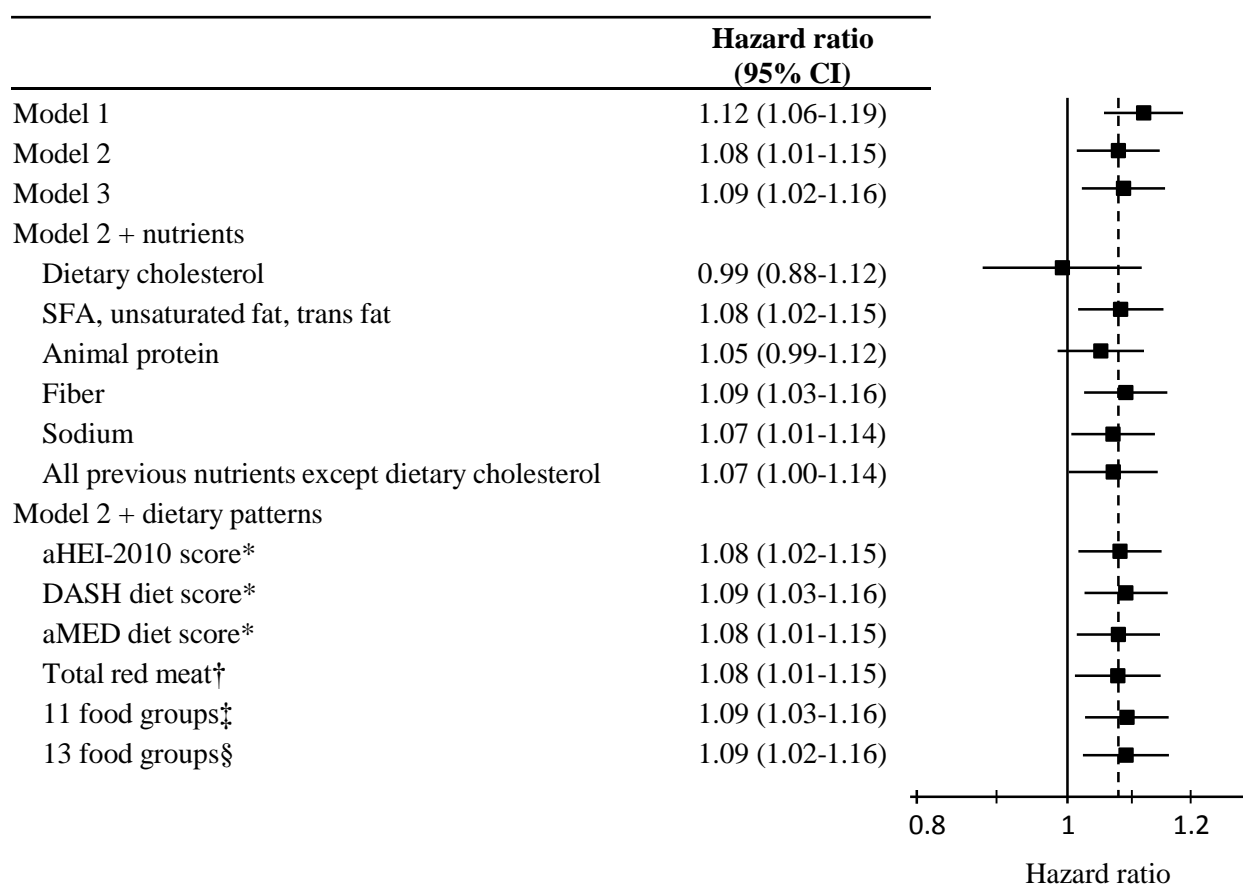* Meat and fish were removed from calculating these dietary scores.
† Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.
‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, and fish and seafood.
§ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, fish and seafood, unprocessed red meat, and processed meat.

eFigure 9. Association Between Each Additional Half an Egg Consumed per Day and Cardiovascular Mortality

	Hazard ratio (95% CI)	
Model 1	1.12 (1.06-1.19)	
Model 2	1.08 (1.01-1.15)	
Model 3	1.09 (1.02-1.16)	
Model 2 + nutrients		
Dietary cholesterol	0.99 (0.88-1.12)	
SFA, unsaturated fat, trans fat	1.08 (1.02-1.15)	
Animal protein	1.05 (0.99-1.12)	
Fiber	1.09 (1.03-1.16)	
Sodium	1.07 (1.01-1.14)	
All previous nutrients except dietary cholesterol	1.07 (1.00-1.14)	
Model 2 + dietary patterns		
aHEI-2010 score*	1.08 (1.02-1.15)	
DASH diet score*	1.09 (1.03-1.16)	
aMED diet score*	1.08 (1.01-1.15)	
Total red meat†	1.08 (1.01-1.15)	
11 food groups‡	1.09 (1.03-1.16)	
13 food groups§	1.09 (1.02-1.16)	

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort- and sex-stratified cause-specific hazard models were applied. Mean egg consumption in the US was approximately half an egg per day, based on the National Health and Nutrition Examination Survey 2011-12 data (reference No. 28 in the main manuscript).
Model 1: age, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).
Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).
Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).
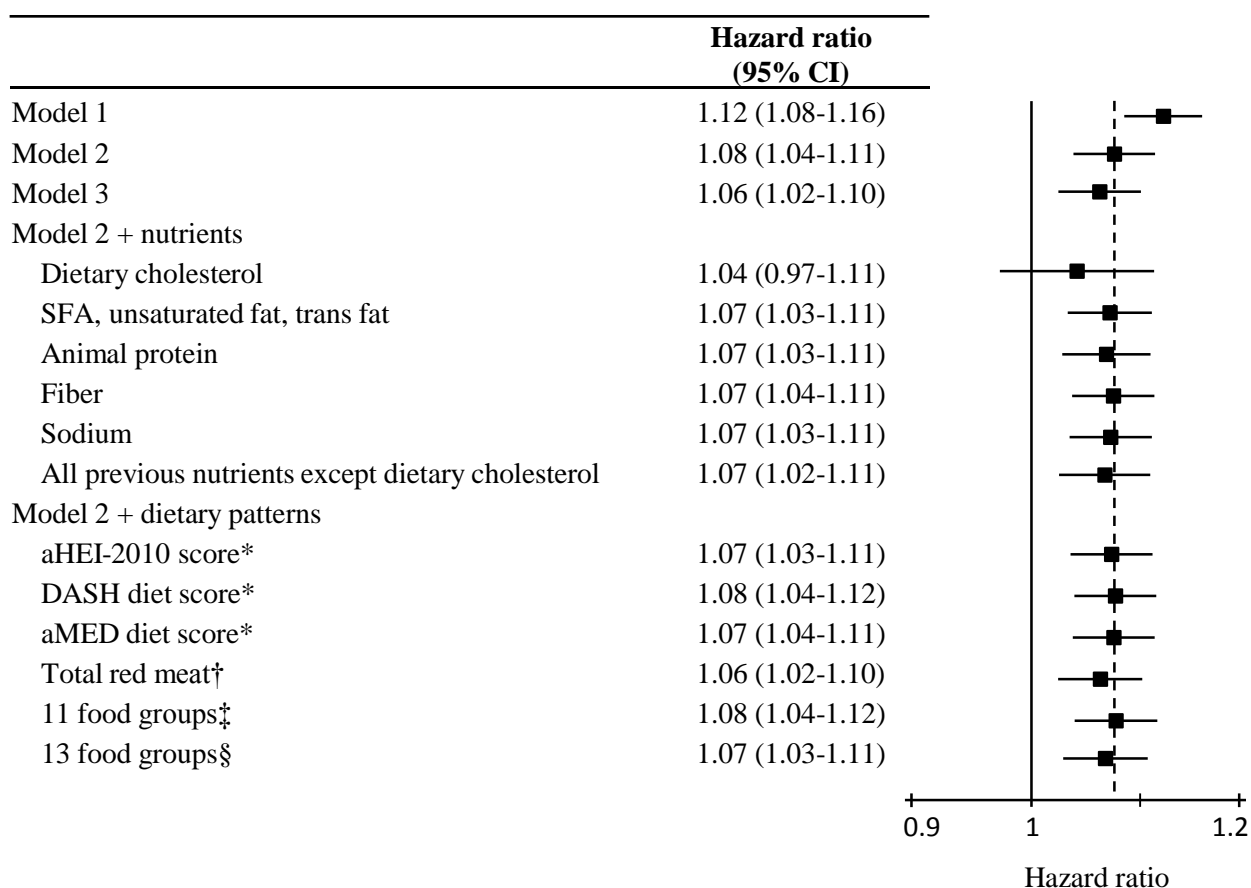* Meat and fish were removed from calculating these dietary scores.
† Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.
‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, and fish and seafood.
§ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, fish and seafood, unprocessed red meat, and processed meat.

eFigure 10. Association Between Each Additional Half an Egg Consumed per Day and Noncardiovascular Mortality

	Hazard ratio (95% CI)	
Model 1	1.12 (1.08-1.16)	
Model 2	1.08 (1.04-1.11)	
Model 3	1.06 (1.02-1.10)	
Model 2 + nutrients		
Dietary cholesterol	1.04 (0.97-1.11)	
SFA, unsaturated fat, trans fat	1.07 (1.03-1.11)	
Animal protein	1.07 (1.03-1.11)	
Fiber	1.07 (1.04-1.11)	
Sodium	1.07 (1.03-1.11)	
All previous nutrients except dietary cholesterol	1.07 (1.02-1.11)	
Model 2 + dietary patterns		
aHEI-2010 score*	1.07 (1.03-1.11)	
DASH diet score*	1.08 (1.04-1.12)	
aMED diet score*	1.07 (1.04-1.11)	
Total red meat†	1.06 (1.02-1.10)	
11 food groups‡	1.08 (1.04-1.12)	
13 food groups§	1.07 (1.03-1.11)	

Hazard ratio axis: 0.9, 1, 1.2

aHEI-2010, alternate Healthy Eating Index 2010; aMED, alternate Mediterranean; CI, confidence interval; DASH, Dietary Approaches to Stop Hypertension; SFA, saturated fat. The inclusion of a dashed line was to assist in comparing results to Model 2. Cohort- and sex-stratified cause-specific hazard models were applied. Mean egg consumption in the US was approximately half an egg per day, based on the National Health and Nutrition Examination Survey 2011-12 data (reference No. 28 in the main manuscript).

Model 1: age, race/ethnicity (white, black, Hispanic, Chinese), and education (<high school, high school, some college or more).

Model 2: Model 1 + total energy, smoking status (current, former, never), smoking pack-years (0, 0.1-4.9, 5.0-9.9, 10-19.9, 20-29.9, 30-39.9, ≥40), cohort-specific physical activity z-score, ethanol consumption (gram), and use of hormone replacement therapy (y/n).

Model 3: Model 2 + BMI, diabetes status (y/n), systolic blood pressure, use of anti-hypertensive medications (y/n), high density lipoprotein cholesterol (HDL-C), non-HDL-C, and use of lipid-lowering medications (y/n).

* Meat and fish were removed from calculating these dietary scores.

† Total red meat included unprocessed red meat and processed meat. These two foods were adjusted separately in the model.

‡ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, and fish and seafood.

§ Fruits, legumes, potatoes, other vegetables excluding legumes and potatoes, nuts and seeds, whole grains, refined grains, low fat dairy products, sugar sweetened beverages, poultry, fish and seafood, unprocessed red meat, and processed meat.