

SUPPLEMENTAL MATERIAL

Table S1. Definitions of three classification for Cardiovascular Health Score

Individual components of Cardiovascular Health Score	Poor (0 points)	Intermediate (1 point)	Ideal (2 points)
Smoking	Current smoker	Former smoker, quit ≤12 months	Never smoker or quit >12 months
Physical activity *	<100	100–299	≥300
Diet quality (APDQS) †	Tertile 1 (median: 50)	Tertile 2 (median:61)	Tertile 3 (median:76)
BMI, kg/m ²	≥30	25–29.9	<25
Total cholesterol, mg/dL	≥240	200 – 239 or <200 with medication	<200 without medication
BP, mmHg	SBP ≥140 or DBP ≥90	SBP 120–139 or DBP 80–89 or SBP < 120 and DBP <80 with medication	SBP <120 and DBP < 80 without medication
Fasting serum glucose, mg/dL ‡	≥126 (NA by study design)	100–125	<100 mg/dL without medication

Abbreviations: APDQS, A Priori Diet Quality Score; BMI, body mass index; BP, blood pressure; DBP, diastolic blood pressure; SBP, systolic blood pressure; NA, not available.

* A total physical activity score (expressed as exercise units or EU) was calculated by summing the weighted products of all activities (frequency in months×intensity of activity). For reference, 300 EU generally corresponds to the American College of Sports Medicine's guidelines for the quantity of exercise required to promote weight loss (5 sessions of 1260 kJ [300 kcal] of weekly energy expenditure). A substudy in the Oakland clinic at Y25 showed that 300 EU corresponds to 150 minutes/week of moderate or vigorous physical activity.²⁰

† Diet quality was assessed using the APDQS. Total score of the ADOQS summed the 46 components (possible scores 0–132, with a range of 35–95 in these data), with higher scores representing a nutritionally rich, plant-centered diet. A one-point increment represents a one-category shift in the presumed favorable direction. Beneficially-rated food group includes fruit, avocado, beans/legumes, green vegetables, yellow vegetables, tomatoes, other vegetables, nuts and seeds, soy products, whole grains, vegetable oil, fatty fish, lean fish, poultry, alcohol (beer, wine, and liquor), coffee, tea, and low-fat milk/cheese/yogurt. In practice, the amount of alcohol consumed was rarely more than a moderate level. Adversely-rated food group includes fried potatoes, grain dessert, salty snacks, pastries, sweets, high-fat red meats, processed meats, organ meats, fried fish/poultry, sauces, soft drinks, whole-fat milk/cheese/yogurt, and butter. Neutrally-rated food group includes potatoes, refined grains, margarine, chocolate, meal replacements, pickled foods, sugar substitutes, lean meats, shellfish, eggs, soups, diet drinks, and fruit juices.

‡ Original LS7 glucose component includes fasting glucose < 100 with medication within the intermediate category. For the present analysis, individuals who were taking diabetic medications at Year 0 were excluded.

Table S2. APDQS food groups and its constituent subgroups

1. Fruit	Vegetable-based savory snack	Loaf-type bread and plain rolls - whole grain
Citrus fruit	8. Nuts and seeds	Crackers - whole grain
Fruit excluding citrus fruit	Nuts and seeds	Pasta - whole grain
Fried fruits	Nut and seed butters	Ready-to-eat cereal (not presweetened) - whole grain
Fruit-based savory snack	9. Soy products	Ready-to-eat cereal (presweetened) - whole grain
2. Avocado	Meat alternatives	Popcorn
Avocado/guacamole and similar	Milk – nondairy	Flavored popcorn
3. Beans/Legumes	Cheese – nondairy	Snack bars - some whole grain
Legumes (cooked dried beans)	Yogurt – nondairy	Snack bars - whole grain
4. Green vegetables	Frozen nondairy dessert	11. Vegetable oil
Dark-green vegetables	Cream – nondairy	Oil
5. Yellow vegetables	10. Whole grains	Fried vegetables
Deep-yellow vegetables	Grains, flour and dry mixes - some whole grain	12. Fish
6. Tomatoes	Loaf-type bread and plain rolls - some whole grain	Fish - fresh and smoked
Tomato	Crackers - some whole grain	13. Lean fish
7. Other vegetables	Pasta - some whole grain	Lean fish - fresh and smoked
Other starchy vegetables	Ready-to-eat cereal (not presweetened) - some whole grain	14. Poultry
Other vegetables	Ready-to-eat cereal (presweetened) - whole grain	Poultry
Fried vegetables	Grains, flour and dry mixes - whole grain	Lean poultry

15. Moderate amounts of beer	Artificially sweetened tea	Cheese - reduced fat
Beer and ales	Unsweetened tea	Cheese - low fat and fat free
16. Moderate amounts of wine	Nondairy-based artificially sweetened meal replacement/supplement	21. Potatoes
Wine	20. Low-fat milk/Cheese/Yogurt	White potatoes
17. Moderate amounts of liquor	Yogurt - sweetened low fat	22. Refined grains
Cordial and liqueur	Yogurt - sweetened fat free	Ready-to-eat cereal (not presweetened) - refined grain
Distilled liquor	Yogurt - artificially sweetened low fat	Ready-to-eat cereal (presweetened) - refined grain
18. Coffee	Yogurt - artificially sweetened fat free	Crackers - refined grain
Sweetened coffee	Milk - reduced fat	Pasta - refined grain
Artificially sweetened coffee	Milk - low fat and fat free	Grains, flour and dry mixes - refined grain
Unsweetened coffee	Ready-to-drink flavored milk - reduced fat	Loaf-type bread and plain rolls - refined grain
Sweetened coffee substitutes	Ready-to-drink flavored milk - low fat and fat free	Snack bars - refined grain
Artificially sweetened coffee substitutes	Sweetened flavored milk beverage powder with non-fat dry milk	23. Margarine
Unsweetened coffee substitutes	Artificially sweetened flavored milk beverage powder with non-fat dry milk	Margarine - regular
19. Tea	Cream - reduced fat	Margarine - reduced fat
Sweetened tea	Cream - low fat and fat free	24. Chocolate

Chocolate candy	Shellfish	Cakes, cookies, pies, pastries, danish, doughnuts and cobblers - some whole grain
25. Meal replacements	30. Eggs	Cakes, cookies, pies, pastries, danish, doughnuts and cobblers - refined grain
Dairy-based sweetened meal replacement/supplement	Eggs	Miscellaneous dessert
Dairy-based artificially sweetened meal replacement/supplement	Egg substitute	36. Salty snacks
Nondairy-based sweetened meal replacement/supplement	31. Soups	Snack chips - whole grain
Nondairy-based artificially sweetened meal replacement/supplement	Soup broth	Snack chips - some whole grain
Nondairy-based unsweetened meal replacement/supplement	32. Diet drinks	Snack chips - refined grain
26. Pickled foods	Artificially sweetened soft drinks	37. Pastries
Pickled foods	Unsweetened soft drinks	Other breads (quick breads, corn muffins, tortillas) - whole grain
27. Sugar substitutes	Artificially sweetened water	Other breads (quick breads, corn muffins, tortillas) - some whole grain
Sugar substitute	Artificially sweetened fruit drinks	Other breads (quick breads, corn muffins, tortillas) - refined grain
28. Lean meats	33. Fruit juices	38. Sweets
Beef	Citrus juice	Sugar
Veal	Fruit juice excluding citrus juice	Syrup, honey, jam, jelly, preserves
Lamb	34. Fried potatoes	Non-chocolate candy
Cured pork	Fried potatoes	Frosting or glaze
Fresh pork	35. Grain dessert	39. High-fat meats
29. Shellfish	Cakes, cookies, pies, pastries, danish, doughnuts and cobblers - whole grain	Lean fresh pork

Lean lamb	Sauces, sweet – regular	Ready-to-drink flavored milk – whole
Lean cured pork	Sauces, sweet - reduced fat/reduced calorie/fat free	Sweetened flavored milk beverage powder without non-fat dry milk
Game	Sauces and condiments - regular	Artificially sweetened flavored milk beverage powder without non-fat dry milk
Lean veal	Sauces and condiments - reduced fat	Cheese - full fat
Lean beef	44. Soft drink	46. Butter
40. Processed meats	Sweetened soft drinks	Butter and other animal fats – regular
Cold cuts and sausage	Sweetened water	Butter and other animal fats - reduced fat
Lean cold cuts and sausage	Sweetened fruit drinks	Shortening
Meat-based savory snack	Non-alcoholic beer	
41. Organ meats	Non-alcoholic light beer	
Organ meats	45. Whole-fat milk/Cheese/Yogurt	
42. Fried fish/Poultry	Yogurt - sweetened whole milk	
Fried chicken - commercial entrée and fast food	Yogurt - artificially sweetened whole milk	
Fried fish - commercial entrée and fast food	Frozen dairy dessert	
Fried shellfish - commercial entrée and fast food	Pudding and other dairy dessert	
43. Sauces	Artificially sweetened pudding and other dairy dessert	
Salad dressing – regular	Cream	
Salad dressing - reduced fat/reduced calorie/fat free	Milk – whole	

Table was taken from Supplemental Table 4 of Choi Y., et al. *Diabetes Care*. 2020;43:2796–2803.²³

Abbreviations: APDQS, A Priori Diet Quality Score. The food groups were derived from NDSR. The following 9/166 food groups were not included in the CARDIA APDQS: Baby food dessert, Baby food grain mixtures, Baby food meat mixtures, infant formula, infant formula – nondairy, miscellaneous baby food mixtures, non-grain flour and similar, unsweetened water, and snack bars – refined grain.

Table S3. Quintile cutpoints* of 46 individual food groups for total score computation of the APDQS

	Cutpoints (servings/day)			
	Cutpoint 1	Cutpoint 2	Cutpoint 3	Cutpoint 4
	(20 th percentile)	(40 th percentile)	(60 th percentile)	(80 th percentile)
Beneficially-rated				
1. Fruit	0.3	0.71	1.23	2.18
2. Avocado	0	0.06	0.15	0.39
3. Beans and legumes	0	0.06	0.14	0.31
4. Green vegetables	0.01	0.1	0.23	0.53
5. Yellow vegetables	0	0.04	0.13	0.32
6. Tomato	0.14	0.26	0.42	0.71
7. Other vegetables	0.84	1.35	1.96	2.98
8. Nuts and seeds	0	0.14	0.46	1.1
9. Soy products	0	0.05	0.2	0.76
10. Whole grains	0.27	0.76	1.41	2.43
11. Vegetable oil	0.27	0.65	1.2	2.25
12. Fatty fish	0	0.1	0.15	0.29
13. Lean fish	0.02	0.22	0.49	1.05
14. Poultry	0.33	0.61	1.01	1.82
15. Beer	0	0.15	0.45	1.1
16. Wine	0	0.08	0.16	0.38
17. Liquor	0	0.08	0.2	0.45
18. Coffee	0	0.36	1.16	2.59
19. Tea	0	0.14	0.42	1.09
20. Low-fat milk/Cheese/Yogurt	0.12	0.32	0.78	1.87
Neutrally-rated				
1. Potatoes	0.07	0.17	0.32	0.62
2. Refined grains	1.9	3.03	4.42	6.52
3. Margarine	0.02	0.46	1.32	2.9
4. Chocolate	0	0.07	0.16	0.36

5. Meal replacements	0	0.1	0.26	0.56
6. Pickled foods	0	0.07	0.19	0.42
7. Sugar substitutes	0	0.1	0.26	0.71
8. Lean red meats	0.02	0.29	0.61	1.24
9. Shellfish	0	0.06	0.16	0.38
10. Eggs	0	0.22	0.48	0.93
11. Soups	0	0.01	0.04	0.09
12. Diet soft drinks	0	0.28	0.83	1.62
13. Fruit juice	0.36	0.87	1.64	2.91
Adversely-rated				
1. Fried potatoes	0	0.12	0.25	0.52
2. Grain desserts	0.11	0.29	0.55	1.05
3. Salty snacks	0	0.03	0.08	0.17
4. Pastries	0.2	0.46	0.83	1.49
5. Sweets	0.24	0.65	1.38	2.73
6. High-fat red meats	0.69	1.32	2.12	3.48
7. Processed meats	0.1	0.33	0.69	1.38
8. Organ meats	0	0.1	0.18	0.35
9. Fried poultry and fish	0	0.02	0.08	1.15
10. Sauces	1.41	2.41	3.81	6.35
11. Soft drinks	0.12	0.57	1.3	2.45
12. Whole-fat milk/Cheese/Yogurt	0.62	1.08	1.71	2.95
13. Butter	1.47	2.64	4.23	7.03

Table was taken from Supplemental Table 1 of Choi Y., et al. *J Am Heart Assoc.* 2021;10:e020718.²⁴

Abbreviations: APDQS, A Priori Diet Quality Score.

*The cutoffs of food group derived from the Year 0 diet data.