

Supplementary Online Content

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

eTable 1. Dietary Components of the American Heart Association (AHA) 2020 Strategic Impact Goals Scoring Standards

AHA Components	Points Range	Scoring Standard ^a	
		Max	Min
Primary Components^b	0-50		
Fruits and vegetables ^c	0-10	≥4.5 cups equiv. per day	0
Fish and shellfish	0-10	≥1 oz equiv. per day	0
Whole grains	0-10	≥3 oz equiv. per day	0
Sugar-sweetened beverages	10-0	≤ 5.14 fl oz per day	>16 fl per day
Sodium	10-0	≤ 1500 mg per day	>4500 mg per day
Secondary Components^b	0-80		
Nuts, seeds and legumes ^d	0-10	≥4 servings per day	0
Processed meat	10-0	≤ 0.5 oz equiv. per day	>1.764 oz equiv. per day
Saturated fat	10-0	≤7% energy	>15% energy

^a Intakes between the minimum and maximum standards are scored proportionately.

^b All AHA dietary variables were energy-adjusted to 2000kcal/d using the residual method prior to analysis.

^c According to the AHA 2020 Goals, up to 3 cups/wk (0.42 cups/d) of starchy vegetables (e.g., potatoes, peas, corn) could be included; this maximum was incorporated into the analysis, with higher intake not contributing toward the score. 100% fruit juice could also be included; while its contribution was not capped in the original AHA 2020 Goals and thus not in our score, some organizations recommend no more than 1 serving/d of 100% fruit juice.

^d A serving of nuts, seeds and legumes is 1-oz equivalent of nuts and seeds or 1/2 cup of legume.

eTable 2. Dietary Components of the Healthy Eating Index (HEI)-2015 and Scoring Standards

HEI-2015 Components	Points Range	Scoring Standard ^a	
		Max	Min
Adequacy Components			
Total Fruits ^b	0-5	≥0.8 cup equiv. per 1,000 kcal	0
Whole Fruits ^c	0-5	≥0.4 cup equiv. per 1,000 kcal	0
Total Vegetables ^d	0-5	≥1.1 cup equiv. per 1,000 kcal	0
Greens and Beans ^d	0-5	≥0.2 cup equiv. per 1,000 kcal	0
Whole Grains	0-10	≥1.5 oz equiv. per 1,000 kcal	0
Dairy ^e	0-10	≥1.3 cup equiv. per 1,000 kcal	0
Total Protein Foods ^f	0-5	≥2.5 oz equiv. per 1,000 kcal	0
Seafood and Plant Proteins ^{e,g}	0-5	≥0.8 oz equiv. per 1,000 kcal	0
Fatty Acids	0-10	(PUFAs + MUFAs)/SFAs ≥2.5	(PUFAs + MUFAs)/SFAs ≤1.2
HEI-2015 Moderation			
Refined Grains	10-0	≤1.8 oz equiv. per 1,000 kcal	≥4.3 oz equiv. per 1,000 kcal
Sodium	10-0	≤1.1 grams per 1,000 kcal	≥2.0 grams per 1,000 kcal
Added Sugars	10-0	≤6.5% of energy	≥26% of energy
Saturated Fats	10-0	≤8% of energy	≥16% of energy

^a Intakes between the minimum and maximum standards are scored proportionately.

^b Includes 100% fruit juice.

^c Includes all forms except juice.

^d Includes legumes (beans and peas)

^e Includes all milk products, such as fluid milk, yogurt, and cheese, and fortified soy beverages.

^f Includes legumes (beans and peas)

^g Includes seafood, nuts, seeds, soy products (other than beverages), and legumes (beans and peas).

^h Ratios of poly-and monosaturated fatty acids (PUFAs and MUFAs) to saturated fatty acids (SFAs).

eTable 3. Trends in Estimated Secondary American Heart Association (AHA) Diet Scores by Sociodemographic Characteristics, NHANES Survey Cycles, 2001-2018

Survey-weighted mean, 95%CI												
		2001-2002	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016	2017-2018	P for trend	P for interaction
AHA Secondary score												
Age group, y												
	65-69	33.97 (32.41-35.53)	31.26 (29.56-32.96)	36.46 (34.71-38.21)	31.54 (29.99-33.09)	34.92 (33.40-36.45)	32.74 (30.55-34.93)	33.68 (32.23-35.13)	33.44 (31.51-35.37)	29.51 (27.45-31.57)	0.02	Ref
	70-74	34.01 (32.53-35.49)	33.46 (32.02-34.91)	38.05 (36.37-39.73)	33.45 (32.04-34.86)	35.52 (34.30-36.74)	34.06 (32.57-35.56)	35.24 (33.52-36.96)	33.87 (32.07-35.67)	31.45 (29.84-33.07)	0.008	0.93
	75-79	34.06 (32.31-35.82)	34.19 (32.59-35.79)	37 (35.10-38.89)	34.12 (32.78-35.46)	35.38 (33.91-36.84)	32.14 (30.56-33.71)	34.09 (32.21-35.98)	33.62 (31.65-35.58)	31.82 (29.96-33.67)	0.006	0.85
	≥ 80	35.38 (34.16-36.61)	35.57 (34.46-3.67)	40.47 (39.27-41.68)	35.19 (33.97-36.41)	38.34 (37.23-39.45)	34.45 (33.21-35.69)	37.14 (35.73-38.56)	35.24 (34.06-36.43)	30.29 (28.89-31.69)	<0.001	0.14
Sex												
	Female	35.58 (34.57-36.59)	34.24 (33.19-35.29)	39.89 (38.78-41.00)	34.39 (33.43-35.34)	37.46 (36.58-38.35)	34.91 (33.74-36.08)	35.91 (34.88-36.94)	35.61 (34.34-36.88)	31.78 (30.53-33.03)	<0.001	0.88
	Male	32.69 (31.56-33.82)	32.39 (31.28-33.50)	35.21 (33.96-36.47)	32.19 (31.12-33.27)	34.17 (33.07-35.26)	31.62 (30.25-32.99)	33.69 (32.39-34.99)	31.79 (30.42-33.16)	29.19 (27.72-30.66)	<0.001	Ref
Race/Ethnicity												
	Non-Hispanic White	36.27 (33.75-38.80)	36.39 (34.43-38.35)	38.83 (36.32-41.35)	36.78 (35.30-38.26)	37.87 (36.53-39.21)	33.64 (31.64-35.63)	35.66 (33.91-37.41)	37.27 (36.04-38.50)	33.99 (32.11-35.87)	0.04	Ref
	Non-Hispanic Black	42.5 (33.20-51.80)	42.14 (37.94-46.34)	45.53 (40.65-50.41)	41.78 (7.02-46.53)	40.95 (37.86-44.04)	36.7 (32.69-40.71)	41.26 (38.78-43.74)	36.22 (33.30-39.14)	36.9 (34.75-39.05)	<0.001	0.006
	Hispanics	34.06 (33.27-34.86)	32.92 (32.12-33.72)	37.62 (36.73-38.51)	32.92 (32.16-33.68)	35.64 (34.88-36.40)	33.19 (32.20-34.18)	34.47 (33.56-35.37)	33.47 (32.40-34.55)	29.86 (28.79-30.94)	<0.001	0.26
Marital Status												
	Married/Living with partner	33.98 (32.95-35.02)	33.83 (32.80-34.86)	37.56 (36.40-38.71)	33.35 (32.34-34.36)	35.7 (34.77-36.64)	33.32 (32.09-34.55)	34.89 (33.80-35.97)	33.73 (32.43-35.03)	30.33 (29.07-31.59)	<0.001	Ref
	Widowed	35.03	33.47	38.94	34.51	36.9	33.99	35.62	34.11	31.58	0.003	0.60

		(33.73-36.33)	(32.22-34.72)	(37.44-40.44)	(33.29-35.72)	(35.76-38.05)	(32.52-35.46)	(34.02-37.22)	(32.25-35.97)	(29.71-33.45)		
	Divorced/Separated	33.96	30.76	36.77	32.38	35.01	32.23	32.61	34.26	30.83	0.17	0.33
		(31.36-36.55)	(28.23-33.28)	(34.23-39.30)	(30.56-34.20)	(32.54-37.49)	(29.65-34.81)	(30.68-34.53)	(32.43-36.08)	(28.36-33.31)		
	Never married	33.92	34.35	41.6	32.07	37.77	36.04	40.09	36.69	27.51	0.47	0.67
		(29.02-38.82)	(29.03-39.66)	(38.07-45.14)	(28.00-36.13)	(34.93-40.61)	(32.92-39.16)	(36.03-44.16)	(31.36-42.02)	(23.78-31.23)		
Education Level												
	< high school diploma	33.28	31.22	37.98	31.94	35.28	32.44	34.32	35.75	30.09	0.74	Ref
		(31.94-34.63)	(30.00-32.43)	(36.57-39.39)	(30.75-33.12)	(34.15-36.40)	(31.15-33.74)	(32.63-36.02)	(34.32-37.18)	(27.76-32.42)		
	High school graduate or GED	33.68	33.88	37.05	33.41	34.69	32.15	34.35	33.18	28.62	<0.001	0.001
		(32.21-35.15)	(32.47-35.29)	(35.42-38.67)	(32.13-34.68)	(33.33-36.05)	(30.16-34.14)	(32.78-35.92)	(31.24-35.13)	(26.89-30.36)		
	Some college	35.02	33.08	38.06	32.84	36.65	33.36	34.24	32.67	31.66	<0.001	0.02
		(33.56-36.49)	(31.37-34.79)	(36.33-39.80)	(31.18-34.51)	(35.19-38.11)	(31.62-35.10)	(32.71-35.77)	(31.10-34.24)	(29.95-33.37)		
	≥ College degree	35.87	36.71	38.84	36.11	37.27	35.48	36.29	35.01	31.52	<0.001	0.001
		(34.00-37.74)	(34.78-38.65)	(36.69-40.99)	(34.40-37.83)	(35.66-38.88)	(33.40-37.56)	(34.65-37.92)	(32.86-37.16)	(29.67-33.36)		
Ratio of family income to poverty level												
	<1.30	33.98	31.87	38.22	33.12	35.84	33.05	34.88	34.16	31.4	0.27	Ref
		(32.50-35.46)	(30.36-33.39)	(36.35-40.09)	(31.79-34.45)	(34.55-37.12)	(31.63-34.47)	(33.19-36.57)	(32.54-35.79)	(29.57-33.23)		
	1.30 to <1.85	32.05	31.1	36.2	33.15	35.53	30.73	34.75	32.26	31.43	0.44	0.88
		(29.98-34.11)	(29.16-33.04)	(34.22-38.17)	(31.45-34.85)	(33.74-37.33)	(27.60-33.85)	(32.47-37.04)	(30.49-34.02)	(29.82-33.03)		
	1.85 to <3.00	33.92	33.82	38.45	32.62	34.79	33.78	34.5	32.78	28.79	<0.001	0.009
		(32.49-35.36)	(32.24-35.39)	(36.75-40.15)	(31.21-34.03)	(33.40-36.18)	(31.81-35.74)	(32.85-36.16)	(30.96-34.59)	(26.73-30.85)		
	≥ 3.00	35.23	34.82	37.74	34.26	36.4	33.91	35.12	33.98	30.69	<0.001	0.009
		(33.82-36.65)	(33.45-36.19)	(36.20-39.27)	(32.86-35.67)	(35.16-37.64)	(32.39-35.43)	(33.79-36.46)	(32.18-35.78)	(29.06-32.31)		
<p>Abbreviations: GED, general equivalency diploma; NHANES, National Health and Nutrition Examination Survey.</p> <p>^a Data were weighted to be nationally representative. P for trend was estimated by treating survey-cycle as a continuous variable in a survey-weighted logistic regression model. P for interaction was calculated using the regression model for an interaction term between survey-cycle and sociodemographic subgroups.</p>												

eFigure. Trends in Mean Diet Quality Score Among US Adults Aged ≥ 65 years by NHANES Survey Cycles, 2001-2018

