

Supplementary Table 1. Health Eating Index-2005 components and standards for scoring*

	Score range	Criteria for maximum score	Criteria for minimum score (0)
<i>Adequacy component (higher score indicates higher consumption)</i>			
Total fruit [†]	0-5	≥0.8 cups/1,000 kcal	No intake
Whole fruits (not juice) [†]	0-5	≥0.4 cups/1,000 kcal	No intake
Total vegetables [†]	0-5	≥1.1 cups/1,000 kcal	No intake
Dark-green and orange vegetables and legumes [†]	0-5	≥0.4 cups/1,000 kcal	No intake
Total grains [†]	0-5	≥3 ounces/1,000 kcal	No intake
Whole grains [†]	0-5	≥1.5 ounces/1,000 kcal	No intake
Milk [†]	0-10	≥1.3 cups/1,000 kcal	No intake
Meat and beans [†]	0-10	≥2.5 ounces/1,000 kcal	No intake
Oils [†]	0-10	≥12 g/1,000 kcal	No intake
<i>Moderation component (higher score indicates lower consumption)</i>			
Saturated fat [‡]	0-10	≤7% kcal	≥15% kcal
Sodium [‡]	0-10	≤700 mg/1,000 kcal	≥2,000 mg/1,000 kcal
Calories from Solid Fats, Alcoholic beverages, and Added Sugars [‡]	0-20	≤20% kcal	≥50% kcal

* 1 ounce = 28.35 g; 1 cup = 0.24 L. 12 components were scored for a total of 0 to 100 points.

[†] For these nine components with recommended minimum intakes, a higher score was awarded for higher consumption. Intakes between the minimum and maximum levels were scored proportionately.

[‡] For these components with recommended minimum intakes, a higher score was awarded for lower consumption. Saturated fat was awarded 8 for the intake accounting for 10% of calories. Sodium was awarded 8 for intake of 1,100 mg/1,000 kcal.

Supplementary Table 2. Health Eating Index-2010 components and standards for scoring*

	Change from HEI-2005	Score range	Criteria for maximum score*	Criteria for minimum score (0)
<i>Adequacy components (higher score indicates higher consumption)</i>				
Total fruit	No change	0-5	≥0.8 cups/1,000 kcal	No intake
Whole fruits (not juice)	No change	0-5	≥0.4 cups/1,000 kcal	No intake
Total vegetables[†]	Minor change from HEI-2005: includes beans and peas (legumes) here when not counted as total protein foods.	0-5	≥1.1 cups/1,000 kcal	No intake
Greens and Beans[†]	Includes dark green vegetables and beans and peas (legumes), replaces dark green and orange vegetables and legumes in HEI-2005	0-5	≥0.2 cups/1,000 kcal	No intake
Whole grains	The maximum point changed to 10	0-10	≥1.5 ounces/1,000 kcal	No intake
Dairy	Known as Milk in HEI-2005	0-10	≥1.3 cups/1,000 kcal	No intake
Total protein foods[‡]	Known as Meat and beans (maximum score 10) in HEI-2005	0-5	≥2.5 ounces/1,000 kcal	No intake
Seafood and plant proteins^{††}	Newly added component in HEI-2010	0-5	≥0.8 ounces/1,000 kcal	No intake
Fatty acids^{‡‡}	Replaces two components (Oils and Saturated fat) in HEI-2005	0-10	(PUFAs+MUFAs)/SFAs ≥2.5	(PUFAs+MUFAs)/SFAs ≤1.2
<i>Moderation components (higher score indicates lower consumption)</i>				
Refined grains	Replaces the adequacy component (total grains) in HEI-2005	0-10	≤1.8 ounces/1,000 kcal	≥4.3 ounces/1,000 kcal

Sodium	Minor change of the scoring standard from HEI-2005	0-10	≤ 1.1 gram/1,000 kcal	≥ 2.0 grams/1,000 kcal
Empty calories^{†††}	Known as Calories from Solid Fats, Alcoholic beverages, and Added Sugars in HEI-2005, minor change of the scoring standard	0-20	$\leq 19\%$ kcal	$\geq 50\%$ kcal

* 1 ounce = 28.35 g; 1 cup = 0.24 L. 12 components were scored for a total of 0 to 100 points. Intakes between the minimum and maximum standards are scored proportionately.

[†] Beans and peas are included here when not counted as total protein foods.

[‡] Beans and peas are included here (and not with vegetables) when the total protein foods standard is otherwise not met.

^{††} Including seafood, nuts, seeds, soy products (other than beverages) as well as beans and peas counted as total protein foods. Beans and peas are included here (and not with vegetables) when the total protein foods standard is otherwise not met.

^{‡‡} Fatty acids, a ratio of poly-unsaturated fatty acids (PUFAs) and mono-unsaturated fatty acids (MUFAs) to saturated fatty acids (SFAs), replaces Oils and Saturated fat to acknowledge the recommendation to replace saturated fat with mono- and polyunsaturated fatty acids.

^{†††} Calories from solid fats, alcohol and added sugars. Threshold for counting alcohol is >13 grams/1,000 kcal.

Supplementary Table 3. Hazard ratios (HRs) and 95% confidence intervals (CIs) for hepatocellular carcinoma (HCC) incidence and chronic liver disease (CLD) mortality by quintiles of the Healthy Eating Index-2005 (HEI-2005)

HEI-2005	Quintile 1 (n=98,988)	Quintile 2 (n=98,989)	Quintile 3 (n=98,988)	Quintile 4 (n=98,989)	Quintile 5 (n=98,988)	<i>P</i>-trend*
HCC						
No. of Cases	150	94	95	88	82	
Age and sex-adjusted HR (95% CI)	1.00	0.63 (0.49-0.82)	0.65 (0.50-0.84)	0.62 (0.48-0.81)	0.60 (0.46-0.79)	<0.0001
Multivariate-adjusted HR [†] (95% CI)	1.00	0.71 (0.54-0.92)	0.77 (0.58-1.01)	0.73 (0.54-0.98)	0.71 (0.52-0.96)	0.03
CLD						
No. of Cases	440	212	164	125	112	
Age and sex-adjusted HR (95% CI)	1.00	0.47 (0.40-0.55)	0.36 (0.30-0.43)	0.27 (0.23-0.34)	0.25 (0.20-0.30)	<0.0001
Multivariate-adjusted HR [†] (95% CI)	1.00	0.66 (0.56-0.79)	0.60 (0.49-0.72)	0.50 (0.40-0.63)	0.48 (0.38-0.60)	<0.0001

* Multivariable models were adjusted for age, sex, race, smoking (never, former ≤ 1 , former > 1 , current ≤ 1 , or current > 1 pack/day), alcohol intake (0, > 0 -0.5, > 0.5 -1, > 1 -2, > 2 -4, or > 4 drinks/day), education, BMI (< 18.5 , 18.5-24.9, 25.0-29.9, 30.0-34.9, or ≥ 35.0 kg/m²), diabetes, usual activity throughout the day, vigorous physical activity, and total energy intake.

Supplementary Table 4. Association of components in Health Eating Index-2005 with HCC incidence and CLD mortality

	Criteria for maximum score*	HCC, HR[†](95% CI)	CLD, HR[†](95% CI)
Total grains	≥3 ounces/1,000 kcal	0.87 (0.79-0.95)	0.74 (0.70-0.79)
Whole grains	≥1.5 ounces/1,000 kcal	0.94 (0.87-1.02)	0.84 (0.79-0.89)
Total vegetables	≥1.1 cups/1,000 kcal	0.90 (0.83-0.97)	0.98 (0.93-1.04)
Dark-green and orange vegetables and legumes	≥0.4 cups/1,000 kcal	0.89 (0.83-0.95)	0.94 (0.90-0.99)
Total fruit	≥0.8 cups/1,000 kcal	1.09 (1.01-1.17)	1.12 (1.07-1.17)
Whole fruits (not juice)	≥0.4 cups/1,000 kcal	1.05 (0.97-1.12)	1.08 (1.03-1.13)
Milk	≥1.3 cups/1,000 kcal	1.02 (0.99-1.05)	0.96 (0.94-0.98)
Meat and beans	≥2.5 ounces/1,000 kcal	0.96 (0.92-1.01)	0.93 (0.90-0.95)
Oils	≥12 g/1,000 kcal	0.99 (0.96-1.03)	0.99 (0.96-1.01)
Saturated fat	≤7% kcal	0.96 (0.93-0.99)	0.97 (0.95-0.99)
Sodium	≤700 mg/1,000 kcal	1.04 (0.99-1.09)	1.02 (0.99-1.06)
Calories from Solid Fats, Alcoholic beverages, and Added Sugars	≤20% kcal	0.98 (0.96-1.00)	0.99 (0.98-1.01)

* 1 ounce = 28.35 g; 1 cup = 0.24 L.

† HR for one point change of each component. Multivariable models were adjusted for age, sex, race, smoking (never, former ≤1, former >1, current ≤1, or current >1 pack/day), alcohol intake (0, >0-0.5, >0.5-1, >1-2, >2-4, or >4 drinks/day), education, BMI (<18.5, 18.5-24.9, 25.0-29.9, 30.0-34.9, or ≥35.0 kg/m²), diabetes, usual activity throughout the day, vigorous physical activity, total energy intake, and a modified score that lacked the particular component.