

Supplemental Methods

The Nurses' Health Study (NHS) and the Health Professionals Follow-Up Study (HPFS)

The NHS is a prospective cohort study of 121,700 registered female nurses aged 30 to 55 years in 1976. The HPFS is a prospective cohort of 51,529 male health professionals aged 40 to 75 years in 1986. The baseline of this analysis was defined as 1984 for the NHS and 1986 for the HPFS, with follow-up through June 2014 for and December 2014, respectively. The two cohorts have been followed via biennial mailed questionnaires that inquire about lifestyle risk factors and other exposures of interest, as well as newly diagnosed diseases and are confirmed by obtaining further data (1). The cumulative follow-up of the two cohorts exceeds 90% of potential person-time. We excluded participants who had a history of diabetes, coronary heart disease, stroke or cancer, or reported implausible dietary data (total energy intake <800 or >4200 kcal/day for men and <600 or >3500 kcal/day for women) at baseline. After exclusions, the analytical population consisted of 83,349 women and 40,741 men. Dietary information was collected with validated semi-quantitative food frequency questionnaires every 2-4 years (2). Nutrient values were calculated based on the Harvard University Food Composition Database, which is updated every four years (3). For this study, we used dietary information collected in 1984, 1986, and then every four years for a total of eight times in the NHS. In the HPFS, dietary information was first collected in 1986 and then every 4 years for a total of seven times. The end of follow-up was defined as June 2014 for the NHS and December 2014 for the HPFS. The incident cases of myocardial infarction and stroke in the NHS and HPFS were confirmed primarily through a review of medical records. Participants (or next of kin for deceased participants) reporting a primary endpoint were asked for permission to have their medical records reviewed by physicians. Myocardial infarction was confirmed based on the World Health Organization criteria (4). For incident stroke, the study physicians reviewed neuroimaging results and a stroke diagnosis was confirmed in accordance with the criteria of the National Survey of Stroke. (5) For participants who reported physician-diagnosed diabetes, a supplementary questionnaire was mailed to obtain information about symptoms, diagnostic tests and diabetes drug use. Type 2 diabetes cases before June 1998 were confirmed based on the criteria of the National Diabetes Data Group. (6) We used the diagnostic criteria from the Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus to define type 2 diabetes cases after June 1998. (7) We also performed systematic searches of the vital records of states and of the National Death Index, supplemented by reports from family members or postal authorities. More than 98% of the deaths in the NHS and the HPFS were identified (8). A physician reviewed death certificates and medical records to classify the cause of death according to the International Classification of Diseases-8 and 9.

Methods for estimating dietary intake in the Global Burden of Disease study

The dietary database in the Global Burden of Disease (GBD) study were derived based on multiple sources including national availability, sales, household availability, and consumption at the individual level. The GBD study considered 24-hour diet recall as the gold-standard method for dietary assessment and adjusted dietary data from other sources to be comparable with 24-hour dietary recall data. Given that some of the sources (i.e., availability, sales, and household data) only included data for all-age groups and both sexes, the data were first split into standard age-sex groups. The GBD study estimated the global age and sex patterns of intake using data from nutrition surveys and then used that age pattern to split the availability, sales, and household data. After age-splitting, dietary data from non-gold-standard sources were matched to the dietary data from the gold-standard source (i.e., 24-hour diet recall) by age, sex, country, and year. A linear regression model was applied to estimate the consumption data from data on availability, sales, and household availability by age and sex using the following equation:

$$\text{Dietary Intake}_{a,s} = \beta * \text{Availability}_{a,s} + \text{age} + \text{sex}$$

Supplementary data

Supplemental Table 1. The Alternate Healthy Eating Index scoring method.

Component	Criteria for minimum score (0)	Criteria for maximum score (10)
Vegetables, ¹ <i>servings/d</i>	0	≥5
Fruit, ² <i>servings/d</i>	0	≥4
Whole grains, ³ <i>servings/d</i>	0	
Women		5
Men		6
Sugar-sweetened beverages and fruit juice, ⁴ <i>servings/d</i>	≥1	0
Nuts and legumes, ⁵ <i>servings/d</i>	0	≥1
Red/processed meat, ⁶ <i>servings/d</i>	≥1.5	0
<i>trans</i> Fat, % of energy	≥4	≤0.5
Long-chain (n-3) fats (EPA + DHA), <i>mg/d</i>	0	250
PUFA, % of energy	≤2	≥10
Sodium, <i>mg/d</i>	Highest decile	Lowest decile
Total	0	100

Abbreviations: DHA, docosahexaenoic acid; EPA, eicosapentaenoic acid; PUFA, polyunsaturated fatty acid.

¹ 1 serving of vegetables equals to 65 g

² 1 serving of fruit equals to 65 g

³ 1 serving of whole grains equals to 40 g (1 cup cooked) of whole-grain cereal.

⁴ 1 serving of sugar-sweetened beverage equals to 226.8 g (8 oz).

⁵ 1 serving of nuts and legumes equals to 50 g of nuts/legumes/seeds

⁶ 1 serving of red and/or processed meats equals to 100 g

Supplementary data

Supplemental Table 2. Associations for a 10 unit increment of the Alternate Healthy Eating Index with cause-specific incidence and mortality in the Nurses' Health Study (1984-2014) and the Health Professionals Follow-Up Study (1986-2014).

	Male		Female	
	RR (95% CI) ¹	P-value	RR (95% CI)	P-value
Total deaths (deaths due to injury and infection excluded)				
Model 1 ²	0.84 (0.82, 0.85)	<0.001	0.79 (0.77, 0.80)	<0.001
Model 2 ³	0.92 (0.91, 0.94)	<0.001	0.91 (0.90, 0.93)	<0.001
Model 3 ⁴	0.91 (0.90, 0.93)	<0.001	0.91 (0.90, 0.93)	<0.001
Cancer mortality				
Model 1	0.87 (0.85, 0.90)	<0.001	0.87 (0.84, 0.89)	<0.001
Model 2	0.96 (0.93, 0.99)	0.004	0.97 (0.94, 0.99)	0.017
Model 3	0.95 (0.92, 0.98)	<0.001	0.96 (0.94, 0.99)	0.014
Incident coronary Heart disease				
Model 1	0.86 (0.83, 0.88)	<0.001	0.81 (0.78, 0.84)	<0.001
Model 2	0.91 (0.88, 0.94)	<0.001	0.90 (0.86, 0.94)	<0.001
Model 3	0.92 (0.89, 0.95)	<0.001	0.90 (0.86, 0.94)	<0.001
Incident stroke				
Model 1	0.92 (0.88, 0.97)	0.002	0.88 (0.84, 0.91)	<0.001
Model 2	0.97 (0.92, 1.02)	0.26	0.94 (0.90, 0.98)	0.007
Model 3	0.97 (0.92, 1.03)	0.33	0.94 (0.90, 0.98)	0.007
Respiratory disease mortality⁵				
Model 1	0.81 (0.76, 0.87)	<0.001	0.76 (0.69, 0.84)	<0.001
Model 2	0.91 (0.85, 0.98)	0.01	0.83 (0.75, 0.92)	<0.001
Model 3	0.89 (0.83, 0.95)	0.001	0.83 (0.75, 0.92)	<0.001
Neurodegenerative disease mortality				
Model 1	0.82 (0.77, 0.88)	<0.001	0.82 (0.78, 0.86)	<0.001
Model 2	0.91 (0.85, 0.97)	0.004	0.99 (0.95, 1.05)	0.82
Model 3	0.88 (0.83, 0.94)	<0.001	0.99 (0.94, 1.04)	0.58
Chronic kidney disease mortality				
Model 1	0.83 (0.73, 0.95)	0.005	0.73 (0.62, 0.86)	<0.001
Model 2	0.88 (0.77, 1.01)	0.07	0.84 (0.70, 1.00)	0.04
Model 3	0.88 (0.77, 1.01)	0.06	0.84 (0.71, 1.00)	0.05
Incident diabetes				
Model 1	0.84 (0.81, 0.87)	<0.001	0.81 (0.79, 0.83)	<0.001
Model 2	0.88 (0.85, 0.92)	<0.001	0.88 (0.86, 0.91)	<0.001
Model 3	0.92 (0.88, 0.95)	<0.001	0.89 (0.86, 0.91)	<0.001
Digestive system disease mortality				
Model 1	0.71 (0.64, 0.80)	<0.001	0.72 (0.64, 0.80)	<0.001
Model 2	0.82 (0.73, 0.92)	<0.001	0.85 (0.75, 0.95)	0.004
Model 3	0.81 (0.73, 0.91)	<0.001	0.85 (0.76, 0.95)	0.004
Mortality due to other causes except injury and infection				
Model 1	0.81 (0.77, 0.85)	<0.001	0.75 (0.72, 0.78)	<0.001
Model 2	0.90 (0.85, 0.94)	<0.001	0.90 (0.87, 0.94)	<0.001
Model 3	0.89 (0.85, 0.93)	<0.001	0.90 (0.87, 0.94)	<0.001

Abbreviation: RR, risk ratio.

¹ Values are risk ratios (95% confidence interval) of incident disease/cause-specific mortality association with 10-unit increment in the Alternate Healthy Eating Index.

² Model 1 adjusted for age (in month).

³ Model 2 further adjusted for total energy intake (quintiles), Caucasian (yes vs. no), marital status (with spouse, yes or no), moderate to vigorous physical activity (0, 0-1, 1.1-3.4, 3.5-5.9, ≥6 hours per week), smoking status (never, past, current 1-14 cigarettes/d, current 15-24 cigarettes/d, current ≥25 cigarettes/d), alcohol consumption (women: 0, 0.1-4.9, 5.0-14.9, ≥15 g/d; men: 0, 0.1-4.9, 5.0-29.9, ≥30 g/d), multivitamin use (yes vs. no), current aspirin use (yes vs. no), family history of myocardial infarction (yes vs. no), family history of diabetes (yes vs. no), family history of cancer (yes vs. no), history of hypertension (yes vs. no), history of hypercholesterolemia (yes vs. no), and menopausal status and hormone use in women (premenopausal, postmenopausal never users, postmenopausal past users, postmenopausal current users).

Supplementary data

⁴ Model 3 further adjusted for body-mass index (<23, 23-24.9, 25-29.9, 30-34.9, ≥ 35 kg/m²).

⁵ Risk ratios on respiratory disease mortality were estimated among nonsmokers only with adjustment for time since smoking cessation.

Supplementary data

Supplemental Table 3. Alternate Healthy Eating Index and its component scores in men and women aged 25 years or older in 190 countries/ territories in 2017.

Countries / Territories	AHEI	Vegetables	Fruit	Whole grains	Sugar sweetened beverages	Nuts / legumes	Red / processed meats	trans fat	Long-chain n-3 PUFAs (DHA + EPA)	PUFAs	Sodium
Bermuda	67.9	6.3	9.6	1.4	2.8	8.1	8.0	10.0	8.0	9.5	4.1
Dominican Republic	66.6	3.0	9.2	1.5	6.0	9.9	8.6	10.0	3.1	9.8	5.4
Israel	65.8	9.8	6.4	0.3	5.7	9.7	7.7	10.0	5.4	8.1	2.6
Taiwan, Province of China	65.6	7.9	6.0	1.1	8.1	10.0	6.7	10.0	2.9	10.0	2.9
Cuba	64.8	7.8	7.5	1.4	7.5	10.0	8.4	10.0	2.1	4.9	5.2
Iran, Islamic Republic of	63.0	10.0	6.9	0.1	7.5	9.9	9.3	8.2	2.2	6.7	2.1
Qatar	62.9	10.0	8.4	0.4	2.5	10.0	7.8	10.0	6.8	6.0	1.1
Lebanon	62.3	9.6	5.1	0.1	7.6	10.0	8.5	10.0	2.4	6.8	2.2
Japan	61.7	7.9	3.2	1.5	7.5	9.9	7.6	10.0	10.0	4.0	0.1
Turkey	61.2	10.0	6.8	0.1	7.3	10.0	9.2	10.0	2.2	1.5	4.1
Antigua and Barbuda	60.5	4.3	7.1	1.1	4.8	7.7	8.6	10.0	4.3	7.5	5.0
Morocco	60.3	7.9	5.7	0.1	9.0	9.7	9.2	9.9	1.9	4.2	2.6
Mauritius	60.1	4.5	2.8	1.1	7.8	10.0	9.1	10.0	3.6	10.0	1.2
Brazil	59.7	3.0	5.8	1.8	5.9	10.0	6.2	10.0	4.9	9.6	2.7
Tunisia	59.5	10.0	4.2	0.2	8.4	10.0	9.3	10.0	1.5	3.5	2.4
Korea, Republic of	59.3	7.6	5.4	2.1	7.6	7.7	7.1	9.6	2.4	9.1	0.7
Cape Verde	59.3	4.2	3.7	1.9	8.2	9.9	8.2	10.0	2.0	6.5	4.5
Korea, Democratic People's Republic of	59.0	7.0	2.5	1.8	9.8	10.0	9.6	10.0	0.4	6.4	1.5
Libyan Arab Jamahiriya	58.9	6.4	3.4	0.2	8.3	8.1	9.1	9.9	1.5	9.5	2.4
Jordan	58.6	7.4	2.7	0.1	8.2	9.5	9.1	9.9	2.9	6.5	2.3
Barbados	58.5	3.9	5.1	0.9	6.0	10.0	8.5	10.0	3.6	5.5	4.9
Bahrain	58.4	9.6	6.0	0.4	4.6	9.9	8.5	9.9	3.8	4.1	1.6
Trinidad and Tobago	58.1	2.0	4.1	0.6	3.8	9.9	8.9	10.0	4.2	9.8	5.0
Haiti	57.7	1.2	3.2	1.1	9.2	10.0	9.4	10.0	0.8	6.5	6.5
Paraguay	57.6	3.0	3.9	1.7	7.1	9.9	7.2	10.0	2.2	9.5	3.1
Guatemala	57.3	3.6	3.2	1.6	7.2	10.0	9.2	9.9	2.1	4.8	5.7
Grenada	57.2	3.5	5.6	1.0	6.6	7.5	8.8	10.0	3.1	6.2	5.0
Nepal	57.1	6.6	2.6	2.0	9.9	10.0	9.3	9.3	1.1	4.8	1.4
Saint Lucia	56.9	3.4	5.3	1.0	6.7	7.5	8.8	10.0	3.0	6.0	5.2
Rwanda	56.8	3.0	7.8	1.1	9.3	10.0	9.6	10.0	0.3	0.0	5.8
Kuwait	56.8	9.4	3.4	0.8	3.4	7.9	8.3	9.9	5.1	7.2	1.3
Dominica	56.6	3.3	5.2	1.0	7.2	7.4	8.8	10.0	2.8	5.8	5.2
Uganda	56.6	1.8	7.2	1.8	9.3	10.0	9.3	10.0	0.8	0.7	5.8
Saint Vincent and the Grenadines	56.6	3.3	5.2	1.0	6.9	7.6	8.9	10.0	2.8	5.8	5.2
Cameroon	56.6	5.8	4.6	1.8	9.1	10.0	9.3	10.0	0.9	0.0	5.2
Suriname	56.3	3.2	4.6	1.6	5.9	3.5	8.9	10.0	3.4	10.0	5.2
Angola	56.2	4.0	4.1	1.4	8.0	10.0	8.7	10.0	2.1	3.9	4.1
Algeria	56.1	8.0	4.1	0.2	7.9	7.8	9.2	10.0	1.0	5.5	2.3
Egypt	55.7	10.0	5.3	1.3	8.2	10.0	9.0	6.3	2.3	1.1	2.3
Venezuela, Bolivarian Republic of	55.5	3.4	4.1	2.1	6.7	7.2	8.0	9.3	4.1	8.1	2.5
Macedonia, the former Yugoslav Republic of	55.5	9.3	5.0	0.4	6.9	8.8	8.4	10.0	2.1	3.1	1.6
Belize	55.3	3.0	4.5	0.9	7.3	7.5	8.9	10.0	2.3	5.3	5.6
Viet Nam	55.2	8.5	3.4	2.8	9.2	9.4	7.9	10.0	2.0	0.1	1.8

Supplementary data

Jamaica	55.1	4.7	5.0	0.7	7.3	4.7	9.3	10.0	3.7	4.2	5.5
Bahamas	54.9	5.5	9.6	0.4	4.3	1.4	7.4	10.0	4.5	6.9	5.0
Costa Rica	54.8	3.0	5.9	1.0	5.7	10.0	8.3	9.2	2.9	6.3	2.5
Senegal	54.6	3.6	0.9	1.4	9.2	9.4	9.4	10.0	0.8	4.9	5.2
Spain	54.6	6.2	5.7	1.1	6.0	9.0	6.3	10.0	3.1	4.5	2.6
United Arab Emirates	53.9	5.2	4.6	0.5	5.6	10.0	8.5	9.9	3.4	4.9	1.2
Fiji	53.9	2.4	2.0	0.9	8.9	9.3	8.6	10.0	2.4	5.9	3.5
Kenya	53.7	3.0	2.8	1.6	8.9	10.0	9.1	10.0	1.4	0.3	6.6
Singapore	53.6	7.0	4.9	1.9	7.0	7.1	7.3	10.0	4.3	4.0	0.1
Malta	53.5	9.6	4.4	0.2	6.4	6.2	6.6	10.0	3.3	4.8	2.0
Tanzania, United Republic of	53.4	2.8	4.0	2.4	9.2	10.0	9.5	10.0	0.8	0.2	4.6
Equatorial Guinea	53.4	5.3	6.9	1.8	3.5	10.0	8.0	10.0	4.0	0.6	3.3
Guyana	53.4	4.1	2.6	1.5	7.8	9.1	9.5	10.0	3.1	0.1	5.7
Global	53.4	5.8	3.6	1.3	7.8	9.8	8.0	10.0	3.9	2.8	0.4
Greece	53.3	8.9	6.4	0.2	7.6	6.0	6.7	10.0	2.2	2.8	2.6
Nigeria	52.9	4.3	3.2	1.3	8.4	10.0	9.4	10.0	0.4	0.0	5.9
Italy	52.8	6.4	6.1	0.0	7.4	5.9	6.4	10.0	2.6	5.7	2.2
Bosnia and Herzegovina	52.8	9.5	4.0	1.6	7.7	7.3	8.8	10.0	1.7	0.7	1.6
El Salvador	52.6	4.0	3.7	1.6	7.2	10.0	9.2	9.5	2.1	2.6	2.7
Gabon	52.5	2.7	7.1	2.1	6.4	9.3	8.8	10.0	2.6	0.0	3.6
Montenegro	52.4	10.0	7.6	0.5	6.7	5.5	6.5	10.0	2.3	1.9	1.5
Lao People's Democratic Republic	52.4	7.6	3.6	3.2	9.1	6.7	8.8	10.0	1.4	0.0	2.0
Malawi	52.4	1.4	3.0	2.5	9.6	10.0	9.6	10.0	0.4	0.0	5.9
Guinea	52.4	3.1	4.3	1.8	9.4	8.4	9.5	10.0	0.5	0.0	5.4
Panama	52.2	1.8	4.6	2.3	4.6	8.2	7.8	9.5	3.8	7.1	2.4
Sierra Leone	52.2	3.4	1.8	1.7	9.4	10.0	9.7	10.0	0.6	0.0	5.4
Serbia	51.8	6.4	4.4	0.7	7.0	9.5	7.7	10.0	2.5	1.9	1.6
Myanmar	51.7	5.1	2.1	2.3	9.2	10.0	9.0	10.0	2.2	0.0	1.8
Ghana	51.7	2.3	8.0	1.2	8.8	8.4	9.6	10.0	1.1	0.0	2.2
Seychelles	51.5	5.8	4.8	2.1	6.9	8.6	8.6	10.0	1.7	0.2	2.7
India	51.4	5.7	2.9	1.3	9.7	10.0	9.8	9.3	0.6	0.2	2.0
Iraq	51.4	9.0	2.1	0.4	7.8	4.8	9.6	9.9	1.4	4.1	2.2
Albania	51.4	10.0	6.3	0.1	7.4	5.7	7.8	10.0	2.5	0.2	1.6
Andorra	51.3	7.6	6.3	0.8	4.2	5.2	5.6	10.0	4.7	4.7	2.1
Mozambique	51.2	1.2	1.3	1.2	9.5	10.0	9.5	10.0	0.3	2.0	6.1
Norway	51.1	4.1	6.0	1.0	5.8	5.8	4.8	10.0	3.5	8.4	1.7
Benin	50.9	2.5	1.8	1.7	9.3	10.0	9.6	10.0	1.0	0.0	5.0
Belgium	50.9	6.8	3.9	0.9	5.9	3.4	6.3	9.9	3.3	7.3	3.2
South Sudan	50.8	2.3	2.2	1.7	9.0	10.0	9.2	10.0	0.8	0.0	5.6
Peru	50.7	3.4	4.9	1.6	6.6	9.1	9.3	9.3	1.6	1.9	2.9
Mali	50.6	3.6	1.5	1.5	9.3	10.0	8.8	10.0	0.7	0.0	5.3
Colombia	50.6	2.4	5.9	1.5	6.3	8.3	8.4	9.8	3.1	3.3	1.4
Mauritania	50.4	1.4	0.7	0.5	8.9	10.0	8.7	10.0	0.9	4.5	4.9
Portugal	50.4	8.2	4.9	0.8	7.3	4.1	6.2	10.0	2.9	3.7	2.2
Canada	50.3	5.9	5.9	1.3	3.6	10.0	6.0	8.1	6.0	1.7	1.7
Greenland	50.2	6.8	5.8	1.3	2.7	6.1	4.9	9.1	6.4	6.1	1.0
Nicaragua	50.1	0.7	2.2	1.9	8.1	10.0	9.4	9.5	1.8	3.5	3.0

Supplementary data

Comoros	50.0	1.6	1.6	1.3	9.4	9.8	9.4	10.0	1.2	0.0	5.7
Zimbabwe	49.9	1.0	0.8	2.0	9.2	7.3	9.2	10.0	1.0	5.6	3.8
Djibouti	49.9	3.5	0.9	0.7	9.0	8.7	8.9	10.0	0.9	1.7	5.6
South Africa	49.9	2.6	1.7	2.5	7.0	4.5	8.1	10.0	3.5	6.1	3.9
United States	49.8	6.1	4.7	1.3	2.2	6.7	5.2	8.1	4.6	10.0	0.9
Sao Tome and Principe	49.8	2.7	1.8	1.3	9.0	9.7	9.3	10.0	0.8	0.0	5.1
Niger	49.8	3.0	1.1	1.0	9.6	10.0	8.9	10.0	0.5	0.0	5.6
Syrian Arab Republic	49.5	4.9	2.6	0.2	9.2	6.4	9.3	9.9	0.8	3.5	2.7
Honduras	49.5	3.1	3.5	1.7	8.0	9.6	9.1	9.5	2.1	0.0	3.0
Eritrea	49.5	1.5	1.4	1.5	9.5	9.6	9.5	10.0	0.4	0.0	6.0
Zambia	49.4	1.8	0.5	2.4	8.8	10.0	9.4	10.0	0.7	0.2	5.5
New Zealand	49.4	6.0	4.9	1.2	7.6	6.1	5.5	9.8	3.9	3.1	1.4
Bulgaria	49.4	9.8	2.4	0.8	6.4	3.8	6.4	10.0	2.4	5.9	1.4
Bhutan	49.3	3.9	2.4	1.9	9.7	9.4	9.4	9.4	1.1	1.0	1.1
Oman	49.3	6.8	9.5	0.9	4.3	5.2	8.2	9.9	3.0	0.0	1.6
Togo	48.9	1.7	0.5	1.5	9.5	10.0	9.6	10.0	0.6	0.0	5.4
Armenia	48.7	10.0	4.1	0.1	8.4	0.6	8.3	10.0	2.7	2.7	1.9
Malaysia	48.6	3.7	3.6	1.4	7.9	5.2	9.0	10.0	3.8	2.7	1.4
Lithuania	48.5	6.4	3.5	1.1	8.0	5.1	6.3	9.5	3.7	2.7	2.2
Denmark	48.4	6.1	6.1	0.7	6.5	2.3	6.4	10.0	4.6	2.2	3.5
Sudan	48.4	4.7	2.3	0.2	9.2	7.8	9.4	9.9	0.9	1.3	2.6
Burundi	48.2	1.3	1.2	0.7	9.6	9.4	9.5	10.0	0.1	0.0	6.3
Bolivia, Plurinational State of	48.2	2.2	3.6	1.3	7.3	5.4	7.9	9.0	3.6	4.8	3.1
Timor-Leste	47.9	2.0	1.0	2.2	9.3	10.0	9.2	10.0	2.2	0.0	1.9
Somalia	47.9	1.1	1.1	0.8	9.8	8.8	9.6	10.0	0.3	0.0	6.5
Thailand	47.9	2.8	5.9	2.5	6.9	5.4	9.0	10.0	2.4	1.7	1.1
Cambodia	47.9	2.3	1.5	3.2	9.4	9.5	9.1	10.0	0.7	0.0	2.1
Samoa	47.9	2.3	3.1	0.9	9.3	4.7	8.7	10.0	1.4	0.4	7.2
Ethiopia	47.8	1.3	0.5	0.8	9.4	10.0	9.5	10.0	0.3	0.0	6.0
Ecuador	47.8	2.8	7.5	1.2	4.8	3.5	7.4	8.6	3.0	6.0	2.9
Cyprus	47.7	5.2	4.1	0.4	6.3	4.7	7.0	10.0	2.4	5.0	2.5
Ukraine	47.7	8.2	2.1	0.5	9.3	2.5	8.3	10.0	2.5	1.6	2.7
Mexico	47.7	3.7	4.9	3.9	0.9	10.0	7.3	7.1	3.3	3.2	3.5
Maldives	47.5	4.7	4.8	0.8	7.6	6.1	9.4	10.0	2.2	0.1	1.9
United Kingdom	47.5	5.0	4.1	0.8	6.2	4.0	6.8	9.9	3.4	3.7	3.3
Netherlands	47.3	4.5	5.6	1.1	5.6	3.6	6.2	9.3	2.7	5.6	3.0
Burkina Faso	47.3	1.3	0.3	1.1	9.4	10.0	9.1	10.0	0.7	0.0	5.3
France	47.3	4.9	4.6	0.3	7.1	3.5	6.1	10.0	3.1	5.1	2.7
Lesotho	47.2	1.4	0.9	2.9	8.9	9.2	9.2	10.0	0.9	0.0	3.9
Belarus	47.2	8.6	3.4	0.3	8.6	1.4	6.4	10.0	3.4	2.8	2.3
China	47.1	7.3	3.2	1.1	8.8	4.8	7.0	10.0	1.7	3.0	0.0
Hungary	47.0	7.6	3.4	0.8	6.4	4.3	7.0	9.8	2.8	3.8	1.2
Palestine	46.9	4.7	2.5	0.3	9.2	6.2	9.3	9.9	1.0	0.8	2.8
Ireland	46.8	5.2	5.7	2.1	5.1	4.6	5.4	10.0	3.8	2.8	2.3
Australia	46.8	5.0	4.4	1.4	6.4	5.0	5.3	9.7	4.7	1.4	3.5
Solomon Islands	46.7	1.0	2.8	1.2	9.6	7.5	9.3	10.0	0.7	0.0	4.7
Congo	46.7	2.4	3.0	1.6	8.2	6.6	9.5	10.0	1.2	0.0	4.2

Supplementary data

Moldova, Republic of	46.6	6.1	2.1	1.2	9.5	1.7	8.6	9.9	1.8	2.6	3.1
Gambia	46.6	2.1	0.4	1.6	9.4	6.5	9.7	10.0	0.4	1.1	5.4
Sri Lanka	46.5	2.6	2.0	1.9	8.6	9.1	9.8	10.0	1.3	0.0	1.3
Indonesia	46.5	2.6	3.5	2.6	9.6	5.8	9.6	10.0	1.0	0.2	1.6
Congo, the Democratic Republic of the	46.5	1.1	1.5	1.6	9.7	5.9	9.5	10.0	0.4	0.0	6.8
Russian Federation	46.5	5.8	3.3	0.8	8.2	2.6	7.2	10.0	3.6	2.7	2.4
Central African Republic	46.2	1.1	1.9	1.2	9.7	7.6	8.4	10.0	0.9	0.0	5.3
Estonia	46.1	6.1	3.7	1.2	8.0	4.7	7.1	9.1	2.9	1.2	2.2
Côte d'Ivoire	45.8	2.6	3.6	1.1	8.9	6.6	9.6	10.0	0.5	0.0	3.0
Guinea-Bissau	45.8	1.3	2.3	2.0	9.5	4.9	9.0	10.0	0.5	0.9	5.5
Liberia	45.7	1.8	2.1	1.4	9.6	4.2	9.7	10.0	0.9	0.0	5.9
Madagascar	45.7	1.1	2.2	2.2	9.5	4.5	9.3	10.0	0.9	0.0	6.0
Botswana	45.6	2.2	2.5	1.6	5.8	8.8	9.0	10.0	1.0	1.7	3.2
Romania	45.6	10.0	3.6	1.3	6.0	2.9	6.6	10.0	2.0	1.9	1.3
Austria	45.5	5.3	5.9	1.5	6.5	4.3	4.7	10.0	3.2	1.8	2.3
Chad	45.4	0.6	0.5	0.1	9.3	10.0	9.2	10.0	0.4	0.0	5.3
Saudi Arabia	45.4	5.5	3.7	0.8	3.1	6.2	9.1	10.0	4.3	1.3	1.5
Swaziland	45.2	1.2	3.6	2.5	7.5	7.2	8.6	10.0	1.2	0.0	3.5
Uruguay	45.1	3.3	4.3	0.3	4.3	3.4	6.8	10.0	3.6	7.2	1.9
Iceland	45.1	4.1	5.7	0.9	5.0	1.2	6.4	10.0	4.1	4.1	3.4
Kyrgyzstan	45.1	8.8	1.7	0.1	9.2	3.3	8.2	10.0	1.2	0.2	2.5
Croatia	45.0	4.7	4.7	1.0	5.8	2.6	7.4	10.0	1.4	6.0	1.4
Luxembourg	45.0	5.5	8.4	1.3	3.0	2.5	5.1	10.0	4.0	3.2	2.0
Tajikistan	44.6	8.6	1.2	0.0	9.3	1.8	9.2	10.0	1.0	0.9	2.6
Slovenia	44.5	4.4	5.9	1.4	4.5	4.0	6.4	8.6	3.4	4.7	1.3
Germany	44.5	4.8	3.7	1.4	5.9	3.1	5.9	9.8	2.6	4.7	2.5
Namibia	44.4	2.0	1.3	1.6	6.9	8.4	8.7	10.0	1.8	0.3	3.3
Kazakhstan	44.3	9.9	2.0	0.1	6.1	1.1	6.7	10.0	3.2	3.6	1.6
Bangladesh	44.1	1.8	1.3	3.0	9.9	6.9	9.8	9.4	0.3	0.6	1.3
Sweden	43.9	4.7	5.4	0.9	6.1	3.8	5.4	10.0	4.4	1.9	1.4
Latvia	43.9	6.5	2.6	0.8	8.2	1.3	6.9	6.4	5.1	3.9	2.2
Chile	43.8	6.1	3.6	0.7	3.8	4.5	6.0	10.0	3.9	3.3	1.8
Uzbekistan	43.7	10.0	2.5	0.0	8.5	0.6	7.9	10.0	1.7	0.3	2.1
Tonga	43.7	2.5	3.4	0.9	9.2	3.6	8.7	10.0	1.6	0.1	3.6
Philippines	43.6	4.1	5.4	2.4	6.9	2.7	8.4	10.0	1.8	0.0	1.8
Yemen	43.6	2.0	2.1	0.1	9.3	6.8	9.5	9.9	0.9	0.0	2.9
Marshall Islands	43.3	2.1	2.9	0.9	9.4	3.4	8.8	10.0	1.3	0.0	4.5
Vanuatu	43.2	1.8	2.3	0.8	9.5	4.6	8.9	10.0	0.9	0.1	4.2
Slovakia	43.0	5.8	3.3	0.9	6.5	3.0	6.8	9.4	2.3	3.8	1.3
Argentina	42.9	4.1	5.4	0.7	3.9	1.4	5.3	10.0	5.4	4.0	2.6
Kiribati	42.9	1.5	1.9	0.7	9.7	4.7	9.1	10.0	0.7	0.0	4.6
Micronesia, Federated States of	42.8	2.0	2.8	0.8	9.5	3.3	8.9	10.0	1.2	0.0	4.2
Switzerland	42.4	5.2	4.4	0.5	6.5	3.8	6.2	9.7	2.3	1.7	2.2
Azerbaijan	42.2	9.8	3.6	0.1	7.0	1.1	8.5	8.7	1.7	0.0	1.8
Brunei Darussalam	42.2	3.6	3.8	1.5	4.9	5.2	8.4	10.0	4.7	0.0	0.2
Poland	42.1	7.5	2.8	1.0	5.6	2.7	6.5	10.0	3.3	1.1	1.5
Papua New Guinea	41.7	1.7	2.4	0.6	9.5	3.0	9.0	10.0	0.7	0.0	4.7

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Finland	41.4	4.4	4.1	1.1	6.7	2.4	6.7	10.0	3.2	0.4	2.6
Turkmenistan	41.2	9.7	3.5	0.1	7.0	0.8	6.2	10.0	2.2	0.0	1.7
Pakistan	40.8	1.7	1.5	0.2	9.8	6.9	9.2	9.2	1.1	0.0	1.2
Georgia	40.5	4.3	2.3	0.1	8.4	1.1	8.7	9.8	1.8	2.2	1.9
Czech Republic	40.2	4.1	3.4	1.9	4.7	4.0	6.7	10.0	2.7	1.6	1.2
Afghanistan	39.5	2.2	1.4	0.1	9.6	3.2	9.3	9.9	0.5	0.0	3.2
Mongolia	34.0	3.1	1.4	0.1	7.8	1.0	5.6	10.0	1.4	1.7	2.0

Supplementary data

Supplemental Table 4. Alternate Healthy Eating Index and its component scores in men and women aged 25 years or older in 190 countries/ territories in 1990.

Countries/ Territories	AHEI	Vegetables	Fruit	Whole grains	Sugar sweetened beverages	Nuts / legumes	Red / processed meats	trans fat	Long-chain n-3 PUFAs (DHA + EPA)	PUFAs	Sodium
Lebanon	71.0	10.0	8.7	0.1	8.5	10.0	8.9	10.0	2.4	10.0	2.5
Israel	65.5	9.9	6.7	0.2	6.6	9.7	8.6	10.0	3.4	7.4	2.8
Dominican Republic	63.1	1.8	6.8	1.2	7.9	10.0	9.1	10.0	1.6	9.2	5.5
Bermuda	62.8	4.9	8.7	1.3	3.6	8.2	8.1	10.0	5.6	8.1	4.2
Taiwan, Province of China	62.7	6.5	4.4	1.3	9.0	10.0	7.4	10.0	2.2	10.0	2.0
Japan	60.9	6.9	2.7	2.1	7.6	10.0	8.1	10.0	10.0	3.5	0.0
Turkey	59.2	10.0	5.4	0.1	8.2	10.0	9.2	10.0	1.0	0.1	5.2
Tunisia	58.6	8.9	3.1	0.2	9.0	8.3	9.2	10.0	1.0	6.1	2.8
Cyprus	58.4	6.7	5.6	0.4	7.3	7.0	6.8	9.8	2.5	9.5	2.7
Libyan Arab Jamahiriya	58.4	9.2	4.8	0.2	6.4	9.4	8.7	9.3	1.7	6.6	2.1
Korea, Democratic People's Republic of	58.2	9.5	2.6	1.9	9.5	10.0	9.3	10.0	0.6	4.8	0.0
Bahamas	58.1	7.7	6.7	0.6	4.3	4.1	6.1	10.0	3.9	9.9	4.8
United Arab Emirates	58.0	10.0	6.0	0.4	3.2	10.0	7.4	9.4	3.8	6.5	1.4
Qatar	57.9	10.0	7.0	0.3	3.2	10.0	8.0	9.4	4.4	4.0	1.5
Trinidad and Tobago	57.6	1.7	3.2	0.7	5.7	10.0	9.2	10.0	1.9	9.8	5.4
Brazil	57.2	1.9	4.4	1.4	6.9	10.0	7.7	9.9	2.5	10.0	2.6
Korea, Republic of	57.1	10.0	2.4	2.8	9.4	10.0	8.5	9.2	1.1	3.2	0.5
Haiti	56.6	2.2	4.6	0.8	9.2	10.0	9.5	10.0	0.5	3.7	6.0
Antigua and Barbuda	56.0	3.3	5.7	1.0	6.2	7.8	8.7	10.0	2.9	5.7	4.7
Malta	55.9	6.9	3.6	0.2	8.0	7.2	6.8	9.8	2.3	8.4	2.6
Guinea	55.8	4.5	5.4	1.6	9.4	9.3	9.7	10.0	0.2	0.0	5.6
Fiji	55.7	1.4	1.0	0.8	9.2	8.6	8.2	10.0	1.3	9.6	5.7
Cameroon	55.2	2.9	5.6	1.5	9.0	10.0	9.3	10.0	1.6	0.0	5.4
Uganda	55.1	1.3	9.0	1.6	9.6	10.0	9.4	10.0	0.7	0.0	3.4
Bahrain	55.0	9.5	5.1	0.3	5.3	9.7	8.5	9.3	2.6	2.6	1.9
Barbados	54.2	2.6	3.4	0.9	6.2	9.7	7.6	10.0	3.6	5.7	4.5
Italy	54.2	9.0	5.6	0.1	7.7	5.7	6.3	10.0	2.9	4.6	2.4
Mauritius	54.0	2.4	0.9	1.2	8.8	10.0	9.2	10.0	1.3	10.0	0.1
Saint Lucia	53.9	2.7	4.5	1.0	7.3	7.8	8.9	10.0	2.1	4.6	5.1
Cuba	53.8	3.1	4.1	1.0	8.0	10.0	8.8	10.0	1.5	2.0	5.2
Spain	53.7	8.7	4.8	0.8	6.9	7.1	6.1	10.0	2.8	3.2	3.3
Rwanda	53.7	1.5	8.5	1.0	9.6	10.0	9.8	10.0	0.1	0.0	3.3
Greece	53.7	10.0	6.6	0.1	7.6	6.8	6.7	9.6	2.2	1.1	2.9
Kuwait	53.5	9.7	3.8	0.7	4.6	6.9	8.2	9.3	2.8	6.2	1.4
Guatemala	53.4	2.5	2.4	2.0	8.0	10.0	9.5	9.8	1.0	0.7	7.4
Dominica	53.1	2.5	4.2	0.9	7.8	7.8	9.0	10.0	1.8	4.3	4.9
Jordan	53.1	6.4	3.0	0.1	8.7	8.8	9.2	9.3	2.2	2.7	2.7
Iran, Islamic Republic of	52.9	7.9	5.0	0.1	8.6	7.2	9.2	5.4	1.0	6.0	2.6
Grenada	52.7	2.4	3.9	0.9	8.0	7.6	9.0	10.0	1.7	4.1	5.1
Saint Vincent and the Grenadines	52.4	2.3	3.8	0.9	7.9	7.6	9.0	10.0	1.6	3.9	5.3
Suriname	52.4	2.9	3.1	1.7	7.0	5.3	9.1	10.0	2.4	5.8	5.1
Senegal	52.3	1.7	0.6	1.0	9.3	9.8	9.4	10.0	0.5	4.5	5.6

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Paraguay	52.3	3.4	5.0	1.5	8.0	10.0	6.1	9.7	2.1	3.7	2.8
Belize	52.2	2.2	3.5	0.8	8.3	7.7	9.1	10.0	1.5	3.7	5.4
Gabon	52.2	2.3	8.0	2.0	6.4	9.5	8.3	10.0	1.4	0.0	4.3
Portugal	52.1	7.9	3.8	0.9	7.9	5.3	7.5	9.4	1.9	4.3	3.2
Jamaica	52.1	3.3	5.5	0.8	7.8	4.0	9.2	10.0	2.5	3.8	5.1
Panama	51.9	1.5	3.5	1.7	7.1	6.2	8.1	8.3	2.1	9.7	3.8
Morocco	51.8	5.0	2.5	0.1	9.3	9.4	9.4	9.2	0.8	2.9	3.0
Cape Verde	51.6	1.4	1.7	1.8	9.3	10.0	9.1	10.0	0.5	2.3	5.5
Sierra Leone	51.4	2.8	1.7	1.7	9.4	10.0	9.8	10.0	0.3	0.0	5.8
Nigeria	51.2	2.8	2.8	1.1	9.0	9.8	9.5	10.0	0.4	0.0	5.8
Kenya	50.5	2.2	2.3	1.9	9.2	10.0	9.1	10.0	0.9	0.0	4.9
Gambia	50.5	1.6	0.2	1.6	9.3	10.0	9.5	10.0	0.3	2.2	5.8
Andorra	50.2	7.6	5.9	0.9	4.4	5.0	5.4	9.9	4.6	4.4	2.2
Iraq	49.9	9.7	3.0	0.3	8.5	5.2	9.5	9.3	1.0	0.9	2.5
Mali	49.8	3.5	1.0	0.7	9.6	9.5	9.1	10.0	0.6	0.0	5.9
Guyana	49.8	1.3	2.7	1.6	8.8	8.7	9.6	10.0	1.1	0.0	5.9
Benin	49.7	2.5	1.4	1.2	9.5	10.0	9.6	10.0	0.5	0.0	5.0
Angola	49.7	1.4	1.7	0.9	8.8	8.2	9.2	10.0	0.6	4.1	4.9
Tanzania, United Republic of	49.3	2.4	2.0	2.9	9.4	10.0	9.4	10.0	0.5	0.0	2.7
Venezuela, Bolivarian Republic of	49.3	1.5	4.8	1.9	6.2	6.3	8.5	6.9	2.5	7.2	3.6
Malawi	49.3	1.6	2.2	2.6	9.6	10.0	9.7	10.0	0.2	0.0	3.3
Mauritania	49.3	0.7	0.5	0.5	9.1	10.0	8.8	10.0	0.6	3.6	5.4
Togo	49.2	2.2	0.5	1.2	9.4	10.0	9.6	10.0	0.3	0.0	5.9
Sao Tome and Principe	49.0	2.2	1.5	1.1	9.3	9.4	9.4	10.0	0.6	0.0	5.5
Seychelles	48.8	4.2	3.5	2.1	8.4	7.1	8.9	10.0	1.2	2.4	1.1
Belgium	48.6	5.5	3.1	1.1	6.6	3.4	6.6	9.3	2.9	6.8	3.2
Bolivia, Plurinational State of	48.5	3.1	4.1	0.8	8.5	5.2	8.1	8.9	1.4	5.6	3.0
Honduras	48.4	1.7	3.8	1.8	8.5	9.8	9.3	8.3	0.9	0.0	4.3
Nepal	48.3	2.9	1.3	2.1	9.9	7.9	9.4	9.0	0.7	1.1	4.1
Burkina Faso	48.2	1.5	0.3	0.9	9.6	10.0	9.4	10.0	0.5	0.0	5.9
Niger	48.2	1.9	0.4	1.0	9.6	10.0	9.0	10.0	0.5	0.0	5.9
Botswana	48.1	1.5	1.3	1.6	8.0	10.0	8.9	10.0	0.9	2.4	3.3
Serbia	48.0	6.0	4.0	0.7	7.4	7.0	7.9	10.0	2.1	2.8	0.1
Congo	48.0	1.6	2.5	1.6	8.7	7.8	9.5	10.0	0.6	0.8	4.9
Singapore	47.8	5.8	3.1	2.0	8.4	6.7	8.2	10.0	2.1	1.6	0.1
South Sudan	47.7	2.3	2.2	1.7	8.9	10.0	9.2	10.0	0.8	0.0	2.7
Liberia	47.7	2.4	2.7	1.8	9.6	4.9	9.7	10.0	0.6	0.1	5.9
Nicaragua	47.7	0.6	1.9	1.5	8.4	10.0	9.4	8.2	0.9	2.6	4.3
Ecuador	47.7	1.7	8.9	1.0	5.9	4.6	8.6	8.3	1.4	4.8	2.5
Norway	47.6	3.1	4.4	0.6	7.0	1.7	6.4	10.0	2.5	9.9	2.0
New Zealand	47.6	6.4	4.8	1.6	7.9	5.3	5.0	8.7	3.1	2.8	1.9
Congo, the Democratic Republic of the	47.5	1.2	1.8	2.0	9.4	6.0	9.4	10.0	0.4	0.0	7.4
Macedonia, the former Yugoslav Republic of	47.4	9.1	3.5	0.3	7.4	6.3	8.4	10.0	1.7	0.4	0.2
Costa Rica	47.3	1.7	5.0	1.0	7.0	10.0	8.3	6.2	2.0	2.2	3.8
Montenegro	47.2	9.1	5.8	0.5	7.1	4.8	7.1	9.7	2.0	1.0	0.1

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Samoa	47.1	1.8	2.3	0.8	9.5	4.8	8.8	10.0	0.9	0.4	7.9
El Salvador	47.0	1.8	2.4	1.7	8.5	9.7	9.5	8.2	0.9	0.0	4.2
Oman	46.9	7.4	5.1	0.5	6.3	5.6	8.7	9.3	1.8	0.0	2.1
Zimbabwe	46.9	0.8	0.6	2.1	8.8	8.5	9.4	10.0	0.5	3.4	2.9
Solomon Islands	46.8	1.1	1.9	0.9	9.7	7.3	9.3	10.0	0.4	0.0	6.1
Comoros	46.6	1.7	1.7	1.5	9.4	9.6	9.4	10.0	0.5	0.0	2.8
Netherlands	46.6	4.0	5.3	1.2	6.3	3.6	5.9	7.7	2.5	6.8	3.3
Lesotho	46.6	1.4	1.0	2.5	9.5	6.8	9.2	10.0	0.6	1.6	4.1
India	46.5	3.0	1.3	1.3	9.9	10.0	9.7	8.9	0.4	0.0	2.0
Chad	46.5	0.8	0.7	0.1	9.5	10.0	9.1	10.0	0.5	0.0	5.8
United Kingdom	46.5	5.0	4.1	0.8	7.1	3.7	6.6	9.3	2.7	3.0	4.2
Egypt	46.3	9.1	3.1	1.0	9.0	8.3	9.3	2.1	1.3	0.1	2.8
Swaziland	46.1	1.5	3.0	1.9	8.3	7.5	8.4	10.0	1.0	1.1	3.4
Saudi Arabia	46.0	8.0	4.3	0.7	3.8	4.0	9.2	10.0	2.6	1.6	1.9
Bhutan	45.9	2.1	1.3	1.8	9.9	8.0	9.6	9.1	0.6	0.0	3.6
United States	45.9	6.0	5.0	1.3	1.0	6.5	4.6	5.8	4.0	9.4	2.2
Timor-Leste	45.8	1.7	1.0	2.1	9.7	9.1	9.3	10.0	2.5	0.0	0.4
Global	45.5	4.0	2.4	1.2	7.9	8.1	8.2	9.5	2.5	1.6	0.2
Greenland	45.5	6.6	5.2	1.3	2.2	6.3	4.4	7.6	5.2	5.0	1.8
Algeria	45.5	4.3	1.8	0.2	8.2	6.0	9.4	9.7	0.9	2.5	2.5
Central African Republic	45.5	1.3	2.3	1.2	9.6	5.7	8.8	10.0	0.9	0.0	5.6
Sudan	45.4	3.8	1.7	0.2	9.6	7.2	9.5	9.2	0.5	0.4	3.3
Eritrea	45.3	1.2	1.1	1.5	9.7	8.5	9.6	10.0	0.3	0.0	3.5
Bosnia and Herzegovina	45.2	7.1	1.2	1.1	9.3	6.2	9.2	10.0	0.8	0.0	0.4
France	45.2	6.2	3.6	0.4	7.1	3.3	5.7	9.9	3.4	2.3	3.2
Ghana	45.1	1.6	4.0	0.8	9.3	4.3	9.7	10.0	0.5	0.0	4.9
Bulgaria	45.1	7.1	3.2	0.3	6.9	5.7	6.9	10.0	2.5	2.4	0.1
Burundi	45.0	1.3	1.3	1.0	9.6	8.8	9.5	10.0	0.2	0.0	3.3
Somalia	45.0	1.1	1.1	1.1	9.7	8.1	9.6	10.0	0.4	0.5	3.3
Mozambique	45.0	0.7	1.0	0.9	9.8	8.5	9.7	10.0	0.2	0.7	3.5
Maldives	44.8	4.0	2.5	0.6	9.2	8.1	9.8	10.0	0.6	0.0	0.1
Guinea-Bissau	44.7	1.1	2.3	2.2	9.5	3.8	9.1	10.0	0.3	0.8	5.7
Vanuatu	44.6	1.6	1.9	0.7	9.6	4.8	8.9	10.0	0.7	0.3	6.0
South Africa	44.6	2.7	1.6	2.6	7.2	4.3	8.4	10.0	1.8	2.1	3.7
Palestine	44.5	4.3	2.2	0.2	9.4	5.9	9.4	9.2	0.7	0.0	3.3
Thailand	44.5	2.3	4.1	2.2	8.5	6.3	9.2	10.0	1.8	0.0	0.2
Pakistan	44.5	1.7	1.6	0.1	9.9	8.2	9.3	9.1	0.9	0.0	3.6
Colombia	44.4	2.1	4.2	1.5	7.3	6.9	8.5	8.6	1.7	2.0	1.6
Syrian Arab Republic	44.4	4.2	2.2	0.3	9.3	5.9	9.3	9.3	0.8	0.1	3.0
Ethiopia	44.3	0.7	0.2	0.6	9.7	10.0	9.5	10.0	0.3	0.0	3.4
Equatorial Guinea	44.3	1.0	1.4	1.2	9.6	5.6	9.5	10.0	0.3	0.0	5.7
Peru	44.3	1.8	2.7	1.3	7.8	6.9	9.5	8.8	1.0	1.9	2.7
Côte d'Ivoire	44.2	2.7	4.1	1.0	8.9	4.4	9.5	10.0	0.5	0.0	3.1
Madagascar	44.2	1.6	2.7	2.2	9.5	5.4	8.8	10.0	0.9	0.0	3.1
Kiribati	44.2	1.4	1.8	0.7	9.6	4.7	9.0	10.0	0.6	0.2	6.0
Ireland	44.1	3.9	3.1	1.7	7.6	3.3	6.2	10.0	3.3	2.3	2.9
Australia	44.0	4.4	3.9	1.6	6.5	5.7	5.1	8.4	3.7	1.0	3.7

Supplementary data

Marshall Islands	43.9	1.8	2.4	0.8	9.6	3.6	8.8	10.0	0.9	0.0	6.0
Indonesia	43.9	1.4	1.3	2.6	9.8	8.5	9.7	10.0	0.4	0.0	0.2
Myanmar	43.8	2.7	1.0	2.0	9.8	8.0	9.7	10.0	0.3	0.0	0.4
Namibia	43.8	1.2	1.2	0.7	8.0	10.0	8.7	10.0	0.8	0.0	3.3
Tonga	43.7	1.9	2.7	0.9	9.5	3.7	8.7	10.0	1.0	0.1	5.2
Micronesia, Federated States of	43.5	1.8	2.4	0.8	9.6	3.6	8.8	10.0	0.8	0.0	5.6
Yemen	43.1	2.6	1.4	0.0	9.5	7.0	9.5	9.2	0.7	0.0	3.2
Moldova, Republic of	43.1	5.7	3.3	0.9	9.3	1.1	8.3	9.8	1.3	0.9	2.5
Denmark	43.0	3.9	3.3	1.8	6.9	1.5	5.2	9.6	3.0	4.4	3.4
Germany	42.7	3.9	4.5	1.9	6.5	2.6	5.2	8.8	2.3	4.2	2.9
Papua New Guinea	42.7	1.4	1.9	0.7	9.6	3.3	9.0	10.0	0.5	0.0	6.2
Austria	42.7	3.7	5.7	1.7	7.3	2.8	4.9	10.0	2.6	1.3	2.7
Luxembourg	42.5	4.0	7.6	1.2	5.2	1.3	5.7	9.8	2.8	2.5	2.5
Malaysia	42.4	1.5	2.4	1.4	9.1	4.9	9.0	10.0	2.4	1.5	0.1
Canada	42.4	5.9	5.0	1.3	3.6	8.0	5.3	5.3	4.7	1.4	1.9
Bangladesh	42.3	0.7	0.5	2.7	9.9	5.3	9.8	9.0	0.2	0.2	3.9
Romania	41.7	7.9	2.5	0.8	6.9	3.0	7.3	9.7	1.7	1.7	0.1
Chile	41.6	5.5	2.1	0.2	6.3	4.1	7.9	10.0	1.7	2.4	1.6
Croatia	41.6	4.4	3.5	0.9	6.5	4.0	8.4	9.7	1.3	2.8	0.1
Russian Federation	41.4	4.7	1.8	0.4	8.3	2.6	6.7	10.0	3.1	1.3	2.5
Albania	41.4	6.2	1.9	0.1	8.4	4.7	8.7	9.7	0.8	0.4	0.4
Ukraine	41.3	4.9	1.8	0.1	9.1	3.5	7.6	10.0	1.9	0.3	2.1
Sri Lanka	41.1	1.7	1.9	1.5	9.4	5.7	9.9	10.0	0.8	0.0	0.2
Philippines	41.1	3.9	4.8	1.9	7.9	2.5	9.0	10.0	0.8	0.0	0.2
Djibouti	41.0	3.0	0.5	0.6	8.7	3.4	9.1	10.0	0.5	2.4	2.8
Zambia	40.9	1.9	0.5	2.9	9.2	3.3	9.5	10.0	0.6	0.1	2.8
Sweden	40.8	3.2	3.9	0.8	7.0	2.4	6.4	10.0	2.6	2.8	1.6
China	40.7	2.9	0.9	1.2	9.7	6.3	8.5	10.0	0.5	0.6	0.0
Mexico	40.6	2.9	4.3	2.6	2.6	10.0	7.9	1.4	1.7	3.4	3.7
Viet Nam	40.5	2.6	2.0	2.5	9.8	3.6	9.2	10.0	0.5	0.0	0.3
Lithuania	40.4	4.3	2.7	0.2	8.8	3.2	6.6	9.4	3.0	0.1	2.1
Switzerland	40.3	4.8	5.4	0.7	6.6	3.1	5.9	8.2	2.1	1.0	2.5
Brunei Darussalam	40.2	3.8	3.3	1.7	4.3	6.3	7.6	10.0	3.2	0.0	0.1
Armenia	39.9	7.4	2.6	0.1	8.8	0.5	8.8	10.0	1.1	0.0	0.8
Poland	39.8	6.4	1.7	0.2	7.8	2.4	6.4	9.9	2.6	0.5	2.0
Lao People's Democratic Republic	39.4	1.4	1.4	2.8	9.7	3.7	9.4	10.0	0.7	0.0	0.3
Cambodia	39.0	2.7	1.1	2.8	9.8	2.5	9.3	10.0	0.5	0.0	0.4
Finland	38.8	3.0	3.4	1.1	7.3	1.9	6.7	9.6	2.7	0.0	3.1
Uzbekistan	38.6	7.5	1.1	0.0	9.0	0.3	8.4	10.0	1.2	0.0	1.0
Argentina	38.5	4.1	3.7	0.1	4.0	1.4	5.7	10.0	3.9	3.1	2.6
Afghanistan	38.4	2.1	1.6	0.2	9.7	2.7	8.9	9.2	0.4	0.0	3.5
Iceland	38.2	2.0	3.5	0.2	6.4	0.3	6.4	9.8	2.7	3.3	3.5
Hungary	38.0	4.9	3.0	1.0	7.0	3.5	5.4	8.6	3.2	1.5	0.0
Estonia	37.7	3.3	2.6	0.4	8.8	1.7	6.9	9.0	2.3	0.7	2.0
Georgia	37.7	4.9	3.2	0.1	8.3	1.3	8.4	9.8	1.3	0.0	0.5
Tajikistan	37.5	6.0	1.4	0.0	8.8	0.7	9.1	10.0	0.6	0.0	0.9
Belarus	37.4	4.4	1.9	0.0	9.0	0.5	6.3	10.0	3.0	0.0	2.2

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Slovenia	36.9	3.4	4.0	1.3	5.8	3.3	6.3	8.4	3.0	1.4	0.1
Slovakia	36.7	4.2	2.6	1.0	7.5	5.0	6.5	7.0	2.1	0.8	0.1
Turkmenistan	35.7	5.5	1.5	0.0	8.2	0.7	7.9	10.0	1.1	0.0	0.7
Kyrgyzstan	35.5	4.3	1.0	0.1	8.9	1.2	7.5	10.0	1.3	0.5	0.9
Azerbaijan	35.3	4.1	3.5	0.0	8.3	0.6	9.1	8.1	0.9	0.0	0.7
Czech Republic	35.3	3.6	3.0	2.0	5.9	2.7	6.0	9.0	2.4	0.5	0.1
Latvia	35.3	4.7	2.3	0.1	8.6	0.5	6.7	6.2	3.4	0.8	1.9
Uruguay	34.6	2.2	2.8	0.4	5.9	2.4	5.4	10.0	3.1	1.1	1.4
Kazakhstan	34.3	3.6	0.6	0.0	7.5	0.6	7.2	10.0	2.4	1.7	0.5
Mongolia	28.4	1.0	0.3	0.0	8.9	1.0	4.8	10.0	1.4	0.0	1.0

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Supplemental Table 5. Percentage reductions in total deaths as a result of improvements in the Alternate Healthy Eating Index from the current diet to the reference healthy die in men and women aged 25 years or older in 190 countries/ territories in 2017. ¹

Countries/ Territories	PAF ²	PAF ³
Afghanistan	28.5 (15.0-39.4)	29.2 (24.4-33.8)
Albania	23.9 (9.4-36.4)	28.3 (23.1-33.4)
Algeria	23.6 (11.3-33.9)	24.3 (19.8-28.6)
Andorra	22.8 (8.6-34.2)	26.9 (21.8-31.5)
Angola	15.5 (8.5-22.4)	14.6 (12.3-17.2)
Antigua and Barbuda	20.5 (9.4-30.5)	21.5 (17.5-25.5)
Argentina	27.3 (11.6-39.1)	29.3 (23.9-34.0)
Armenia	29.0 (16.3-40.2)	29.9 (25.1-34.7)
Australia	26.1 (9.6-38.4)	30.1 (24.4-35.1)
Austria	28.9 (13.0-40.1)	31.6 (25.9-36.2)
Azerbaijan	32.6 (15.2-45.4)	33.2 (26.7-38.8)
Bahrain	23.8 (13.1-32.8)	22.2 (18.2-26.1)
Bangladesh	28.6 (14.6-41.6)	29.4 (24.7-34.5)
Barbados	20.6 (10.3-29.8)	22.6 (18.7-26.3)
Belarus	28.7 (15.6-39.7)	30.3 (25.2-35.1)
Belgium	23.4 (9.3-35.2)	26.9 (21.9-31.6)
Belize	20.8 (9.0-30.4)	20.5 (16.5-24.2)
Benin	17.1 (8.3-25.0)	17.5 (14.5-20.5)
Bermuda	15.9 (7.3-25.0)	18.0 (14.7-21.8)
Bhutan	26.0 (11.5-38.5)	24.7 (20.1-29.5)
Bolivia, Plurinational State of	25.0 (10.3-37.0)	25.6 (20.9-30.3)
Bosnia and Herzegovina	24.6 (11.1-35.8)	28.1 (23.0-32.7)
Botswana	16.5 (7.7-23.4)	17.2 (14.1-19.9)
Brazil	19.0 (8.0-27.3)	19.9 (16.1-23.1)
Brunei Darussalam	27.9 (13.4-39.5)	29.9 (24.6-34.9)
Bulgaria	26.9 (11.6-38.5)	30.0 (24.3-34.8)
Burkina Faso	18.7 (9.2-26.9)	18.6 (15.4-22.0)
Burundi	17.4 (9.1-24.1)	16.4 (13.7-19.0)
Cambodia	22.7 (8.1-34.6)	23.2 (18.7-27.6)
Cameroon	14.0 (5.7-20.7)	13.9 (11.2-16.4)
Canada	24.7 (9.7-37.1)	28.2 (22.8-33.3)
Cape Verde	17.7 (7.4-26.0)	18.9 (15.3-22.3)
Central African Republic	15.2 (7.4-21.4)	14.6 (11.9-17.1)
Chad	18.5 (7.7-26.2)	18.5 (15.0-21.5)
Chile	27.2 (10.8-39.9)	30.2 (24.9-35.2)
China	24.6 (8.6-37.1)	29.7 (24.2-34.7)
Colombia	23.4 (8.6-35.0)	25.1 (20.2-29.5)
Comoros	21.2 (10.0-30.2)	21.4 (17.6-25.0)
Congo	18.4 (8.0-25.6)	18.0 (14.5-20.9)
Costa Rica	23.3 (10.7-34.9)	24.3 (20.1-28.8)
Côte d'Ivoire	17.4 (7.6-24.6)	17.1 (13.9-20.0)
Croatia	27.8 (12.3-41.3)	31.8 (26.1-37.5)
Cuba	17.1 (7.8-25.6)	18.8 (15.3-22.3)
Cyprus	27.6 (13.7-40.3)	29.6 (24.6-35.0)
Czech Republic	29.8 (12.9-42.9)	33.5 (27.2-39.1)
Congo, the Democratic Republic of the	19.6 (9.8-28.1)	18.6 (15.3-22.1)
Denmark	25.4 (9.1-37.1)	29.1 (23.5-33.9)
Djibouti	18.9 (9.5-27.2)	18.8 (15.5-22.2)
Dominica	22.4 (9.6-32.9)	23.8 (19.3-28.1)
Dominican Republic	16.0 (7.3-23.5)	16.4 (13.3-19.3)
Ecuador	25.6 (10.2-37.4)	25.8 (21.1-30.2)
Egypt	26.2 (14.1-37.4)	24.3 (20.0-28.8)
El Salvador	23.7 (10.9-35.4)	22.6 (18.8-26.9)
Equatorial Guinea	13.8 (6.5-19.5)	13.1 (10.7-15.3)
Eritrea	17.3 (7.9-24.3)	17.1 (13.9-19.8)
Estonia	28.6 (15.8-41.3)	31.3 (26.4-36.8)
Ethiopia	19.5 (9.1-27.7)	19.0 (15.6-22.1)
Micronesia, Federated States of	29.0 (14.0-41.7)	29.0 (23.9-34.2)
Fiji	27.9 (15.5-37.9)	25.6 (20.7-30.0)
Finland	27.9 (9.8-41.2)	33.3 (27.0-38.6)

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France	23.6 (8.9-35.1)	29.0 (23.8-33.5)
Gabon	19.4 (9.1-27.7)	19.0 (15.5-22.3)
Georgia	30.9 (14.6-44.5)	34.2 (28.3-39.8)
Germany	28.7 (13.0-41.3)	31.7 (26.2-36.9)
Ghana	16.5 (7.5-23.5)	17.0 (13.9-19.7)
Greece	23.0 (8.5-34.4)	27.1 (22.0-31.6)
Greenland	22.4 (10.1-33.0)	25.5 (20.9-29.9)
Grenada	22.5 (9.9-33.0)	23.5 (18.9-27.7)
Guatemala	20.4 (9.1-29.4)	19.0 (15.5-22.2)
Guinea	16.9 (7.9-24.9)	17.9 (14.8-21.0)
Guinea-Bissau	18.5 (8.6-26.6)	18.4 (15.1-21.6)
Guyana	23.0 (12.1-33.0)	22.8 (18.9-26.9)
Haiti	20.2 (9.7-29.4)	20.2 (16.5-23.8)
Honduras	26.4 (13.3-38.0)	25.0 (20.6-29.6)
Hungary	27.7 (12.9-39.4)	30.8 (25.2-35.7)
Iceland	26.0 (12.0-37.9)	30.2 (25.0-35.1)
India	23.0 (8.6-32.7)	21.4 (16.8-25.1)
Indonesia	25.8 (11.6-37.1)	27.1 (22.5-31.5)
Iran, Islamic Republic of	19.2 (9.0-28.4)	19.9 (16.1-23.7)
Iraq	19.5 (8.2-28.5)	20.5 (16.5-24.2)
Ireland	26.1 (12.0-38.9)	30.1 (25.0-35.3)
Israel	17.3 (7.4-27.1)	19.2 (15.7-23.0)
Italy	23.0 (5.4-35.3)	27.6 (21.6-32.5)
Jamaica	22.4 (8.2-33.6)	24.4 (19.4-28.9)
Japan	16.2 (5.8-25.3)	20.8 (17.1-24.2)
Jordan	22.4 (9.8-32.1)	22.8 (18.4-26.7)
Kazakhstan	28.8 (16.1-40.1)	29.8 (25.2-34.5)
Kenya	15.7 (7.5-22.4)	14.5 (11.9-17.0)
Kiribati	28.7 (15.6-39.2)	28.0 (23.4-32.3)
Kuwait	21.0 (11.2-30.2)	21.3 (17.4-25.2)
Kyrgyzstan	30.0 (15.6-42.5)	30.1 (24.9-35.3)
Lao People's Democratic Republic	23.1 (9.3-33.7)	23.6 (19.1-27.6)
Latvia	28.3 (14.1-40.1)	32.1 (26.7-37.1)
Lebanon	19.7 (10.0-28.3)	21.0 (17.2-24.8)
Lesotho	14.9 (7.2-20.9)	15.1 (12.5-17.4)
Liberia	19.3 (8.7-26.1)	19.1 (15.6-21.8)
Libyan Arab Jamahiriya	20.8 (10.4-29.6)	21.1 (17.2-24.7)
Lithuania	27.3 (13.2-38.7)	29.2 (23.7-34.1)
Luxembourg	26.3 (12.0-38.3)	30.5 (25.4-35.3)
Macedonia, the former Yugoslav Republic of	21.8 (9.2-33.5)	26.4 (21.7-31.2)
Madagascar	22.6 (9.7-32.7)	23.0 (18.7-27.0)
Malawi	15.8 (7.7-23.0)	15.2 (12.6-18.0)
Malaysia	22.6 (10.4-31.6)	23.7 (19.4-27.3)
Maldives	28.0 (12.6-41.1)	28.1 (23.1-33.2)
Mali	19.0 (9.1-27.2)	19.2 (15.8-22.4)
Malta	24.0 (11.1-34.7)	26.8 (22.0-31.2)
Marshall Islands	29.1 (11.1-40.8)	29.0 (23.0-33.7)
Mauritania	21.6 (9.4-31.5)	22.1 (17.9-26.0)
Mauritius	24.4 (10.6-35.6)	22.7 (18.4-26.9)
Mexico	29.6 (13.8-42.6)	27.0 (22.3-31.8)
Moldova, Republic of	29.3 (13.3-40.9)	29.9 (24.0-34.7)
Mongolia	28.6 (11.7-42.0)	34.4 (28.5-39.9)
Montenegro	23.2 (9.2-35.0)	28.2 (23.0-33.0)
Morocco	22.3 (11.6-31.3)	22.3 (18.2-26.1)
Mozambique	12.2 (4.8-17.8)	13.1 (10.6-15.3)
Myanmar	24.8 (11.6-34.9)	23.8 (19.7-27.5)
Namibia	17.4 (8.2-24.9)	17.9 (14.8-20.9)
Nepal	22.2 (10.0-32.2)	20.2 (16.3-23.9)
Netherlands	24.3 (9.4-35.7)	29.4 (24.1-33.9)
New Zealand	25.5 (12.6-37.0)	29.1 (24.4-33.9)
Nicaragua	27.5 (12.0-41.2)	26.4 (21.9-31.4)
Niger	16.6 (8.1-23.4)	16.9 (14.1-19.5)
Nigeria	15.3 (7.2-22.7)	15.0 (12.4-17.8)
Korea, Democratic People's Republic of	22.3 (8.4-34.0)	23.3 (18.8-27.6)

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Norway	23.1 (10.1-33.9)	26.8 (22.2-31.2)
Oman	21.9 (10.9-31.1)	22.2 (18.1-26.3)
Pakistan	28.4 (14.6-40.8)	29.2 (24.6-34.2)
Palestine	26.8 (10.0-38.5)	28.9 (23.2-33.7)
Panama	22.5 (9.5-33.3)	24.2 (20.0-28.4)
Papua New Guinea	27.6 (11.9-38.7)	26.5 (21.4-30.9)
Paraguay	21.4 (9.1-31.7)	21.9 (17.7-25.9)
Peru	22.0 (9.2-31.9)	23.6 (19.5-27.3)
Philippines	26.0 (11.9-37.2)	26.7 (22.1-31.1)
Poland	27.9 (11.2-40.8)	32.3 (26.1-37.8)
Portugal	23.3 (7.7-35.3)	27.4 (22.1-32.0)
Qatar	16.1 (7.8-23.3)	15.6 (12.5-18.7)
Romania	27.5 (11.3-39.8)	31.1 (25.3-36.1)
Russian Federation	27.0 (13.2-39.0)	29.4 (24.2-34.4)
Rwanda	17.3 (8.0-25.2)	16.1 (13.1-19.0)
Saint Lucia	21.9 (9.6-32.5)	23.2 (18.9-27.4)
Saint Vincent and the Grenadines	22.8 (11.6-32.3)	23.2 (19.0-27.2)
Samoa	28.1 (13.3-40.1)	28.1 (23.2-32.7)
Sao Tome and Principe	25.8 (12.9-37.6)	24.0 (20.1-28.2)
Saudi Arabia	23.1 (9.6-32.6)	23.3 (18.7-27.2)
Senegal	18.2 (8.4-26.0)	18.3 (15.0-21.3)
Serbia	25.4 (11.7-37.9)	29.0 (23.9-34.1)
Seychelles	23.5 (9.5-34.4)	24.4 (19.8-28.6)
Sierra Leone	17.1 (9.7-24.9)	16.9 (14.4-20.0)
Singapore	19.3 (6.4-29.9)	23.3 (18.6-27.7)
Slovakia	28.8 (14.8-39.5)	32.0 (26.7-36.5)
Slovenia	26.6 (12.8-39.3)	30.8 (25.7-36.2)
Solomon Islands	24.6 (11.2-34.8)	24.3 (19.8-28.5)
Somalia	18.3 (7.9-26.5)	18.0 (14.5-21.3)
South Africa	14.9 (6.6-21.1)	15.3 (12.4-17.8)
Korea, Republic of	16.9 (6.4-26.7)	21.4 (17.6-25.2)
South Sudan	15.7 (6.0-22.6)	15.5 (12.3-18.1)
Spain	22.9 (10.4-35.4)	26.3 (22.0-31.2)
Sri Lanka	27.9 (14.4-38.8)	27.4 (22.7-31.7)
Sudan	25.8 (12.8-36.5)	25.9 (21.1-30.4)
Suriname	21.3 (9.2-32.3)	22.3 (18.3-26.4)
Swaziland	16.3 (8.1-22.7)	16.4 (13.5-18.9)
Sweden	27.3 (11.4-40.8)	31.5 (25.8-37.1)
Switzerland	27.2 (12.9-39.6)	31.9 (26.9-36.9)
Syrian Arab Republic	20.9 (10.8-29.5)	20.6 (16.8-24.3)
Taiwan, Province of China	16.0 (6.0-25.1)	18.1 (14.6-21.7)
Tajikistan	29.2 (14.1-41.3)	29.7 (24.2-34.8)
Tanzania, United Republic of	17.2 (7.8-24.7)	16.8 (13.6-19.8)
Thailand	20.8 (5.4-32.3)	24.1 (19.3-28.4)
Bahamas	21.3 (8.5-31.4)	22.5 (17.9-26.7)
Gambia	20.7 (9.7-29.5)	21.3 (17.5-24.8)
Timor-Leste	24.6 (8.8-36.6)	26.1 (21.0-30.7)
Togo	16.5 (7.4-24.6)	16.8 (13.7-20.0)
Tonga	29.3 (14.7-41.6)	29.8 (24.8-34.7)
Trinidad and Tobago	23.3 (11.7-33.1)	22.7 (18.4-26.8)
Tunisia	22.0 (10.5-32.9)	22.6 (18.2-27.1)
Turkey	20.5 (7.9-31.3)	21.9 (17.4-26.2)
Turkmenistan	33.0 (16.6-46.3)	33.3 (27.4-38.9)
Uganda	14.8 (6.5-22.0)	14.5 (11.8-17.3)
Ukraine	28.6 (13.5-40.4)	29.8 (23.9-35.0)
United Arab Emirates	20.0 (8.3-29.1)	20.1 (15.8-23.9)
United Kingdom	25.3 (11.6-37.5)	29.4 (24.6-34.3)
United States	25.8 (11.8-38.7)	28.1 (23.1-33.3)
Uruguay	25.5 (8.7-38.1)	29.6 (23.9-34.7)
Uzbekistan	32.1 (17.7-44.0)	31.4 (26.0-36.6)
Vanuatu	29.0 (11.0-40.9)	29.0 (23.0-33.7)
Venezuela, Bolivarian Republic of	21.2 (9.3-29.9)	21.6 (17.5-25.0)
Viet Nam	19.7 (5.4-30.4)	22.9 (18.2-26.9)
Yemen	25.3 (14.3-35.2)	25.9 (21.8-30.2)

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Zambia	15.6 (7.5-22.4)	15.2 (12.5-17.8)
Zimbabwe	16.1 (8.3-22.2)	16.1 (13.3-18.5)

Abbreviation: PAF, population attributable fraction.

¹ Values were population attributable fractions (95% confidence interval) calculated based on comparison in Alternate Healthy Eating Index between global diet in 2017 and the reference healthy diet modified slightly from the target dietary pattern in the EAT-Lancet Commission Report (9).

² PAFs were calculated as the percentage of preventable total deaths in total deaths, including those due to infection and injury in the denominator.

³ PAFs for total mortality were calculated based on the biological effects (risk ratios) for total deaths (deaths due to injury and infection excluded) from the Nurses' Health Study and the Health Professionals Follow-Up Study.

Supplementary data

Supplemental Table 6. Percentage reductions in deaths as a result of improvements in the Alternate Healthy Eating Index from the current diet to the reference healthy die in men and women aged 25 years or older in 190 countries/ territories in 2017 in the sensitivity analysis using biological effects with further adjustment for body mass index. ¹

	Male	Female	Both sexes
Total deaths ²			
Preventable deaths	6,978,411 (5,768,476 - 8,100,019)	6,155,713 (5,142,120 - 7,100,753)	13,134,124 (10,910,597 - 15,200,773)
PAF (%)	26.2 (21.7, 30.4)	27.4 (22.9, 31.6)	26.8 (22.2, 31.0)
Total deaths ³			
Preventable deaths	6,380,068 (2,919,663 - 9,179,286)	5,595,643 (2,522,637 - 8,067,102)	11,975,711 (5,442,299 - 17,246,388)
PAF (%)	30.1 (13.8, 43.3)	29.6 (13.4, 42.7)	29.9 (13.6, 43.0)
Cause-specific deaths			
Cancer			
Preventable deaths	1,210,648 (548,606 - 1,795,445)	567,139 (104,135 - 982,269)	1,257,752 (632,772 - 1,683,166)
PAF (%)	21.5 (9.7, 31.9)	14.0 (2.6, 24.3)	18.4 (6.7, 28.7)
Coronary heart disease			
Preventable deaths	1,878,810 (1,261,245 - 2,425,734)	1,868,667 (1,240,652 - 2,410,745)	3,747,476 (2,501,897 - 4,836,478)
PAF (%)	32.3 (21.7, 41.8)	36.9 (24.5, 47.5)	34.4 (23.0, 44.5)
Stroke			
Preventable deaths	304,520 (-435,230 - 911,193)	683,834 (204,414 - 1,091,755)	988,354 (-230,817 - 2,002,948)
PAF (%)	9.7 (-13.9, 29.0)	23.1 (6.9, 36.8)	16.2 (-3.8, 32.8)
Respiratory disease			
Preventable deaths	964,393 (544,924 - 1,289,152)	975,823 (592,385 - 1,248,041)	1,940,217 (1,137,309 - 2,537,193)
PAF (%)	45.0 (25.5, 60.2)	56.5 (34.3, 72.2)	50.1 (29.4, 65.6)
Neurodegenerative disease			
Preventable deaths	446,211 (247,771 - 604,154)	93,638 (-301,194 - 426,993)	539,849 (-53,422 - 1,031,147)
PAF (%)	42.0 (23.3, 56.9)	5.2 (-16.7, 23.7)	18.9 (-1.9, 36.0)
Kidney disease			
Preventable deaths	258,156 (-21,509 - 434,609)	276,591 (87 - 433,594)	534,746 (-21,422 - 868,204)
PAF (%)	40.8 (-3.4, 68.7)	49.2 (0.0, 77.1)	44.7 (-1.8, 72.7)
Diabetes			
Preventable deaths	206,265 (126,597 - 275,809)	286,236 (231,689 - 335,270)	492,500 (358,286 - 611,079)
PAF (%)	31.6 (19.4, 42.3)	40.7 (32.9, 47.6)	36.3 (26.4, 45.1)
Digestive system disease			
Preventable deaths	806,709 (448,812 - 1,048,322)	451,042 (183,960 - 634,844)	1,257,752 (632,772 - 1,683,166)
PAF (%)	58.2 (32.4, 75.7)	49.7 (20.3, 70.0)	54.9 (27.6, 73.4)
Injury (assumed)			
Preventable deaths	0	0	0
PAF (%)	0	0	0
Infection (assumed)			
Preventable deaths	0	0	0
PAF (%)	0	0	0
Other causes			
Preventable deaths	304,357 (198,446 - 394,869)	392,673 (266,509 - 503,590)	697,030 (464,955 - 898,459)
PAF (%)	40.2 (26.2, 52.2)	35.7 (24.2, 45.8)	37.5 (25.0, 48.4)

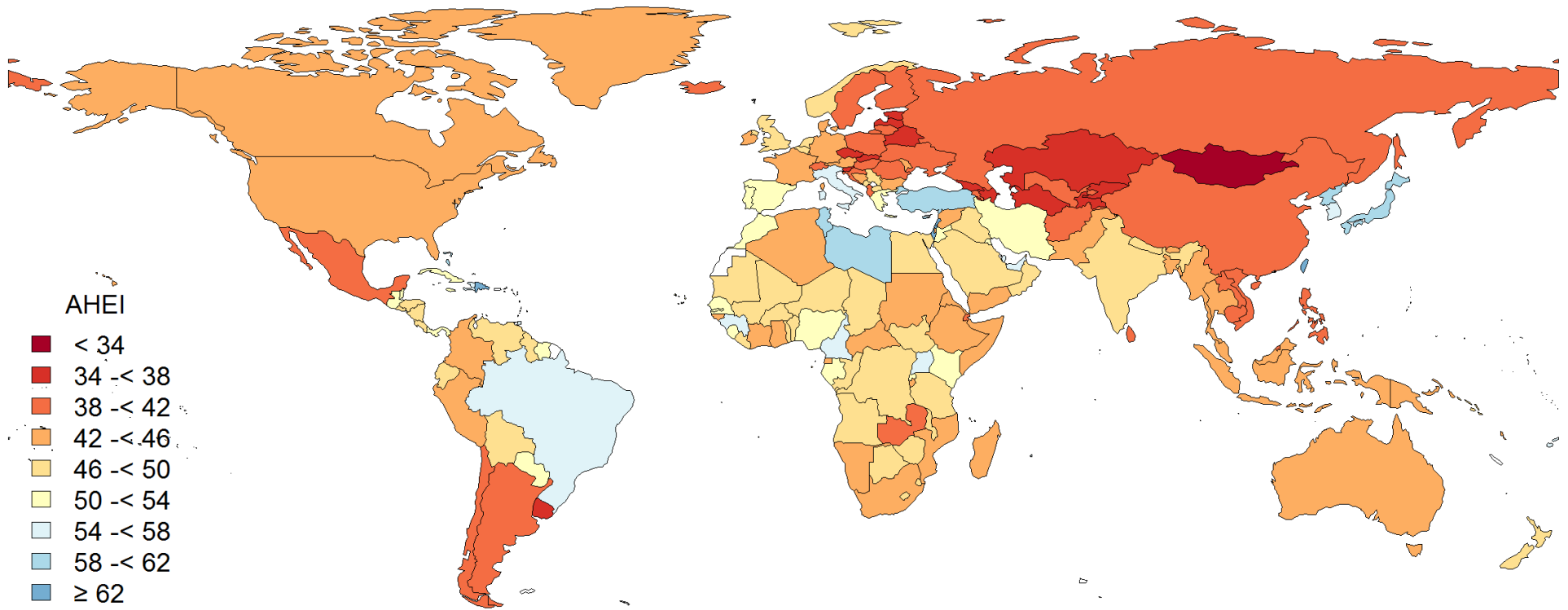
Abbreviation: PAF, population attributable fraction.

¹ Values were population attributable fractions (95% confidence interval) calculated based on comparison in Alternate Healthy Eating Index between global diet in 2017 and the reference healthy diet modified slightly from the target dietary pattern in the EAT-Lancet Commission Report (9).

² Total preventable deaths were calculated by summing up all the preventable cause-specific deaths. PAFs were calculated as the percentage of preventable total deaths in total deaths, including those due to infection and injury in the denominator.

³ PAFs for total mortality were calculated based on the biological effects (risk ratios) for total deaths (deaths due to injury and infection excluded) from the Nurses' Health Study and the Health Professionals Follow-Up Study. Preventable total deaths were calculated by multiplying the total deaths (deaths due to injury and infection excluded) by the PAFs. The final PAFs for total mortality were calculated as the percentage of preventable total deaths in total deaths, including those due to infection and injury in the denominator.

Supplementary Data



Supplemental Figure 1. Geographical distribution of Alternate Healthy Eating Index in men and women aged 25 years or older in 190 countries/ territories in 1990. White areas indicate that dietary data were not available. The Alternate Healthy Eating Index ranged from 0 (non-adherence) to 100 (perfect-adherence).

Supplementary Data

References

1. Bao Y, Bertola ML, Lenart EB, Stampfer MJ, Willett WC, Speizer FE, Chavarro JE. Origin, Methods, and Evolution of the Three Nurses' Health Studies. *American journal of public health*. 2016;106:1573-81.
2. Willett W. Chapter 5: Food Frequency Methods and Chapter 6: Reproducibility and Validity of Food-Frequency Questionnaires. *Nutritional epidemiology* Third ed: Oxford University Press; 2013.
3. HSPH. Harvard University Food Composition Table. [cited 2015 March 8th]; Available from: <https://regepi.bwh.harvard.edu/health/nutrition/>
4. Rose GA, Blackburn H, Gillum R, Prineas R. *Cardiovascular survey methods*: Geneva, Switzerland; WHO; 1982.
5. Walker A, Robins M, Weinfeld F. The National Survey of Stroke. Clinical findings. *Stroke; a journal of cerebral circulation*. 1981;12:113.
6. Group NDD. Classification and diagnosis of diabetes mellitus and other categories of glucose intolerance. *Diabetes*. 1979;28:1039-57.
7. Gavin III JR, Alberti K, Davidson MB, DeFronzo RA. Report of the expert committee on the diagnosis and classification of diabetes mellitus. *Diabetes Care*. 1997;20:1183.
8. Rich-Edwards JW, Corsano KA, Stampfer MJ. Test of the national death index and equifax nationwide death search. *American Journal of Epidemiology*. 1994;140:1016-9.
9. The EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems. *Our Food in the Anthropocene*. *Lancet*. 2018.