

ReadMe for WHI's Alternative Healthy Eating Index (AHEI)-2010 component and total scores computed from the food-frequency questionnaire (FFQ)

Data.

The tab delimited file, *f60_ahai_2010_inv.dat*, includes participant common ID (*ID*), visit year (*F60VY*; 0 == baseline; 1 to 10 == annual visits), exclusion consideration status (*STATUS*; 1 == energy < 600 kcal consider excluding; 2 == energy > 5000 kcal consider excluding; 3 == energy intake is plausible), AHEI-2010 component scores and total score (*AHEI_2010*; sum of its eleven components ranges from 0 to 110 best). Higher scores indicate closer conformance to eating patterns purported to reduce chronic disease (1). AHEI scores, computed from FFQs completed closest to a participant's expected annual visit ([WHI Data Preparation and Use](#)), corresponding FFQ data ([MPEDs](#), [nutrients](#) or [items](#)) and scoring algorithm are described below, and apply only to [FFQs](#) collected during the [WHI study phase \(1993 to 2005\)](#). Available SAS-code and references, listed below, provide further details and motivation.

Description of AHEI-2010 scores.

Component	AHEI-2010 scores	MPED/FFQ variables	Conversion factor (cup or ounce-equivalents per serving)¹	Standard: max score (10)²	Standard: min score (0)²
Vegetables	<i>AHEI1_VEG</i>	<i>V_TOTAL - V_POTATO</i>	x 2 (0.5 cup eqv/svg)	≥5 svg/d	0
Fruit	<i>AHEI2_FRUIT</i>	<i>F_NJ_TOTAL</i>	x 2 (0.5 cup eqv/svg)	≥4 svg/d	0
Whole grains ³	<i>AHEI3_WGRAINS</i>	<i>G_WHL</i>	x 1 (1 oz eqv/svg)	75 g/d	0
Nuts and legumes	<i>AHEI4_NUTS</i>	<i>M_SOYESM + M_NUTSD + (LEGUMES x 4)</i>	x 0.5 (2 oz eqv/svg)	≥1 svg/d	0
Long-chain (n-3) fats (EPA + DHA) ⁴	<i>AHEI5_EPA_DHA</i>	<i>F60PF205 + F60PF226</i>	NA	250 mg/d	0
PUFA (excludes EPA and DHA) ⁵	<i>AHEI6_PUFA</i>	<i>F60PFA - (F60PF205 + F60PF226)</i>	NA	≥10% of total energy	≤2% of total energy
Sugar sweetened beverages & juice ⁶	<i>AHEI7_SUGAR</i>	<i>POP + OJ + KOOLAID + FRTJUICE</i>	NA	0	≥1 svg
Red/processed meat	<i>AHEI8_REDMEAT</i>	<i>M_MEAT + M_FRANK</i>	x 0.25 (4 oz eqv/svg)	0	≥1.5 svg
Trans-fat ⁵	<i>AHEI9_TFA</i>	<i>F60TF181 + F60TF182</i>	NA	≤0.5%	≥4 %
Sodium ^{7,8}	<i>AHEI10_SODIUM</i>	<i>F60SODIUM</i>	NA	Lowest decile	Highest decile
Alcohol	<i>AHEI11_ALCOHOL</i>	<i>A_BEV</i>	NA	0.5-1.5 svg	≥2.5 svg; Non-drinkers

¹ Multiplicative factor (number of cup or ounce-equivalents *per serving*) used to convert units of MPED/FFQ variables to servings; derived from Table 1 of Chiuve (1) and Figure 1-1 of the 2015-2020 Dietary Guidelines (2); an HTML version of Figure 1-1 is available, [Figure-1-1-cup-and-ounce-equivalents](#) .

² Standards for maximum and minimum scores. Intakes between the minimum and maximum standards are scored proportionately except for sodium⁷.

³ Standard for max score is 5 svg or 75 g dry.

⁴ Multiply by 1000 to convert to mg.

⁵ Multiply by (9/F60ENRGY x 100) to convert to percentage of total energy.

⁶ Multiply POP by 1.5 and the remaining types of beverages by 0.75 to convert 12oz and 6oz medium FFQ servings to 8 oz servings, respectively.

⁷ Approximate deciles at enrollment for the CT + OS were used. Specifically, participants were divided into 11 equal groups according to the distribution of estimated sodium intake and assigned corresponding scores of 0–10 (higher score for less sodium consumed); the ten cutpoints were 1337.54, 1681.10, 1942.51, 2174.21, 2408.25, 2646.27, 2910.73, 3224.10, 3637.10 and 4328.23 (mg/d).

⁸ The sodium nutrient data is reliant on the WHI FFQ, which did not target dietary sodium assessment and did not assess all sources of sodium. If interested in sodium as a primary exposure, the FFQ sodium should be biomarker-calibrated (3). However, calibrating within a dietary quality index does not apply.

SAS-code.

For additional information, please refer to the SAS program, *f60_ahai_2010_pseudoCode_inv.sas*, that processed FFQ-derived MPED data and computed AHEI-2010 scores.

References.

- (1) Chiuve, S.E., Fung, T.T., Rimm, E.B., Hu, F.B., McCullough, M.L., Wang, M., Stampfer, M.J. and Willett, W.C., 2012. Alternative Dietary Indices Both Strongly Predict Risk of Chronic Disease–. *The Journal of nutrition*, 142(6), pp.1009-1018.
- (2) US Department of Health and Human Services, 2017. Dietary guidelines for Americans 2015-2020 ([pdf of 2015-2020 guidelines](#)). Skyhorse Publishing Inc.
- (3) Huang, Y., Van Horn, L., Tinker, L.F., Neuhaus, M.L., Carbone, L., Mossavar-Rahmani, Y., Thomas, F. and Prentice, R.L., 2014. Measurement error corrected sodium and potassium intake estimation using 24-hour urinary excretion. *Hypertension*, 63(2), pp.238-244.