

hei: Calculate Healthy Eating Index (HEI) Scores

Tim Folsom¹ and VP Nagraj¹

1 University of Virginia

DOI: 10.21105/joss.00417

Software

■ Review 🗗

■ Repository 🗗

■ Archive ♂

Licence

Authors of JOSS papers retain copyright and release the work under a Creative Commons Attribution 4.0 International License (CC-BY).

Summary

The Health Eating Index (HEI) is a dietary metric originally designed by the United States Department of Agriculture (USDA) and National Cancer Institute (NCI) to gauge adherence to the United States Dietary Guidelines (Guenther et al. 2014). The NCI distributes SAS macros for calculating individual HEI scores. hei is a package that implements the HEI scoring algorithms in R(R Core Team 2016), allowing users without SAS licenses to perform these calculations for individuals across several years of National Health and Nutrition Examination Survey (NHANES) studies. The package has been unit tested against HEI scores computed using the SAS functions to validate its performance. Internally, hei depends on the nhanesA package (Endres 2016) to retrieve necessary data for scoring. HEI scores can be widely applied in the fields of epidemiology, public health, nutrition and beyond (Pieroth et al. 2017) (Spankovich et al. 2017) (Yoshida et al. 2017), particularly when combined with additional publicly available demographic and behavioral NHANES datasets.

References

Endres, Christopher. 2016. *NhanesA: NHANES Data Retrieval*. https://CRAN. R-project.org/package=nhanesA.

Guenther, Patricia M., Sharon I. Kirkpatrick, Jill Reedy, Susan M. Krebs-Smith, Dennis W. Buckman, Kevin W. Dodd, Kellie O. Casavale, and Raymond J. Carroll. 2014. "Role of Age and Acculturation in Diet Quality Among Mexican Americans - Findings from the National Health and Nutrition Examination Survey, 1999-2012." *Journal of Nutrition* 144 (3): 399–407. doi:10.3945/jn.113.183079.

Pieroth, Renee, Diane Rigassio Radler, Patricia M.Guenther, Philip J.Brewster, and Andrea Marcus. 2017. "The Relationship Between Social Support and Diet Quality in Middle-Aged and Older Adults in the United States." *Journal of the Academy of Nutrition and Dietetics* 117 (8): 1272–8. doi:10.1016/j.jand.2017.03.018.

R Core Team. 2016. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Spankovich, Christopher, Charles Bishop, Mary Frances Johnson, Alex Elkins, Dan Su, Edward Lobarinas, and Colleen G. Le Prell. 2017. "Relationship Between Dietary Quality, Tinnitus and Hearing Level: Data from the National Health and Nutrition Examination Survey, 1999-2002." *International Journal of Audiology* 56 (10): 716–22. doi:10.1080/14992027.2017.1331049.

Yoshida, Yilin, Richard Scribner, Liwei Chen, Stephanie Broyles, Stephen Phillippi, and Tung-Sung Tseng. 2017. "Role of Age and Acculturation in Diet Quality Among Mexican Americans - Findings from the National Health and Nutrition Examination Survey, 1999-2012." Preventing Chronic Disease 14. doi:10.5888/pcd14.170004.