All data used in this analysis are publicly available from the following sources: (1) individual dietary intake data measured by two -24 hour dietary recalls from nationally representative sample of US population, used for generating stratum-specific distribution of dietary intakes of US population by age, sex, race (NHANES 2013-2014, 2015-2016, 2017-2018, data downloads: <https://wwwn.cdc.gov/nchs/nhanes/default.aspx>. ); (2) Population demographic data (proportion of population by age, sex, race), stratum-specific overweight -prevalence, and high blood pressure-prevalence distribution data (NHANES 2013-2014, 2015-2016, 2017-2018, data downloads: <https://wwwn.cdc.gov/nchs/nhanes/default.aspx>. ); (3) stratum-specific crude rate of death and standard error from ischemic heart disease (IHD), stroke, and diabetes (CDC Wonder underlying cause of death data, data downloads: <https://wonder.cdc.gov/ucd-icd10.html>.); (4) stratum-specific crude rate of death and standard error from 13 types of cancers (National Program of Cancer Registries and Surveillance, Epidemiology, and End Results SEER\*Stat Database, data downloads: <https://seer.cancer.gov/data-software/> ); (5) direct, age-adjusted effects of added sugar and whole grains on IHD, stroke, diabetes, and sodium on stroke, ref.1 ; (6) direct effect of whole grain on colorectal cancer, ref. 2 (7) linear, BMI-stratified effects of dietary factors on weight gain: ref.3 (8) direct, proportional, age-adjusted effects of BMI on IHD, stroke, diabetes: ref.1 (9) optimal intake levels for dietary factors: ref.4, 5  (10) direct effect of BMI on 13 types of cancers, ref. 6 (11) direct effect of sodium on systolic blood pressure, ref. 5, 7; (12) direct effect of systolic blood pressure on stroke. 5

Custom code was developed using SAS 9.4, with two-tailed α = 0.05, for cleaning, merging and formatting of data inputs on dietary intake distribution, prevalence of overweight and high blood pressure, by age, sex, race. Codes for calculation of age-adjusted relative risks; comparative risk assessment modeling, including PAF calculations for each dietary factor separately and joint PAF calculations for all dietary factors, summary aggregation of stratum-level PAF estimates, were developed using R (version 4.0.0). Given their computational size and complexity, all comparative risk assessment modeling codes were run on the Tufts University High Performance Computing Cluster (<https://it.tufts.edu/high-performance-computing>), supported by the National Science Foundation (grant 2018149, <https://www.nsf.gov/awardsearch/showAward?AWD_ID=2018149&HistoricalAwards=false>) under active development by Research Technology (<https://it.tufts.edu/researchtechnology.tufts.edu>), Tufts Technology Services. The statistical code used for this analysis is not publicly available. The authors can make the statistical code available to researchers upon request. Eligibility criteria for such requests include: utilization for nonprofit purposes only, for appropriate scientific use based on a robust research plan and by investigators from an academic institution. The authors will nominate co-authors to be included on any papers generated using this or adapted statistical code. If you are interested in requesting access to the statistical code, please plan to submit a proposed research plan and complete a data-sharing agreement (available upon request).

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