**Supplementary Table 1**. Components of the Dietary Guideline Index according to the Dietary Guidelines of Australia(24).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dietary Guideline | Indicator and description | Criteria for maximum score\* | Criteria for minimum score (0) | Maximum Score |
| Guidelines for adequate intake | | | | |
| Enjoy a wide variety of nutritious foods | Food variety†: proportion of food from each of the 5 core food groups eaten at least one serve per week | 100% | 0% | 10 |
| Plenty of vegetables | Total vegetable intake: servings of vegetables per day | 19-50 y: M ≥ 6, F ≥ 5  51-70 y: M ≥ 5.5, F ≥ 5  >70 y: M ≥ 5, F ≥ 5 | 0 | 10 |
| Fruit | Total fruit intake: servings of fruit per day | ≥ 2 | 0 | 10 |
| Grain (cereal) foods | Total cereal intake: servings of grains per day  Wholegrain or high fiber cereals: proportion of wholegrain bread to white bread intake per day | 19-50 y: M ≥ 6, F ≥ 6  51-70 y: M ≥ 6, F ≥ 4  >70 y: M ≥ 4.5, F ≥ 3  ≥ 50% wholemeal bread | 0  0% | 5  5% |
| Lean meat and poultry, fish, eggs, nuts and seeds, and legumes/beans | Total lean meat and alternative: servings per day  Lean meat: proportion of lean meats and alternatives to total meat and alternatives per day | 19-50 y: M ≥ 3, F ≥ 2.5  51-70 y: M ≥ 2.5, F ≥ 2  >70 y: M ≥ 2.5, F ≥ 2  100% | 0  0% | 5  5 |
| Dairy  Milk, yoghurt, cheese and/or their alternativesǂ | Total dairy and alternative: servings per day | 19-50 y: M ≥ 2.5, F ≥ 2.5  51-70 y: M ≥ 2.5, F ≥ 4  >70 y: M ≥ 3.5, F ≥ 4 | 0 | 10 |
| Guidelines to limit or moderate intake | | | | |
| Limit intake of foods containing saturated fat, added salt, added sugars and alcohol | Limit discretionary foods | M ≤ 3; F ≤ 2.5 | M > 3; F > 2.5 | 10 |
| Limit intake of foods high in saturated fat | Trim meat: proportion of trimmed meat to total meat | ≥ 50% | 0% | 5 |
|  | Choose reduced-fat milk: proportion of reduced-fat milk to total milk intake per day | ≥ 50% reduced-fat milk | 0% | 5 |
| Small allowance of unsaturated oils, fats or spreads | Unsaturated spreads and oils: servings per day | 19-50 y: M ≤ 4, F ≤ 2  51-70 y: M ≤ 4, F ≤ 2  >70 y: M ≤ 2, F ≤ 2 | M > 4; F > 2 | 10 |
| Limit intake of foods and drinks containing added sugars§ | Limit extra sugar: servings per day | M ≤ 1.5; F ≤ 1.25 | M > 1.5; F > 1.25 | 10 |
| If you choose to drink alcohol, limit intake | Limit alcohol: servings per day | ≤ 2 | > 2 | 10 |

\*Criteria for maximum scores were derived from the Australian Dietary Guidelines

†Food variety was measured and scored using a similar method to the Recommended Food Score

ǂChoosing reduced fat dairy is captured in the “Limit intake of foods high in saturated fat” component

§Since added sugar intake is not recommended there are no cut-off values for number or recommended serves, instead half of the maximum discretionary food cut-off were used consistent with the original DGI

**Supplementary Table 2**. Components of the Mediterranean-Dietary Approaches to Stop Hypertension Diet (MIND)

|  |  |  |  |
| --- | --- | --- | --- |
| **MIND component** | **Score (range: 0-13)** | | |
| **0** | **0.5** | **1** |
| 1. Green leafy vegetables | 2 servings/week | 2 to 6 servings/week | 6 servings/week |
| 2. Other vegetables | 5 servings/week | 5 to 7 servings/week | 7 servings/week |
| 3. Berries | 1 serving/week | 1-2 servings/week | 2 servings/week |
| 4. Nuts | 1 serving/month | 1 serving/month to 5 servings/week | 5 servings/week |
| 5. Cheese | 7 servings/week | 1 to 7 servings/week | 1 serving/week |
| 6. Wholegrains | 1 serving/day | 1 to 3 servings/day | 3 servings/day |
| 7. Fish (not fried) | 1-2 servings/month | 1-2 servings/month | 1-2 servings/month |
| 8. Beans | 1 serving/week | 1-2 servings/week | 3 servings/week |
| 9. Poultry (not fried) | 1 serving/week | 1 serving/week | 3 servings/week |
| 10. Red meat and products | 6 servings/week | 4-6 servings/week | 4 servings/week |
| 11. Fast fried foods | 4 servings/week | 1 to 4 servings/week | 1 serving/week |
| 12. Pastries and sweets | 7 servings/week | 5 to 7 servings/week | 5 servings/week |
| 13. Wine | 1 glass/day or never | 1 glass/month to 6 glasses/week | 1 glass/day |

Olive oil and Butter/ margarine were omitted from scoring as they were not captured as separate items in the FFQ

**Supplementary Table 3**. Food parameters included in the Dietary Inflammatory Index.

|  |  |
| --- | --- |
| Food parameter | Available |
| Alcohol (g) | Yes |
| Vitamin B12 (µg) | No |
| Vitamin B6 (µg) | No |
| Β-Carotene (µg) | Yes |
| Caffeine (mg) | No |
| Carbohydrate (g) | Yes |
| Cholesterol (mg) | Yes |
| Energy (kcal) | Yes |
| Eugenol (mg) | No |
| Total fat (g) | Yes |
| Fibre (g) | Yes |
| Folic Acid (µg) (as folate) | Yes |
| Garlic | Yes |
| Ginger | No |
| Iron (mg) | Yes |
| Magnesium (mg) | Yes |
| Mono-unsaturated FA (g) | Yes |
| Niacin (mg) | Yes |
| Omega-3 FA (g) | Yes |
| Omega-6 FA (g) | Yes |
| Onion | Yes |
| Protein (g) | Yes |
| Poly-unsaturated FA (g) | Yes |
| Riboflavin (mg) | Yes |
| Saffron | No |
| Saturated fat (g) | Yes |
| Selenium (µg) | No |
| Thiamin (mg) | Yes |
| Trans FA (mg) | Yes |
| Tumeric | No |
| Vitamin A (RE) | Yes |
| Vitamin C (mg) | Yes |
| Vitamin D | No |
| Vitamin E (mg) | Yes |
| Zinc (mg) | Yes |
| Green/black tea (g) | No |
| Flavan-3-ol (mg) | No |
| Flavones (mg) | No |
| Flavonols (mg) | No |
| Flavonones (mg) | No |
| Anthocyanidins (mg) | No |
| Isoflavones (mg) | No |
| Pepper (g) | No |
| Thyme/oregano (mg) | No |
| Rosemary (mg) | No |

**Supplementary Table 4**. Descriptive baseline characteristics of participants from the AusDiab study.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Included (n 2844) | Excluded (n 8401) | *P*\* |
|  |  |  |  |
| Age, mean (SD) | 47.3 (9.7) | 53.0 (15.5) | <0.001 |
| Women, n (%) | 1531 (53.8) | 4668 (55.6) |  |
| Men, n (%) | 1313 (46.2) | 3735 (44.4) | 0.11 |
| Energy, (kJ/day) | 8316.0 (3181.9) | 7897.7 (3653.9) | <0.001 |
| Body mass index (kg/m2), mean (SD) | 26.5 (4.7) | 27.2 (5.1) | <0.001 |
| Physical activity (mins per week), mean (SD) | 290.2 (333.5) | 265.7 (329.8) | 0.99 |
| Smoking, n (%) |  |  |  |
| Current smoker | 268 (9.4%) | 1382 (16.6%) |  |
| Non-smoker | 2576 (90.6%) | 6953 (83.4%) | <0.001 |
| Income (per week), n (%) |  |  |  |
| $0-199 | 705 (24.8%) | 1116 (13.7%) |  |
| $200-399 | 1020 (35.9%) | 2030 (24.8%) |  |
| $400-599 | 402 (14.1%) | 1068 (13.1%) |  |
| $600-799 | 360 (12.7%) | 1376 (16.8%) |  |
| $800-1,499 | 260 (9.1%) | 1745 (21.4%) |  |
| $1,500 or more | 97 (3.4%) | 838 (10.3%) | <0.001 |
| Diabetes, n (%) |  |  |  |
| Yes | 130 (4.6%) | 98 (3.4%) |  |
| No | 2714 (90.6%) | 2746 (96.6%) | <0.001 |
| Cardiovascular disease, n (%) |  |  |  |
| Yes | 82 (2.9%) | 905 (11.0%) |  |
| No | 2762 (97.1%) | 7319 (89.0%) | <0.001 |
|  |  |  |  |

\* Independent sample *t*–tests for continuous variables and chi-squared tests for categorical variables. *P*<0.05 was considered statistically significant.

**Supplemental Table.** STROBE-nut: An extension of the STROBE statement for nutritional epidemiology

| **Item** | **Item nr** | **STROBE recommendations** | **Extension for Nutritional Epidemiology studies (STROBE-nut)** | **Reported on page #** |
| --- | --- | --- | --- | --- |
| **Title and**  **abstract** | 1 | (a) Indicate the study’s design with a commonly used term in the title or the abstract.  (b) Provide in the abstract an informative and balanced summary of what was done and what was found. | **nut-1** State the dietary/nutritional assessment method(s) used in the title, abstract, or keywords. | 1  2 |
| **Introduction** |  |  |  |  |
| Background rationale | 2 | Explain the scientific background and rationale for the investigation being reported. |  | 3-4 |
| Objectives | 3 | State specific objectives, including any pre-specified hypotheses. |  | 4 |
| **Methods** |  |  |  |  |
| Study design | 4 | Present key elements of study design early in the paper. |  | 5 |
| Settings | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection. | **nut-5** Describe any characteristics of the study settings that might affect the dietary intake or nutritional status of the participants, if applicable. | 5 |
| Participants | 6 | a) Cohort study—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up.  Case-control study—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls.  Cross-sectional study—Give the eligibility criteria, and the sources and methods of selection of participants.  (b) Cohort study—For matched studies, give matching criteria and number of exposed and unexposed.  Case-control study—For matched studies, give matching criteria and the number of controls per case. | **nut-6** Report particular dietary, physiological or nutritional characteristics that were considered when selecting the target population. | 5  Not applicable |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable. | **nut-7.1** Clearly define foods, food groups, nutrients, or other food components.  **nut-7.2** When using dietary patterns or indices, describe the methods to obtain them and their nutritional properties. | 6-9 |
| Data sources - measurements | 8 | For each variable of interest, give sources of data and details of methods of assessment (measurement).Describe comparability of assessment methods if there is more than one group. | **nut-8.1** Describe the dietary assessment method(s), e.g., portion size estimation, number of days and items recorded, how it was developed and administered, and how quality was assured. Report if and how supplement intake was assessed.  **nut-8.2** Describe and justify food composition data used. Explain the procedure to match food composition with consumption data. Describe the use of conversion factors, if applicable.  **nut-8.3** Describe the nutrient requirements, recommendations, or dietary guidelines and the evaluation approach usedto compare intake with the dietary reference values, if applicable.  **nut-8.4** When using nutritional biomarkers, additionally use the STROBE Extension for Molecular Epidemiology (STROBE-ME). Report the type of biomarkers used and their usefulness as dietary exposure markers.  **nut-8.5** Describe the assessment of nondietary data (e.g., nutritional status and influencing factors) and timing of the assessment of these variables in relation to dietary assessment.  **nut-8.6** Report on the validity of the dietary or nutritional assessment methods and any internal or external validation used in the study, if applicable. | 6-9 |
| Bias | 9 | Describe any efforts to address potential sources of bias. | **nut-9** Report how bias in dietary or nutritional assessment was addressed, e.g., misreporting, changes in habits as a result of being measured, or data imputation from other sources | Not applicable |
| Study Size | 10 | Explain how the study size was arrived at. |  | 12 |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why. | **nut-11** Explain categorization of dietary/nutritional data (e.g., use of N-tiles and handling of nonconsumers) and the choice of reference category, if applicable. | 10-11 |
| Statistical  Methods | 12 | (a) Describe all statistical methods, including those used to control for confounding  (b) Describe any methods used to examine subgroups and interactions.  (c) Explain how missing data were addressed.  (d) Cohort study—If applicable, explain how loss to follow-up was addressed.  Case-control study—If applicable, explain how matching of cases and controls was addressed.  Cross-sectional study—If applicable, describe analytical methods taking account of sampling strategy.  (e) Describe any sensitivity analyses. | **nut-12.1** Describe any statistical method used to combine dietary or nutritional data, if applicable.  **nut-12.2** Describe and justify the method for energy adjustments, intake modeling, and use of weighting factors, if applicable.  **nut-12.3** Report any adjustments for measurement error, i.e,. from a validity or calibration study. | 10-11  Not applicable  Not applicable |
| **Results** |  |  |  |  |
| Participants | 13 | (a) Report the numbers of individuals at each stage of the study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed.  (b) Give reasons for non-participation at each stage.  (c) Consider use of a flow diagram. | **nut-13** Report the number of individuals excluded based on missing, incomplete or implausible dietary/nutritional data. | 12 and 21 |
| Descriptive data | 14 | (a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders  (b) Indicate the number of participants with missing data for each variable of interest  (c) Cohort study—Summarize follow-up time (e.g., average and total amount) | **nut-14** Give the distribution of participant characteristics across the exposure variables if applicable. Specify if food consumption of total population or consumers only were used to obtain results. | 12 and 23-25  21  12 |
| Outcome data | 15 | Cohort study—Report numbers of outcome events or summary measures over time.  Case-control study—Report numbers in each exposure category, or summary measures of exposure.  Cross-sectional study—Report numbers of outcome events or summary measures. |  | 13-14, 27 |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval).  Make clear which confounders were adjusted for and why they were included.  (b) Report category boundaries when continuous variables were categorized.  (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period. | **nut-16** Specify if nutrient intakes are reported with or without inclusion of dietary supplement intake, if applicable. | 13-14, 27 |
| Other analyses | 17 | Report other analyses done—e.g., analyses of subgroups and interactions and sensitivity analyses. | **nut-17** Report any sensitivity analysis (e.g., exclusion of misreporters or outliers) and data imputation, if applicable. | 34-35 |
| **Discussion** |  |  |  |  |
| Key results | 18 | Summarize key results with reference to study objectives. |  | 14 |
| Limitation | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias. | **nut-19** Describe the main limitations of the data sources and assessment methods used and implications for the interpretation of the findings. | 17 |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence. | **nut-20** Report the nutritional relevance of the findings, given the complexity of diet or nutrition as an exposure. | 14-16 |
| Generalizability | 21 | Discuss the generalizability (external validity) of the study results. |  | 17 |
| **Other information** |  |  |  |  |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based. |  | 18-19 |
| *Ethics* |  |  | **nut-22.1** Describe the procedure for consent and study approval from ethics committee(s). | 5 |
| *Supplementary material* |  |  | **nut-22.2** Provide data collection tools and data as online material or explain how they can be accessed. | \* |

\* The data that support the findings of this study are available from Australian Diabetes, Obesity & Lifestyle Study, but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available.