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

Lachat C et al. (2016) STrengthening the Reporting of OBservational studies in Epidemiology – Nutritional Epidemiology (STROBE-nut): an extension of the STROBE statement. Plos Medicine 13(6) <http://dx.doi.org/10.1371/journal.pmed.1002036> [pdf](http://journals.plos.org/plosmedicine/article/asset?id=10.1371%2Fjournal.pmed.1002036.PDF) or [online](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002036) version.

**Müller et al.; Bio or not to Bio? Comprehensive assessment of organic food consumption in Switzerland: Results from the Swiss National Nutrition Survey *menuCH*.**

| **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.  The abstract indicates that this is a cross-sectional study.  (b) Provide in the abstract an informative and balanced summary of what was done and what was found.  Yes. | **nut-1** State the dietary/nutritional assessment method(s) used in the title, abstract, or keywords.  24-hour dietary recalls is mentioned in the abstract and is a keyword. | 1 |
| **Introduction** |  |  |  |  |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported.  We explain the scientific background and reference to previous studies in the first paragraphs of the introduction. |  | 2/3 |
| Objectives | 3 | State specific objectives, including any pre-specified hypotheses.  We state the objective of the study in the last paragraph of the introduction. |  | 3 |
| **Methods** |  |  |  |  |
| Study design | 4 | Present key elements of study design early in the paper.  We give information about the study design in the first subsection of the materials and methods section (“Study design and setting”). |  | 4 |
| Settings | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection.  Information about recruitment and data collection is described in the first subsection of the materials and methods section (“Study design and Setting”). Further information about outcome and explanatory variables is given in the materials and methods subsections “Dietary assessment”, “Assessment of organic food”, “Assessment of diet quality” and “Assessment of sociodemographic, anthropometric, and lifestyle factors”. | **nut-5** Describe any characteristics of the study settings that might affect the dietary intake or nutritional status of the participants, if applicable.  Some considerations about dietary assessment are presented in the discussion subsection “Limitations”. | 4-5, 13 |
| Participants | 6 | a) Cohort study—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up.  NA  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.  NA  Cross-sectional study—Give the eligibility criteria, and the sources and methods of selection of participants.  Information is available in the materials and methods subsection “Study design and Setting”. Additionally, we referred to a previously published paper for further details (Chatelan et al. 2017).  (b) Cohort study—For matched studies, give matching criteria and number of exposed and unexposed.  NA  Case-control study—For matched studies, give matching criteria and the number of controls per case.  NA | **nut-6** Report particular dietary, physiological or nutritional characteristics that were considered when selecting the target population.  The population was selected from a random stratified sample in order to be representative of the adult Swiss population. No particular dietary characteristics were therefore taken into account. | 4 |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.  Classification of exposure, outcomes and covariates is given in the materials and methods subsections “Assessment of organic food”, “Assessment of diet quality”, “Assessment of sociodemographic, anthropometric, and lifestyle factors” and “Statistical Methods”. | **nut-7.1** Clearly define foods, food groups, nutrients, or other food components.  Detailed information about foods and beverages included in the 18 food categories are given in Table S2, supplementary materials.  **nut-7.2** When using dietary patterns or indices, describe the methods to obtain them and their nutritional properties.  A short description of the used Alternate Healthy Eating Index (AHEI) in order to assess diet quality is given in the materials and methods subsection “Assessment of diet quality”. Additionally, we referred to a previously published paper for further details (Pestoni et al. 2019). | 5-6/29-30 |
| 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.  The methods of assessment of the variables of interest are reported in the materials and methods subsections describing the variables (“Dietary assessment”, “Assessment of organic food”, “Assessment of diet quality”, Assessment of sociodemographic, anthropometric, and lifestyle factors”). | **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.  This information is presented in the materials and methods subsection “Dietary assessment”.  **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.  This information is presented in the materials and methods subsection “Dietary assessment”.  **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.  NA  **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.  NA  **nut-8.5** Describe the assessment of non-dietary data (e.g., nutritional status and influencing factors) and timing of the assessment of these variables in relation to dietary assessment.  NA  **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.  Details are given in the materials and methods subsection “Dietary assessment” and in the section discussion, third paragraph and subsection “Limitations”. | 4-5/9/13 |
| Bias | 9 | Describe any efforts to address potential sources of bias.  Information is given in the materials and methods subsections “Weighting strategy” and “Statistical Methods”. Further details are presented in the section discussion, third paragraph and subsection “Limitations”. | **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  Dietary assessment data were cleaned and screened for inconsistency in the primary study (materials and methods subsection “Dietary assessment”). We also refer to a previous published paper for more details (Chatelan et al. 2017). | 5-6/9/13 |
| Study Size | 10 | Explain how the study size was arrived at.  The study size depends on the national nutrition survey menuCH. Details are given in the materials and methods subsection “Study design and Setting”. |  | 4 |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why.  Details are given in the materials and methods subsections “Assessment of organic food”, “Assessment of diet quality”, “Assessment of sociodemographic, anthropometric, and lifestyle factors”. | **nut-11** Explain categorization of dietary/nutritional data (e.g., use of N-tiles and handling of non-consumers) and the choice of reference category, if applicable.  Information is given in the materials and methods subsection “Assessment of diet quality”. | 5-6 |
| Statistical  Methods | 12 | (a) Describe all statistical methods, including those used to control for confounding  Information is presented in the materials and methods subsection “Statistical Methods”. Further details about the categorization of covariates used as confounding factors is given in the materials and methods subsection “Assessment of sociodemographic, anthropometric, and lifestyle factors”. Finally, details are also provided in Table 3 and Table S3 of the supplementary materials.  (b) Describe any methods used to examine subgroups and interactions.  Information is given in the materials and methods subsection “Statistical Methods”.  (c) Explain how missing data were addressed.  Information about missing data is given in the materials and methods subsection “Statistical Methods”, second paragraph.  (d) Cohort study—If applicable, explain how loss to follow-up was addressed.  NA  Case-control study—If applicable, explain how matching of cases and controls was addressed.  NA  Cross-sectional study—If applicable, describe analytical methods taking account of sampling strategy.  We provide information about the weighting strategy applied in this study in the materials and methods subsection “Weighting strategy”.  (e) Describe any sensitivity analyses.  We provide information about sensitivity analyses in the materials and methods subsections “Statistical Methods” and in the results subsections “Mean Amount and Number of organic food” and “Organic food consumption by food categories”. | **nut-12.1** Describe any statistical method used to combine dietary or nutritional data, if applicable.  NA  **nut-12.2** Describe and justify the method for energy adjustments, intake modeling, and use of weighting factors, if applicable.  Information is given in the materials and methods subsection “Statistical Methods” and in Table 2A, 2B, 2B.  **nut-12.3** Report any adjustments for measurement error, i.e,. from a validity or calibration study.  NA | 6-7/17-21/ 31-32 |
| **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.  Information is given in the materials and methods subsection “Study design and Setting” and in the results section. We also refer to a previously published paper for further details (Chatelan et al. 2017).  (b) Give reasons for non-participation at each stage.  Information is given in the materials and methods subsection “Study design and Setting”. A participant flowchart was previously published (Chatelan et al. 2017).  (c) Consider use of a flow diagram.  A participant flowchart was previously published (Chatelan et al. 2017). | **nut-13** Report the number of individuals excluded based on missing, incomplete or implausible dietary/nutritional data.  We only included participants with complete dietary assessment (see materials and methods subsection “Study design and Setting”). | 4/7 |
| Descriptive data | 14 | (a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders  Details are given in the results section and in Table 1  (b) Indicate the number of participants with missing data for each variable of interest  Information about missing data is given in Table 1.  (c) Cohort study—Summarize follow-up time (e.g., average and total amount)  NA | **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.  The participant characteristics are presented in the results section and in Table 1. | 7-8/15 |
| Outcome data | 15 | Cohort study—Report numbers of outcome events or summary measures over time.  NA  Case-control study—Report numbers in each exposure category, or summary measures of exposure.  NA  Cross-sectional study—Report numbers of outcome events or summary measures.  Numbers of outcome events is given in the results section and in Table 1. |  | 7-8/15 |
| 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.  Confounder-adjusted estimates and 95% confidence intervals are presented in the results section, in Table 3, and in Table S3 of the supplementary materials. Details about confounders are given in the materials and methods subsection “Assessment of sociodemographic, anthropometric, and lifestyle factors”, “Statistical Methods” and in the Tables.  (b) Report category boundaries when continuous variables were categorized.  Boundaries of continuous variables were mentioned in the materials and methods subsection “Assessment of diet quality” and “Assessment of sociodemographic, anthropometric, and lifestyle factors” and in Table 1, Table 3, and Table S3 of the supplementary material.  (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period.  NA | **nut-16** Specify if nutrient intakes are reported with or without inclusion of dietary supplement intake, if applicable.  Information about dietary supplement is given in the materials and methods subsection “Dietary Assessment”. | 4-6/8/ 15-16/ 20-21/ 31-32 |
| Other analyses | 17 | Report other analyses done—e.g., analyses of subgroups and interactions and sensitivity analyses.  We report sensitivity analyses (see materials and methods subsection “Statistical Methods”, results subsections “Mean Amount and Number of organic food consumed” and “Organic food consumption by food categories”). | **nut-17** Report any sensitivity analysis (e.g., exclusion of misreporters or outliers) and data imputation, if applicable.  We report sensitivity analyses (see materials and methods subsection “Statistical Methods” and results subsections “Mean Amount and Number of organic food consumed” and “Organic food consumption by food categories”). We also report about applied data imputation method (see materials and methods subsection “Statistical Methods”). | 6-8 |
| **Discussion** |  |  |  |  |
| Key results | 18 | Summarize key results with reference to study objectives.  Key results are given in the first paragraph of the discussion section. |  | 9 |
| 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.  Information about limitations of the study are given in the third paragraph and in the subsection “Limitations” of the discussion section. | **nut-19** Describe the main limitations of the data sources and assessment methods used and implications for the interpretation of the findings.  Information about limitation of the data sources and assessment methods used are given in the third paragraph and in the subsection “Limitations” of the discussion section. | 9,13 |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.  Interpretation of results and comparison to other studies is presented in the central part of the discussion. | **nut-20** Report the nutritional relevance of the findings, given the complexity of diet or nutrition as an exposure.  Information is given in the central part of the discussion and in the conclusion part. | 9-14 |
| Generalizability | 21 | Discuss the generalizability (external validity) of the study results.  Information is given in the “Strengths” and “Limitations” subsections of the discussion. |  | 12-13 |
| **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.  Information about the Financial support is given in the title page. |  | Title page/4 |
| *Ethics* |  |  | **nut-22.1** Describe the procedure for consent and study approval from ethics committee(s).  Details are described in the title page as well as in the materials and methods subsection “Study design and Setting”, third paragraph. |  |
| *Supplementary material* |  |  | **nut-22.2** Provide data collection tools and data as online material or explain how they can be accessed.  Information and references are given in the materials and methods subsection “Study design and Setting”, third paragraph. |  |