nut-19. Describe the Main Limitations of the Data Sources and Assessment Methods Used and Implications for the Interpretation of the Findings

Dietary assessment methods are prone to various sources of bias and degrees of error that should be considered when interpreting the results. Limitations in food composition data should be described as well as the limitations inherent to the dietary assessment method . Discuss whether the limitations could have introduced a random or systematic error and, if systematic, suggest in which direction this might have affected the findings.

Example. “However, the dietary history method used has limitations that may have caused some misclassification of subjects. These tend to diminish the associations observed between exposure and outcome. The result of the dietary history interview is always a subjective assessment of the respondent’s own dietary habits. A period of 1 y is a lengthy time to recall. Food models were used to diminish errors in recall, and open ended questions enabled respondents to be more specific in their answers. To minimize possible bias, trained nutrition professionals used a structured questionnaire. In general, the short-term repeatability of the dietary history method was relatively good. However, rather poor repeatability for glucose and fructose hinders the interpretation of the results and the possibility of chance findings increases. The poorer longterm consistency can be partly explained by changes in Finnish dietary habits. Changes in food consumption during follow-up tend to weaken the associations observed. For this reason, follow-up in this study was limited to 12 y”

Explanation. Given the complexity of nutritional epidemiology, the discussion of study limitations is an essential part of the scientific reporting. Assumptions with regard to the accuracy of the reported dietary intake should be handled with care. Potential sources of biases and, if relevant, how these were handled, as well as degrees of error related to the dietary assessment need to be reported and thoroughly discussed when interpreting the results. To observe different health outcomes in exposed compared with nonexposed study participants, the dietary exposure gradient needs to be large enough.