nut-9. Report How Bias in Dietary or Nutritional Assessment (E.g., Misreporting, Changes in Habits as a Result of Being Measured, and Data Imputation from Other Sources)

Example 1.

“Diagnoses within 6 mo of food diary completion were excluded to ensure that latent disease without formal diagnosis was not present; otherwise, disease suspected by participants could have influenced their dietary habits. In sensitivity analyses, women with extreme intakes, defined as >1.5 times the IQR >75th percentile, were excluded in tests for linear trends. To investigate the robustness of results to missing data, analyses were repeated by using multiple imputation by chained equations, with imputations based on exposure, covariates, and outcome”.

Explanation.

Information bias and selection bias are concerns in nutrition research (see Text Boxes 3 and 5), and measures taken to identify or reduce the potential of these biases during all stages of the study (i.e., planning, data collection, data handling, and statistical analysis) need to be reported. When study participants have made changes in their diets (e.g., due to their own or a relative’s disease diagnosis), the reported diet may reflect their present diet correctly. However, such reports may be misleading when examining dietary intakes in relation to health and disease, because the development of chronic disease commonly proceeds over many years. Some population groups may be at particular risk of misreporting their energy intake (e.g., weight-conscious persons,

those who eat out frequently), whereas others (e.g., children) may not be able to report their dietary habits. It will help readers to interpret study findings if information is included about the study setting (see Nut-5), handling of misreporting, and use of any imputations (see Nut-6, -13,and -17).

Information about sampling and self-selection of participants will make it possible for the reader to evaluate the effect of selection as well as the ability to generalize the study findings to the source (or other) populations. Thus, authors ought to describe how subjects were selected, report the characteristics of nonrespondents and dropouts, and discuss how differences might affect observed associations. Studies may consider the exclusion of participants with potentially biased dietary reports. However, an examination of the robustness of study findings is encouraged, with a subsequent discussion of potential differences between subgroups.