



Federation of  
European  
Nutrition Societies (FENS)

# FENS News

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## ***An update on the FENS Working Groups on “Improving Standards in the Science of Nutrition”***

The Federation of European Nutrition Societies (FENS) has established three working groups on the topic of improving standards in the science of nutrition [1]. The overall aims of the activity are outlined elsewhere [1] and the tasks of working groups are related to 1) concepts and methods, 2) organization, capabilities and funding and 3) internal and external communication. The working groups will produce statements and guidance related to the conduct of nutrition research and its funding and to the communication of the findings of research in nutrition science to different stakeholder groups. FENS will champion the implementation of its guidance throughout Europe and will act internationally in conjunction with other societies such as the the American Society of Nutrition and the Nutrition Society of Australia. Members of the working groups represent FENS member societies [2]. At a first virtual workshop held on 29 March 2021, each working group presented its progress on the defined tasks and this was critically discussed considering potential overlaps between working groups and next steps.

The working group on “Concepts and Methods” has produced a conceptual framework and based on this, three sub-activities have been defined. Due to the overlapping interest and aims, as well as already executed extensive work within the Foodball JPI-project on biomarkers and their definitions [3], subgroups 1 and 2 are working together. The first subgroup is discussing how to determine a cause-and-effect relationship in nutrition, taking into account the totality of evidence and the level of acceptable certainty. The Bradford-Hill criteria have been taken as a starting point. The second subgroup is discussing the predictive reliability of biomarkers and how to apply them credibly in nutrition and health related studies. Valid biomarkers may enable the application of relevant criteria to establish a cause-and-effect relationship and they are used to complement any subjective reporting methodology. Modern methodologies such as metabolomics analysis of foods, blood, urine and other tissue specimens have enormous potential to identify the new and more reliable biomarkers for nutrition research, but their validation is demanding. The third subgroup is considering the utility of alternative study methodologies and models, such as participatory science, citizen science and N-of-1 trials, in research on the effects of diet, nutrition on health. In contrast to classical research methods where expert scientists determine the generation of data, participatory science is based on a bottom-up approach. It is used to give voice to those who have not been heard and is thus well suited for marginalized individuals or population groups, providing insights into different causal patterns that otherwise would not have been identified for further study. Due to its qualitative methodology, it is ranked at the bottom of the hierarchy of evidence. However, it must be better recognized that much can be learned from this approach and that science is not an entirely top-down exercise. The working group will frame its considerations around examples such as sugar and obesity, preventive effects of vitamin D, and overweight/obesity

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in those of lower socioeconomic status and the question of how health can be made consistently measurable in relation to nutrition and prevention of disease will be a central theme.

The working group on “Organisation, Capabilities and Funding” is reflecting on how nutrition science can be best defined and what other disciplines are needed to better understand the role of diet and nutrition in life-long health and well-being. To reach this aim a questionnaire has been developed to investigate and map the diversity of financing and funding systems in nutrition-related research across Europe. Moreover, this working group is implementing an inventory of nutrition education in Europe considering that the organization of nutrition research is dependent on the fields where nutrition education is embedded, as their scope would be different if students are formed in, for example, agriculture or medicine. The funding of nutrition research in Europe is a central theme for this working group as is the means to secure scientific integrity irrespective of funding source.

The working group on “Internal and External Communication” is creating a series of best practice guidelines in order to ensure the consistency, transparency, clarity and quality of nutrition science communication. This is fundamental for ensuring the public, patients, health professionals and regulators can have confidence in nutrition science. Two main sub-activities have been identified. The Science subgroup is updating the reporting guidelines for nutrition intervention studies. Various guidelines have been identified that have been developed to strengthen the reporting of research studies in health. The overall aim of such guidelines is to ensure that a published manuscript can be understood, that the research is replicable, that if applicable, health professionals can use research findings in their clinical decision-making, and that any data are sufficient to be included in a systematic review. Additional guidelines are available for case report studies, preclinical animal research and economic evaluations. Extensions to several guidelines have been created including for N-of-1, pilot studies and studies with a non-standard design. However, to date, there exists only one extension with a focus on nutrition research: STROBE-nut for epidemiological studies in nutrition [4, 5]. Yet, there are many human nutrition studies conducted that involve an intervention, the reporting of which could be enhanced through specialized guidelines for study reporting as well as protocol preparation and reporting. The focus of the Science Subgroup is therefore to develop additional extensions to guidelines commonly used in nutrition research, starting with CONSORT and SPIRIT; this is being explored through interaction with others interested in such developments. The Public subgroup is assessing nutrition scientist views on the existing research-to-press communication process. A survey has been conducted and the results of this research are currently under analysis. Initial analysis highlights that not all institutions across Europe have press offices, that there is a desire for a unified approach to guide the dissemination of research in nutrition science, and that the majority of the respondents think that nutrition research findings should be released when having a direct and applicable consequence

for health advice. Within institutions that do have press offices, the decision to disseminate research findings is often not made by the researchers themselves.

All three working groups are composed of a mix of junior and senior scientists with a variety of backgrounds. There is a very positive working atmosphere which is illustrated by the respectful and creative collaboration within and between the working groups. A second workshop will be held on 1 July 2021.

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2. FENS News (2020) *Ann Nutr Metab* 76, 443–444
3. Foodball, the Food Biomarker Alliance. See <https://food-metabolome.org/>.
4. Lachat C, Hawwash D, Ocké MC, Berg C, Forsum E, Hörnell A, Larsson C, Sonestedt E, Wirfält E, Åkesson A, Kolsteren P, Byrnes G, De Keyzer W, Van Camp J, Cade JE, Slimani N, Cevallos M, Egger M, Huybrechts I (2016) Strengthening the reporting of observational studies in epidemiology-nutritional epidemiology (STROBE-nut): An extension of the STROBE statement. *PLoS Med* 13, e1002036.
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