

Funding Opportunity for Improving Diet And Physical Activity Assessment (R01/R21)

Overview

Diet and physical activity are lifestyle and behavioral factors that play a role in the etiology and prevention of many chronic diseases such as cancer and coronary heart disease. Both also play roles in preventing overweight/obesity and in maintaining weight loss. Moreover, longitudinal data on physical activity and dietary intake would be especially helpful in understanding how the physical activity and dietary intake patterns over the lifespan may have an impact on health and functional status in later years and old age. Therefore, diet and physical activity are assessed for both surveillance and epidemiologic/ clinical research purposes.

The measurement of usual dietary intake or physical activity over varying time periods or in the past, by necessity, has relied on self-report instruments. Such reports are cognitively difficult for respondents and are prone to varying degrees of measurement error depending on the time period considered, the ease of the instrument, and the characteristics of the respondents. Understanding and interpretation of instruments and the concepts they address may differ among population subgroups.

Research Objectives

The objective of the Program Announcement (PA) is to promote research to: 1) improve existing instruments that seek to measure dietary intake and physical activity within diverse populations over time, 2) develop or refine new technologies for the measurement of dietary intake or physical activity, and 3) improve the statistical and analytical techniques to correct for measurement error in diet and physical activity assessment instruments.

Proposals should be aimed at exploring the optimal combination of objective and self-report measures of physical activity or dietary intake that can capture these behaviors in both general and diverse populations.

Possible topics include:

- Refine, and test methods of diet or physical activity assessments for use in population surveillance, epidemiological studies, and/or behavioral interventions within general and diverse populations.
- Develop or refine innovative methods to improve respondent self-report of diet or physical activity behavior.
- Conduct validation or testing of existing instruments to assess utility in diverse populations.
- Develop or refine innovative methods to improve underreporting of energy intake among obese and overweight individuals.
- Identify factors leading to misreporting on dietary or physical activity assessment instruments.
- Develop, refine, and test analytic or statistical methods to address measurement errors in the collection of dietary supplement and physical activity data.
- Improve methods for measuring the type or amount of physical activity, the energy cost associated with physical activity, energy intake, and energy balance.
- Improve methods for assessing intake of particular types of food constituents, such as fat subtypes and phytochemicals.
- Validate methods for measuring dietary and/or supplement intake or physical activity using appropriate reference instruments.
- Develop or refine new technologies.
- Conduct cognitive testing of self-reported dietary or physical activity.
- Explore psychometric properties of instruments so that questionnaire items can be developed for various groups, compared using the same metric, or be administered with innovative approaches.
- Explore the potential of ecological momentary analysis (EMA) techniques in the assessment of dietary intake and physical activity.

Mechanisms of Support

Both the R01 and R21 award mechanisms will be supported by two partner Program

Announcements. R21 applicants may request a project period of 2 years with a combined budget for direct costs of up to \$275,000 (no more than \$200,000 in any single year). R01 applications have no dollar limit.

Applicants without extensive preliminary data or who wish to explore the utility of new dietary or physical activity assessment methods are urged to submit applications for this PA using the exploratory/developmental grant (R21) mechanism. Investigators are encouraged to seek continued support after completing an exploratory/developmental grant project through a research project grant (R01). Applicants may wish to coordinate efforts in developing their applications.

Furthermore, applicants proposing to develop new instruments for measuring dietary intake or physical activity are strongly encouraged to build upon existing measures and instruments and to collaborate with other investigators undertaking work in these areas as a means of promoting improved methods or analytic techniques that can be shared among multiple investigators and have utility in a number of research settings.

Application Procedures

In order to facilitate reviews advantageous to methods research the NIH Center for Scientific Review has agreed to convene a Special Emphasis Panel if a sufficient number of applications are assigned to a particular Scientific Review Group for a given date. Therefore, applicants are encouraged to include a cover letter with their application requesting assignment to the Biostatistical Methods and Research Design Study Group (BMRD) Study Section.

Prospective applicants are asked to submit a Letter of Intent four weeks in advance of the Application receipt date (see full text of PA online for all receipt dates – links provided below). The letter should include a descriptive title of the PA in response to which the application will be submitted. Although a Letter of Intent is not required, is not binding, and does not enter into the review of a subsequent application, the information that it contains allows program staff to estimate the potential workload and plan the review. The Letter of Intent is to be sent to Dr. Subar (address below).

For the full text of these PAs, visit:

<http://grants.nih.gov/grants/guide/pa-files/PA-07-259.html> (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-06-103.html> (R21)

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