**Food and Nutrition Board Update: What Do SNAP Allotments, Physical Fitness, and Obesity Prevention Have in Common?**

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**ABSTRACT**

The Institute of Medicine’s Food and Nutrition Board had a productive year, with important expert committee reports on the Supplemental Food Assistance Program, physical fitness, and accelerating obesity prevention efforts that provided grounding for dietary guidance and nutrition policies and programs. This summary describes Food and Nutrition Board activities, including current thinking on dietary reference intakes. The summary also highlights consensus reports on defining and measuring Supplemental Food Assistance Program benefit adequacy and on physical fitness and health outcomes in youth. In addition, current and new activities related to obesity prevention and care are addressed. What do these activities have in common? All adhere to the Institute of Medicine report model by filling gaps and by being analytical, evidence-based, and challenging.

**Food and Nutrition Board Update**

Suzanne Murphy, Food and Nutrition Board (FNB)7 chair, introduced the session by summarizing the work of the FNB over the past year. In addition to the consensus reports and obesity prevention activities discussed subsequently, she noted that 5 workshop summaries were published: 1) exploring health and environmental costs of food, 2) developing research methods to assess dietary intake and program participation in child day care, 3) building public–private partnerships in food and nutrition, 4) finding common ground for alliances for obesity prevention, and 5) the human microbiome, diet, and health.

Two major reports released in May 2013 focused on assessing recent evidence on sodium intake and health outcomes and on physical activity and physical education in the school environment. A report on evaluating progress in obesity prevention is due later in 2013. Workshops on nutrition education curriculum standards, sustainable diets, and creating equal opportunities for a healthy weight will result in Institute of Medicine (IOM) Workshop Summaries in 2013. FNB reports are available online (1).

New activities include a consensus study to develop a framework for assessing the health, environmental, and social effects of the food system (a joint project of the FNB and the National Research Council’s Board on Agriculture and Natural Resources) and the establishment of a Roundtable on Obesity Solutions.

The FNB is moving forward on plans for updates to the dietary reference intakes (DRI). The board has regular calls and meetings with representatives of United States and Canadian government DRI committees. These committees have offered the opportunity for stakeholders to nominate nutrients for which the DRI values may need to be reviewed. Nominations for nutrients and related substances previously reviewed by FNB DRI committees will be considered.

The FNB is considering a core review committee that would be convened to ensure a periodic review of all DRI values. This committee would interface with the government...
nomination process for major updates, with the ultimate goal of ensuring that DRI values remain current. A related FNB activity is development of a brochure to increase the visibility of the importance of the DRIs. One goal of the brochure is to emphasize that current DRI values are key to nutrition monitoring and the development of many types of nutrition guidance and programs. A copy of the brochure will be available online (2). Overall, it has been a productive and challenging year for the FNB.

**Supplemental Food Assistance Program Benefits: Can an Adequate Benefit Be Defined?**

Julie Caswell, committee chair, summarized key messages, conclusions, and recommendations of the report *Supplemental Nutrition Assistance Program: Examining the Evidence to Define Benefit Adequacy*. The Supplemental Food Assistance Program (SNAP), formerly called the Food Stamp Program, is a nutrition assistance program that enables eligible low-income families to purchase food for preparation at home. Individuals or households receive a monthly benefit, calculated from the household’s size, income, and other factors, to supplement their resources available for food purchases. The allotment or amount of benefit an individual or household receives is based on a minimal-cost model food plan, the Thrifty Food Plan. This plan is derived from a nationwide market basket survey of the cost of foods representative of those consumed by low-income households and assessed against the recommendations of the *Dietary Guidelines for Americans*.

Questions about whether there are different ways to think about the adequacy of SNAP allotments prompted the USDA Food and Nutrition Service (FNS) to ask the IOM and the National Research Council to conduct a study examining the feasibility of establishing an objective, evidence-based definition of allotment adequacy, consistent with the goals of improving food security and access to a healthy diet, and to identify data and analyses needed to support an evidence-based assessment of allotment adequacy. In response, the committee reviewed current evidence and devised a framework to illustrate the process by which households make food choices and how SNAP program characteristics affect this process and affect the adequacy of the benefit received by participants.

The committee concluded that it is feasible to define the adequacy of SNAP allotments, but certain factors need to be examined as elements of the definition. These include SNAP program characteristics and individual, household, and environmental factors. The factors for which the evidence is most robust are time to purchase and prepare foods, geographic price variation, and high transaction costs as a result of limited access to retail outlets. Important factors for which the evidence was limited include nutrition knowledge and budgeting skills and transportation.

The evidence review identified challenges related to the calculation of benefits that have an impact on defining benefit adequacy. In particular, the committee found that the maximum benefit guarantee, the benefit reduction rate, and the calculation of net income have the greatest influence on the adequacy of SNAP allotments. Thus, the committee recommended that the FNS include consideration of these factors in research aimed at defining allotment adequacy.

Also recommended were research on the effects of nutrition knowledge and resource management skills on benefit adequacy, surveys of the cost and availability of food and access to food outlets, and a monitoring and assessment program to evaluate the correspondence between the definition of adequacy and attainment of program goals. The committee identified emerging evidence for future consideration, including the influence of incentives and restrictions on purchases by SNAP participants of healthier foods and the contribution of ready-to-eat prepared foods to the cost of a market basket of healthy foods.

The committee’s recommendations for defining, measuring, and monitoring the adequacy of SNAP allotments are intended to assist the FNS in establishing an objective definition of the adequacy of the allotments. Ultimately, this effort could help to provide SNAP participants with greater opportunities to become more food secure and to have access to a healthy diet.

**Fitness Measures and Health Outcomes in Youth**

Russell Pate, committee chair, explained that physical fitness testing in youth in the United States was established on a larger scale than before in the 1950s, with a focus on motor (“athletic”) fitness. By the 1980s health-related fitness had become a focus and was typically defined as including cardiorespiratory endurance, musculoskeletal fitness, flexibility, and body composition. It was based largely on evidence from adults and led to debate about appropriate measures for children. Thus, at the request of the Robert Wood Johnson Foundation, a study committee was appointed to assess the relationship between youth fitness tests items and health outcomes and to recommend the best items for use in national surveys to assess health-related fitness in youth and for use in schools. The committee also recommended methods for interpretation of test performance and research needs.

The committee held three meetings, solicited information through a workshop, and drew on a systematic review of the literature provided by the CDC. The evidence review examined the quality of studies, strength of evidence, validity and reliability of the test, and practicality. The committee concluded that: 1) a substantial body of evidence supports specific test items that are related to health for body composition and cardiorespiratory endurance; 2) adequate evidence supports the relationship between musculoskeletal fitness and health, but less evidence links specific musculoskeletal test items to health; and 3) little evidence links flexibility and health in youth.

On the basis of these conclusions the committee recommended that fitness tests for national surveys should measure cardiorespiratory endurance with the progressive shuttle run, such as the 20-m shuttle run, or the cycle ergometer or treadmill tests if physical space is limited. The
handgrip strength test and the standing long jump tests should be included to measure musculoskeletal fitness. To measure body composition, national surveys should include BMI as an estimate of body weight in relation to height, skinfold thickness at the triceps and below the shoulder blade as indicators of underlying fat, and waist circumference as an indicator of abdominal fat.

For fitness testing in schools, a progressive shuttle run should be included to measure cardiorespiratory endurance, handgrip strength and the standing long jump tests to measure musculoskeletal fitness, and BMI to measure body composition. For schools, additional items that have not yet been shown to be related to health but are valid, reliable, and feasible may also be considered as supplemental education tools (e.g., distance or timed runs and modified pull-up and push-up, curl-up, and sit-and-reach tests).

The committee also recommended that developers of fitness test batteries use age- and gender-specific cut-points to identify individuals at risk of poor fitness-related health outcomes, and the report provided guidance for developing cut-points when the needed data exist and also for developing interim cut-points when data are limited.

Well-designed studies aimed at advancing understanding of the association between fitness components and health in youth are needed. These studies would include exercise intervention studies linking change in specific fitness measures to change in specific health outcomes, longitudinal studies linking fitness in youth to health outcomes in adulthood, and studies to establish and validate cut-points for fitness test performances based on health criteria.

Obesity Prevention: Where Do We Stand?
Shiriki Kumanyika, Standing Committee on Childhood Obesity Prevention chair, described the context for IOM’s obesity prevention efforts and the urgent need for action by reminding the audience that obesity-related diseases are major causes of death and disability, obesity prevalence is high and may still be increasing in some population subgroups, treatment is needed but cannot be the primary strategy, and population-level preventive approaches are needed. She then described the work of the standing committee and related FNB projects beginning with the first consensus report in 2005, Preventing Childhood Obesity: Health in the Balance, and including the 2012 report, Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation. The 2012 report was built around a systems approach to accelerating progress and the basic tenet of health equity and provided a benchmark for the HBO/IOM series of documentaries entitled “The Weight of the Nation.” The standing committee also hosted workshops on a range of topics, including measuring progress, legal strategies, perspectives from the United States and United Kingdom, and obesity prevention in Texas. These workshops are available for download at the IOM website (3).

The IOM is establishing the Roundtable on Obesity Solutions, a unique initiative that will engage leadership from many sectors to foster ongoing dialogue about critical and emerging policy and research issues to accelerate progress in obesity prevention and care. In short, the intention is to move from knowing “what” we should do to “how.” Topics likely will include clinical education and practice, clinical–community partnerships, and identification and dissemination of innovative practices, among others. Overarching considerations to guide the roundtable include viewing obesity from a systems perspective, achieving health equity through focused action and research, developing and using effective communication strategies, identifying innovative financing mechanisms, and fostering evaluation.

Activities of the roundtable will include cross-sector discussions at meetings, workshops, and symposia; background papers; and innovation collaboratives. Innovation collaboratives, a new feature of IOM roundtables, are initiated by roundtable members; foster joint activities and development of new strategies; and could result in development of toolkits, metrics, and frameworks that implement priorities identified in IOM reports. The plan is to launch the roundtable in late 2013 as the newest phase of IOM’s obesity work.

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Literature Cited