Resolution 905-I-12, introduced by the Medical Student Section and referred by the House of Delegates, asked:

That our American Medical Association (AMA) (1) support the addition of folic acid supplements in the Supplemental Nutrition Assistance Program, the Special Supplemental Nutrition Program for Women, Infants, and Children, and other similarly aligned programs; and (2) work with United States Department of Agriculture and other appropriate organizations to encourage and procedurally facilitate the implementation of folic acid supplements in the Supplemental Nutrition Assistance Program, the Special Supplemental Nutrition Program for Women, Infants, and Children, and other similarly aligned programs.

INTRODUCTION

The Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, provides a basic safety net to millions of people by providing monthly benefits to eligible low-income families to purchase food. SNAP allows for the purchase of food items that the household can eat and for the purchase of seeds or plants that produce foods for human consumption. SNAP benefits do not extend to purchases of medicines or dietary supplements such as vitamins or minerals.

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides Federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant women, breastfeeding and non-breastfeeding postpartum women, and to infants and children up to age five years who are found to be at nutritional risk. Foods eligible for purchase under WIC are determined on a state level, but generally include bread and grains, cereals, milk and cheese, fruits and vegetables, and infant food and formula; often only store (generic) brands are eligible. As with SNAP, vitamins and other dietary supplements are not covered under WIC, which stresses the importance of maintaining adequate intake of nutrients such as folate through a healthy diet.

This report examines the potential inclusion of vitamin and mineral supplements as eligible items under the SNAP and WIC programs. Although Resolution 905-I-12 focused on folic acid supplements, the Council believes it is most appropriate to examine the inclusion of supplements in general, since optimal health is dependent on achieving recommended levels of several nutrients.
The Council acknowledges the importance of folic acid in reducing the occurrence of neural tube defects (NTDs), and briefly discusses the special case of folic acid in this report. It is worth noting that the Council has previously examined the relationship of folic acid to NTDs, as well as the need to expand fortification programs to include corn-based products.1,2

METHODS

Literature searches were conducted in the PubMed database for English-language articles published between 1995 and August 2013 using the search terms “supplemental nutrition assistance program,” “SNAP,” “food stamp,” “WIC,” and “women infants children,” along with the terms “supplements,” “vitamin,” and “mineral.” Additionally, a Google search was conducted using the same search terms. A comprehensive report examining the potential use of SNAP benefits to purchase supplements,3 as well as several evaluations of the SNAP and WIC programs,4-8 were identified and relied upon for many of the report’s key discussion points.

NUTRIENT INTAKE

Recommended Nutrient Intake for Individuals

Recommended Dietary Allowances (RDAs), which represent the average daily dietary intake level sufficient to meet the nutrient requirements of nearly all (97-98%) healthy individuals in a group, have been established for nearly all nutrients and life stages, and are published by the Institute of Medicine’s Food and Nutrition Board.9 Individual nutrient needs vary; RDA levels are set to provide a safety factor for each nutrient, so recommended levels generally exceed the actual requirements of most individuals. Even when nutrient intake is below the RDA, the nutrient needs of any given individual may still be met.10 A well-balanced, healthy diet is recommended for achieving recommended nutrients levels, however in certain circumstances, supplements may be useful in providing one or more nutrients that otherwise may be consumed in less than recommended amounts.11 For example, it is recommended that pregnant women consume 600 μg of folate daily to reduce the risk of the pregnancy being affected by an NTD,9 but many will find it difficult to consume that level through food. A daily folic acid supplement is therefore often recommended.12-15

Average Nutrient Intake of Americans

According to National Health and Nutrition Examination Survey (NHANES) data, 87.2%-98.3% of the general population achieves adequate intake of 10 essential vitamins and minerals including folate (Table).4,5 Adequate intake of vitamin C, potassium, vitamin A, magnesium, and vitamin E are achieved by 68.8%, 57.8%, 55.4%, 44.1%, and 8.3% of the total population, respectively (Table).4,5

When nutrient intake is considered according to income level and participation in SNAP, those in higher income groups achieve adequate nutrient intake in significantly higher proportions for 15 vitamins and minerals examined than those in the SNAP program.5 The magnitude of difference varies; for example, vitamin E, magnesium, and vitamin A have the largest differences, while for iron, niacin, vitamin B12 and riboflavin, the differences are smaller (Table).4

In contrast, few significant differences in nutrient intake exist among WIC program participants and non-participant higher-income individuals. Similar proportions of WIC participant children and children of higher-income parents meet recommended nutrient intake (Table).5,16 and few
differences have been found in the nutrient intake of pregnant WIC participants compared with pregnant non-WIC participants.\textsuperscript{17}

INCLUSION OF VITAMIN AND MINERAL SUPPLEMENTS IN THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM

Data showing that fewer SNAP participants achieve adequate nutrient intake than do higher-income individuals suggests that the use of vitamin and mineral supplements among participants may be beneficial. In 1999, the USDA’s Food and Nutrition Service issued a Congressionally-mandated report examining the merits of inclusion of vitamin and mineral supplements as eligible items under the SNAP program.\textsuperscript{3} The report acknowledged small gaps in the nutrient intake of SNAP participants and recognized that vitamin and mineral supplements may be beneficial for some participants, but for a number of reasons summarized below, did not explicitly endorse the inclusion of supplements as a SNAP benefit.

Health Benefits of Supplement Inclusion in SNAP

It is well known that nutrient intake affects health, but evidence establishing links between small nutrient deficiencies and chronic degenerative diseases is more complex.\textsuperscript{3} While evidence supports the use of supplements in certain circumstances, their effectiveness varies across the nutrients in question and population subgroup. Another complicating factor is the difficult task of determining the health benefit of supplements apart from nutrients acquired from food intake, especially given that many foods are fortified with vitamins and minerals.\textsuperscript{3}

To inform its report, the Food and Nutrition Service convened an expert panel to explore supplement inclusion in SNAP. The panel recognized the benefits of nutritional supplements in certain subpopulations, but it found no existing evidence indicating that the subgroups that might benefit most from nutritional supplements would actually use them.\textsuperscript{3} Additionally, the panel found no evidence demonstrating that the ability to purchase supplements with SNAP benefits would benefit participants as a group.\textsuperscript{3}

Economic Benefits of Supplement Inclusion in SNAP

A paucity of evidence exists examining the economic benefits of including supplement purchases in the SNAP program. Cost-benefit analyses have suggested that nutritional supplements can reduce health care costs due to hospitalizations for birth defects, low birthweight premature births, and coronary artery disease; however, those findings are based on narrow population subgroups and therefore cannot be generalized to the larger population of SNAP participants.\textsuperscript{3,18} Studies more directly addressing the economic benefit of supplement inclusion in SNAP would need to include factors such as which supplements could be purchased, who would buy them, and how dietary patterns might change as a result.\textsuperscript{3}

Determination of Supplement Eligibility and Administrative Implementation

The Food and Nutrition Act of 2008 defines eligible items for purchase under the SNAP program. Eligible items are any food or food product for home consumption, and seeds and plants that produce food for consumption by SNAP households. The following items are not eligible for purchase with SNAP benefits: alcoholic beverages; tobacco products; hot food and any food sold for on-premises consumption; and nonfood items such as pet foods, soaps, paper products, medicines, vitamin and mineral supplements, household supplies, grooming items, and cosmetics. A change in the eligibility status of vitamins and supplements would require legislative action.\textsuperscript{3}
If vitamin and mineral supplements were authorized as eligible items for purchase under SNAP, a clear definition of what constitutes an eligible product would be needed. A supplement is defined by the Dietary Supplement Health and Education Act (DSHEA) of 1994 as a product taken by mouth that contains a “dietary ingredient” intended to supplement the diet. The definition is broad, and includes vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, glandulars, and metabolites. It is estimated that more than 55,000 dietary supplements are available for purchase. Options for product eligibility could range from making eligible all supplements carrying a supplement facts label (and therefore considered by the FDA to be a supplement), to limiting eligibility to only vitamin and mineral supplements with established health benefits. While the latter may seem like the most reasonable option, its implementation would be difficult given the number of supplement products that contain ingredient combinations; it is difficult to determine whether many of these combination products are primarily vitamin or mineral supplements with established health benefits. Retailers selling supplements would also face challenges in distinguishing eligible and ineligible supplement products.

Changes to the SNAP Program Model

SNAP exists to provide assistance to low-income Americans in purchasing food items; it focuses on achieving adequate nutrient intake through a healthful diet. The introduction of dietary supplements as eligible items calls into question whether the existing food model would remain adequate for defining a healthful diet, estimating associated food costs, and determining benefit amounts. Currently, SNAP participants are provided with education focusing on the purchase, preparation, and consumption of a combination of foods that are consistent with maintaining a healthful diet. If supplements were eligible items, recipients would need to be provided with guidance on how to use information in the marketplace to make supplement purchases that meet their individual needs and represent good value. Additionally, it is questionable whether the ability to purchase supplements without a concomitant increase in monetary benefits to support such purchases would enable families to continue purchasing enough healthy food to meet basic hunger needs.

PROPOSED IMPROVEMENTS TO THE SNAP PROGRAM

Several barriers have been identified as standing in the way of SNAP participants eating nutritiously. For example, food markets and/or restaurants that offer a good selection of healthy, value-oriented foods are often located far from participants. SNAP participants, like most Americans, face widespread marketing of unhealthy foods, and the food industry and other corporate interests have pushed back on program changes designed to place emphasis on healthier food choices. Healthier foods are often more expensive, and working families lack the time to plan meals and shop. Lower health literacy among people with less education has generally been noted, and the nutrition education component of SNAP receives modest funding. Further, the USDA does not currently collect point-of-purchase data about the foods that are bought by SNAP recipients or make publicly available information about where benefits are redeemed; these data are important in understanding how to improve nutrition among SNAP participants.

The SNAP (and former Food Stamp) program has been evaluated a number of times throughout its existence, with several recommendations having been made to strengthen its mission to alleviate hunger and improve the nutritional status of low-income Americans. In 2012, the Center for the Study of the Presidency and Congress (CSPC) developed a comprehensive evaluation of the SNAP program, including ten recommendations intended to reformulate SNAP as a program that serves both as an invaluable safety net for low-income households and also as a tool to fight the concurrent threats of food insecurity, poor nutrition, and obesity that are prevalent in contemporary
American society.\(^7\) The recommendations largely echo those of other evaluations and include protection of funding levels for SNAP; integration of strategies to align purchases to the 2010 Dietary Guidelines for Americans;\(^{11}\) focusing attention on children’s health; incentivizing the purchase of fruits, vegetables, and whole grains; and establishing stronger food stocking standards for SNAP retailers.\(^7,8\) The full set of CSPC recommendations can be found in the Appendix. Notably, neither the CSPC nor an additional expert group that recently evaluated the SNAP program recommended the inclusion of supplement purchases as a way to strengthen the program.\(^7,8\)

Since 1994, nearly a dozen bills seeking to include the purchase of supplements as a SNAP benefit have been introduced in Congress, many as part of the Farm Bill reauthorizations.\(^{10}\) The supplement provisions of the various bills either were never passed by both chambers or were dropped in the conference process. The bills generated opposing views from stakeholders. The Council for Responsible Nutrition (a trade organization representing the supplement industry) and a number of individual nutrition experts supported several of the bills, arguing that vitamin and mineral supplements can provide a vital safety net when food intake is inadequate.\(^{21}\) The American Academy of Pediatrics (AAP), American Heart Association, the Food Research and Action Center, and several individual nutrition experts opposed the bills, believing that the ability to purchase supplements without a concomitant increase in monetary benefits to support such purchases would ultimately reduce the amount of healthy food purchased and increase the chance that families would be hungrier more often and for longer durations.\(^{21}\)

AMA POLICY ON SUPPLEMENTAL NUTRITION PROGRAMS

The AMA has historically been supportive of improvements to supplemental nutrition programs that would increase nutrient intake. Policy D-150.983 (Food Stamp Incentive Program) supports legislation that would provide a meaningful increase in the value of food stamps when used to purchase fruits and vegetables. Similarly, Policy H-150.937 (Reducing the Price Disparity Between Calorie-Dense, Nutrition-Poor Foods and Nutrition-Dense Foods) supports programs that would extend SNAP and WIC benefits to fruit and vegetable purchases at farmer’s markets. Adequate funding for programs that seek to improve nutrition and obesity, such as the WIC and SNAP programs, also is supported by the AMA (H-150.937; H-245.979, Opposition to Proposed Budget Cuts in WIC and Head Start).

SPECIAL CONSIDERATION FOR FOLIC ACID

Folic acid reduces the occurrence of NTDs, including spina bifida and anencephaly.\(^{22-25}\) Citing its protective effect, the U.S. Public Health Service in 1992 recommended that all women of child-bearing age consume 400 µg of folic acid daily, through both foods rich in folate and vitamin supplementation.\(^{26}\) To further promote folic acid intake, the FDA mandated in 1996 that all enriched grain products sold in the U.S. must be fortified with folic acid by 1998.\(^{27}\) Following implementation of the fortification mandate, the number of pregnancies in the U.S. affected by NTD decreased by 36%, from approximately 4,000 per year during 1995-1996 to 3,000 per year during 1999-2000.\(^{28,29}\) The percentage of the population with low serum folate declined from 21 percent in 1988-1994 to less than one percent in 1999-2000.\(^{30}\) A list of foods high in folate, as well as popular breakfast cereals fortified with folic acid, can be found on the Web sites of the National Institutes of Health Office of Dietary Supplements and the Centers for Disease Control and Prevention (CDC), respectively.\(^{31,32}\) Most state Medicaid programs cover the purchase of folic acid supplements for beneficiaries.\(^33\) The medical community has collectively supported folic acid supplementation and fortification strategies. The United States Preventive Services Task Force, American Congress of Obstetricians...
and Gynecologists, American Academy of Family Physicians, and American Academy of Neurology recommend that women of child-bearing age take a 400 µg/day folic acid supplement, and the AAP endorses the U.S. Public Health Service recommendation. The AMA supports “broad-based public educational programs about the need for women of child-bearing potential to consume adequate folic acid through nutrition, food fortification, and vitamin supplementation to reduce the risk of neural tube defects” (H-440.898), and has urged manufacturers to fortify corn-grain products (D-150.985).

The CDC recently evaluated the effectiveness of current approaches to increasing folic acid intake. It found that supplementation alone has not been effective since approximately half of pregnancies are unplanned; however, fortification has been highly effective since it makes folic acid accessible to all women of child-bearing age without requiring the behavior changes associated with daily supplement use or dietary improvement. Based on its findings, the CDC recommends expansion of fortification efforts, including for corn-based foods that are staples in the Hispanic population, which continues to experience higher rates of NTDs than other racial/ethnic groups in the U.S.

CONCLUSIONS

A smaller proportion of SNAP participants achieves adequate nutrient intake compared to higher-income individuals. Among WIC program participants, few differences in nutrient intake have been noted compared to higher-income individuals. The inclusion of supplement purchases under the SNAP program has been proposed as a mechanism to improve nutrient intake among participants, but for a number of reasons, the administrators of the program have not instituted such benefits. Although the Council sees merit in the idea of using supplements to increase nutrient intake of SNAP participants, it believes that improvements proposed as a result of extensive SNAP program evaluations are more likely to increase nutrient intake while also addressing food insecurity and obesity. Consistent with AMA policy, the Council believes that the SNAP and WIC programs are essential for ensuring the health of millions of Americans, and supports improvements that will address contemporary nutrition needs. Regarding folic acid, the Council strongly supports continued efforts to ensure that all women of child-bearing age reach recommended levels. Since supplementation alone has been mostly unsuccessful in widely increasing folic acid intake, the Council believes that the addition of folic acid supplements as eligible items in supplemental nutrition programs is not appropriate at this time.

RECOMMENDATION

The Council on Science and Public Health recommends that the following statement be adopted in lieu of Resolution 905-I-12, and that the remainder of the report be filed.

1. That our American Medical Association support improvements to the Supplemental Nutrition Assistance Program (SNAP) and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) that are designed to promote adequate nutrient intake and reduce food insecurity and obesity. (New HOD Policy)

2. That our AMA reaffirm Policy D-150.985, which urges fortification of all grain products, including those that are corn-based, as a means to increase folic acid intake in all women of child-bearing age. (Reaffirm HOD Policy)

3. That our AMA reaffirm Policy H-440.898, which encourages education of women on the need to achieve adequate folic acid intake. (Reaffirm HOD Policy)
Fiscal note: No significant fiscal impact
REFERENCES


Table. Percentage of Americans achieving adequate intake of selected vitamins and minerals.4,5

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Values reflect the proportion with daily intake greater than Estimated Average Requirement (EAR), which is used to estimate the prevalence of adequate daily intakes.

*EARs not available. Values based on Adequate Intake (AI), which is the usual daily intake level of apparently healthy people who are maintaining a defined nutritional state or criterion of adequacy.
Appendix. Center for the Study of the Presidency and Congress (CSPC) Recommendations for Improving Nutrition among SNAP Participants, released in 2012.7

1. Protect Current Funding Levels for SNAP
A reduction in SNAP spending would jeopardize the health and well-being of the 1 out of 7 Americans for whom SNAP is a food lifeline—nearly half of whom are children. Cuts would hurt the working poor, strain already-stressed charitable safety net programs, and threaten the frail economies of low-income communities.

2. Collect Data on SNAP Purchases
Require the U.S. Department of Agriculture (USDA) to collect and make public data on SNAP product purchases to help improve participants’ nutritional quality as well as to increase the program’s effectiveness, efficiency, and transparency.

3. Identify a Set of Integrated Strategies that Would Help Align SNAP Purchases with the 2010 Dietary Guidelines for Americans
As a complement to other USDA nutrition assistance programs, especially WIC and the National School Meal Program, identify and test a set of transformative improvements for SNAP that would build program infrastructure to promote healthier nutrition for low-income Americans.

4. Focus Attention on Children’s Health in SNAP
Half of all youth in the United States will have been enrolled in SNAP at some time before their 19th birthday. SNAP is a missed opportunity for improving children’s nutrition and preventing obesity. Adequate nutrition is essential to their development, learning, and growth. Strengthen nutrition in SNAP to improve children’s health by pilot-testing a defined food package for youth.

5. Use Incentives to Make Fruits, Vegetables, and Whole Grains the EasyChoice
Encourage public and private support for programs that incentivize the purchase and/or reduce the price of nutrient-dense foods in grocery stores and farmers’ markets.

6. Establish Stronger Food Stocking Standards for SNAP Retailers
Strengthen stocking standards for a variety of healthy foods (e.g. fruits and vegetables) in order to be certified as a SNAP retailer.

7. Provide States with Flexibility to Evaluate Fresh Approaches to SNAP
The USDA should grant states greater flexibility for waivers to pilot test and evaluate program changes in SNAP that would improve nutrition (e.g. pilot projects to assess the feasibility of incentivizing the purchase of healthy foods and/or limiting the purchase of high-calorie, nutrient-poor products with SNAP benefits).

8. Promote Innovation in SNAP
Establish a Center for Health and Nutrition Innovation at the USDA, headed by a Chief Public Health Officer, to promote novel strategies and support pilot projects that enhance healthy nutrition for SNAP beneficiaries. Apply information technology and social media to promote healthy food choices.
9. **Create a Partnership to Move SNAP towards Health**
   Establish a strong partnership between the USDA and the U.S. Department of Health and Human Services (as occurs with the *Dietary Guidelines for Americans*) to ensure that promoting health is central to the mission of this federal nutrition assistance program.

10. **Establish a National Strategy of Fresh Approaches to Strengthen SNAP**
    Create a National Strategy for strengthening SNAP under the auspices of a Federal Interagency Taskforce. The plan should identify the actions needed to promote research, program policy change, technological innovation, and evaluation that will improve nutrition and prevent and reduce obesity and its health damaging consequences among SNAP beneficiaries.