

---

# Food, Health, and Nutrient Supplements: Beliefs Among Food Stamp-Eligible Women and Implications for Food Stamp Policy

Vivica Kraak, MS, RD  
David L. Pelletier, PhD  
Jamie Dollahite, PhD, RD

Cornell University

Several U.S. professional organizations that develop research-based dietary recommendations for the public support the position that most nutrients can and should be obtained by consuming a balanced diet. This position differs from the widespread and growing use of supplements by the public and changes in public policy currently under consideration, such as the proposal to allow nutrient supplements to be purchased with food stamps. This study investigated the attitudes and beliefs of a diverse sample of food stamp-eligible women concerning the relationship among food, health, nutrient supplementation, and associated lifestyle factors; these findings were then related to ongoing policy dialogue. The findings suggest the need to clarify the policy goals, conduct a more systematic examination of potential strategies for achieving those goals, and broaden the set of explicit criteria used when considering supplement-related policies in this population.

Many U.S. organizations that develop research-based national dietary recommendations support the position that nutrients required by healthy people can be obtained by consuming a balanced diet (Pelletier & Kendall, 1997). The American Dietetic Association maintains that “the best nutrition strategy for promoting optimal health and reducing the risk of chronic disease is to obtain adequate nutrients from a wide variety of foods” (Hunt, 1996). The Food Guide Pyramid and the *Dietary Guidelines for Americans, 2000* also support this perspective by promoting a food-based approach for U.S. consumers to achieve optimal health (Johnson & Kennedy, 2000). The use of supplements,<sup>1</sup> however, is a growing trend, which suggests that Americans are becoming more receptive to non-food sources of nutrition for health promotion.

A recent biannual nationwide survey conducted by the American Dietetic Association (2002), which tracks public attitudes, beliefs, knowledge, and practices related to food, nutrition, and health, found that nearly half (49 percent) of the adults surveyed took supplements daily, and more than a third (38 percent) believed that taking supplements is necessary to ensure

---

<sup>1</sup>Nutrient supplements are defined by the U.S. Department of Health and Human Services (DHHS), Office of Dietary Supplements as a formulation containing at least one or more of a variety of vitamins and minerals used to supplement the diet by increasing the total dietary intake. *Dietary supplements*, a broader class of products, include a vitamin, mineral, amino acid, herb, or other botanical intended for ingestion in the form of a capsule, powder, soft gel, or gel cap, and which is not represented as a conventional food or as a sole item of a meal in the diet (Office of Dietary Supplements, 1999).

good health. The high prevalence of supplement use has been confirmed in other national surveys (Balluz, Kieszak, Philen, & Mulinare, 2000; Bender, Levy, Schucker, & Yetley, 1992; Slesinski, Subar, & Kahle, 1995; Subar & Block, 1990). Further analyses suggest that users of nutrient supplements tend to have higher incomes and education and more healthful lifestyles than do nonusers (Nayga & Reed, 1999; Neuhausser, Patterson, & Levy, 1999), although supplement use also is associated with having one or more health problems (Bender et al., 1992; Newman et al., 1998). Many studies have reported that vitamin and mineral intakes from food tend to be higher among supplement users than nonusers, but analysis of data from the 1989-91 Continuing Survey of Food Intakes by Individuals revealed that this relationship can vary across sociodemographic groups and is influenced by the motivations and beliefs for using supplements (Pelletier & Kendall, 1997).

In 1995 and 1999, Congress considered legislation to permit food stamp recipients to use their benefits to purchase dietary supplements (H.R. 104-236 and S.1307, respectively) (Thomas, 2000). This legislation was opposed by many organizations that monitor public health and hunger, including the American Academy of Pediatrics; American Heart Association; USDA; and the Food, Research, and Action Center (Pelletier & Kendall, 1997; Porter, 1995; Skolnick, 1995). These organizations voiced a range of concerns: Most important was that a policy change would depart from the original intent of the Food Stamp Program (FSP), and supplements would not provide the calories needed or full range of nutritional benefits by children to avoid health problems and maximize learning potential in school (Porter, 1995). The proposed change was also seen as an attempt by a billion-dollar

supplement industry to widen its market (Skolnick, 1995). USDA's position on this issue was stated in these terms:

Because vitamins and minerals occur naturally in foods, a good diet will include a variety of foods that together will supply all the nutrients needed. . . . Because these products serve as deficiency correctors or therapeutic agents to supplement diets deficient in essential nutrition rather than as foods, they are not eligible for purchase with food coupons. (Porter, 1995)

Those favoring the proposed legislation maintained that the bill would expand dietary choices by giving food stamp recipients the option of improving their diet through additional nutrients. The Council for Responsible Nutrition, a trade organization representing the food supplement industry, testified in Congress:

When critical food choices are necessary, spending a few cents a day for a vitamin and mineral supplement may actually be the best and most economical choice available to a person at nutrition risk. (Dickinson, 1998)

Thus, supporters framed the issue in terms of improving nutrition and maintaining personal choice.

A report prepared by USDA at the request of Congress examined issues related to this proposal (U.S. Department of Agriculture [USDA], 1999). Among other findings, the report noted vitamin and mineral intake from food differs little across income levels, food stamp recipients tend to have nutrient profiles that are comparable to non-recipients, and a third (35 percent) of food stamp recipients already purchase supplements with other income sources.

The current policy, therefore, may not restrict individual choice as some have suggested.

There is a paucity of research elucidating attitudes, beliefs, and supplement-use practices of low-income, ethnically diverse Americans. One study suggested that food stamp recipients are less likely to take dietary supplements than are nonrecipients. However, it analyzed neither the reasons for this practice nor the relationship to nutritional quality of the diets, health status, socioeconomic circumstances, or other contextual factors (Nayga & Reed, 1999). The purposes of the present research were to investigate the attitudes and beliefs toward supplement use among food stamp-eligible women to understand better the potential effects of policy changes in this population and to relate these findings to the earlier policy dialogue about this issue, including the discussion of policy goals, strategies, and criteria for selecting among them.

---

## Methods

### Study Sites and Sampling

The purpose of this research was to clarify the perspectives about nutrient supplement use rather than to obtain population-level estimates of the distribution of particular beliefs. Qualitative methods were used by two researchers trained in qualitative research techniques (Miles & Hubberman, 1994) to elucidate attitudes and beliefs of food stamp-eligible women concerning food, health, and nutrient supplements. Member checks and peer debriefing<sup>2</sup>

---

<sup>2</sup>A *member check* involves obtaining feedback from respondents on the interpretation of the data following the analysis; *peer debriefing* involves discussing the analysis and interpretation of the data with other researchers (Miles & Hubberman, 1994).

were techniques used by both researchers to enhance the reliability and credibility of the data (Kraak, Pelletier, & Dollahite, 2000).

Three study sites were selected to provide ethnic and regional variation among food stamp-eligible individuals who were nutrient supplement users or nonusers. A purposeful sample was obtained at each study site and was based on ethnicity (African American, White, Latina, and Asian), eligibility for food stamps (current recipient and/or former recipient), and use of supplements (user or nonuser). Each case was reviewed and classified according to the usual supplement-use habits. For instance, women were categorized as *users* if they occasionally used supplements whenever the supplements were needed or when they remembered to take them. By contrast, women were categorized as *nonusers* if they took a prenatal multivitamin/mineral only during pregnancy, as advised by their physician, but did not use supplements preceding or following their pregnancy. The interviews were conducted in urban locations including New York; San Francisco, San Jose, and Oakland, California; and Fort Smith, Arkansas.

With the assistance of the Cooperative Extension staff in each site, we recruited 72 individuals—6 from each ethnic group in each location. Efforts were made to recruit participants who were food stamp-eligible adult women, at least 18 years old, who had received or were receiving food stamps, and were not pregnant or breastfeeding. The final sample consisted of 24 individuals in New York (NY), 25 in California (CA), and 23 in Arkansas (AR). Participants in NY were drawn from the Expanded Food and Nutrition Education Program (EFNEP). Those in CA and AR were drawn either from the EFNEP and Food Stamp Nutrition Education Program (FSNEP) or

contacted with the assistance of organizations serving the population that met the sampling criteria.

The age range for the 72 participants was 19 to 75 years. Thirty-eight of the final sample used supplements, 34 did not; 37 were food stamp recipients, 34 were not; and 1 respondent was unclear about her use of supplements. The final sample consisted of 19 Whites, 16 African Americans, 20 Latinas, and 17 Asian Americans. Most interviews were conducted in English among bilingual interviewees; in interviews with three Asian participants, a bilingual interpreter was used.

Eligibility for EFNEP in the participating States required a family income less than or equal to 185 percent of the poverty level; whereas, eligibility for FSNEP was less than or equal to 130 percent of the poverty level. Specific questions about income were not asked, but participants were asked to identify all of the food assistance programs they knew they were eligible for and had participated in. Some EFNEP participants may have been ineligible to receive food stamp benefits. Current or former food stamp recipients made up 38 percent of the sample in NY, 52 percent in CA, and 65 percent in AR.

### Interview Guide, Data Collection Methods, and Analysis

Qualitative methods were used for data collection and analysis (Miles & Hubberman, 1994). A semi-structured, open-ended interview guide was used to elicit participants' views and attitudes concerning the following areas:

- attitudes about and participation in food assistance and nutrition education programs;
- eating habits;
- beliefs about the adequacy of food-based nutrients in the average American diet;

- beliefs about the general attributes of a healthy person;
- perceptions about their own health status;
- personal health concerns;
- health-promoting or health-detracting behaviors;
- intentions to adopt health-promoting behaviors;
- perceptions about the meaning of the term *supplement*;
- specific supplement-use habits;
- influences promoting nutrient supplement use;
- reasons for not using or discontinuing supplements;
- beliefs about the benefits and drawbacks of allowing the use of food stamps to purchase nutrient supplements in addition to food; and
- opinions about who—the government or food stamp recipients—should decide how food stamps could be used if the policy changed.

After receiving input from staff of the Cooperative Extension program, we pretested and modified the interview guide for each site. Interviews were taped and transcribed verbatim. Data from the transcripts, demographic information, and field notes were used to analyze the qualitative data.

A consolidated summary was generated from the ethnic- and geographically based summaries of pertinent emergent themes. An in-depth analysis of key themes was undertaken in four specific categories:

- Nutrient supplement users receiving food stamp benefits
- Nutrient supplement users not receiving food stamp benefits
- Nutrient supplement nonusers receiving food stamp benefits
- Nutrient supplement nonusers not receiving food stamp benefits

---

**About one-half of the participants described a supplement as a substitute or a replacement for food. About one-quarter of the participants described it as something taken in addition to the nutrients one could obtain from food, and another quarter expressed uncertainty about the purpose or role of a supplement.**

These categories emerged as more important themes than the regional and ethnic categories used to obtain the heterogeneous sample. Emergent themes were incorporated into a conceptual framework describing the attitudes, beliefs, and practices of the women. Examples were chosen to illustrate the breadth of results for each question in the interview guide. The research site (NY, CA, AR), participants' ethnicity, supplement status (user vs. nonuser), and food stamp status (recipient vs. nonrecipient) are indicated after each quote. In some cases, approximate percentages are provided to give a sense of the number of women who expressed a certain viewpoint, although population representativeness should not be inferred.

---

## Results

### Attitudes and Beliefs About the Adequacy of Food-Based Nutrients

Two major themes emerged from this question: "Can the average person get all the vitamins and minerals he/she needs to be healthy, from the average U.S. diet, without taking a multivitamin and mineral pill?"

Theme 1: Roughly 60 percent of participants believe it is possible to get all nutrients from food, but most people do not do what is necessary to achieve that goal because of one or more of the following:

- fast-paced and stressful lifestyles
- ease and convenience of eating "junk" food
- lack of attention paid to the diet until chronic diseases develop
- lack of knowledge about what to select and prepare to meet needs

- lack of precision in serving sizes to eat according to the *Food Guide Pyramid*
- personal preferences that influence food choices that may not be nutritious
- time and money required to make wise decisions (especially challenging for low-income working mothers)
- the perception that healthful foods are too expensive to afford on a limited income

Theme 2: Less than one-quarter of respondents said it is *not* possible for a person to obtain all necessary nutrients exclusively from food because certain health conditions might require people to take nutrient supplements. Also, respondents had concerns about how food is produced and processed with special reference to nutrient losses, use of pesticides, and food additives and/or preservatives that were believed to change the nutrient value of food.

Illustrations of the participants' attitudes and beliefs about the adequacy of food-based nutrients and the role of nutrient supplements appear in the box on page 25.

### Perceptions Concerning the Role of a Supplement

When participants were asked, "What comes to mind when you hear the word *supplement*?" the responses followed three themes. About one-half of the participants described a supplement as a substitute or a replacement for food. About one-quarter of the participants described it as something taken in addition to the nutrients one could obtain from food, and another quarter expressed uncertainty about the purpose or role of a supplement.

---

**Illustrative statements of people's attitudes and beliefs about adequacy of food-based nutrients and the role of supplements**

**“Can the average person get all the vitamins and minerals he/she needs to be healthy from the average U.S. diet, without taking a multivitamin and mineral pill?”**

***Time and money to make wise food choices and/or to prepare nutritious foods were lacking.***

“Yes, if they eat right. If they have their diet balanced right, I believe they can, but most people don't do that. It's our culture . . . our society in America. You just slam food into your mouth and keep running. The way the government has made it, people have to work to live, and they don't take the time out for themselves. It's really a labor of love. You really have to dedicate every day, commit, and I'm thinking about this right now . . . ‘*How can I bring a lunch to work that's more nutritious?*’ . . . A lot of people don't have the time or energy to commit that way.” CA, White, supplement user, former food stamp recipient

***Food preferences influence food choices that may not provide all the nutrients people need.***

“No and that's why I think I need to eat my vitamins because I don't get enough. This food guide program of so much of this and that. . . . I don't follow it. I get three servings of fruits and vegetables out of five. . . . I am lucky that I like them. Even if I try, I am not very precise with my servings, and that is why I think I don't get all the nutrients I need.” CA, Latina, supplement user, non-food stamp recipient

***Food production techniques affect nutrient availability.***

“No, the good stuff [food] is too expensive because they [retailers] know it's good. Sometimes when they grow it with that . . . . I don't know how to explain it, I don't know all the terminology of it but for it to grow faster, it doesn't have all its nutrients, [and] half the time when people buy it, they don't cook it right . . . .” AR, White, supplement user, former food stamp recipient

***Certain health conditions might require people to take supplements.***

“No . . . sometimes it is good to take vitamins . . . you go to the doctor and he prescribes for you how much you must take and how often . . . some people need to take more because they don't have enough of something or they've become anemic . . . .” NY, White, supplement user, non-food stamp recipient

**“What comes to mind when you hear the word *supplement*?”**

***A supplement is a substitute or replacement for food.***

“It's like a second thing . . . that supplies . . . it's a replacement I would think. . . . it's like the fruits and vegetables; you can get better vitamins from them than pills, but sometimes when you can't take all the foods that you need, you can take a pill . . . ; it's not the best thing but it helps.” AR, Latina, supplement user, non-food stamp recipient

***A supplement adds extra to the nutrients obtained from food.***

“Something that gives you additional help, extra help. . . . it actually gives you more support for your body, the necessary nutrients for your body because you don't have enough from the food.” CA, Asian American, nonsupplement user, non-food stamp recipient

***There is uncertainty about the role or purpose of a supplement.***

“It helps somehow [to] control the disease or something like that. . . . It's for your memory, and you can go to sleep easier. It's very good if that person is a woman and if she is pregnant . . . . [I]t is very good for her child . . . and for the elderly. Oh, I don't know, I am not sure.” CA, Asian American, nonsupplement user, non-food stamp recipient

## Perceptions of Health Status

The participants were asked a series of questions about what constitutes good health, their perceived health status, and any healthful or unhealthful activities they engaged in. They were asked, “Do you consider yourself to be healthy?” (table 1). In general, the women described health status along a continuum of well-being, with roughly equal numbers expressing these three views: (1) they did not feel healthy, (2) they were somewhat healthy but could make changes to improve their health, and (3) they were healthy.

The primary difference between the non-food stamp recipients and the current or former food stamp recipients is that the latter group reported more health problems, regardless of supplement use. Some women said they were not healthy because of chronic diseases such as diabetes, hypertension, obesity, asthma, and arthritis. Some also indicated that they had epilepsy, anemia, gastrointestinal problems, mental health conditions related to depression, and histories of substance abuse and domestic violence.

## Reasons for Using Nutrient Supplements

Participants were asked whether they consumed anything besides food, for any reasons. Questioning was done to probe for the range of possibilities of supplement use. They were then asked whether they took any vitamin or mineral pills, and if they answered “yes,” they were asked what they took (either generic or brand names were offered), the dosage, and how often they took the vitamin or mineral supplement. They were also asked the reason(s) for taking supplements, the means by which they obtained them, the estimated cost of the supplements, how they were paying for them (e.g., out-of-pocket cash or insurance reimbursement), and any other

information about dietary supplements (e.g., herbs) that they and/or other household members were taking. The responses were categorized into eight emergent themes that related to

1. Brands of supplements used by adults
2. Supplement use by children
3. Reasons for use of single-nutrient supplements
4. Dosage of supplements
5. Income constraints and patterns of supplement use
6. Acquisition of supplements
7. Promotion of supplement use by influential figures
8. Media influence on supplement use

Multivitamins/multiminerals were the most common nutrient supplement taken by the participants. Family members usually took the same brand. Some women and family members took supplements with added nutrients beyond a standard multivitamin formulation.

Children were most often given either multivitamins or nutrient supplements containing specific micronutrients such as vitamin C and zinc. Parents who did not take supplements themselves often ensured that their children took a daily multivitamin.

“My husband doesn’t [take vitamins], but my kids take a generic multivitamin with extra vitamin C; . . . off the top of my head, I don’t know [how much vitamin C], but they each take one of them. I just assumed that it would be better for them because they have so many different choices, and I just hear so much about vitamin C being so important for people. . . that’s why I grabbed that one. . . . [I]t was just something I thought they needed, and of course, just

about everything I buy is generic because when you are on a low income like we are, you have to stretch your dollars as far as you can. Sometimes it’s hard, but I just thought . . . they’ve all been healthy. . . . I’ve been pretty lucky.” *AR, White, nonsupplement user, current food stamp recipient*

Single nutrient supplements were taken either in addition to or instead of a multivitamin and often for specific reasons. Some women said it was important to purchase a multivitamin and mineral supplement if they thought it would provide a positive benefit such as improving their energy level, managing stress, building up their body reserves, preventing infections, or managing chronic diseases. Some participants were able to describe why they were taking supplements as illustrated in the example below. Others were unable to describe clearly what the supplements were supposed to do for them.

“I take a lot of herbs. I take Echinacea, calcium, magnesium with zinc, and I take 1,000 mg of vitamin C every day. I [also] take some beta-carotene.”

[Interviewer: Why are you taking the calcium, magnesium, and zinc?] “Because it builds bones . . . I was a polio victim when I was 3 months old and so I take it to build up [my bones] . . . and then it’s good for . . . what do you call it? Osteoporosis. The vitamin C keeps colds out because, as a diabetic, you can contract anything quickly. . . . [I]t stops the flu and colds and stuff. I took it through the winter and didn’t have any problem.” *AR, African American, supplement user, non-food stamp recipient*

**Table 1. Beliefs about personal health among food-stamp eligible women: “Do you consider yourself to be healthy?”**

Perceived status	Illustrative statements	Respondents' characteristics
"I am not healthy . . ."	"Not me because I get so tired at the end of the day. See, I work a lot, but I get so tired at the end of the day. I don't know if this is normal. . . . It's like when my husband come[s] home at night and he's trying even to talk to me, I can't even open my eyes to talk to him."	<i>NY, White, supplement user, non-food stamp recipient</i>
	"Oh, no, because I'm overweight. I've been that way pretty much all my life, and I think it's not due to what I eat. . . . it's because of what I like to do. I don't get enough exercise, that's the biggest part. If I exercised, I could be the size I wanted to be, but there never seems to be enough time in my day to take that time out for me. I eat stuff that's not considered healthy. I don't sit down and eat junk food like potato chips, but I don't eat what you would call good-for-you foods like fruits and vegetables. We eat them, but I try to make it more a part of my kids' [diet] than I do mine. . . . I think about them, but I don't stop to think about myself."	<i>AR, White, nonsupplement user, food stamp recipient</i>
"I am somewhat healthy . . ."	"Yea, pretty much. I might contradict myself here because I know that I'm overweight. . . . I don't feel that it is causing me to be really unhealthy where I am dragging. . . . I could probably lose the weight and feel better."	<i>AR, Latina, supplement user, food stamp recipient</i>
	"No, because I don't really eat right. I eat about one meal a day sometimes, and then I will . . . snack throughout the day on chips and soda . . . you know, junk food. I don't eat right. . . . I consider myself to be somewhat healthy . . . healthier than . . . this is what I am trying to say. If I took vitamins, I don't think that would change anything."	<i>CA, White, nonsupplement user, food stamp recipient</i>
"I am healthy . . ."	"Yea. I consider myself to be healthy. I eat the right types of foods, I hardly ever get sick with the flu or anything like that, and I exercise."	<i>AR, White, nonsupplement user, food stamp recipient</i>
	"Yes . . . I'm a little overweight, but it's okay. . . . I don't have diabetes. . . . I haven't developed any of those diseases. I don't have heart disease yet. I've been trying real hard to keep it down. I'm trying to lose more weight."	<i>NY, African American, supplement user, food stamp recipient</i>

“. . . I thought I had ovarian cancer but it was [endometriosis]. I'm starting to feel better now . . . and I'm taking vitamins, which I don't like to do. . . . I don't like taking pills. I started 2 months ago. My nails are getting stronger, I'm feeling healthier, and my hair is growing faster. I take them every day. I love it because it is about \$5 for a 30-day supply. It's got the vitamin E, the magnesium and zinc, the herbal energy, and the rest of them . . . the value pack. . . . I pay my own cash for them.” *AR, White, supplement user, former food stamp recipient*

Many participants were not always attentive to the dosage or brand of the supplements taken: They admitted taking less than what was recommended or not taking the supplements daily. Because these participants had limited incomes, they wanted the supplements to last longer.

“I take vitamin E for skin, vitamin C, and calcium. On the [vitamin E] bottle it says to take one pill three times a day but I only take one a day because I can't afford to buy 'em for three times a day.” *AR, African American, supplement user, current food stamp recipient*

Most women living on limited incomes either paid for supplements themselves, received them through Medicaid or MediCal when a prenatal multivitamin or iron was prescribed, or received them from friends or relatives who would share their supplements or purchase supplements for the participants when resources were low.

“The prenatal vitamins . . . when I ran out, I just didn't take them [any] more. . . . They

gave them to me free at the clinic . . . through MediCal. . . . The kids take vitamin B, vitamin C, and the little kid vitamins. . . . I pay for them out of my own pocket.” *CA, African American, nonsupplement user, food stamp recipient*

Friends, relatives, and/or physicians most commonly recommended supplements. Pharmacists, dentists, and sales associates in health-food stores were identified less frequently as authorities encouraging supplement use. No participant identified a nutritionist or dietitian as a professional recommending supplement use.

The media was cited less frequently than were authoritative figures for influencing supplement use and was reported to have both a positive and negative influence on women's use of supplements. In some cases, the media messages influenced them to try something new. In other instances, the media messages promoting supplement use were disregarded, because the woman questioned the benefit of the products.

“I think they are just trying to get you to buy the product . . . just like any commercial. For some people, it might be a good thing. I don't drink milk, so maybe I could take some type of calcium supplement. But if you eat right and do everything right, there is no need for that. They just want your money.” *CA, White, nonsupplement user, current food stamp recipient*

One participant equated the side effects of medications with the potential side effects of nutrient supplements and stated that she avoided them.

“Yea, we've seen [the TV advertisements]. Well, they show all those side effects . . . , and that scares me. . . . [S]ide effects scare me to death. I took some antibiotics when I was sick, and I had some real bad side effects. [Interviewer: Is that different from a vitamin?] It's just the side effects that scare me.” *AR, White, nonsupplement user, current food stamp recipient*

### Reasons Why Women Do Not Take Nutrient Supplements

Several different themes were identified to explain why women chose not to take nutrient supplements. About one-quarter of the participants believed it was possible to get all the vitamins and minerals one needs from food.

“I don't take any vitamins because I get all the vitamins I need from the fruits and vegetables I eat.” *AR, White, nonsupplement user, food stamp recipient*

Women and/or their children avoided or discontinued supplement use for reasons such as cost and the need to prioritize expenses; side effects such as nausea, dizziness, or constipation; potential or perceived side effects; and dislike of the taste by children.

“My kids will not take vitamins . . . . [T]hey don't like the taste . . . . [The vitamins] taste nasty [or] have a funny taste. . . . [I]'s not like regular foods that you can prepare differently.” *CA, Latina, nonsupplement user, current food stamp recipient*

---

The women cited several reasons for discontinued supplement use: a multivitamin could overstimulate the appetite, the supplements had previously not produced the anticipated effects, and for some women who were already taking pills for medical conditions, they did not want to take more pills. A few did not think about purchasing a multivitamin pill or nutrient supplement while grocery shopping.

### The Use of Food Stamp Benefits to Purchase Nutrient Supplements

The responses of participants were divided into two groups concerning the use of food stamps to purchase nutrient supplements (table 2). The first group consisted of a minority of participants who believed that food stamps should be used only for food because (1) the monthly food stamp allowance was not adequate to meet a household's food needs especially in large families, (2) recipients should eat vegetables or fruits rather than take pills, and (3) a vitamin pill would not alleviate hunger or promote satiation as food could. The second group believed certain circumstances deserved consideration so that needy families could purchase nutrient supplements.

Several themes were identified to characterize the view of both food stamp recipients and nonrecipients who said it was a good idea to allow recipients to purchase a multivitamin and mineral pill with their food stamp benefits because it might (1) assist them in getting what they need nutritionally while living on a low income; (2) help parents save pocket money that could be used toward something else such as buying children's clothes or school supplies; and/or (3) improve food stamp recipients' overall health.

In Arkansas, three food stamp recipients expressed that taking a multivitamin would be less expensive than buying fresh fruit. Although they would have preferred to purchase fruit, they believed that taking vitamin C or a multivitamin would be the most practical and least expensive alternative for low-income families.

Some said that changing the FSP policy was a good idea *if* recipients could not buy healthful food. However, others said it was a good idea *because* they believed that food stamp recipients generally do not eat healthful foods. Other attitudes and beliefs shared concerning the benefits of supplements included these:

- Food stamp recipients should take one multivitamin instead of several vitamin or mineral pills.
- It is feasible to use food stamp benefits for supplements if recipient makes wise budgeting decisions.
- Supplement use would depend on the person or family situation.
- Supplement use could set a good example for children and might stimulate other healthful habits such as buying more healthful foods.
- It is easier to take a pill than to eat healthful food.
- Food stamp recipients need to be convinced of the benefit of taking a multivitamin and mineral pill regularly.

A few food stamp recipients suggested that the government offer a special coupon to families each month that could be used to purchase a designated supplement—similar to providing specific WIC commodities—but if recipients did not use the coupon, they would lose the benefit.

---

**Most women living on limited incomes either paid for supplements themselves, received them through Medicaid or MediCal . . . , or received them from friends or relatives . . . when resources were low.**

**Table 2. Food stamp-eligible women's perceptions regarding the use of food stamps to purchase nutrient supplements**

Perceived status	Illustrative statements	Respondents' characteristics
Group 1 <i>"Food stamps are for food only because . . ."</i>	<p>"I would rather buy food, because I get hungry and I need to eat . . . I like to eat. [A vitamin and mineral pill] won't do [anything] for me. . . . [T]he welfare office does not give you enough food stamps to have that luxury to also buy vitamins. I only get \$230 for my two daughters, and they are thinking that's enough for food for the whole month and it [isn't]! You really don't have that much money coming in to afford to buy that. You would rather have your kid eat food than a vitamin; . . . it would not be bad if a person receiving food stamps also had more income coming in if that is what they want to do."</p>	<p>CA, White, nonsupplement user, current food stamp recipient</p>
	<p>"You buy vitamins automatically with food stamps, because you're buying your fruits and your vegetables and stuff like that . . . so it's really the same thing."</p>	<p>NY, African American, supplement user, current food stamp recipient</p>
Group 2 <i>"Food stamps could be used to purchase nutrient supplements because . . ."</i>	<p>"It would help because then that money I spend on my calcium, I could spend on something else. My kid always needs socks and underwear . . . he's growing so fast . . . .Yea, I would probably [take] vitamins and [my son] would [take] vitamins, but vitamins and stuff like that are just outrageous. You just can't afford it! [If money wasn't an issue], I would probably buy [vitamins] to make sure I was getting what I was supposed to and what my body really needed, so that my body wouldn't break down, and I wouldn't have so many health problems."</p>	<p>AR, White, supplement user, current food stamp recipient</p>
	<p>"I think that would be great, because a lot of people out there can't shop, and it would be just as easy to take a pill to stay healthier. Many times I've been low on food stamps, cooked for the kids, and went hungry. . . . I could have used that vitamin supplement."</p>	<p>AR, White, nonsupplement user, current food stamp recipient</p>
	<p>"I think a lot of your healthier foods are more expensive . . . . [I]f you go to buy your fruits, other than bananas and apples and oranges, when you start buying for a family of seven, you're talking several bags of each. I think that to be healthier, you are going to have to spend more. . . . I think it's too expensive to eat what they <i>should</i> eat."</p>	<p>AR, White, nonsupplement user, current food stamp recipient</p>

---

## Perceived Drawbacks to Using Food Stamps to Purchase Nutrient Supplements

Several participants shared some possible drawbacks to allowing food stamp recipients to use their benefits to purchase supplements. They believed recipients might purchase supplements but not take them, might not give their children adequate food if household resources were spent on a supplement, might not be able to absorb the nutrients from a pill or may be allergic to the supplement, or might abuse the FSP by selling food stamp benefits or nutrient supplements for cash. They also thought that allowing recipients to purchase supplements might reinforce the perception that food is not needed if vitamins are substituted and that taking too many or high doses of supplements may be harmful.

## Decisionmaking About the Use of Food Stamps

Participants were asked their opinion regarding who should decide how food stamps are used—either the government or recipients. Three themes emerged: they believed food stamp recipients should decide, the government should decide, or the government and people should work together to decide. More than half of the food stamp recipients indicated that the people rather than the government should decide how food stamps are used. Many acknowledged, however, that the government's position would be more heavily weighted because it provides the benefits.

---

## Discussion

The FSP-supplement proposal, far from being a simple policy change, brings two relatively new concerns to the foreground with respect to the goals of the FSP: (1) Should the goals of the

FSP be broadened to include *health promotion* beyond that associated with achieving equity in food intake? A related question is whether the supplement proposal is an appropriate strategy for doing so. (2) Given the high prevalence of supplement use in the general population, should food stamp recipients have the same level of choice as the general population regarding how they obtain their nutrients (i.e., via foods or supplements)? A related question is whether the current FSP policy constrains such choice. This latter question reveals a concern for consumer autonomy as distinct from equity or health promotion. Autonomy has not been one of the stated goals of the FSP; for example, current regulations do not permit the use of food stamps to purchase prepared food away from home.

While equity, health promotion, and autonomy all are implicated in this issue, much of the debate has emphasized only one or another of these goals and has not examined the actual strength of the trade-offs among them. The findings from the present study are synthesized below, in order to shed light on these policy questions.

As shown in figure 1, women in this study appear to hold an overall philosophy regarding nutrient supplements that is shaped by their beliefs concerning the nutritional adequacy of food, the inadequacy of actual behaviors, perceived benefits and experiences, the concept of supplements itself, and their current supplement practices. This philosophy appears to be malleable and/or negotiable depending upon such factors as degree of self-reflection, the clarification of existing information or addition of new information (especially from influential interpersonal sources), or changes in the participants' health status or income. In a few cases in this study where participants believed their

diet was adequate to provide them with all the nutrients they needed, their general philosophy appeared less malleable.

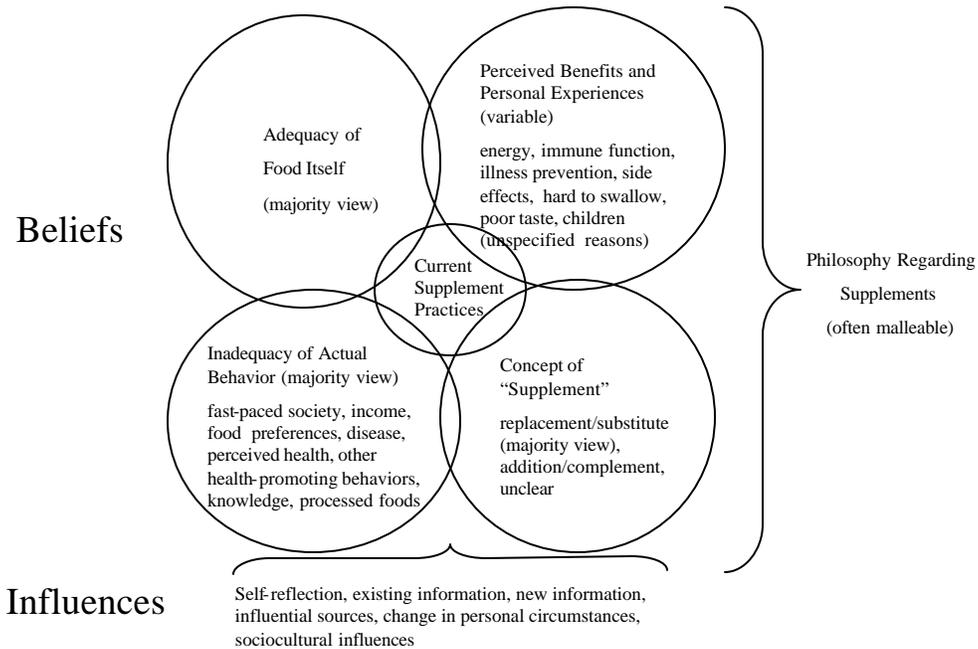
The most plausible prediction to be derived from these findings is that nutrient supplement use will increase in this population as long as the dominant narrative in their personal information networks and other influential sources is positive toward using nutrient supplements. Conversely, information from national authorities—as reported in the media or through programs such as FSNEP or EFNEP—concerning adverse events, lack of efficacy, or false advertising claims is unlikely to reach this population efficiently, although it may do so after an indeterminate lag time. Supplement use is predicted to increase under *both* the existing FSP policy and revisions in the policy, although it is likely to be more rapid and extensive under a changed FSP policy.

## Implications for Policy Goals

In attempting to relate these predictions to equity in food access, health promotion, and personal autonomy, we find it necessary to consider the potential effect of increased use of nutrient supplements on total household expenditures, on the quality of food intake itself, and on other health-related behaviors. Moreover, it is necessary to examine more carefully the meaning of autonomy in light of the information asymmetries noted in the preceding paragraph.

**Effect on Food Access.** With regard to household expenditures, the expectation derived from household economics is that expenditures for supplements would reduce the income available for all other expenditures by an equal amount. That is, it would be subtracted from the *total* household budget not exclusively from the household *food*

Figure 1. Conceptual framework for food, health, and nutrient supplements among low-income, food stamp-eligible women



budget because only a fraction of FSP households (25 to 40 percent) currently purchase their entire food supply with food stamps (USDA, 1999). Most (60 to 75 percent) augment their food stamps with other income sources, indicating a substitutability between food and non-food expenditures, and they must do so to an even greater extent when they purchase supplements. This is true regardless of whether food stamps or cash is used to purchase the supplements.

A high-end figure of \$5/month (17 cents/day for a mother and two children as used by USDA [1999] and the average food stamp household of 2.4 persons in 1999 [with \$338/month net income plus \$162 in food stamps]), for example, would represent a 1-percent decrease in income available for all other expenditures. If all of this were subtracted from *non-food* expenditures, there may be no effect on food expenditures. If all of it were subtracted from *food* expenditures (which average \$224/

month for FSP households), the effect could be a 2.4-percent reduction (\$5) in food expenditures.

Using a different set of assumptions and methods, USDA estimated a low-end effect of 26 cents/month and high-end effect of 94 cents/month (0.4 percent) reduction. One of the major reasons for this difference (compared with the present estimates) is that the USDA method averages the effect across all FSP households; whereas, the present method emphasizes the potential effects on smaller subgroups (USDA, 1999). Notwithstanding these large differences among estimates in percentage terms, effects of this size do not appear to constitute a significant threat to food access, especially since households would retain the option of foregoing supplements in favor of purchasing food.

However, the policy change could have more serious implications for food access if it were to lead eventually to

changes in the way benefit levels are calculated. Specifically, if the base assumption for future Thrifty Food Plan calculations is that nutrient supplements can be used to meet some or all of a FSP recipient's vitamin and mineral requirements, especially for those that are relatively expensive from food alone such as folate, this could lead to significant reductions in benefit levels and, subsequently, food access. This is not a minor policy consideration.

**Effect on Health Promotion.** In theory, a change in the FSP policy could affect recipients' health in several ways. A benefit is that it could compensate for or enhance the vitamin and mineral intake of recipients who have unhealthful diets. A drawback is that it could compromise the quality of food choices and intake because of the belief that nutrient supplements are an effective substitute for food. Reports by the USDA and Life Sciences Research Office address the former possibility in considerable detail (Life Sciences

---

Research Office, 1998; USDA, 1999), and the present study does not add further insight into the findings. However, the present study does suggest the danger that greater supplement use in this population may lead to compromises in the quality of food choices and intake—especially if there is an implied government endorsement of supplement use as a result of a change in food stamp policy.

**Implications for Autonomy.** The majority of study participants expressed the view that food stamp recipients should not only make their own choices regarding supplement use (citing normative as well as pragmatic reasons) but also that the government should create the circumstances that would support recipients' choices. While these reasons have strong support from the perspective of ethics and welfare economics, respectively, this study also reveals some countervailing considerations that demand equal attention.

First is the documentation of a wide range of misconceptions concerning the purpose and role of a supplement, the nature of its benefits, and the degree to which the health benefits of food and supplements are substitutable. Even if there is no change in the current policy regarding supplements, these misconceptions deserve attention in current nutrition education programs for low-income populations. Second is the documentation that this population is likely to face significant information asymmetries because of the nature of their influential information sources, and will be unable to discover hidden quality defects on their own such as lack of efficacy and adverse consequences.

Both of these situations suggest a middle ground in which food stamp recipients could exercise autonomy in decisionmaking, but government should

take effective steps to correct potential information failures. Such steps would need to include the following: designing a clear and effective education initiative regarding the use of nutrient supplements; regulating labeling, advertising, and other forms of promotion based on the messages that are targeted for and understood by this population; and evaluating the extent to which an implicit government endorsement of multivitamin and mineral supplement use (and its associated promotion by the supplement industry and retailers) is generalized by members of this population to include higher doses and/or other forms of dietary supplements. (This latter possibility was not investigated directly in this study.) Finally, a policy change regarding supplements would require a variety of administrative changes to define eligible items; inform manufacturers, retailers, and consumers of these rules; and monitor and enforce compliance with these rules.

### Strategies for Improving Food and Nutrient Intakes

If promoting the health of low-income Americans beyond that required for achieving equity is deemed a worthy policy goal, attention should then focus on the most effective and appropriate strategies to do so. Previous discussions have explicitly noted the logical fallacy of assuming that the most effective and appropriate strategy necessarily involves supplements or even the FSP itself (Life Sciences Research Office, 1998). Instead, this earlier analysis considered supplements, fortification, a variety of other incentives, and promotional or enabling strategies to improve food and nutrient intake to promote good health among food stamp recipients and low-income people in general. But even this is only a partial list of the potential strategies for pursuing one of the core public health goals as outlined in *Healthy People*

2010 (U.S. Department of Health and Human Services [DHHS], 2000).

Investigating the larger food environment of food stamp recipients would be appropriate for the purpose of promoting health and other food-system goals such as improving access to and the quality of supermarkets, supporting the capacity of institutions that serve low-income groups to purchase fresh produce from local farmers, and expanding the ability to use electronic benefit transfer cards at farmers' markets or for community-supported agricultural schemes. A systematic examination of potential strategies (and an effort to reconcile health, food security and food-system goals pursued by other government programs) does not appear to have been undertaken.

---

## Conclusions

One version of the FSP-supplement policy dialogue maintains that a change in FSP policy would give program participants the same freedom to use nutrient supplements that other Americans have and improve their health and nutritional status at a lower cost than is possible through careful food selection. A decision to change the FSP policy based on this narrative would greatly overestimate the benefits associated with a multivitamin and mineral supplement in a population where nutrient deficiencies are rare. It would overlook the potential for negative consequences (i.e., decreasing the intake of nutrient-dense foods), and it would neglect the imperfections and asymmetries in the information available to food stamp recipients and the cost of government actions required to correct this class of market failures effectively.

A decision to change FSP policy further suggests that the net effect of proceeding with the policy change in the

---

absence of effective actions to correct for these market failures would be to shift some additional costs or risks onto an already disadvantaged population for the sake of little additional benefit, thereby raising serious ethical concerns.

This study reveals the need to conduct a more systematic examination of the potential strategies for improving the nutritional health of food stamp-eligible households and the importance of using a more complete list of criteria when attempting to identify the most effective and appropriate goals and strategies.

---

## Acknowledgments

This research was funded through the Food and Nutrition Research small grants program sponsored by the USDA Economic Research Service and administered by the University of California at Davis. We are grateful to the Cooperative Extension staff in New York City; Fort Smith, Arkansas; and San Francisco, San Jose, and Oakland, California, for their generous assistance in conducting this study.

---

## References

- American Dietetic Association. (2000). Nutrition and you: Trends 2000. *Journal of the American Dietetic Association, 100*, 626-627.
- Balluz, L.S., Kieszak, S.M., Philen, R.M., & Mulinare, J. (2000). Vitamin and mineral supplement use in the United States: Results from the Third National Health and Nutrition Examination Survey. *Archives of Family Medicine, 9*, 258-262.
- Bender, M.M., Levy, A.S., Schucker, R.E., & Yetley, E.A. (1992). Trends in prevalence and magnitude of vitamin and mineral supplement usage and correlation with health status. *Journal of the American Dietetic Association, 92*, 1096-1101.
- Dickinson, A. (1998). *Optimal Nutrition for Good Health: The Benefits of Nutritional Supplements*. Washington, DC: Council for Responsible Nutrition.
- Hunt, J. (1996). Position paper of the American Dietetic Association: Vitamin and mineral supplementation. *Journal of the American Dietetic Association, 96*, 73-77.
- Johnson, R.K., & Kennedy, E. (2000). The 2000 Dietary Guidelines for Americans: What are the changes and why were they made? *Journal of the American Dietetic Association, 10*, 769-774.
- Kraak, V., Pelletier, D., & Dollahite, J. (2000). *How Do Food Stamp Eligible Women Negotiate Food and Nutrient Supplement Choices? Qualitative Findings From an Ethnically and Regionally Diverse Sample of Low-Income Nutrient Supplement Users and Nonusers*. Division of Nutritional Sciences, Cornell University, Ithaca, New York (unpublished).
- Life Sciences Research Office. (1998). *Analysis and Review of Available Data and Expert Opinion on the Potential Value of Vitamin and Mineral Supplements to Meet Nutrient Gaps Among Low-Income Individuals*. Draft report prepared for the USDA Economic Research Service, Bethesda, MD (unpublished).
- Miles, M.B., & Hubberman, A.M. (1994). *Qualitative Data Analysis*. Thousand Oaks, CA: Sage Publications.
- Nayga, R.M., & Reed, D.B. (1999). Factors associated with the intake of dietary supplements. *Family Economics and Nutrition Review, 12*, 43-48.
- Neuhouser, M.L., Patterson, R., & Levy, L. (1999). Motivations for using vitamin and mineral supplements. *Journal of the American Dietetic Association, 99*, 851-854.
- Newman, V., Rock, C.L., Faerber, S., Flatt, S.W., Wright, F.A., & Pierce, J.P. (1998). Dietary supplement use by women at risk for breast cancer recurrence. *Journal of the American Dietetic Association, 98*, 285-292.

---

Office of Dietary Supplements, National Institutes of Health. (1999). Retrieved September 12, 2000, from <http://ods.od.nih.gov>.

Pelletier, D.L. (2001). Research and policy directions. In R. Semba & M. Bloehm (Eds.), *Nutrition and Health in Developing Countries*. Totawa, NJ: Humana Press.

Pelletier, D., & Kendall, A. (1997). Supplement use may not be associated with better food intake in all population groups. *Family Economics and Nutrition Review*, 10, 32-44.

Porter, D.V. (1995). Purchasing dietary supplements with food. *Nutrition Today*, 30, 214-217.

Skolnick, A.A. (1995). Experts debate food stamp revision. *Journal of the American Medical Association*, 274, 781-783.

Slesinski, M.J., Subar, A.F., & Kahle, L.L. (1995). Trends in use of vitamin and mineral supplements in the United States: The 1987 and 1992 National Health Interview Surveys. *Journal of the American Dietetic Association*, 95, 921-923.

Subar, A.F., & Block, G. (1990). Use of vitamin and mineral supplements: Demographics and amount of nutrients consumed. *American Journal of Epidemiology*, 132, 1091-1101.

Thomas, P. (2000). Food stamps for dietary supplements? *The Dietary Supplement*, Issue 1(9). Retrieved September 12, 2000, from <http://www.thedietarysupplement.com>.

U.S. Department of Agriculture. (1999). *The Use of Food Stamps to Purchase Vitamin and Mineral Supplements*. Retrieved September 12, 2000, from <http://www.fns.usda.gov/oane/menu/Published/fsp/FILES/Program%20Design/vitamin.pdf>.

U.S. Department of Health and Human Services. (2000). *Healthy People 2010*. Washington, DC.