

### **Summary**

Interest, research, and expenditures on dietary supplements are growing very fast. Americans spent \$8.2 billion in 1995 for vitamins, minerals, herbs and botanicals, and sports nutrition products. About half of all Americans reported at least some use of vitamins and minerals in response to recent surveys.

Compared to the general population, low-income persons are less likely to report any use of vitamins or minerals, use of more than one vitamin or mineral product, or use of supplements composed of a single nutrient. Within the low-income population, the percentages are smaller for food stamp recipients.

Some point to the Food Stamp Program's authorizing legislation which prohibits using benefits to buy dietary supplements as a serious impediment to using them. They are calling for a Program change in this area in order to create more equitable treatment of food stamp recipients and to improve their health.

Those who support current rules point out that the Program's mission, as well as the nation's official dietary guidance focus on food as the source of nutrients and other substances necessary for good health. They also acknowledge the potential trade-offs associated with redirecting some food stamp benefits to purchase supplements.

In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (Public Law, 104-93) directed the Secretary of Agriculture to conduct a study, in consultation with the National Academy of Sciences and the Centers for Disease Control and Prevention, on the use of food stamps to purchase dietary supplements.

The general goal of the study is to examine existing data that bear on a diverse set of pertinent issues.

### **Adequacy of Nutrient Intakes among Low-income Populations in the United States**

USDA monitors the food and nutrient intakes of Americans through the Agricultural Research Service's Continuing Survey of Food Intakes by Individuals (CSFII). The most recent available data (1994-96) were analyzed to estimate usual vitamin and mineral intakes of Americans. Nutrient intake data from the 1988-94 National Health and Nutrition Examination Survey were also examined for comparison purposes.

The most striking result is that vitamin and mineral intakes from food differ little across income levels. Some nutrient gaps occur, but the pattern of usual intakes above and below the relevant Recommended Dietary Allowances is quite similar for high and low-income persons – that is for households with incomes above and below 130 percent of poverty.

Within the low-income population, food stamp recipients have better nutrient profiles than their non-recipient counterparts. For some nutrients, median intakes for food stamp recipients even exceed the comparable average for higher income persons.

Belonging to a particular age and sex group is related to diet quality. Children's intakes are higher than those of the general population for all nutrients. In contrast, females of child-bearing age, pregnant and lactating females, as well as elderly men and women have intakes below recommended levels for more nutrients than the population as a whole. Within subgroups, income is a factor but its influence varies by subgroup and nutrient.

### **Potential Value of Nutritional Supplements in Meeting Nutrient Gaps and Impacts of Nutritional Improvements on Health Status and Health Care Costs**

There is virtual scientific consensus that dietary patterns and nutrient intakes can dramatically affect health, as well as agreement on the general characteristics of a healthful diet. However, the links between diet and chronic, degenerative diseases are complex, and current research is less than definitive. Although there is research support for greater supplement use in some circumstances, there are also indications that the relative effectiveness of improved diet, fortified food, and supplement use varies across nutrients in question and population subgroups.

Scientific knowledge is particularly limited when it comes to understanding:

- how some of the non-nutrient components of food (like fiber and phytochemicals) reduce the risks of disease;
- what differences exist in the bio-availability of nutrients in food compared to supplements;
- what represents deficient and excessive intake levels for different nutrients and groups of people; and
- what are the key interaction effects for different combinations of nutrients.

Even less is known about the comparative health care impacts of these alternative approaches to nutrition improvement among U.S. citizens. The studies that estimate potential savings for a single type of intervention or across two approaches typically are subject to serious methodological criticism.

### **Dietary Supplement Use Patterns and Expenditures among Low-income Populations in the United States**

Data from national surveys show that between 41 and 48 percent of the general U.S. population reported at least some vitamin and mineral use. Higher-income persons were consistently more

likely than low-income persons to report supplement use. Among low-income persons, Food Stamp Program participants are less likely than non-participants to use dietary supplements.

Information on household supplement purchase patterns is much more limited. Data from the national Consumer Expenditure Survey suggest that purchases are relatively infrequent. Only a small percentage of households reported buying vitamins or minerals within the two-week reporting period. Given the fact that supplements typically are sold in quantities providing a two or three month supply, the findings are not surprising. The average amount of vitamin and mineral purchases during the two-week diary period was in the \$8 to \$11 range.

### **Costs of Commercially Available Vitamin and Mineral Supplements**

There is substantially more information available on the average costs of nonprescription vitamins and minerals, at least for some retail environments. Using market data collected by A.C. Nielsen from supermarkets and drug stores (which together represent 70% of total U.S. vitamin and mineral sales by mass merchandisers), per tablet prices were estimated for a variety of products.

Price variability across nutrient type, brand and retail category was observed, but the average per tablet costs typically fell below 10 cents. This information can be used to estimate the daily, monthly or annual costs of various combinations of dietary supplements. For example, on average, it costs a household consisting of a mother and two young children slightly more than 17 cents per day for them each to take a generic-label multi-vitamin with minerals.

### **Impact of Using Food Stamps to Purchase Vitamin and Mineral Supplements on Food Expenditures**

Analyses of survey data offer a look at the relationship between supplement use and food expenditures but cannot establish the effect of a policy change on recipient behavior. The

observed relationships are modest in magnitude and vary across different household types.

A related question - to what extent are food stamp households now constrained from buying vitamins and minerals - can be addressed more directly. In general, the Food Stamp Program benefit structure expects households with income to be responsible for a portion of their food costs. Since there are no restrictions on how a household spends its own food money, these dollars could be used without restriction to purchase vitamins and minerals. Nationally, about 77 percent of participating households have sufficient income so that benefits are reduced to an amount less than the maximum allotment. These households have some minimum amount of cash income that could be used to buy vitamin and mineral supplements.

The Consumer Expenditure Survey shows that a somewhat smaller, 62, percent of food stamp households reported actually spending more than their allotments on food. Thus, overall a majority of food stamp households currently have cash resources for food which could be used for vitamin and mineral supplements.

Projections of the impact of a Food Stamp Program policy change on food expenditures are made for a number of different, but realistic scenarios. They are based on the premise that allowing vitamin and mineral purchases with food stamps without increasing total household resources is unlikely to lead to greater supplement and food expenditures. The results of this analysis indicate impacts on food expenditures that range from a \$0.00 to \$0.94 reduction in food purchases per food stamp household per month.

These estimates, however, assume relatively small proportions of food stamp households actually respond to the policy change by reducing food expenditures, and the impact on them is averaged across all food stamp households. Among households who actually redirect some benefits from food to supplements, the dollar impact would be larger. The family of three who consumes multi-vitamins each day could be expected to spend \$5.20 a month on supplements.

### **Economic Impact of Using Food Stamps to Purchase Vitamin and Mineral Supplements on Agricultural Commodities**

The alternative estimates of policy impacts on household food expenditures, just described, were converted into changes in farm receipts. This was done using the impact estimates of a policy change on food expenditures, national survey data on the distribution of food dollars across different food groups, and average 1996-97 values of the farm share of the retail dollar as calculated by the Economic Research Service, USDA. Impacts of a Food Stamp Program policy change concerning dietary supplements are projected to reduce annual farm receipts from \$5-19 million. In the context of overall farm receipts, the estimated impacts represent less than a fraction of one percent of the total.

### **Administrative Implications for the Food Stamp Program of Using Benefits to Purchase Vitamin and Mineral Supplements**

While not quantified, a change in Food Stamp Program policy regarding dietary supplements also affects Program administration. Among the most immediate requirements is the need to define which dietary supplements are eligible for purchase with food stamp benefits. With thousands of products currently on the market, the criteria for defining eligible supplements need to be clear to manufacturers, food retailers and recipients. There will be some additional challenge to the Food and Nutrition Service to monitor and enforce compliance.

In addition, the introduction of dietary supplements as food stamp eligible items raises questions of whether or not the existing food model remains adequate for defining a healthful diet; estimating associated food costs (i.e., the Thrifty Food Plan); and determining food stamp benefit amounts. In any case, a policy change to allow the purchase of supplements adds some additional requirements for the Program's educational efforts. It will become important to provide food stamp recipients with guidance on how to use information in the market place to make supplement purchases that meet their individual needs and represent good value.

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