DEVELOPMENT OF THE DIETARY SUPPLEMENT INGREDIENT DATABASE

PHASE I: EVALUATION OF EXISTING DIETARY SUPPLEMENT INFORMATION

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Nutrient/Ingredient Content of Dietary Supplements, NHANES III, April 1998

Vitamin C 1087
Cholesterol 635
Phosphorus 261
Sodium 273
Calcium 120
Zinc 548
Potassium 325
Manganese 303
Selenium 273
Chromium 262
Phosphorus 301
Molybdenum 211
Copper 300
Iron 650
Chloride 157
Inositol 116
PABA 111
Para-aminobenzoic acid 111
*Not reported to be used at least once in the past month

Abstract

The use of dietary supplements of all types continues to increase dramatically in the United States. The overall objective for this project is to develop a Dietary Supplement Ingredient Database to provide representative values for the content of commonly used dietary supplements. In Phase I, existing information is being evaluated and future needs determined for the database. A comprehensive survey of the available literature, government organizations and trade associations is being conducted to gather the information needed to set up an adequate database on quantitative levels of nutrients and other components in dietary supplements. To date, several U.S. Government surveys and product databases have been evaluated to gather information on dietary supplement use as well as label ingredient information. Other databases have been developed to support specific research projects at universities. Literature articles and industry sources can provide some analytical results, but a systematic approach to generate data for nutrients and other components is needed. In addition to published methods of analysis need to be developed for many dietary supplement ingredients. Certification programs for dietary supplements have recently been established which may also provide valuable information for the database. The development of a quantitative database for nutrients and other components in dietary supplements will play a critical role in national research studies. These include investigations of total intake from diet and supplements and the relationship between supplement use and health. When completed, the database will be made available to researchers and consumers via the internet.

Need for the Database

In 1994, the U.S. Congress enacted the Dietary Supplements Health and Education Act (DSHEA). Before the passage of the DSHEA, dietary supplements were considered foods and were subject to the same regulatory requirements as foods. The new law established separate regulations for the safety and regulation of dietary supplements. A dietary supplement was officially defined as "a product (other than tobacco) that is intended to supplement the diet and bears or contains one or more of the following dietary ingredients: a vitamin, a mineral, an herb or other botanical, an amino acid, a dietary substance for use by man to supplement the diet by increasing the total daily intake, or a concentrate, metabolite, constituent, extract, or combinations of these ingredients, intended for ingestion in pill, capsule, tablet, or liquid form, not represented for use as a conventional food or as the sole item of a meal or dish, and labeled as a dietary supplement." (U.S. Congress, 1994).

DSHEA granted the Food and Drug Administration (FDA) oversight responsibility, requiring ingredient and nutrition labeling for all dietary supplements. The law also set up new rules governing safety, advertising and label claim issues. From 1994 to 2000, dietary supplement sales grew by nearly 80%, with sales burgeoning to $2 billion in 2000 (Blendon, et al, 2001). American consumers have been choosing to take many different products, from supplements of vitamins, minerals, amino acids, fatty acids, botanicals and other types of products for their alleged health effects. Surveys conducted by the U.S. government in 1965 and 1992 showed that one-half to one-third of adults took vitamin and mineral supplements every day (Slesinski, et al, 1995). Accurate assessments of the amount and types of nutrients and other components consumed in foods and in dietary supplements is essential to determining their impact on the country’s health. Under a new interagency agreement between the Agricultural Research Service (ARS) and the National Institutes of Health/Organization of Dietary Supplements (NIH/DSO), the Dietary Supplement Ingredient Database is being developed at NDL in parallel with an ongoing research effort, the National Food and Nutrient Analysis Program (NFNAP). The NFNAP program is using the results of national food consumption surveys, recent advances in sampling statistics, data evaluation methodology and analytical chemistry to identify, sample and analyze high consumption food products.

Plans for Phase II

-Identify and Rank Dietary Supplements for Priority in Sampling and Analysis

Dietary supplement consumption and production patterns will be used to identify the specific products and specific ingredients that are most commonly consumed as dietary supplements. Public health and research needs will also be taken into account in identifying priority supplements, including ingredients involved in (NIH) intervention trials. The availability of methods for the analysis of specific dietary supplement ingredients will be a critical factor.

-Consult with Statisticians to set up sampling frames and product specific plans for the collection of representative samples of dietary supplement products

-Identify Qualified laboratories and laboratory methods for the preparation and analysis of dietary supplements.

References:


