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A Free New Dietary Supplement Label Database for Dietitians

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The Academy of Nutrition and Dietetics recognizes the importance of including dietary supplements in assessing and planning dietary intakes.¹ Dietary supplement (DS) use in the United States has increased markedly during the last 30 years and is now widespread across

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all segments of society.^{2,3,4,5,6} Today, over half of adults and a third of US children have used one or more DS within the past 30 days, with multi-vitamin, multi-mineral (MVMM) products especially common.^{7, 8} Since supplements are now major sources of several nutrients such as calcium and vitamin D in American diets, it is important for registered dietitians and nutritionists (RDNs) to include their contributions when assessing intakes or planning diets.^{9,10,11} Likewise, for national nutrition surveillance the contributions to nutrient intakes from supplements must be considered in order to identify groups at dietary risk because their intakes fall below the estimated average requirement (EAR) or above the upper tolerable intake level (UL).¹² For example, when supplements are included in assessments, the proportion of the United States population that is below the EAR is much less for several vitamins¹¹ and fewer women are “at risk” (defined as below the EAR) for folate intake than when they are not.^{13,14} For some nutrients, like folic acid, the UL is established based solely for the form that comes from fortificants in foods and in dietary supplements. RDNs, epidemiologists, and public health officials also need accurate dietary supplement databases in order to evaluate possible associations between nutrient intake and disease outcomes.

The National Health and Nutrition Examination Survey (NHANES) dietary supplement label database contains label-derived information from supplement products that is updated every two years. Information contained in the database is driven by what is reported by survey participants. The currently available database contains supplement label information for products reported from 1999–2010. While the NHANES DS database provides useful information, it is not comprehensive and is more likely to contain commonly used supplements and less likely to contain infrequently used supplements.¹⁵ In fact, MVMM products account for only about half of all supplements used.³ Additionally, not all information from the label is recorded and released in the database. For example, the NHANES database does not contain information such as health claims, other ingredients and warning statements that may have been on the label.

DIETARY SUPPLEMENT LABEL DATABASE (DSLID) FEATURES

Contents

The DSLID is publicly available through the National Library of Medicine’s web portal (<http://www.dsld.nlm.nih.gov>) and is intended to capture all information in the Supplement Facts box and elsewhere on supplement product labels. The database currently contains over 23,000 labels, with 1000 labels being entered monthly. The eventual goal is to capture labels of all the supplement products sold in the United States. To date, it contains most of the popular brands and the products used by participants in the NHANES 2011–2012 survey. The DSLID contents are updated approximately every year or sooner if a manufacturer wishes to provide the information more frequently. The specifications for DSLID were developed and are monitored by an ad-hoc Federal Working Group.

Search and Browse Options

Search and browse options are designed to meet the needs of RDNs, which include both finding products and finding specific ingredients in supplements. The Quick Search feature

searches for any text on a supplement label. The Browse Dietary Ingredients option searches for ingredients on labels, and includes an alphabetical list of ingredients. The Browse Products option searches for dietary supplement products, and also includes an alphabetical list of products. The Browse Contacts searches by manufacturer or distributor. The Advanced Search function provides options for limiting or expanding searches. Options include intended user group, label claims, type and amount of dietary ingredient, and manufacturer.

Viewing Search Results

Figure 1 shows the various presentation formats using the example of vitamin mineral supplement. Results can be viewed by product or by dietary ingredient in the Browse Dietary Ingredients, Browse Products, and Browse Contacts or Advanced Search options. For example, in the product label information view, information is organized under the following tabs for the product selected: Product Information, Dietary Supplement Facts, Label Statements, and Contact Information for the manufacturer.

Download Features

A download feature to Microsoft Excel is available for single labels and as resources permit, it is planned to develop the ability to download the entire database in the future. A pdf of the product label can also be downloaded in most cases.

Other Features

DLSD provides links to other databases and sources of information such as Medline Plus, Pub Med, and National Institutes of Health Fact Sheets. In the future the database will also include links to a structured vocabulary, Languag, which facilitates comparisons between supplements across different studies and countries.¹⁶ Discontinued products remain in a searchable archive.

INCREASED REFERENCE MATERIALS

The DSLD provides a new tool for exploring product labels and is free for use. Since the data are based on label declarations, accuracy of declared values is a concern.^{17,18} Recently, an analytically validated dietary supplement ingredient database (DSID) has been developed by the USDA that provides data on nutrients in a representative sampling of MVMM products, the most commonly consumed types of supplements in the United States.¹⁹ The DSID includes a web-based calculator (<http://dsid.usda.nih.gov/>) that permits comparisons between label declarations and analytical data for these products. Users enter label values to obtain predicted contents using the calculator. Results to date on adult MVMM suggest that label declarations meet or exceed claims for most nutrients.^{20, 21, 22} Going forward, it will be interesting to see if label accuracy improves with the increasing availability of reference materials and analytical methods and if other federal initiatives increase label accuracy. Expansion of the DSID will include child MVMM supplements, over-the-counter prenatal MVMM products, omega 3 fatty acid supplements, and updated analytical values for adult MVMM.

NEW ADDITION TO THE RDN'S TOOLBOX

The DSLD is a valuable and free resource that provides RDNs and their clients with ready access to nutrient and other information from DS product labels. The DSLD is constantly updated to keep up with many of the new products that are constantly appearing on the market.²³ It also contains label images and information not included in other DS composition databases. Clinical RDNs may find it helpful in the nutrition assessment process and in reviewing the labels of supplement products with their patients and to scan for dietary ingredients that interact with medications. Research RDNs may find DSLD useful in supplement exposure assessments, in estimating nutrient intakes in surveys more precisely, and for other epidemiological applications. RDNs and registered dietetic technicians in clinical and community settings can download complete supplement composition information for nutrition planning or assessing intakes. They can also provide patients with an image of the supplement label and relevant National Institutes of Health fact sheets for particular supplements that are being discussed. The website is available at <http://dslld.nlm.nih.gov>. Finally, if patients use the free MyDS smartphone app to keep track of the dietary supplements that they are taking (available free at: <https://myds.nih.gov>), RDNs can use the DSLD to evaluate and explain the patient's supplement use in real time.

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600+D

The information provided about this dietary supplement product is a complete representation of the manufacturer's label contents on the date that the data was entered on **August 24, 2012**. The DSLD includes all information available on the product label. "NP" indicates that the information is "not provided on label". NP does not imply that a product label is lacking information required by the U.S. Government.

 Download

| Product Information | Dietary Supplement Facts | Label Statements | Contact Information |
|--|--|------------------|---------------------|
| General Information | | | |
| DSLID ID: | 12245 | | |
| NHANES ID: | 1-000-0572-03 | | |
| Product Name: | 600+D | | |
| Brand: | Calcium & Vitamin D Products by this Brand: | | |
| Product Trademark Copyright Symbol: | ® | | |
| SKU: | 3 0005 5509 24 5 | | |
| Outer Packaging: | Not Present | | |
| Statement of Identity: | Calcium Supplement | | |
| Serving Information | | | |
| Serving Size: | 1.0 Tablet(s) [Take 2 Daily] | | |
| Suggested Use: | Suggested Use: Take one tablet twice daily with food or as directed by your physician. Not formulated for use in children. | | |
| Net Contents Quantity: | 120.0 Tablet(s) | | |
| Tracking Information | | | |
| Date Entered into DSLD: | August 24, 2012 (Complete) | | |

Figure 1. Example of the label information from a popular vitamin and mineral product#

#This product is being used only to demonstrate the DSLD interface, and an endorsement of this product is not intended.