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# Use of Diet-Tracking Websites as a Resource for Hard-to-Find Food Label Information: An Example Using Specialty Grocery Store Items

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## Abstract

Many specialty foods cannot be found in research-focused food databases. However, some nutrient data can be found for many of these foods through individual website searches using brand and store names. Some popular diet-tracking websites contain data for over 3 million foods, data often entered by consumers, based on non-systematic searches. The reliability of these data to guide dietary data entry decisions are unknown. Five popular diet tracking websites were used to compare availability and accuracy of data for food items from a specialty grocery store that are currently unavailable in research-focused food databases.

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## 1. Introduction

It is well known that there are many limitations when collecting dietary intake data including inaccurate portion estimation, under-reporting and under-eating<sup>1-4</sup>. Even if accurate data can be collected, there may be challenges in the coding and analyses of diet data due to the current limitations in available food composition databases. It is challenging to keep up with the constantly changing food market and even our most complete research food

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databases do not contain nutrient information for every food on the market. Currently, one of the most commonly used sources of food composition data in the United States is the US Department of Agriculture's (USDA) National Nutrient Database for Standard Reference (Release 27) which contains 8618 foods<sup>5</sup>. The USDA food composition database is incorporated in other databases commonly used in dietary data analysis, such as the Food and Nutrient Database for Dietary Studies (FNDDS) which contains about 7,600 main food descriptions with an additional 9,900 food descriptions<sup>6</sup>, while the Food and Nutrient Database that is used in the Nutrition Data System for Research (NDSR) contains over 18,000 foods<sup>7,8</sup>.

Traditional grocery stores on average carry over 43,000 food products<sup>9</sup> and with the introduction and reformulation of over 20,000 foods and beverages annually<sup>10</sup>, there is not a current system in place to keep the databases completely up to date or inclusive of all the products available to the consumer. There are also natural food stores, limited assortment stores, and supercenters that bring even more variety to the food market<sup>9</sup>. Not every food can be found in research-focused food composition databases so there are standard protocols for coding foods that may appear on dietary assessments, such as 24-hour recalls or food records, for which an exact match cannot be found in the database. Often there is a similar food item that can be matched based on quality standards of how close certain nutrients can be per 100 grams of that food. In some cases, when a close match cannot be found, a recipe can be created for that food based on the ingredient list. Food packaging information that includes the nutrition facts panel and ingredient list or information from a manufacturer's website helps guide decisions when resolving the missing food item. When a food label is not available or when dietary information for these products is unavailable directly from the grocery store or the manufacturer's website, there is large potential for errors in estimating nutrient intakes. The growth of online diet-tracking companies provide a unique opportunity for dietary assessment research because many specialty products can be found in various online food databases that are part of diet-tracking and weight loss websites.

Popular diet-tracking websites and mobile applications post nutrition data for thousands, and for some even millions, of food items not currently found in research databases. These programs often allow for users to manually enter nutrient information from a food label or enter the food details by scanning the barcode. As a result, many of these web tools contain more restaurant items and more brand name and specialty grocery store items compared to the current research food databases. For example, one of the top diet-tracking websites, MyFitnessPal.com, states that it has over 3 million foods in its food database. It has been found that self-monitoring dietary intake is a key to success in weight loss and these websites and mobile apps help individuals track their caloric intake. However, it is unknown if the food composition data available on these sites are an accurate reference to guide data entry decisions when it comes to research-related dietary data entry.

The objective of this study was to gain insight into availability and accuracy of energy content for hard-to-find food labels such as foods from a specialty grocery store obtained from web-based diet-tracking sites.

## 2. Methods

For the purpose of this study, food items from a popular national specialty grocery store chain were selected because they commonly appear on our dietary assessments but are currently missing from research dietary analysis programs such as the FNDDS database or NDSR. Nutrition information can be obtained from the actual food package for these products, however, no information about the food labels is posted on the store's website and a list of the nutrient profiles could not be obtained by contacting the store directly.

A list of 110 quick meal food items provided on the store's website was used as a starting point since many of these prepared and frozen food items are reported on dietary assessments. Out of the 110 foods on this list, 87 of these food products were found in the local stores. Data from the food packages including the food item name, serving size, gram weight of the package and nutrient information from the nutrition facts label were collected at the specialty grocery store. Five popular diet-tracking website were chosen based on the websites that most often showed up when entering these grocery store items in a Google search. These 5 popular diet-tracking websites included <http://www.myfitnesspal.com/>, <http://www.fatsecret.com/>, <http://www.livestrong.com/>, <http://caloriecount.about.com/> and <http://www.calorieking.com/>. All of these sites had free access to search their online food databases. We searched these five diet-tracking websites for the 87 food items for which food labels were available in order to compare the occurrence of these food items within each website as well as the accuracy of posted energy

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