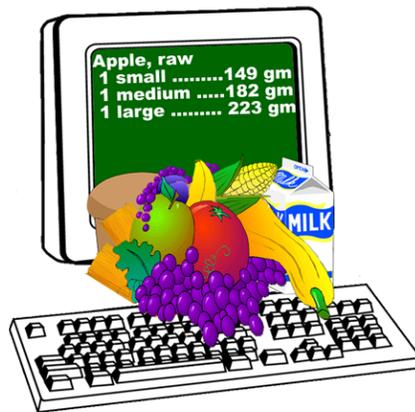


THE USDA FOOD AND NUTRIENT DATABASE FOR DIETARY STUDIES 2011-2012: DOCUMENTATION AND USER GUIDE



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You may also consider including the following sentence in your manuscript: USDA's Food and Nutrient Database for Dietary Studies 2011-2012 was used to code dietary intake data and calculate nutrient intakes.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMPM = USDA Automated Multiple-Pass Method
ARS = Agricultural Research Service
ASCII = American Standard Code for Information Interchange
CDC = Centers for Disease Control and Prevention
FNDDS = USDA Food and Nutrient Database for Dietary Studies
FSRG = Food Surveys Research Group
NIH = National Institutes of Health
NDB No. = Nutrient Databank number
NDL = Nutrient Data Laboratory
NHANES = National Health and Nutrition Examination Survey
SAS[®] = Statistical Analysis System
SR = USDA National Nutrient Database for Standard Reference
U.S. = United States of America
USDA = United States Department of Agriculture
WWEIA = What We Eat in America

THE USDA FOOD AND NUTRIENT DATABASE FOR DIETARY STUDIES 2011-2012: DOCUMENTATION AND USER GUIDE

INTRODUCTION

In dietary studies, the researcher collects information on what people eat. Collection methods may vary, from 24-hour recalls collected in What We Eat in America (WWEIA), the dietary intake interview component of the National Health and Nutrition Examination Survey (NHANES) (National Center for Health Statistics, CDC), to food diaries recorded by an individual. After data collection, the researcher needs a way to translate the intake data into a form that can be used for analysis. The USDA Food and Nutrient Database for Dietary Studies (FNDDS) is the underlying database used to code dietary intakes and to calculate nutrients for WWEIA, NHANES. The FNDDS is based on nutrient values in the USDA National Nutrient Database for Standard Reference (Nutrient Data Laboratory, Agricultural Research Service, USDA). The FNDDS can also be used with dietary intake data collected in your own study.

The FNDDS has historically been assigned a version number for each release. For example, the FNDDS used to calculate dietary intakes for WWEIA, NHANES 2009-2010 was FNDDS 5. Beginning with this release of FNDDS, the naming convention will match the corresponding two-year survey cycle of the WWEIA, NHANES that the FNDDS represents. This clearly identifies the association between each version of FNDDS and the related WWEIA, NHANES survey period.

What is the FNDDS?

- This is a database of foods/beverages, their nutrient values, and weights for typical portions. It is used to code dietary intake data and to calculate nutrient intakes based on the foods/beverages and amounts reported.
- This version (FNDDS 2011-2012) was used to code dietary intakes and to calculate nutrients for WWEIA, NHANES 2011-2012.
- Nutrient values for FNDDS 2011-2012 are based on values in USDA National Nutrient Database for Standard Reference, Release 26 (SR26) (For more details, see section headed "FNDDS Nutrient Values").

How Can You Use It?

- In dietary research projects using WWEIA, NHANES dietary intake data
- In other intake studies to code foods/beverages and amounts eaten and to calculate the amounts of nutrients/food components in those items

What Are Some FNDDS Applications?

In addition to its use for national nutrition monitoring and projects using WWEIA, NHANES dietary intake data, FNDDS is the underlying database for many other dietary studies and consumer and research products. The following are a few examples:

- School Nutrition Dietary Assessment Study (SNDA) – a nationally representative study of meals and snacks served to children in the National School Lunch Program and School Breakfast Program, and the food environment (Food and Nutrition Service, USDA)
- The National Household Food Acquisition and Purchase Survey (FoodAPS) - a nationally representative survey of household food purchases and acquisitions (Economic Research Service, USDA)
- Healthy Aging in Neighborhoods of Diversity Across the Life Span (HANDLS) – a 20 year longitudinal study to understand the sources of persistent health disparities (National Institute on Aging, NIH)
- What's In The Foods You Eat Search Tool – a consumer-friendly search tool for viewing nutrient profiles for 17,000 foods (Food Surveys Research Group, USDA)
- SuperTracker and Food-A-Pedia – consumer-friendly online dietary assessment and food information tool (Center for Nutrition Policy and Promotion, USDA)
- USDA Food Patterns Equivalents Database (FPED) (formerly MyPyramid Equivalents Database (MPED)) – translates foods/beverages consumed in national dietary surveys to food groups based on dietary guidance (Food Surveys Research Group, USDA)
- Food Intakes Converted to Retail Commodities Database (FICRCD) – converts foods/beverages consumed in national dietary surveys to retail-level commodities (Food Surveys Research Group, USDA)
- Automated Self-administered 24-hour Recall (ASA24) - web-based tool for conducting self-administered 24-hour recalls for research studies (National Cancer Institute, NIH)
- Diet History Questionnaire - a food frequency questionnaire for research studies (National Cancer Institute, NIH)
- Commercial nutrient analysis software

How Can I Learn More About the FNDDS, WWEIA, and the SR?

- Download the database free from the website of USDA's Food Surveys Research Group (FSRG) that developed and maintains the FNDDS.
- Receive e-mail announcements about FNDDS, WWEIA, and other FSRG products and services by joining the FSRG listserv available on the FSRG website at <http://www.ars.usda.gov/ba/bhnrc/fsrg>.
- Attend workshops periodically offered at conferences such as the National Nutrient Databank Conference and NCHS National Conference on Health Statistics.
- Access the USDA National Nutrient Database for Standard Reference from the website of USDA's Nutrient Data Laboratory (NDL).

DEVELOPMENT AND UPDATING OF THE FNDDS

Development and Updating

USDA's technical files for analyzing food/beverage and nutrient intakes have developed over several decades of food surveys (Bodner and Perloff, 2003). In 2004, the files were incorporated into one database, the FNDDS, for processing WWEIA. A new version of the FNDDS is released every 2 years, in parallel with the release of the WWEIA data. Versions of the FNDDS are tied to releases of data from WWEIA, NHANES. This version (FNDDS 2011-2012) was used to process WWEIA, NHANES 2011-2012. It is not recommended to use a version of the database not associated with the given survey; for example, FNDDS 2011-2012 should not be used for WWEIA, NHANES 2009-2010. For each new version of FNDDS, foods/beverages, portions, and nutrient values are reviewed and updated. Foods/beverages are added based on changes in consumption and the marketplace and new or updated nutrients are provided in new versions of SR.

As WWEIA dietary intakes are processed and the reported foods/beverages and amounts are coded, the FNDDS descriptions and portion weights undergo continual review. Foods/beverages or portions that cannot be matched to items in the database are resolved by FSRG nutritionists. New items and new portion sizes are added as needed. Information about new foods/beverages and package sizes is collected using internet resources, direct contact with manufacturers, or market checks. In addition to the monitoring of information reported by WWEIA respondents, regular planned data reviews are conducted. Before a new version of FNDDS is updated, specific categories of foods/beverages are selected for comprehensive review. The selection of these categories is based on criteria such as frequency of use by ethnicity and age, changes in the marketplace, date of last review, and changes in SR. The purpose of these reviews is to ensure that the FNDDS reflects the current marketplace. Before finalizing the database for release, all changes undergo extensive quality control checks to ensure the accuracy of changes made.

The FNDDS Nutrient Values file is updated every other year, using the latest release of the SR and corresponding with the release of WWEIA data (e.g., FNDDS 2011-2012 was updated with SR26 for WWEIA 2011-2012). Data for about 3,200 items in SR were used to determine the nutrient values for the about 7,600 commonly consumed foods/beverages in FNDDS. As new and updated nutrient data are included in the SR, they are evaluated and incorporated into the FNDDS. Updates also include the complete nutrient profile for new items; they may include new nutrients for existing items and new units of expression for existing nutrients, for example folate as micrograms of dietary folate equivalents (DFE) and vitamin A as micrograms of retinol activity equivalents (RAE). Values for new nutrients are added when sufficient analytical data are available for major contributors of the nutrient to permit NDL to calculate or impute estimated values for all of the approximately 3,200 SR foods/beverages that serve as the basis of the FNDDS. Multiple checks are performed for all new and revised data at different steps to ensure validity, integrity and accuracy (Ahuja and Perloff, 2008).

The database includes a file, FNDDS-SR Links, which lists the SR codes (called "Nutrient Databank Numbers" or "NDB_No" in SR) and amounts that document how the nutrient values are calculated for each FNDDS food/beverage. About one-third of the FNDDS foods/beverages are represented by a one-to-one link to the SR, such as apples and tortilla chips. The remaining two-thirds of FNDDS foods/beverages are represented by a recipe where the ingredients are

matched to SR items to develop the nutrient profile. New entries are added to the FNDDS-SR Links file as new codes are added to the Food Descriptions files. The linkages are revised to reflect updates to FNDDS descriptions and weights and SR when appropriate.

FNDDS 2011-2012 incorporates updates to the FNDDS-SR Links file as a result of the Recipe Protocol Project. The project was established to provide the evidence basis for the recipes for foods and beverages. The protocols provide documentation and a framework for selection of ingredients and amounts for a group of similar items. The project entails a comprehensive review of all foods/beverages to ensure they are consistent across similar items, based on established framework, and represent current dietary consumption and preparation patterns. Additional information on the Recipe Protocol Project will be available on the FSRG website.

The size and complexity of the FNDDS necessitates careful quality control practices to ensure accuracy and consistency of the data. The FNDDS contains about 3 million data points held in many files interrelated through common fields. A comprehensive quality control plan is in place to ensure that interrelationships are maintained among the various database files and that updates do not introduce errors (Anderson et al., 2004). Checks for content validity, accuracy, and referential integrity are performed at all data processing steps. These checks are documented in the 'FNDDS Quality Control Handbook'. Historical files are also maintained to provide documentation of all changes in database values.

Changes between FNDDS 5.0 and FNDDS 2011-2012

Major changes for FNDDS 2011-2012 are itemized below. Table 1 indicates additional select changes across FNDDS versions.

- The **FNDDS naming convention changed** from a version number to the corresponding two-year survey cycle.
- **Identification of “fortified” products:** Expanded characterization of FNDDS foods and beverages was developed to identify existing FNDDS foods and beverages which represent a “fortified” product (page 19).
- **Recipe Protocols applied:** Recipes for approximately 2,500 food/beverage codes were reviewed and updated as part of the Recipe Protocol Project (page 10).
- **New SR codes incorporated:** Includes commercial and restaurant foods and beverages as well as enhanced pork, chicken, and turkey.
- **Nutrient profiles for select default or “not further specified” codes** are documented in Appendix D (page 55).
- **Food/Beverage coding scheme changes** are documented in Appendix E (page 58).

Table 1. Changes across versions of FNDDS

Number	FNDDS 1 (2001-02)	FNDDS 2 (2003-04)	FNDDS 3 (2005-06)	FNDDS 4 (2007-08)	FNDDS 5 (2009-10)	FNDDS 2011-12
Food codes	6,974	6,940	6,921	7,174	7,253	7,618
added	n/a	70	115	283	99	1,156
discontinued	n/a	104	134	30	20	791
Additional descriptions	6,585	6,600	6,801	7,255	7,437	9,791
Portions and weights	29,081	29,102	29,272	30,907	31,431	35,190
added	n/a	319	855	1,972	1,025	8,649
discontinued	n/a	298	685	337	502	4,890
Nutrients/food components	61	63*	64*	65*	65	65

Nutrients added by year:

2007-2008: Vitamin D (D2+D3) (µg)

2005-2006: Total Choline (mg)

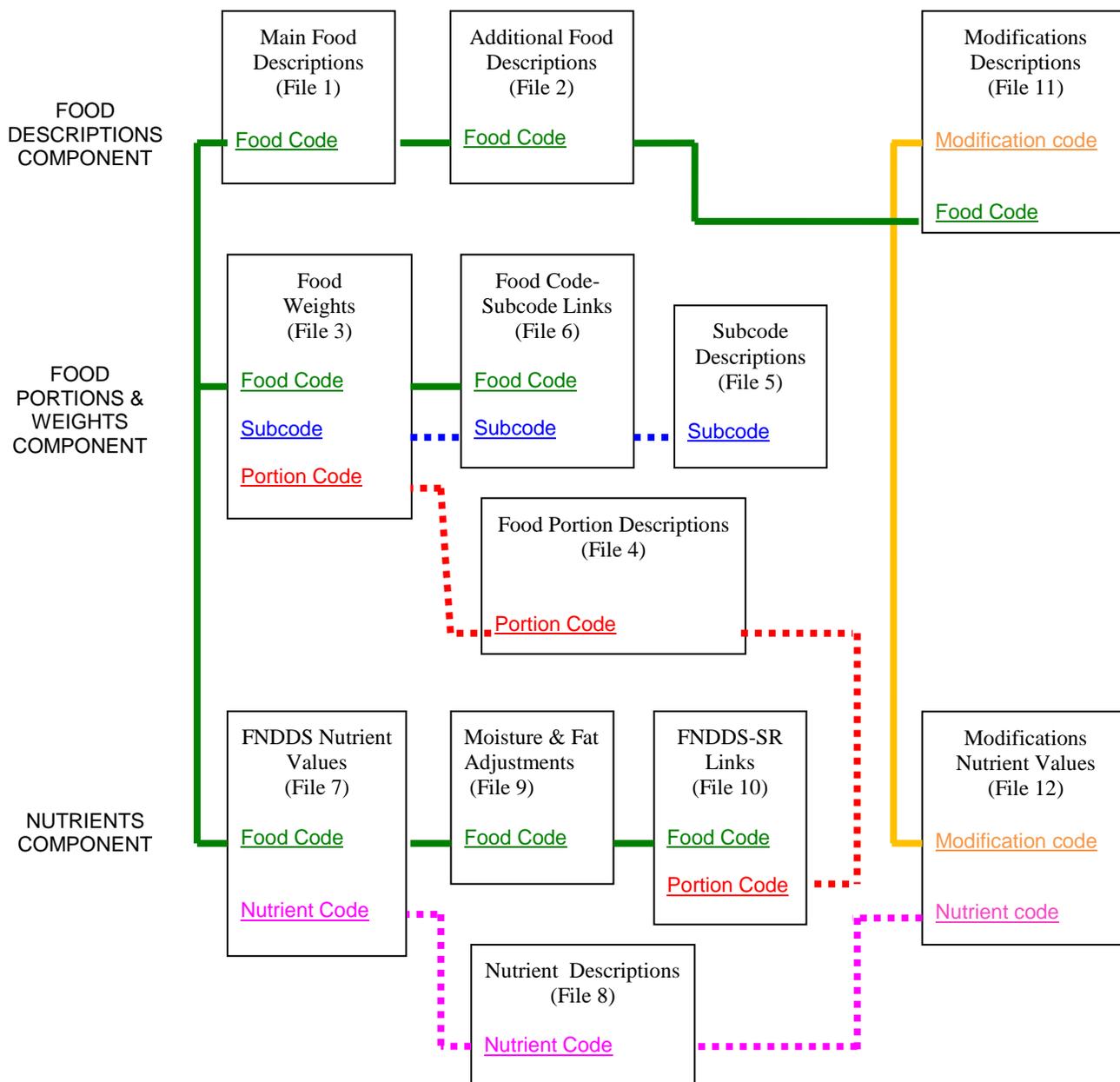
2003-2004: Added Vitamin E (mg) and Added Vitamin B-12 (µg)

GENERAL INFORMATION ABOUT FNDDS FORMAT

What is the Database Format?

- Available in three formats - as a Microsoft Access® database, as a SAS® dataset, and as ASCII delimited text files.
- Consists of 12 separate but linked data files (referred to as "tables" in the Microsoft Access® database). As shown in Figure 1, food code and modification code are the primary links between the database components and are indicated with a solid line. Secondary links between files are indicated with a dotted line and include subcode and portion code in the Food Portions & Weights component, and nutrient code in the Nutrients component. Portion code also connects the FNDDS-SR Links file to the Food Portion Descriptions file. Together, the files form a normalized, relational database system where data redundancy is minimized.

Figure 1. USDA Food and Nutrient Database for Dietary Studies (FNDDS) – files and interrelationships



File number in parentheses after file name refers to the order of files as they are listed on the next page.

As shown in Figure 1, the 12 FNDDS files fall into four components.

Food Descriptions Component:

1. Main Food Descriptions
 - Primary descriptions, usually generic, for about 7,600 foods/beverages
 - Unique 8-digit food code assigned to each main description (see Appendix E, "Food/Beverage Coding Scheme")
2. Additional Food Descriptions
 - Descriptions for similar foods/beverages associated with specific main food/beverages
 - Same nutrient profile and portion weights as the main food/beverage

Food Portions and Weights Component:

3. Food Weights
 - Weights (in grams) for various portions of each food/beverage
 - About 35,000 weights
4. Food Portion Descriptions
 - Descriptions for common portions (amounts) of foods/beverages
 - Unique 5-digit code assigned to each portion description
5. Subcode Descriptions
 - Descriptions for specific snack cakes and candy only
 - Unique 7-digit code assigned to each subcode description
 - Same nutrient profile as the main food/beverage
 - Unique portion weights
6. Food Code-Subcode Links
 - Records that show the association between main foods/beverages and subcodes

Nutrients Component:

7. FNDDS Nutrient Values
 - Complete nutrient profile (energy and 64 nutrients/food components) for each food code
 - Source of nutrient values used to calculate the complete nutrient profiles is the USDA National Nutrient Database for Standard Reference (SR)
8. Nutrient Descriptions
 - Descriptions and measurement units for nutrients in FNDDS
 - Unique 3-digit code assigned to each nutrient
9. Moisture & Fat Adjustments
 - Factors used during calculation of nutrient values for some foods/beverages in the database
10. FNDDS-SR Links
 - Information used to calculate nutrient values in FNDDS
 - Documents the links between FNDDS and SR

Modifications Files:

11. Modifications Descriptions
 - Description for modifications associated with specific main food/beverage
 - Unique 6-digit code assigned to each modification description
 - Nutrient profile differs from the main food/beverage
12. Modifications Nutrient Values
 - Complete nutrient profile (energy and 64 nutrients/food components) for each modification code

The following table lists the full names of the FNDDS files, along with the abbreviated file/table name.

Table 2. Full and Abbreviated File/Table Names

File Number	Full File Name	Abbreviated File Name
1	Main Food Descriptions	MainFoodDesc
2	Additional Food Descriptions	AddFoodDesc
3	Food Weights	FoodWeights
4	Food Portion Descriptions	FoodPortionDesc
5	Subcode Descriptions	SubcodeDesc
6	Food Code-Subcode Links	FoodSubcodeLinks
7	FNDDS Nutrient Values	FNDDSNutVal
8	Nutrient Descriptions	NutDesc
9	Moisture & Fat Adjustments	MoistNFatAdjust
10	FNDDS-SR Links	FNDDSSRLinks
11	Modifications Descriptions	ModDesc
12	Modifications Nutrient Values	ModNutVal

Data Files

The ASCII data files have an extension of .txt and use delimited, uncompressed formats. In the ASCII delimited files, all fields are separated (delimited) by carets (^), and text fields are also surrounded by tildes (~).

The SAS® data files have an extension of .sas7bdat. Proc Contents procedure may be used to get a listing of the fields and field data type in each file.

The FNDDS in MS Access® format consists of a single database file called FNDDS2011-2012.mdb. Within the file are the 12 individual tables whose names are listed in Table 2. In order to create Access queries, forms, and reports to display information from several tables at once, relationships between the tables must be created. Such relationships have been established between the FNDDS tables in the Access® database by linking matching fields. Linked fields in the FNDDS include the food code, subcode, portion code, nutrient code, and modification code. The relationships between the tables may be viewed within the MS Access® database by selecting “relationships” in the database tools tab.

FILE FORMATS

When this documentation is viewed online or printed in color, the linking fields that connect information from one file to another appear in color. Additional formatting has been added to distinguish these fields when color is not available or useful. In the schematic diagrams (figures), lines are used to show linking fields. In the tables and examples of data records, the symbol ‡ follows the name of each linking field.

Key to Tables

This key (Table 3) defines abbreviations and symbols used in Tables 4 to 15, which outline the format of each file in the FNDDS.

Table 3. Key to abbreviations and symbols used in Tables 4 to 15

Abbreviation or symbol in tables 4 to 15	Meaning	Additional information
N #.#	Numeric field	Number (shown here as #) following field type indicates field length; number after decimal point indicates number of decimal places.
A #	Alphanumeric field	Number (shown here as #) following field type indicates field length
D (MM/DD/YYYY)	Date field	For FNDDS 2011-2012, all start and end dates are the same (1/1/2011 and 12/31/2012, respectively). Dates may differ in the multi-year version of the FNDDS.
*	Indexed field (holds values by which the file is ordered)	Although ASCII delimited files do not have indexes, they are identified in this document to show the order of records. Indexed fields are useful in relational databases.
‡	Linking field	Used to indicate links within FNDDS. Linking field names are also highlighted in color in the figures and tables. Linking fields are useful in relational databases.

Food Descriptions Component

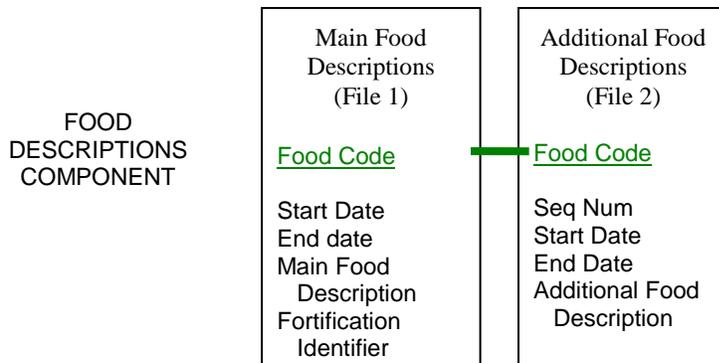
The Food Descriptions component consists of 2 files:

- Main Food Descriptions
- Additional Food Descriptions

Counting both main and additional food descriptions, the number of food descriptions included in FNDDS exceeds 17,000.

As shown in Figure 2, the food code links the Main and Additional Food Descriptions files to one another and to other files in the database.

Figure 2. Main Food Descriptions file, Additional Food Descriptions file, and their link



Main food descriptions

There are about 7,600 main food descriptions. The main food description is the primary (usually generic) complete description identified by a unique 8-digit food code. The food code links the description to information in the other database files. The main food description often includes form (fresh, frozen, or canned) and preparation method.

The main food description may be modified over time to reflect changes in naming conventions or small changes to the food or beverage the code represents. If the food or beverage is determined to have either changed dramatically or no longer be available in the marketplace, the food code may be discontinued. Discontinued food codes are removed from the FNDDS and the codes are not recycled.

As a new addition for FNDDS 2011-2012, an identifier code was added to the Main Food Description File to indicate which FNDDS foods and beverages are “fortified” or contain “fortified” ingredients. A value of “1” in this field indicates the item is a fortified product and a value of “2” indicates the product contains fortified ingredients.

For the addition of this identifier, “fortified” nutrients were considered those nutrients, vitamins or minerals, added to a product which did not occur naturally. Enriched flours, pasta, and rice were not identified as fortified because, except for folic acid fortification, added nutrients typically replace those lost in processing. Although some vitamins or minerals in enriched products may be added back in amounts greater than naturally occur, the focus of this project was to identify products with added nutrients that are not inherent.

Appendix C (page 50) indicates the number of foods and beverages identified as fortified in each WWEIA Food Category. The WWEIA Food Categories is a type of categorization developed by FSRG to analyze foods and beverages as consumed in the American diet and is further summarized on page 42. The main WWEIA categories of foods/beverages containing fortified products for FNDDS 2011-2012 included: dairy products; baby foods and infant formulas; ready-to-eat breakfast cereals; nutrition bars and beverages; and energy and sport drinks.

The main sources of fortification identified as ingredients in recipes were dairy products and margarine which are often fortified with vitamin A and vitamin D. The identification of fortified products and products with fortified ingredients is dependent on the links within the respective FNDDS-SR Links file (page 34) and may change with each FNDDS release due to changes in the marketplace, the addition of new FNDDS and SR codes, and revision of the FNDDS SR-Links file.

Table 4. Format of Main Food Descriptions file†

Field Name	Field Type	Description
Food code‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Start date	D (MM/DD/YYYY)	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Main food description	A 200	A complete description for a food/beverage, often including preparation method (e.g., boiled) and original form of the food/beverage (e.g., from frozen); usually generic in nature.
Fortification Identifier	N 2	A unique identifier code assigned to indicate the following: 1 = fortified product 2 = contains fortified ingredients

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Additional food descriptions

An additional food description is associated with a specific main food description and shares the same nutrient profile and same portion weights. More than one additional food description may be associated with a single food code. Not all food codes have additional descriptions. There are approximately 9,800 additional food descriptions linked to unique 8-digit food codes. Additional food descriptions aid in the selection of food codes to represent foods/beverages reported by study participants. About half of the additional food descriptions are brand names. Some additional food descriptions represent similar forms of the main food; some represent less specific forms.

Table 5. Format of Additional Food Descriptions file†

Field Name	Field Type	Description
Food code†	N 8*	A unique 8-digit number assigned to a particular main food description.
Seq num	N 2*	A sequence number (unique within a food code) used for ordering additional food descriptions; a gap in a series of sequence numbers indicates that a previously used additional description has been discontinued.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Additional food description	A 80	An additional food description included under the same food code as the main food description; often a specific brand name.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Examples of data records from the Food Descriptions Component files



The food code links the main food description (Cookie, chocolate wafer) with five additional food descriptions two of which are shown here (Teddy Grahams and 100 Calorie Oreo Thin Crisps).

Food Portions and Weights Component

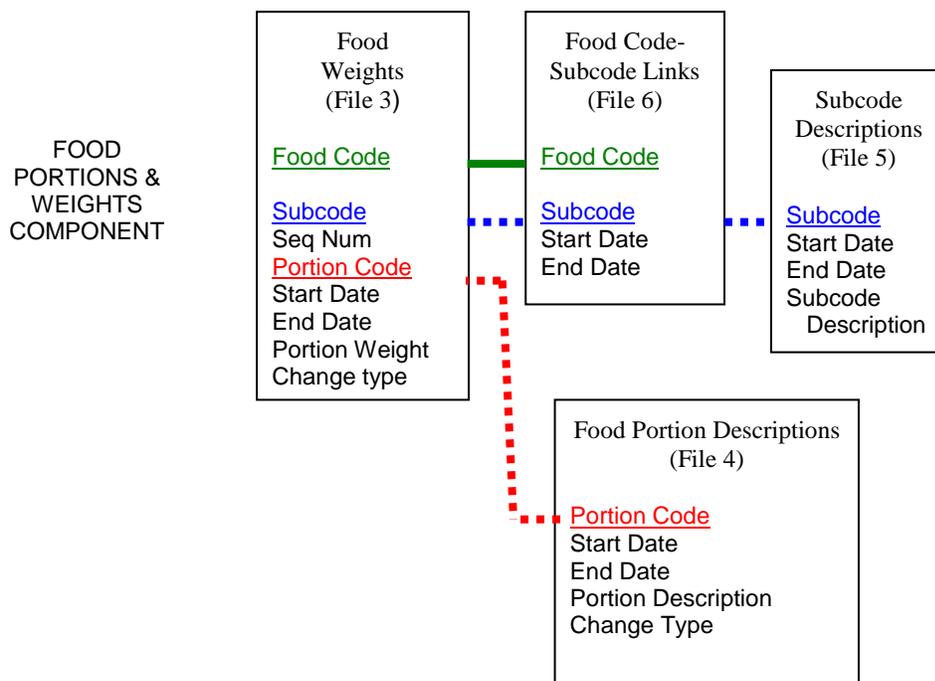
For each food/beverage in the FNDDS, there is a set of portion descriptions and weights for those portions. The Food Portions and Weights Component consists of four files:

- Food Weights
- Food Portion Descriptions
- Food Code-Subcode Links
- Subcode Descriptions

Figure 3 shows the following links:

- **Food code** links the Food Weights and Food Code-Subcode Links files, as well as other files in the database.
- **Portion code** links the Food Portion Descriptions and Food Weights files, as well as the FNDDS-SR Links file (a Nutrients Component file).
- **Subcode** links the Subcode Descriptions, Food Weights, and Food Code-Subcode Links files.

Figure 3. Food Weights file, Food Portion Descriptions file, Food Code-Subcode Links file, Subcode Descriptions file, and their links



Food weights

The Food Weights file includes the weights (in grams) for different portions of a particular item.

This file contains over 35,000 weights. Many weights are specific to brand name items. (The brand name information is in the Food Portion Descriptions file.)

Table 6. Format of Food Weights file†

Field Name	Field Type	Description
Food code‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Subcode‡	N 7*	Value may be zero; if present, a unique 7-digit number associated with a particular subcode description. Descriptions are for specific snack cakes and candy only.
Seq num	N 2*	A sequence number (unique within a food code) used for ordering portion weights; a gap in a series of sequence numbers indicates that a previously used portion weight has been discontinued.
Portion code‡	N 5*	A unique 5-digit number assigned to a particular portion description.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Portion weight	N 8.3	Weight of food/beverage item for the portion indicated by portion code; all weights are in grams; weight of edible portion only is included; missing values for the portion code 90000 (quantity not specified) are indicated with -9 in this field^.
Change type	A 1	Blank field unless a change has occurred in the weight record, indicated by a D (data change) or F (food change); indicated changes may have occurred prior to latest version of FNDDS.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

^See "Defaults Used for Coding Foods/Beverages and Amounts in WWEIA" (page 44).

Food portion descriptions

This file contains common food portion descriptions that are used in coding portion sizes, such as:

<u>Type of portion</u>	<u>Examples of portion descriptions</u>
Individual portion	Slice, piece
Container or package	Can, snack size
Brand name (when related to portion size)	1 Hot Pocket, 1 McDonald’s Sundae
Relative size	Small, medium, large
Household measure	Teaspoon, tablespoon, cup

Each portion description is identified by a unique 5-digit portion code. The same portion code and portion description can be used for many different foods/beverages.

Table 7. Format of Food Portion Descriptions file†

Field Name	Field Type	Description
Portion code‡	N 5*	A unique 5-digit number assigned to a particular portion description. A value of zero indicates portion description is “none”.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Portion description	A 120	A description of an amount of food/beverage in terms that facilitate coding of portions.
Change type	A 1	Blank field unless a change has occurred in the portion description, indicated by a D (data change) or F (food change); indicated changes may have occurred prior to latest version of FNDDS.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Subcode descriptions

A subcode description is associated with a specific food code and main food description and shares the same nutrient profile. Subcodes are used in the Food Portions and Weights component of the FNDDS for approximately 50 snack cake and candy food codes that have several different weights for a single portion description.

For example, the food code 53108200, "Snack cake, chocolate, with icing or filling," includes 18 weights for the portion description code 64248, which represents "1 snack cake." Below are two examples:

- 28 grams (Drake's Yankee Doodles, subcode 1000233)
- 50 grams (Hostess Chocolate Cupcakes, subcode 1000239)

Subcodes were developed for these foods to facilitate food/beverage coding. Subcodes are not used with other foods/beverages because the number of brand name weights associated with individual food codes is smaller, and each has been given a unique portion description.

Table 8. Format of Subcode Descriptions file†

Field Name	Field Type	Description
Subcode†	N 7*	A unique 7-digit number associated with a particular subcode description. A value of zero indicates use "default gram weights".
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY	
Subcode description	A 80	A description for a specific food/beverage that has the same nutrient profile as a main food description but has its own unique weight data.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Food code-subcode links

Food code-subcode links document the associations between food codes and subcodes. A food code may be linked to multiple subcodes, and a subcode may be linked to multiple food codes. This file provides a quick way to list all subcodes for a particular food code, or all food codes for a particular subcode. Only food codes that have subcodes are included in this file.

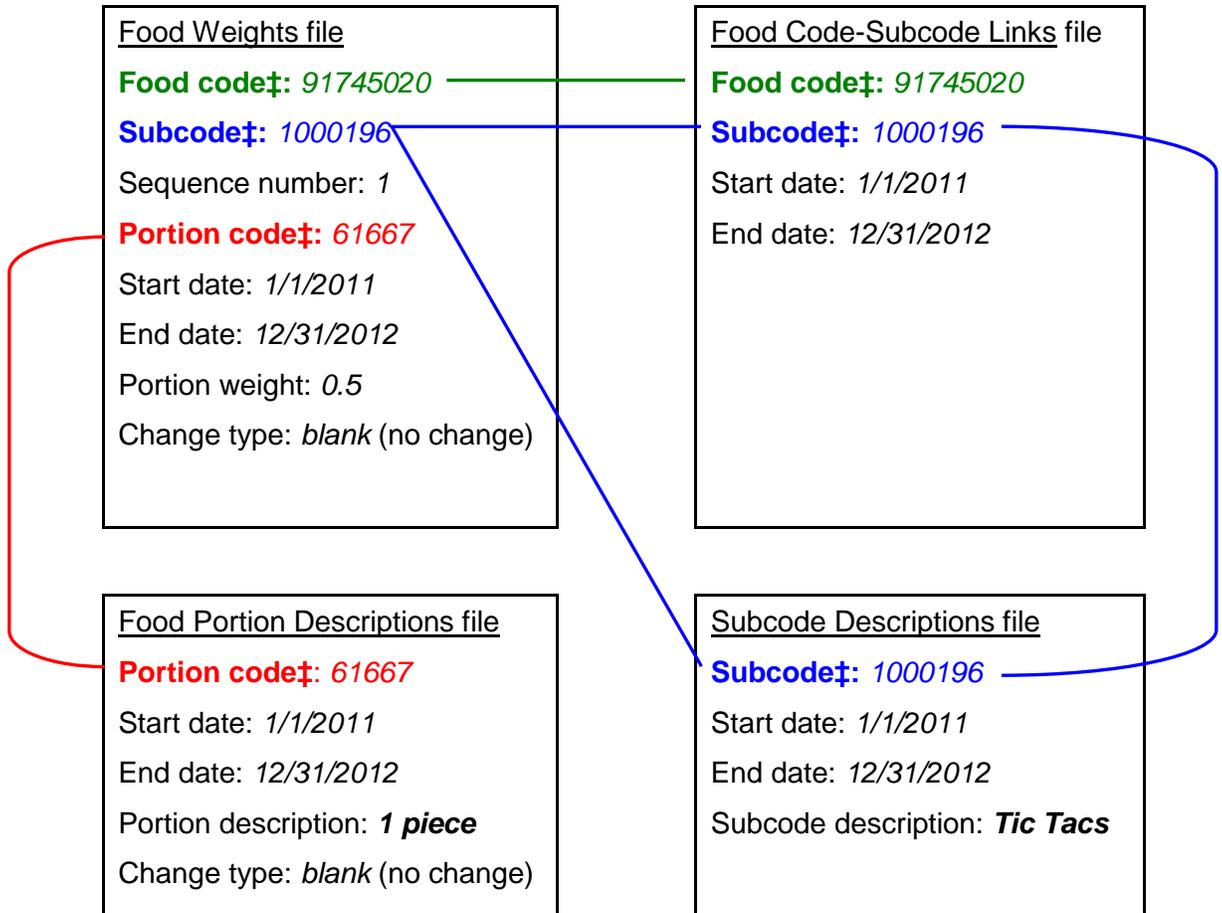
Table 9. Format of Food Code-Subcode Links file†

Field Name	Field Type	Description
Food code ‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Subcode ‡	N 7*	A unique 7-digit number associated with a particular subcode description. A value of zero indicates use “default gram weights”.
Start date	D (MM/DD/YYYY)	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Examples of data records from the Food Portions and Weights Component files

The Main Food Description associated with the food code used in this example is "Hard candy."



Three linking fields in this example are:

1. **Food code** links the main food description "Hard candy" from the Food Descriptions Component to the Food Weights and Food Code-Subcode Links files.
2. **Subcode** links the Food Weights file and the Food Code-Subcode Links file to the Subcode Descriptions file.
3. **Portion code** links the Food Portion Descriptions file to the Food Weights file.

As a result, for a type of hard candy called "Tic Tacs," the weight of the portion "1 piece" is 0.5 grams.

Nutrients Component

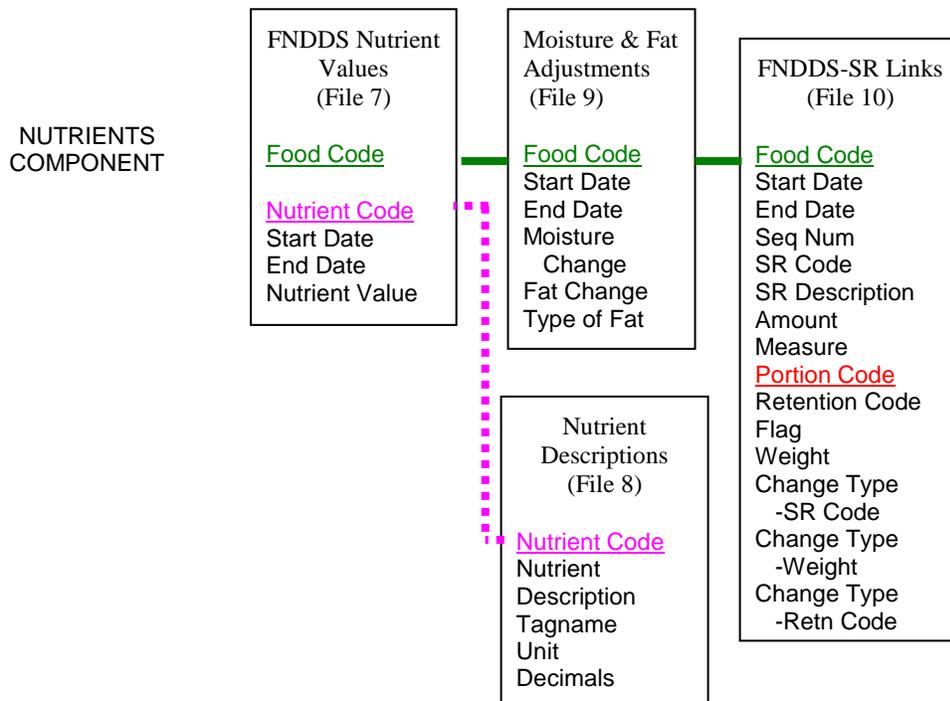
There are four files in the Nutrients Component:

- FNDDS Nutrient Values
- Nutrient Descriptions
- Moisture & Fat Adjustments
- FNDDS-SR Links

Figure 4 shows the following links:

- **Food code** links the FNDDS Nutrient Values file to the FNDDS-SR Links file and the Moisture & Fat Adjustments file, as well as to other files in the database.
- **Portion code** links the FNDDS-SR Links file to two of the Food Portions and Weights files (Food Weights and Food Portion Descriptions).
- **Nutrient code** links the Nutrient Descriptions file to the FNDDS Nutrient Values file.

Figure 4. FNDDS Nutrient Values file, Nutrient Descriptions file, FNDDS-SR Links file, Moisture & Fat Adjustments file, and their links



FNDDS nutrient values

The FNDDS Nutrient Values file provides a complete nutrient profile (energy and 64 nutrients) for each food/beverage code. The nutrient values for FNDDS are based on data from the USDA National Nutrient Database for Standard Reference (SR). The nutrient codes and the number of decimal places to which values are expressed in the FNDDS Nutrient Values file are consistent with similar fields in SR. SR was developed and is maintained by USDA's Nutrient Data Laboratory (Agricultural Research Service, Nutrient Data Laboratory).

Although the SR and FNDDS are similar, they were designed for different purposes and serve different needs (Bodner-Montville et al., 2006). SR serves as the standard for food/beverage composition information in the U.S. It is a compilation of data from many sources, including national samples of key food items (Haytowitz et al., 2002), and provides documentation about data sources and derivation of non-analytical (i.e., imputed) values. For analytical data, it provides many statistics including mean values, number of data points, standard errors, minimum and maximum values, lower and upper 95% error bounds, and statistical notes. The SR contains values for many more nutrients or food components; not all the components are present for all foods/beverages.

SR is not used directly in processing WWEIA, NHANES for the reasons that follow. First, the survey uses a special food/beverage coding scheme that is not a part of SR. This coding scheme has been used with USDA surveys to allow the study of food/beverage consumption over time. Second, this set of food codes contains many items that are not included in SR. These foods/beverages are often mixtures, such as enchiladas, or are codes that may be used when survey respondents cannot be specific, e.g., "milk, not further specified," for when a respondent does not know if it was whole, reduced fat, or nonfat milk. Third, SR contains many nutrients for which data are incomplete i.e., nutrient values are missing and therefore would not be appropriate for estimating national intakes. In addition, the FNDDS contains descriptions for foods/beverages and portion amounts as consumed by the survey respondents, whereas the SR lists foods in raw form and the most common preparation methods (Stumbo et al., 2007).

Data for about 3,200 items in SR were used to determine the values for the over 7,600 foods/beverages in the FNDDS. When any of those 3,200 items lacked analytical data for any FNDDS nutrient, the Nutrient Data Laboratory estimated the values from similar analyzed foods/beverages. For details on how the nutrient values are generated and other details on nutrients, please see the SR documentation on NDL's website (www.ars.usda.gov/ba/bhnrc/ndl). Values for many items in FNDDS (e.g., enchiladas) were calculated based on more than one of those 3,200 SR items. The specific SR items that were used to generate values for each survey food code in FNDDS, and their proportions, are identified in the FNDDS-SR Links file. The Moisture & Fat Adjustments file also contains information that was used in calculating the nutrient values.

Table 10. Format of FNDDS Nutrient Values file†

Field Name	Field Type	Description
Food code ‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Nutrient code ‡	N 5*	Identifies a nutrient.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Nutrient value	N 10.x	Amount of nutrient in 100 grams edible portion of the food/beverage; number of decimal places varies by nutrient, following conventions in SR.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Nutrient descriptions

This file contains the names (nutrient descriptions) and codes for nutrients included in the FNDDS Nutrient Values file. The nutrient codes, nutrient descriptions, units of expression, and number of decimal places to which values are expressed are consistent with similar fields in SR.

Table 11. Format of Nutrient Descriptions file†

Field Name	Field Type	Description
Nutrient code‡	N 5*	Identifies a nutrient.
Nutrient description	A 45	A description of a nutrient or food component.
Tagname	A 15	The nutrient or food component name or “tag” assigned by INFOODS, the International Network of Food Data Systems, for international interchange of nutrient data (Food and Agriculture Organization, 2014).
Unit	A 10	The measurement unit in which values for the nutrient are expressed.
Decimals	N 1	The number of decimal places to which the nutrient value is expressed; varies by nutrient, following conventions in SR.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Moisture & fat adjustments

The Moisture & Fat Adjustments file provides factors used to adjust amounts of moisture and fat during calculation of the nutrient values for some foods/beverages. These adjustments are made to account for changes that occur to food during cooking.

Table 12. Format of Moisture & Fat Adjustments file†

Field Name	Field Type	Description
Food code‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Moisture change	N 5.1	Increase or decrease in moisture, expressed as a percentage (plus or minus) of the total weight of the food/beverage; applied during nutrient value calculations.
Fat change	N 5.1	Increase or decrease in fat, expressed as a percentage (plus or minus) of the total weight of the food/beverage; applied during nutrient value calculations.
Type of fat	N 8	Type of fat (SR code or food code) used for calculating fat change.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

FNDDS-SR links

This file provides information used to calculate FNDDS nutrient values. It documents the association between FNDDS foods/beverages and about 3,200 items from SR. Some items are represented by a one-to-one link between an FNDDS code and the corresponding SR code, e.g., whole milk. FNDDS codes for food/beverage mixtures are usually linked to multiple SR codes. When multiple links exist, nutrient values were calculated according to the retention factor recipe calculation method (Powers and Hoover, 1989). For many commercial mixtures, links were estimated from label information. For other mixtures, popular cookbooks were consulted to aid in constructing links.

The links for food/beverage mixtures were developed to estimate the nutrient content, not to determine the intake of ingredients in recipes or mixtures. For example, for the FNDDS food code 28340660, “chicken or turkey vegetable soup, home recipe,” there are links to multiple SR items. Proportions of the items were based on soup recipes from a popular cookbook. Sample persons who reported consuming home-made chicken or turkey soup may not have consumed the same items in their soups, or their soups may have included the same items, but not in the same proportion as in the recipe we chose to represent this food. Thus, the FNDDS-SR links document the basis for the nutrient values included in this database, not specific ingredients that were consumed.

Sometimes one FNDDS food/beverage is linked to another FNDDS item, instead of multiple SR codes, as a way of simplifying database maintenance. For example, ‘Macaroni or noodles with cheese and tuna’ has an FNDDS ingredient – cooked macaroni and cheese and tuna. This type of linkage can be distinguished by the number of digits in the SR Code field – there are 8 digits for an FNDDS food code number and 4 or 5 digits for an SR code. Note that to match the SR Code field from the FNDDS with the NDB_No field in SR, it is necessary to add a leading zero to 4-digit SR codes.

Nutrient values for ingredients not released in SR26 provided in Excel® file

With few exceptions, the codes from SR26 used in the FNDDS-SR Links file are available from the NDL website (www.ars.usda.gov/ba/bhnrc/ndl). For the 5 items that are not released on SR26, nutrient values for these items are included with the downloaded FNDDS 2011-2012 files as an Excel® file that includes the code, description, and nutrient values for each of the 5 items.

Nutrient values for ingredients that differ from SR26

With few exceptions, the nutrient values from SR26 match those used for the development of FNDDS nutrient values. For FNDDS 2011-2012, the nutrient values for select nutrients assigned to ten SR codes differ from that released in SR26. The codes and corresponding nutrients are provided in Appendix B.

About retention codes and factors

Calculation of the nutrient values must take into account any nutrient losses that occur as a result of cooking. A table of retention factors for calculating the amounts of nutrients that are retained after cooking was developed and is maintained by NDL (Agricultural Research Service, Nutrient Data Laboratory, 2007). Because nutrient losses vary by food and by cooking method, categories were created that are specific to a food type and cooking method (for example, "Chicken, broiled"). Each category is identified by a 4-digit retention code. For each retention code, there is a list of nutrient-specific retention factors. Each retention factor is the percent of the specific nutrient that remains in the food after it is prepared by the specified method. The retention codes are included in the FNDDS-SR links file to identify the set of retention factors that were applied during calculation of the FNDDS nutrient values for that food.

Table 13. Format of FNDDS-SR Links file†

Field Name	Field Type	Description
Food code ‡	N 8*	A unique 8-digit number assigned to a particular main food description.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)*	
Seq num	N 2*	A sequence number (unique within a food code and a time period) used for ordering SR codes and descriptions.
SR code	N 8	May be a 4- or 5-digit SR code (called "NDB_No" in SR) or an 8-digit food code.
SR description	A 240	Description of SR code or Main description of FNDDS food code.
Amount	N 11.3	Number of measures or portions of SR code.
Measure	A 3	Type of common volume or weight measure (such as cup, tablespoon, quart, fluid ounce, pound, or gram) used to quantify amount of SR code; measure field may be blank.
Portion code ‡	N 5	A unique 5-digit number assigned to a particular portion description; used in combination with SR code to calculate weight (gm) of SR item; value is 0 (not used) if measure = lb, oz, g, or mg.
Retention code	N 4	Link to USDA Table of Nutrient Retention Factors, Release 6; retention code links to a description of the food category and preparation method; retention factors are expressed as a percentage of the nutrient retained.
Flag	N 2	Signals a special condition: 2 = item not available, substitution used; SR description may not match SR code under this condition. Other values = internal processing codes for FSRG use only.
Weight	N 11.3	Weight of SR item (excluding refuse weight).

– Table continued on next page –

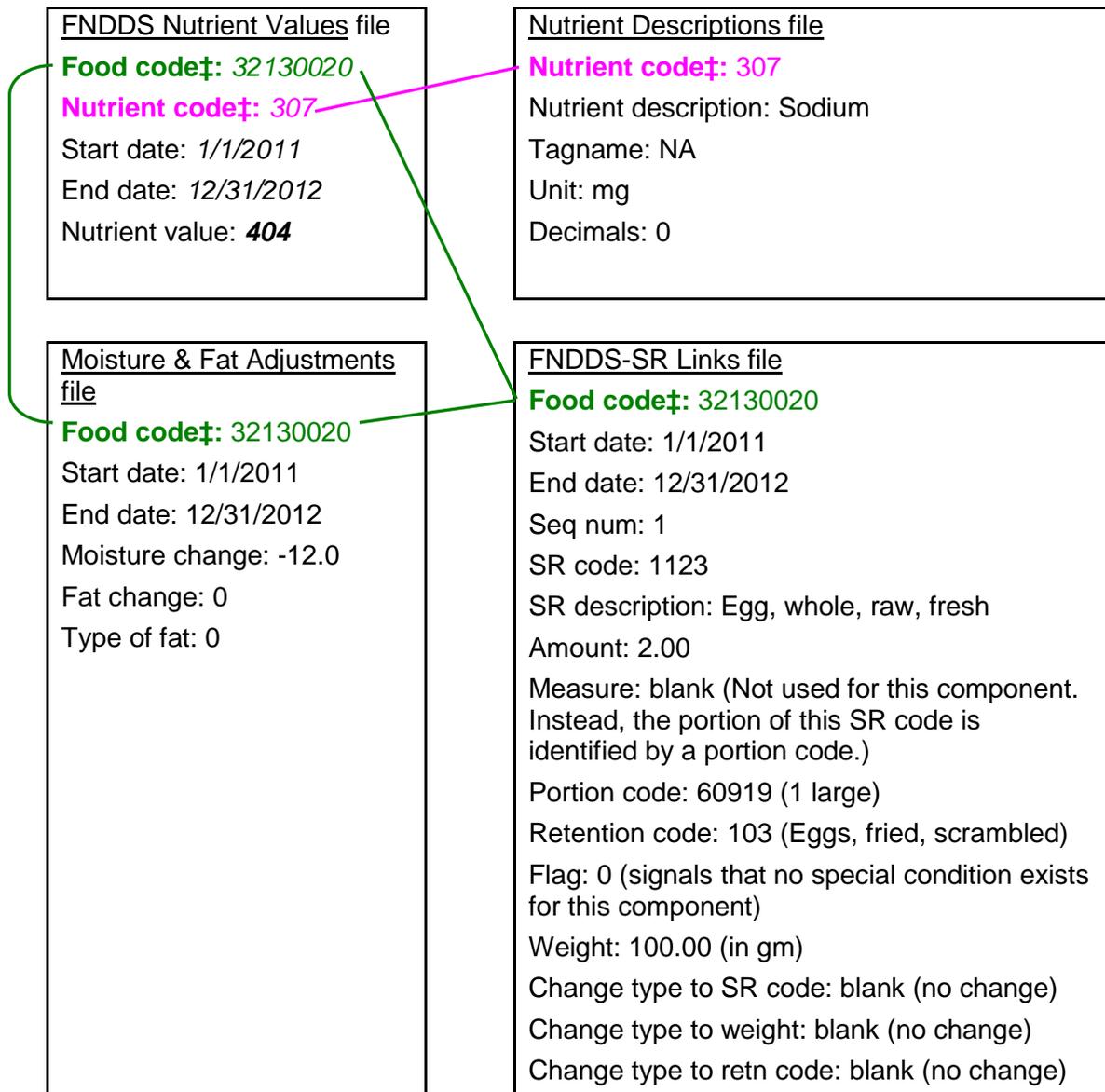
– Table 13, continued –

Field Name	Field Type	Description
Change type to SR code	A 1	Blank fields unless a change has occurred in the associated data field (SR code, weight, or retention code); changes are indicated by a D (data change) or F (food change); indicated changes may have occurred prior to the latest version of FNDDS.
Change type to weight	A 1	
Change type to retn code	A 1	

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Example of data records from the Nutrients Component files

The food description associated with the food code in this example: "Egg omelet or scrambled egg, made with butter" is found in the Main Food Description file. There are 4 records in the FNDDS-SR Links file that are used in calculating the nutrient values for this food. For the sake of simplicity, the illustration below shows only one of those records, the record for the egg used in the omelet. Similarly, for the FNDDS Nutrient Values and Nutrient Descriptions files, only the records associated with sodium are shown.



The nutrient code links the Nutrient Descriptions file with the FNDDS Nutrient Values file and indicates that there are 404 milligrams of sodium per 100 grams of this food.

The food code links the Moisture & Fat Adjustments file with the FNDDS-SR Links file (as well as with the FNDDS Nutrient Values file and other files in the database). The moisture change field indicates that a 12 percent moisture loss for this omelet must be applied to the total food weight.

In order to account for the nutrient losses that occurred as a result of cooking this omelet, the factors for retention code 0103 (Eggs, fried, scrambled) are applied to specific nutrient values for the egg (SR code 01123 = Egg, whole, raw, fresh).

Modifications Files

During the coding process of dietary recalls in WWEIA, NHANES, predefined recipes for some mixtures are modified to match more closely the item as described by the respondent. Reported items that were modified in WWEIA, NHANES 2011-2012 are identified in the Individual Foods File in the WWEIA data release that can be accessed at the FSRG website (www.ars.usda.gov/ba/bhnrc/fsrg). Once there, follow the links for What We Eat in America.

Nutrients are modified by substituting ingredients in a predefined recipe for the mixture or by modifying the amount of liquid (such as infant formula dilution). An example of a modified recipe for ingredient substitution is spinach cooked with butter rather than margarine. Each modification is assigned a unique 6-digit identification number. Tables 14 and 15 describe the format of the ModDesc and ModNutVal files.

Table 14. Format of Modifications Descriptions file†

Field Name	Field Type	Description
Modification code†	N 6*	A unique 6-digit number assigned to a particular modification description.
Start date	D (MM/DD/YYYY)	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	
Modification description	A (Memo)	Includes description of how the modified food/beverage differs from original main food description.
Food code†	N 8	8-digit unique number assigned to a particular main food description to which the modification code is linked

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

Table 15. Format of Modifications Nutrient Values file†

Field Name	Field Type	Description
Modification code†	N 6*	A unique 6-digit number assigned to a particular modification description.
Nutrient code†	N 5*	Identifies a nutrient.
Start date	D (MM/DD/YYYY)*	Start and end dates that indicate the time period corresponding to the WWEIA data for which the record was used.
End date	D (MM/DD/YYYY)	

– Table continued on next page –

– Table 15, continued –

Field Name	Field Type	Description
Nutrient value	N 10.x	Amount of nutrient in 100 grams edible portion of the food/beverage; number of decimal places varies by nutrient, following conventions in SR.

†See Table 3 (page 17) for an explanation of the abbreviations and symbols used in this table.

FOOD CODE NUMBERS, THE FOOD/BEVERAGE CODING SCHEME, FSRG-DEFINED FOOD GROUPS, AND WHAT WE EAT IN AMERICA FOOD CATEGORIES

The Main Food Descriptions file associates the primary (usually generic) description of a given food/beverage with a unique 8-digit food code. The food code is assigned according to a scheme that associates the first three or four digits of the code number with FSRG-defined food groups and subgroups. The first digit in the food code identifies one of nine major food groups:

- (1) milk and milk products
- (2) meat, poultry, fish, and mixtures
- (3) eggs
- (4) legumes, nuts, and seeds
- (5) grain products
- (6) fruits
- (7) vegetables
- (8) fats, oils, and salad dressings
- (9) sugars, sweets, and beverages

The second, third, and (sometimes) fourth digits of a food code identify increasingly more specific subgroups within the nine major food groups. The remaining digits are used for identification of particular foods/beverages within a numerical sequence. Most subgroups are identified by the first three digits, except for some subgroups in the Meat, Poultry, Fish, and Mixtures, and Sugar, Sweets, and Beverages section. Shown below is an example of a food item where the first four digits signify which groups the food item belongs to:

27116350 Stewed, seasoned, ground beef, Mexican style (Picadillo de carne de rez)

- The first digit (2) means this food item belongs in the **Meat, Poultry, Fish, and Mixtures** section.
- The first two digits (27) mean this item belongs in the **Meat, Poultry, Fish with nonmeat items** section.
- The first three digits (271) mean this food item is in the **Meat, Poultry, Fish in Gravy or Sauce or Creamed** section.
- The first four digits (2711) mean this food item is in the **Beef in Gravy or Sauce (tomato-based sauce; gravy; cream, white, or soup-based sauce; soy-based sauce; other sauce; Puerto Rican) section.**

The food/beverage coding scheme provides an outline of the major food groups and subgroups identified by the first 1 to 4 digits of the food code. The coding scheme is in Appendix E (page 58).

The FSRG-defined food groups that may be used in reporting dietary intakes are in Appendix F (page 73), along with lists of the food codes that fall into each food group and subgroup.

The What We Eat in America (WWEIA) Food Categories is another type of categorization developed by FSRG to analyze foods and beverages as consumed in the American diet. Each of the foods and beverages in FNDDS is placed in one of approximately 150 mutually exclusive categories. The categorization is not based on the food/beverage coding scheme. The focus of

this categorization system is on grouping similar foods and beverages together based on usage and nutrient content. The food categories and FNDDS food codes within each category are updated with each release of FNDDS and are available on the FSRG website.

DEFAULTS USED FOR CODING FOODS/BEVERAGES AND AMOUNTS IN WWEIA

Foods/Beverages

In WWEIA, 24-hour recalls are conducted using the USDA Automated Multiple-Pass Method (AMPM), a computerized instrument that provides standardized questions for all types of foods/beverages. When a respondent is unable to answer all questions about a food/beverage, a food code is selected that contains the term "not specified" or "not further specified" in its description. Because the number of characters used in descriptions is limited, "not specified" is abbreviated "NS" and "not further specified" is abbreviated "NFS." For example, if a respondent reports milk but is unable to provide any additional information, the food code selected is 11100000, "Milk, NFS"; if a respondent reports ground beef but is unable to identify the percent lean of that ground beef, the food code selected is 21500100, "Ground beef or patty, cooked, NS as to percent lean."

Nutrient values and portion weight data for the NS or NFS food codes are developed using food production and supply statistics (when available), food consumption data from previous surveys, internal data on the frequency of reports during the current survey, information gathered from food industry publications and other sources, and the professional judgment of FSRG nutritionists. These codes in the FNDDS SR-Links file may often be represented by one SR code or multiple codes in a composite based upon the sources indicated above. More research attention is given to those food codes that are considered to have more impact on survey data, such as food codes that are used more frequently to code intake data or that are used in the FNDDS-SR links for many other food codes.

The sources used to develop nutrient profiles for the top NFS codes are reviewed for each release of the FNDDS and revised as necessary to reflect the most current data. The sources for the nutrient profiles for select NFS codes are provided in Appendix D (page 55).

Amounts

When a respondent in WWEIA cannot describe the portion that was eaten, a portion description containing the phrase "Quantity not specified" (QNS) is chosen (portion codes 90000 to 90011). Because it is unusual for a respondent not to describe the amount of a food/beverage consumed, QNS values are not used frequently when coding food consumption data. For that reason, the FNDDS does not contain a QNS value for every food/beverage. In the Food Weights file, missing QNS values are identified with a -9 in the portion weight field for portion code 90000.

QNS values are usually based on a common measure of the food/beverage, but they do not necessarily represent the amount reported by most respondents. Database users should not assume that QNS values will accurately represent the average amount of a food consumed.

MULTI-YEAR VERSION OF FNDDS

Each release of the FNDDS is a subset of the multi-year (1994-2012) database maintained by FSRG. Each FNDDS release corresponds with a 2-year WWEIA data release cycle and is based on the version of SR that is current at the time it is generated.

The multi-year database was designed to track changes in foods/beverages and facilitate analysis of intake trends in the United States (Anderson et al., 2001). The multi-year database provides opportunities to investigate the real differences in nutrient intakes before and after fortification levels change and to re-analyze dietary intake data collected in earlier years, taking advantage of the improved data, but maintaining the integrity of values for the original time period (Ahuja, Goldman, and Perloff, 2006).

When a food/beverage has changed over time, the database may contain more than one record for the same item, with different dates to indicate the different time periods when each value is valid. For example, the level of folate in many products changed in 1998 when folate fortification became mandatory in cereal grains subject to standards of identity. Separate records exist in the multi-year FNDDS Nutrient Values file for the different folate levels. The time period associated with each level is designated by the fields “start date” and “end date.” In addition, as new nutrients are added to the FNDDS, they are given a start date of the beginning of the 2-year WWEIA, NHANES survey period. For example, records for total choline values have a start date of 1/1/2005 in the multi-year database, as choline was added for the WWEIA, NHANES 2005-2006 survey.

Most changes that occur in the multi-year database are associated with changes in SR nutrient values. When nutrient values change in the SR for foods/beverages used in the FNDDS, NDL determines the classification of each change.

Some changes to data values occur because a food/beverage actually changes, as in the case of new fortification levels or reformulation, or because a portion weight such as the weight for “1 package” has changed. Such changes are classified as “food changes”.

Other changes to data values occur because of improvements to the data. Improvements to nutrient values usually occur because of improved analytical procedures for determining the values, or because values are based on more representative samples of foods/beverages. Several thousand nutrient values have been revised over the past several years, largely due to improved food composition data generated by NDL’s National Food and Nutrient Analysis Program, or NFNAP (Haytowitz et al., 2008). Such changes are classified as “data changes”. Values classified as data changes replace older values in the database and do not require multiple records. It is valid to include those types of changed values in a database used to recalculate dietary intake data collected during a previous time period.

In the FNDDS, as in the multi-year database, many of the data files include start date and end date fields. For FNDDS 2011-2012, the start date for all records is 1/1/2011 and the end date for all records is 12/31/2012. Three data files (Food Weights, Food Portion Descriptions, and FNDDS-SR Links) also include “change type” fields that contain information about changes to data values. While these codes generally serve no purpose for a single version subset of the database such as FNDDS 2011-2012, they are included to keep the format consistent with the multi-version format.

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APPENDIXES

Appendix A. List of Nutrients/Food Components (Unit)

Food energy (kcal)	Vitamin A as retinol activity equivalents (µg)
Protein (g)	Retinol (µg)
Carbohydrate (g)	Carotenoids:
Fat, total (g)	Carotene, alpha (µg)
Alcohol (g)	Carotene, beta (µg)
	Cryptoxanthin, beta (µg)
	Lycopene (µg)
Sugars, total (g)	Lutein + zeaxanthin (µg)
Dietary fiber, total (g)	Vitamin E as alpha-tocopherol (mg)
Water (g)	Added vitamin E (mg)
	Vitamin D (D2+D3) (µg)
Saturated fatty acids, total (g)	Vitamin K as phylloquinone (µg)
Monounsaturated fatty acids, total (g)	Vitamin C (mg)
Polyunsaturated fatty acids, total (g)	Thiamin (mg)
Cholesterol (mg)	Riboflavin (mg)
	Niacin (mg)
Individual fatty acids:	Vitamin B-6 (mg)
4:0 (g)	Folate, total (µg)
6:0 (g)	Folate as dietary folate equivalents (µg)
8:0 (g)	Folic acid (µg)
10:0 (g)	Food folate (µg)
12:0 (g)	Vitamin B-12 (µg)
14:0 (g)	Added vitamin B-12 (µg)
16:0 (g)	Choline, total (mg)
18:0 (g)	
16:1 (g)	Calcium (mg)
18:1 (g)	Iron (mg)
20:1 (g)	Magnesium (mg)
22:1 (g)	Phosphorus (mg)
18:2 (g)	Potassium (mg)
18:3 (g)	Sodium (mg)
18:4 (g)	Zinc (mg)
20:4 (g)	Copper (mg)
20:5 n-3 (g)	Selenium (µg)
22:5 n-3 (g)	
22:6 n-3 (g)	Caffeine (mg)
	Theobromine (mg)

Other nutrients of public health interest, such as amino acids, trans fatty acids, and flavonoids, are not included in FNDDS 2011-2012 because data are missing for many of the 3,200 SR26 items used to generate the FNDDS nutrient values. Also, for some nutrients, information about retention during cooking or processing is not available. A nutrient is added to FNDDS when adequate analytical data and retention factors allow the necessary values to be derived.

Appendix B. Nutrient Values for Ingredients that Differ from SR26

SR code	SR description	Nutrient code	Nutrient description	Nutrient value SR26	Nutrient value FNDDS 2011-2012
3968	Toddler formula, MEAD JOHNSON, ENFAGROW PREMIUM (formerly ENFAMIL, LIPIL, NEXT STEP), ready-to-feed	432	Folate, food	11	0
3968	Toddler formula, MEAD JOHNSON, ENFAGROW PREMIUM (formerly ENFAMIL, LIPIL, NEXT STEP), ready-to-feed	435	Folate, DFE	30	19
4539	Salad dressing, blue or roquefort cheese dressing, commercial, regular	417	Folate, total	8	5
7962	Frankfurter, meat and poultry, unheated	432	Folate, food	9	6
7962	Frankfurter, meat and poultry, unheated	435	Folate, DFE	9	6
14021	Beverages, PEPSICOLA, SOBE Energize Energy Juice Drinks	404	Thiamin	0.025	0
14021	Beverages, PEPSICOLA, SOBE Energize Energy Juice Drinks	405	Riboflavin	0.575	0
14021	Beverages, PEPSICOLA, SOBE Energize Energy Juice Drinks	418	Vitamin B-12	1.96	0
14021	Beverages, PEPSICOLA, SOBE Energize Energy Juice Drinks	578	Vitamin B-12, added	1.96	0
14036	Beverages, CYTOSPORT, Muscle Milk, ready-to-drink	328	Vitamin D (D2 + D3)	28	0.7
14036	Beverages, CYTOSPORT, Muscle Milk, ready-to-drink	431	Folic acid	24	33
14036	Beverages, CYTOSPORT, Muscle Milk, ready-to-drink	435	Folate, DFE	40	56
14062	Beverages, ABBOTT, ENSURE, Nutritional Shake, Ready-to-Drink	431	Folic acid	39	42
14062	Beverages, ABBOTT, ENSURE, Nutritional Shake, Ready-to-Drink	435	Folate, DFE	67	72

SR code	SR description	Nutrient code	Nutrient description	Nutrient value SR26	Nutrient value FNDDS 2011-2012
14461	Beverages, COCA-COLA, POWERADE, lemon-lime flavored, ready-to-drink	418	Vitamin B-12	1.37	0.9
14461	Beverages, COCA-COLA, POWERADE, lemon-lime flavored, ready-to-drink	578	Vitamin B-12, added	1.38	0.9
18951	Waffles, chocolate chip, frozen, ready-to-heat	431	Folic acid	44	59
18951	Waffles, chocolate chip, frozen, ready-to-heat	432	Folate, food	13	16
18951	Waffles, chocolate chip, frozen, ready-to-heat	435	Folate, DFE	88	116
19435	Snacks, granola bar, fruit-filled, nonfat	417	Folate, total	316	312
19444	Snacks, tortilla chips, low fat, made with olestra, nacho cheese	417	Folate, total	53	16

Appendix C. Number of Fortified Foods/Beverages in FNDDS by WWEIA Food Category

WWEIA category number	WWEIA category description	Number foods/ beverages in category	Number fortified	Number with fortified ingredients
1002	Milk, whole	9	9	0
1004	Milk, reduced fat	6	5	0
1006	Milk, lowfat	7	6	0
1008	Milk, nonfat	8	7	0
1202	Flavored milk, whole	11	2	8
1204	Flavored milk, reduced fat	16	4	12
1206	Flavored milk, lowfat	6	2	4
1208	Flavored milk, nonfat	5	2	3
1402	Milk shakes and other dairy drinks	21	3	12
1404	Milk substitutes	12	10	0
1602	Cheese	61	6	1
1604	Cottage/ricotta cheese	16	0	0
1802	Yogurt, whole and reduced fat	4	4	0
1804	Yogurt, lowfat and nonfat	17	13	0
2002	Beef, excludes ground	77	0	3
2004	Ground beef	11	0	1
2006	Pork	83	0	1
2008	Lamb, goat, game	45	0	0
2010	Liver and organ meats	15	0	0
2202	Chicken, whole pieces	129	0	0
2204	Chicken patties, nuggets and tenders	5	0	1
2206	Turkey, duck, other poultry	66	0	1
2402	Fish	340	0	102

WWEIA category number	WWEIA category description	Number foods/ beverages in category	Number fortified	Number with fortified ingredients
2404	Shellfish	94	0	19
2502	Eggs and omelets	180	0	146
2602	Cold cuts and cured meats	92	0	1
2604	Bacon	11	0	0
2606	Frankfurters	12	0	0
2608	Sausages	24	0	0
2802	Beans, peas, legumes	102	0	0
2804	Nuts and seeds	63	1	1
2806	Processed soy products	27	0	2
3002	Meat mixed dishes	307	0	119
3004	Poultry mixed dishes	152	0	69
3006	Seafood mixed dishes	124	0	50
3202	Rice mixed dishes	142	0	9
3204	Pasta mixed dishes, excludes macaroni and cheese	120	0	18
3206	Macaroni and cheese	15	0	10
3208	Turnovers and other grain-based items	48	0	15
3402	Fried rice and lo/chow mein	34	0	0
3404	Stir-fry and soy-based sauce mixtures	86	0	1
3406	Egg rolls, dumplings, sushi	18	0	0
3502	Burritos and tacos	54	0	0
3504	Nachos	7	0	0
3506	Other Mexican mixed dishes	65	0	3
3602	Pizza	74	0	2
3702	Burgers (single code)	58	0	8
3703	Frankfurter sandwiches (single code)	60	0	0
3704	Chicken/turkey sandwiches (single code)	32	0	4
3706	Egg/breakfast sandwiches (single code)	46	0	9
3708	Other sandwiches (single code)	81	0	16

WWEIA category number	WWEIA category description	Number foods/ beverages in category	Number fortified	Number with fortified ingredients
3802	Soups	235	0	47
4002	Rice	25	0	7
4004	Pasta, noodles, cooked grains	50	0	5
4202	Yeast breads	126	0	13
4204	Rolls and buns	48	0	3
4206	Bagels and English muffins	63	0	0
4208	Tortillas	7	0	0
4402	Biscuits, muffins, quick breads	57	0	31
4404	Pancakes, waffles, French toast	37	3	23
4602	Ready-to-eat cereal, higher sugar (>21.2g/100g)	123	123	0
4604	Ready-to-eat cereal, lower sugar (= < 21.2g/100g)	81	81	0
4802	Oatmeal	30	6	14
4804	Grits and other cooked cereals	75	22	29
5002	Potato chips	16	0	0
5004	Tortilla, corn, other chips	23	0	0
5006	Popcorn	11	0	0
5008	Pretzels/snack mix	15	0	0
5202	Crackers, excludes saltines	53	1	0
5204	Saltine crackers	5	0	0
5402	Cereal bars	31	31	0
5404	Nutrition bars	15	15	0
5502	Cakes and pies	203	0	58
5504	Cookies and brownies	108	0	3
5506	Doughnuts, sweet rolls, pastries	75	0	22
5702	Candy containing chocolate	69	0	1
5704	Candy not containing chocolate	66	3	0
5802	Ice cream and frozen dairy desserts	117	0	1
5804	Pudding	56	15	27
5806	Gelatins, ices, sorbets	38	0	0

WWEIA category number	WWEIA category description	Number foods/ beverages in category	Number fortified	Number with fortified ingredients
6002	Apples	14	0	2
6004	Bananas	11	0	0
6006	Grapes	6	0	0
6008	Peaches and nectarines	14	0	0
6010	Berries	45	0	0
6012	Citrus fruits	21	0	0
6014	Melons	6	0	0
6016	Dried fruits	43	0	0
6018	Other fruits and fruit salads	105	0	0
6402	Tomatoes	17	0	5
6404	Carrots	21	0	14
6406	Other red and orange vegetables	53	0	29
6408	Dark green vegetables, excludes lettuce	148	0	84
6410	Lettuce and lettuce salads	14	0	0
6412	String beans	43	0	28
6414	Onions	26	0	11
6416	Corn	64	0	39
6418	Other starchy vegetables	95	0	43
6420	Other vegetables and combinations	283	0	153
6422	Vegetable mixed dishes	190	0	37
6802	White potatoes, baked or boiled	20	0	9
6804	French fries and other fried white potatoes	22	0	4
6806	Mashed potatoes and white potato mixtures	71	0	38
7002	Citrus juice	14	3	0
7004	Apple juice	2	1	0
7006	Other fruit juice	18	8	0
7008	Vegetable juice	9	0	0
7102	Diet soft drinks	13	0	0
7104	Diet sport and energy drinks	10	10	0
7106	Other diet drinks	7	5	0
7202	Soft drinks	19	0	0
7204	Fruit drinks	57	12	5
7206	Sport and energy drinks	19	19	0
7208	Nutritional beverages	17	17	0

WWEIA category number	WWEIA category description	Number foods/ beverages in category	Number fortified	Number with fortified ingredients
7302	Coffee	57	0	12
7304	Tea	39	0	0
7502	Beer	2	0	0
7504	Wine	11	0	0
7506	Liquor and cocktails	61	0	2
7702	Tap water	1	0	0
7704	Bottled water	1	0	0
7802	Flavored or carbonated water	5	0	0
7804	Enhanced or fortified water	4	4	0
8002	Butter and animal fats	17	1	0
8004	Margarine	32	26	3
8006	Cream cheese, sour cream, whipped cream	25	0	1
8008	Cream and cream substitutes	23	0	0
8010	Mayonnaise	11	0	0
8012	Salad dressings and vegetable oils	56	0	0
8402	Tomato-based condiments	13	0	0
8404	Soy-based condiments	8	0	0
8406	Mustard and other condiments	40	0	0
8408	Olives, pickles, pickled vegetables	42	0	1
8410	Pasta sauces, tomato-based	11	0	0
8412	Dips, gravies, other sauces	53	0	4
8802	Sugars and honey	12	0	0
8804	Sugar substitutes	11	0	0
8806	Jams, syrups, toppings	51	0	3
9002	Baby food: cereals	20	20	0
9004	Baby food: fruit	51	51	0
9006	Baby food: vegetable	31	0	0
9008	Baby food: meat and dinners	67	3	0
9010	Baby food: yogurt	12	12	0
9012	Baby food: snacks and sweets	34	34	0
9202	Baby juice	18	18	0
9204	Baby water	1	0	0
9402	Formula, ready-to-feed	67	67	0
9404	Formula, prepared from powder	124	124	0
9406	Formula, prepared from concentrate	48	48	0
9602	Human milk	1	0	0
9999	Not included in a food category	85	28	0

Appendix D. Source of the Nutrient Profile for Select NFS Codes

Food Code	Description	SR Code	SR Description	Amt ¹ (g)	Source (date)
11100000	Milk, NFS	1077	Milk, whole, 3.25% milkfat, with added vitamin D	31	International Dairy Foods Association (2010)
		1079	Milk, reduced fat, fluid, 2% milkfat, with added vitamin A and vitamin D	38	
		1082	Milk, lowfat, fluid, 1% milkfat, with added vitamin A and vitamin D	14	
		1085	Milk, nonfat, fluid, with added vitamin A and vitamin D (fat free or skim)	17	
11511000	Milk, chocolate, NFS	1103	Milk, chocolate, fluid, commercial, reduced fat, with added vitamin A and vitamin D	87	USDA Economic Research Service (2010)
		1102	Milk, chocolate, fluid, commercial, whole, with added vitamin A and vitamin D	13	
11710000	Infant formula, NFS	3815	Infant formula, MEAD JOHNSON, ENFAMIL LIPIL, with iron, ready-to-feed, with ARA and DHA	100	WWEIA Survey Frequency (2010)
14010000	Cheese, NFS	1009	Cheese, cheddar	45	International Dairy Foods Association (2012)
		1252	Cheese product, pasteurized process, American, vitamin D fortified	30	
		1028	Cheese, mozzarella, part skim milk	25	
14107010	Cheese, Mozzarella, NFS	1029	Cheese, mozzarella, part skim milk, low moisture	100	Nielsen sales data (2012)
21500100	Ground beef or patty, cooked, NS as to percent lean (formerly NS as to regular, lean, or extra lean) ²	23573	Beef, ground, 80% lean meat / 20% fat, patty, cooked, broiled	34	National Cattlemen's Beef Association (2010)
		23578	Beef, ground, 75% lean meat / 25% fat, patty, cooked, broiled	32	
		23568	Beef, ground, 85% lean meat / 15% fat, patty, cooked, broiled	16	
		23563	Beef, ground, 90% lean meat / 10% fat, patty, cooked, broiled	16	
		23558	Beef, ground, 95% lean meat / 5% fat, patty, cooked, broiled	1.5	
22000100	Pork, NS as to cut, cooked, NS as to fat eaten ²	10062	Pork, fresh, loin, top loin (chops), boneless, separable lean and fat, raw	70	National Meat Case Study and WWEIA Survey Frequency (2010)
		10949	Pork, fresh, enhanced, loin, top loin (chops), boneless, separable lean and fat, raw	30	
24100000	Chicken, NS as to part and cooking method, NS as to skin eaten ²	5062	Chicken, broiler or fryers, breast, skinless, boneless, meat only, raw	53	National Meat Case Study and WWEIA Survey Frequency (2010)
		5314	Chicken, broilers or fryers, breast, skinless, boneless, meat only, enhanced, raw	22	
		5096	Chicken, broilers or fryers, dark meat, thigh, meat only, raw	17	
		5682	Chicken, dark meat, thigh, meat only, enhanced, raw	8	
24201000	Turkey, NFS ²	5186	Turkey, all classes, light meat, cooked, roasted	66	National Meat Case Study (2010)
		5697	Turkey from whole, enhanced, light meat, meat only, cooked, roasted	34	
25220410	Bologna, NFS	7971	Bologna, meat and poultry	100	Nielsen sales data (2012)
25221400	Sausage (not cold cut), NFS	7064	Pork sausage, link/patty, cooked, pan-fried	100	WWEIA Survey Frequency (2010)
25221500	Salami, NFS (Include cotto salami)	7072	Salami, dry or hard, pork, beef	100	Nielsen sales data (2012)

Food Code	Description	SR Code	SR Description	Amt ¹ (g)	Source (date)
22600100	Bacon, NS as to type of meat, cooked	10862	Pork, cured, bacon, pre-sliced, cooked, pan-fried	100	WWEIA Survey Frequency (2010)
42100100	Almonds, NFS	12563 12063	Nuts, almonds, dry roasted, with salt added Nuts, almonds, dry roasted, without salt added	50 50	WWEIA Survey Frequency (2010)
42110000	Mixed nuts, NFS	12637 12638	Nuts, mixed nuts, oil roasted, with peanuts, with salt added Nuts, mixed nuts, oil roasted, without peanuts, with salt added	80 20	Nielsen sales data (2012)
42111000	Peanuts, NFS	16090 16089	Peanuts, all types, dry-roasted, with salt Peanuts, all types, oil-roasted, with salt	80 20	WWEIA Survey Frequency (2010)
52215000	Tortilla, NFS	18364	Tortillas, ready-to-bake or -fry, flour, refrigerated	100	Nielsen sales data (2012)
53201000	Cookie, NFS	18159	Cookies, chocolate chip, commercially prepared, regular, higher fat, enriched	100	WWEIA Survey Frequency (2010)
57100100	Cereal, ready-to-eat, NFS	8013 8045 8020 8030 8069	Cereals ready-to-eat, GENERAL MILLS, CHEERIOS Cereals ready-to-eat, GENERAL MILLS, HONEY NUT CHEERIOS Cereals ready-to-eat, KELLOGG, KELLOGG'S Corn Flakes Cereals ready-to-eat, KELLOGG, KELLOGG'S FROOT LOOPS Cereals ready-to-eat, KELLOGG, KELLOGG'S FROSTED FLAKES	30 25 16 15 14	WWEIA Survey Frequency (2010)
57134000	Corn flakes, NFS	8020	Cereals ready-to-eat, KELLOGG, KELLOGG'S Corn Flakes	100	WWEIA Survey Frequency (2010)
57227000	Granola, NFS	8189 8037 8284	Cereals ready-to-eat, KELLOGG, KELLOGG'S Low Fat Granola without Raisins Cereals ready-to-eat, granola, homemade Cereals ready-to-eat, KELLOGG, KELLOGG'S Low Fat Granola with Raisins	50 40 10	WWEIA Survey Frequency (2010)
57329000	Raisin bran, NFS	8060 8061	Cereals ready-to-eat, KELLOGG, KELLOGG'S RAISIN BRAN Cereals ready-to-eat, POST Raisin Bran Cereal	75 25	WWEIA Survey Frequency (2010)
61210000	Orange juice, NFS	9209 9210 9211	Orange juice, chilled, includes from concentrate Orange juice, chilled, includes from concentrate, fortified with calcium and vitamin D Orange juice, chilled, includes from concentrate, fortified with calcium	68 20 12	Nielsen sales data (2012)
63200100	Berries, raw, NFS	9316	Strawberries, raw	100	WWEIA Survey Frequency (2010)
64100100	Fruit juice, NFS	9016 9400 9209 9211	Apple juice, canned or bottled, unsweetened, without added ascorbic acid Apple juice, canned or bottled, unsweetened, with added ascorbic acid Orange juice, chilled, includes from concentrate Orange juice, chilled, includes from concentrate, fortified with calcium	24 8 26 9	WWEIA Survey Frequency (2010)

Food Code	Description	SR Code	SR Description	Amt ¹ (g)	Source (date)
		9210	Orange juice, chilled, includes from concentrate, fortified with calcium and vitamin D	16	
		9443	Juice, apple and grape blend, with added ascorbic acid	17	
75122000	Pepper, raw, NFS	11333	Peppers, sweet, green, raw	65	WWEIA Survey
		11821	Peppers, sweet, red, raw	35	Frequency (2010)
75510000	Olives, NFS	9193	Olives, ripe, canned (small-extra large)	70	WWEIA Survey
		9195	Olives, pickled, canned or bottled, green	30	Frequency (2010)
81100500	Butter, NFS	1001	Butter, salted	100	Nielsen sales data (2012)
81102000	Margarine, NFS	4614	Margarine-like, vegetable oil spread, 60% fat, stick/tub/bottle, with salt	85	USDA Nutrient Data
		4693	Margarine-like, vegetable oil spread, 60% fat, stick, with salt, with added vitamin D	15	Laboratory (2009)
82101000	Vegetable oil, NFS	4044	Oil, soybean, salad or cooking	47	Institute of Shortening
		4582	Oil, canola	25	and Edible Oils & USDA
		4518	Oil, corn, industrial and retail, all purpose salad or cooking	12	Nutrient Data Laboratory
		4053	Oil, olive, salad or cooking	12	(2008)
		4042	Oil, peanut, salad or cooking	4	
83100100	Salad dressing, NFS, for salads	4639	Salad dressing, ranch dressing, commercial, regular	50	WWEIA Survey
		4114	Salad dressing, Italian dressing, commercial, regular	40	Frequency (2010)
		43015	Salad dressing, Caesar dressing, regular	10	
91101000	Sugar, NFS	19335	Sugars, granulated	100	WWEIA Survey
					Frequency (2010)
91300010	Syrup, NFS	19360	Syrups, table blends, pancake, with 2% maple	55	WWEIA Survey
		19353	Syrups, maple	45	Frequency (2010)

¹Amount to total 100g.

²Recipe also includes a small amount of salt used in cooking.

Appendix E. Food/Beverage Coding Scheme¹

Changes made to the Food/Beverage Coding Scheme for 2011-2012:

Groups/subgroups moved:

- 116 Milk based meal replacements, fluid - moved to 951
- 9256 Sports drinks and thirst quencher beverages – moved to 9532
- 9257 Beverages, fluid replacement – moved to 9533
- 9265 Beverages, nonfruit, fortified (include energy drinks) – moved to 9531

Groups/subgroups added:

- 324 Mixtures made with egg whites
- 334 Mixtures made with egg substitutes
- 537 Bars
- 5371 Cereal bars, granola bars
- 5372 Nutrition bars (protein, energy, meal replacement, etc.)
- 833 Fat free salad dressings
- 95 Formulated nutrition beverages, energy drinks, sports drinks, functional beverages
- 951 Nutrition drinks
- 952 Nutrition powders
- 953 Energy drinks, sports drinks, fluid replacements, other functional beverages
- 9531 Energy drinks
- 9532 Sports drinks
- 9533 Fluid replacements
- 9534 Other functional beverages

Groups/subgroups discontinued:

- 2812 Pork or ham frozen or shelf stable meals
- 331 Egg substitute, from powdered mixture
- 332 Egg substitute, from frozen mixture
- 333 Egg substitute, from liquid mixture
- 415 Frozen plate meals with legumes as major ingredient

Groups/subgroups descriptions changed:

- 321 Egg dishes
- Changed to: Egg dishes (mixtures made with whole eggs)

53 Cakes, cookies, pies, pastries

Changed to: Cakes, cookies, pies, pastries, bars

533 Pies (fruit pies; pie tarts; cream, custard, and chiffon pies; miscellaneous pies; pie shells)

Changed to: Pies (fruit pies; pie tarts; cream and custard pies; miscellaneous pies; pie shells)

¹The food coding scheme provides an outline of the major food groups and subgroups identified by the first three or four digits of the 8-digit food code. Most subgroups are identified by the first three digits, except for some subgroups in the Meat, Poultry, Fish, and Mixtures, and Sugar, Sweets, and Beverages sections.

535 Danish, breakfast pastries, doughnuts, granola bars
Changed to: Danish, breakfast pastries, doughnuts

556 Flour-milk patties
Changed to: Flour-milk dumplings, plain

734 Sweetpotatoes
Changed to: Sweet potatoes

832 Low calorie and reduced calorie salad dressings
Changed to: Light salad dressings

9256 Sports drinks and thirst quencher beverages
Changed to: Sports drinks (subgroup number also changed as indicated above)

9257 Beverages, fluid replacement
Changed to: Fluid replacements (subgroup number also changed as indicated above)

9265 Beverages, nonfruit, fortified (include energy drinks)
Changed to: Energy drinks (subgroup also moved as indicated above)

1 Milk and Milk Products

11 *Milks and milk drinks*

- 110 Milk, human
- 111 Milk, fluid (regular; filled; buttermilk; and dry reconstituted)
- 112 Milk, fluid, evaporated and condensed
- 113 Milk, fluid, imitation
- 114 Yogurt
 - 1148 Yogurt, baby food
- 115 Flavored milk and milk drinks, fluid
- 117 Infant formulas, fluid, reconstituted concentrate, reconstituted dry, and ready-to-feed (milk-based formulas; soy-based formulas; therapeutic formulas)
- 118 Milk, dry, and powdered mixtures with dry milk, not reconstituted

12 *Creams and cream substitutes*

- 121 Sweet dairy cream
- 122 Cream substitutes
- 123 Sour cream

13 *Milk desserts, sauces, gravies*

- 131 Milk desserts, frozen
- 132 Puddings, custards, and other milk desserts
- 133 Milk desserts baby food
- 134 White sauces and milk gravies

14 *Cheeses*

- 140 Cheese, NS² as to type
- 141 Natural cheeses
- 142 Cottage cheeses
- 143 Cream cheeses
- 144 Processed cheeses and cheese spreads
- 145 Imitation cheeses
- 146 Cheese mixtures
- 147 Cheese soups

²NS = not specified. See section headed "Defaults Used for Coding Foods and Amounts in WWEIA" (page 45)

2 Meat, Poultry, Fish, and Mixtures

20 Meat, NS as to type

200 Meat, NS as to type

21 Beef

210 Beef, NFS³

211 Beef steak

213 Beef oxtails, neckbones, short ribs, head

214 Beef roasts, stew meat, corned beef, beef brisket, sandwich steaks

215 Ground beef, beef patties, beef meatballs

216 Other beef items (beef bacon; dried beef; pastrami)

217 Beef baby food

22 Pork

220 Pork, NFS; ground, dehydrated

221 Pork chops

222 Pork steaks, cutlets

223 Ham

224 Pork roasts

225 Canadian bacon

226 Bacon, salt pork

227 Other pork items (spareribs; cracklings; skin; miscellaneous parts)

228 Pork baby food

23 Lamb, veal, game, other carcass meat

230 Lamb, NFS

231 Lamb and goat

232 Veal

233 Game

234 Lamb or veal baby food

24 Poultry

241 Chicken (breast; leg; drumstick; wing; back; neck or ribs; misc.)

242 Turkey

243 Duck

244 Other poultry

247 Poultry baby food

25 Organ meats, sausages and lunchmeats, and meat spreads

251 Organ meats and mixtures

2511 Liver

2512 Hearts

2513 Kidney

2514 Sweetbreads

2515 Brains

³NFS = not further specified. See section headed "Defaults Used for Coding Foods/Beverages and Amounts in WWEIA." (page 44)

- 2516 Tongue
- 2517 Other variety meats
- 252 Frankfurters, sausages, lunchmeats, meat spreads
 - 2521 Frankfurters
 - 2522 Sausages
 - 2523 Luncheon meats (loaf)
 - 2524 Potted meat, spreads
- 26 Fish and shellfish**
 - 261 Finfish
 - 262 Other seafood
 - 263 Shellfish
- 27 Meat, poultry, fish with nonmeat items**
 - 271 Meat, poultry, fish in gravy or sauce or creamed
 - 2711 Beef in gravy or sauce (tomato-based sauce; gravy; cream, white, or soup-based sauce; soy-based sauce; other sauce; Puerto Rican)
 - 2712 Pork with gravy or sauce
 - 2713 Lamb and veal with gravy or sauce
 - 2714 Poultry with gravy or sauce (tomato-based sauce; gravy; cream, white, or soup-based sauce; soy-based sauce; other sauces; Puerto Rican)
 - 2715 Fish, shellfish with gravy or sauce
 - 2716 Miscellaneous meats with gravy or sauce
 - 272 Meat, poultry, fish with starch item (includes white potatoes)
 - 2721 Beef with starch item (potatoes; noodles; rice; bread; Puerto Rican)
 - 2722 Pork with starch item
 - 2723 Lamb, veal, game with starch item
 - 2724 Poultry with starch item (potatoes; noodles; rice; bread)
 - 2725 Fish, shellfish with starch item
 - 2726 Miscellaneous meats with starch item
 - 273 Meat, poultry, fish with starch item and vegetables
 - 2731 Beef with starch and vegetable (potatoes; noodles; rice; bread; Puerto Rican)
 - 2732 Pork with starch and vegetable
 - 2733 Lamb, veal, game with starch and vegetable
 - 2734 Poultry with starch and vegetable (potatoes; noodles; rice; bread; Puerto Rican)
 - 2735 Fish, shellfish with starch and vegetable
 - 2736 Miscellaneous meats with starch and vegetable
 - 274 Meat, poultry, fish with vegetables (excluding white potatoes)
 - 2741 Beef with vegetable, no potatoes
 - 2742 Pork with vegetable, no potatoes
 - 2743 Lamb, veal, game with vegetable, no potatoes
 - 2744 Poultry with vegetables, no potatoes
 - 2745 Fish, shellfish with vegetables, no potatoes

- 2746 Miscellaneous meats with vegetable, no potatoes
- 275 Sandwiches with meat, poultry, fish
 - 2751 Beef sandwiches
 - 2752 Pork sandwiches
 - 2754 Poultry sandwiches
 - 2755 Fish, shellfish sandwiches
 - 2756 Frankfurters, luncheon meat, potted meat sandwiches
 - 2757 Hors d'oeuvres, finger sandwiches
- 276 Meat, poultry, fish with nonmeat items baby food
 - 2761 Beef mixtures baby food
 - 2764 Poultry mixtures baby food

28 *Frozen and shelf-stable plate meals, soups, and gravies with meat, poultry, fish base; gelatin and gelatin-based drinks*

- 281 Frozen or shelf-stable plate meals with meat, poultry, fish as major ingredient
 - 2811 Beef frozen or shelf-stable meals
 - 2813 Veal frozen or shelf-stable meals
 - 2814 Poultry frozen or shelf-stable meals
 - 2815 Fish, shellfish frozen meals
 - 2816 Miscellaneous meat frozen or shelf-stable meals
- 283 Soups, broths, extracts from meat, poultry, fish base
 - 2831 Beef soups
 - 2832 Pork soups
 - 2833 Lamb soups
 - 2834 Poultry, soups
 - 28345 Poultry cream soups
 - 2835 Fish, shellfish soups
 - 2836 Puerto Rican soups
- 284 Gelatin and gelatin-based meal supplements
- 285 Gravies from meat, poultry, fish base

3 Eggs

31 Eggs

- 311 Chicken eggs
- 312 Other poultry eggs

32 Egg mixtures

- 321 Egg dishes (mixtures made with whole eggs)
- 322 Egg sandwiches
- 323 Egg soups
- 324 Mixtures made with egg whites

33 Egg substitutes

- 330 Egg substitute, NS as to form
- 334 Mixtures made with egg substitutes

35 Frozen plate meals with egg as major ingredient

- 350 Frozen plate meals with egg as major ingredient

4 Dry Beans, Peas, Other Legumes, Nuts, and Seeds

41 Legumes

- 411 Dried beans
- 412 Dried beans mixtures
- 413 Dried peas, lentils, and mixtures
- 414 Soybean derived products (excluding milks)
- 416 Soups with legumes as major ingredient
- 418 Meat substitutes, mainly legume protein
- 419 Meat substitute sandwiches

42 Nuts, nut butters, and nut mixtures

- 421 Nuts
- 422 Nut butters
- 423 Nut butter sandwiches
- 424 Coconut beverages
- 425 Nut mixtures

43 Seeds and seed mixtures

- 431 Seeds

44 Carob products

- 441 Carob powder, flour
- 442 Carob chips, syrup

5 Grain Products

50 *Flour and dry mixes*

500 Flour and dry mixes

51 *Yeast breads, rolls*

510 Breads, rolls, NFS

511 White breads, rolls

512 Whole wheat breads, rolls

513 Wheat, cracked wheat breads, rolls

514 Rye breads, rolls

515 Oat breads

516 Multigrain breads, rolls

518 Other breads

52 *Quick breads*

521 Biscuits

522 Cornbread, corn muffins, tortillas

523 Other muffins, popovers

524 Other quick breads

53 *Cakes, cookies, pies, pastries, bars*

531 Cakes

532 Cookies

533 Pies (fruit pies; pie tarts; cream and custard pies; miscellaneous pies; pie shells)

534 Cobblers, eclairs, turnovers, other pastries

535 Danish, breakfast pastries, doughnuts

536 Coffee cake, not yeast

537 Bars

5371 Cereal bars, granola bars

5372 Nutrition bars (protein, energy, meal replacement, etc.)

538 Cookies and bars, baby food

54 *Crackers and salty snacks from grain products*

540 Crackers, NS as to type

541 Sweet crackers

542 Low sodium crackers

543 Nonsweet crackers

544 Salty snacks from grain products

55 *Pancakes, waffles, French toast, other grain products*

551 Pancakes

552 Waffles

553 French toast

554 Crepes

555 Flour-water patties

556 Flour-milk dumplings, plain

557 Rice flour cakes

558 Funnel cakes

- 56 *Pastas, cooked cereals, rice***
 - 561 Pastas
 - 562 Cooked cereals, rice
- 57 *Cereals, not cooked or NS as to cooked***
 - 570 Cereal, NS as to cooked
 - 571 Ready-to-eat cereals
 - 572 Ready-to-eat cereals
 - 573 Ready-to-eat cereals
 - 574 Ready-to-eat cereals
 - 576 Cereal grains, not cooked
 - 578 Cereals baby food
- 58 *Grain mixtures, frozen plate meals, soups***
 - 581 Mixtures, mainly grain, pasta, or bread
 - 582 Mixtures, mainly grain, pasta, or bread
 - 583 Frozen plate meals with grain mixture as major ingredient
 - 584 Soups with grain product as major ingredient
 - 585 Grain mixtures baby food
- 59 *Meat substitutes, mainly cereal protein***
 - 590 Meat substitutes, mainly cereal protein

6 Fruits

61 Citrus fruits, juices

- 611 Citrus fruits
- 612 Citrus fruit juices

62 Dried fruits

- 621 Dried fruits

63 Other fruits

- 631 Fruits, excluding berries
- 632 Berries
- 633 Mixtures of two or more fruits
- 634 Mixtures of fruits and nonfruit items

64 Fruit juices and nectars excluding citrus

- 641 Fruit juices, excluding citrus
- 642 Nectars
- 644 Vinegar

67 Fruits and juices baby food

- 671 Fruits and fruit mixtures baby food
- 672 Fruit juice and fruit juice mixtures baby food
- 673 Fruits with cereal baby food
- 674 Fruit desserts and fruit-flavored puddings and yogurt desserts baby food
- 675 Fruits with meat or poultry baby food
- 676 Fruits and vegetables mixtures baby food

7 Vegetables

71 *White potatoes and Puerto Rican starchy vegetables*

- 710 White potatoes, NFS
- 711 White potatoes, baked and boiled
- 712 White potatoes, chips and sticks
- 713 White potatoes, creamed, scalloped, au gratin
- 714 White potatoes, fried
- 715 White potatoes, mashed, stuffed, puffs
- 716 Potato salad
- 717 Potato recipes
- 718 Potato soups
- 719 Puerto Rican starchy vegetables

72 *Dark-green vegetables*

- 721 Dark-green leafy vegetables
- 722 Dark-green nonleafy vegetables
- 723 Dark-green vegetable soups

73 *Deep-yellow vegetables*

- 731 Carrots
- 732 Pumpkin
- 733 Squash, winter
- 734 Sweet potatoes
- 735 Deep-yellow vegetable soups

74 *Tomatoes and tomato mixtures*

- 741 Tomatoes, raw
- 742 Tomatoes, cooked
- 743 Tomato juices
- 744 Tomato sauces
- 745 Tomato mixtures
- 746 Tomato soups
- 747 Tomato sandwiches

75 *Other vegetables*

- 751 Other vegetables, raw
 - 7514 Raw vegetable mixtures
- 752 Other vegetables, cooked
- 753 Other vegetable mixtures, cooked
- 754 Other cooked vegetables, cooked with sauces, batters, casseroles
- 755 Olives, pickles, relishes (excluding tomatoes)
- 756 Vegetable soups

76 *Vegetables and mixtures mostly vegetables baby food*

- 761 Dark-green vegetables baby food
- 762 Deep-yellow vegetables baby food
- 764 Vegetables other than dark-green, deep-yellow, and tomato baby food
- 765 Vegetables with grain baby food

- 766 Vegetables with meat baby food
- 77 *Vegetables with meat, poultry, fish***
 - 771 White potato with meat, poultry, fish (mixtures)
 - 772 Puerto Rican starchy vegetable (viandas) mixtures
 - 773 Other vegetable mixtures
 - 775 Puerto Rican stews or soups with starchy vegetables (viandas)
- 78 *Mixtures mostly vegetables without meat, poultry, fish***
 - 781 Vegetable and fruit juice blends, 100% juice

8 Fats, Oils, and Salad Dressings

81 Fats

- 811 Table fats
- 812 Cooking fats
- 813 Other fats

82 Oils

- 821 Vegetable oils

83 Salad dressings

- 831 Regular salad dressings
- 832 Light salad dressings
- 833 Fat free salad dressings

9 Sugars, Sweets, and Beverages

91 Sugars and sweets

- 911 Sugars and sugar-sugar substitute blends
- 912 Sugar replacements or substitute
- 913 Syrups, honey, molasses, sweet toppings
- 914 Jellies, jams, preserves
- 915 Gelatin desserts or salads
- 916 Ices or popsicles
- 917 Candies
- 918 Chewing gums

92 Nonalcoholic beverages

- 921 Coffee
- 922 Coffee substitutes
- 923 Tea
- 924 Soft drinks, carbonated
- 925 Fruit drinks
 - 9251 Fruit juice drinks and fruit-flavored drinks
 - 9253 Fruit juice drinks and fruit flavored drinks with high vitamin C
 - 9254 Fruit flavored drinks, made from powdered mix
 - 9255 Fruit juice drinks and fruit flavored drinks, low calorie
 - 9258 Fruit juice drinks and fruit flavored drinks, fortified with calcium
- 926 Beverages, nonfruit
- 928 Nonalcoholic beers, wines, cocktails
- 929 Beverage concentrates, dry, not reconstituted

93 Alcoholic beverages

- 931 Beers and ales
- 932 Cordials and liqueurs
- 933 Cocktails
- 934 Wines
- 935 Distilled liquors

94 Water, noncarbonated

- 940 Water, not bottled
- 941 Water, bottled
- 942 Water, bottled, fortified
- 943 Water, baby food

95 Formulated nutrition beverages, energy drinks, sports drinks, functional beverages

- 951 Nutrition drinks
- 952 Nutrition powders
 - 9531 Energy drinks
 - 9532 Sports drinks
 - 9533 Fluid replacements
 - 9534 Other functional beverages

Appendix F. FSRG-Defined Food Groups – What Each Group Includes and Excludes and Food Codes in Each Group

Milk and Milk Products

Total milk and milk products

Includes

Milk and milk drinks, yogurt, milk desserts, and cheese
Fluid and whipped cream, half-and-half, sour cream, and milk sauces and gravies
are included in this total but not in any of the following subgroups.

Excludes

Butter and nondairy sweet cream and sour cream substitutes, which are tabulated
under Fats and Oils.
Milk and milk products that are ingredients in food mixtures coded as a single item
and tabulated under another food group. For example, cheese on pizza is tabulated
under Grain Products.

Variable name	Food group	Food Code Number
MILK0	Total Milk and milk products	111 ----- or 112 ----- or 113 ----- or 114 ----- or 115 ----- or 117 1---- or 117 2---- or 117 4---- or 118 ----- or 121 ----- or 123 1---- or 123 202-- or 123 5---- or 13- ----- or 14- ----- or 951 01--- thru 951 03--- or 951 05--- thru 951 2002- or 952 01--- thru 951 012-- or 952 016-- thru 952 30000 or 952 30030

Total milk, milk drinks, yogurt

Includes

Fluid milk and yogurt. Flavored milk and milk drinks, meal replacements with milk, milk-based infant formulas, and unreconstituted dry milk and powdered mixtures are included in this total but not in any of the following subgroups.

Excludes

Frozen yogurt, which is tabulated under "milk desserts."

Variable name	Food group	Food Code Number
MILK1	Total milk, milk drinks, yogurt	111 ----- or 112 ----- or 114 1---- thru 114 4---- or 114 8---- or 115 ----- or 116 ----- or 117 1---- or 117 2---- or 117 4---- or 118 ----- 951 01--- thru 951 03--- or 951 05--- thru 951 2002- or 952 01--- thru 951 012-- or 952 016-- thru 952 30000 or 952 30030

Total fluid milk

Includes

Fluid whole, low-fat, skim, and acidophilus milk; buttermilk; reconstituted dry milk; evaporated milk; and sweetened condensed milk.

Variable name	Food group	Food Code Number
MILK11	Total fluid milk	111 ----- or 112 -----

Whole milk

Includes

Whole fluid milk, low-sodium whole milk, and reconstituted whole dry milk.

Variable name	Food group	Food Code Number
MILK111	Whole milk	111 1100- thru 111 1115- or 111 1435- or 111 16--- or 111 211--

Low-fat milk

Includes

Reduced fat (2 percent), low-fat (1 percent) milk, buttermilk (reduced fat, and low-fat), acidophilus milk, low-fat lactose-reduced fluid milk, and reconstituted low-fat dry milk.

Variable name	Food group	Food Code Number
MILK112	Lowfat milk	111 1116- or 111 12--- or 111 1430- or 111 1431- or 111 1433- or 111 1510- or 111 1520- or 111 212-- or

Skim milk

Includes

Skim or nonfat fluid milk, lactose-reduced fluid nonfat milk, nonfat buttermilk, and reconstituted nonfat dry milk.

Variable name	Food group	Food Code Number
MILK113	Skim milk	111 1117- or 111 13--- or 111 1432- or 111 1500- or 111 213--

Yogurt

Includes

Plain, flavored, and fruit-variety yogurt.

Excludes

Frozen yogurt, which is tabulated under "milk desserts."

Variable name	Food group	Food Code Number
MILK2	Yogurt	114 1---- thru 114 4---- or 114 8----

Milk desserts

Includes

Ice cream, imitation ice cream, ice milk, sherbet, frozen yogurt, and other desserts made with milk, such as pudding, custard, and baby-food pudding.

Variable name	Food group	Food Code Number
MILK3	Milk desserts	114 5----- thru 114 6----- or 131 ----- or 132 ----- or 133 -----

Cheese

Includes

Natural hard and soft cheeses, cottage cheese, cream cheese, processed cheese and spreads, imitation cheeses, and mixtures having cheese as a main ingredient, such as cheese dips and cheese sandwiches coded as a single item.

Variable name	Food group	Food Code Number
MILK4	Cheese	14- -----

Meat, Poultry, and Fish

Total meat, poultry, and fish

Includes

Beef, pork, lamb, veal, game, organ meats, frankfurters, sausages, luncheon meats, poultry, fish, shellfish, and mixtures having meat, poultry, or fish as a main ingredient.

Excludes

Meat, poultry, and fish that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, pepperoni on pizza is tabulated under Grain Products. Meat gravies and unflavored gelatin are included in this total but not in any of the following subgroups.

Variable name	Food group	Food Code Number
MEAT0	Total meat, poultry, fish	2-- -----

Beef

Includes

All cuts (including ground), corned beef, beef bacon, pastrami, and baby-food beef.

Excludes

Organ meats, frankfurters, sausages, and luncheon meats.

Variable name	Food group	Food Code Number
MEAT1	Beef	21- -----

Pork

Includes

All cuts (including ground); pickled, smoked, and cured pork; ham; pork roll; bacon; salt pork; pig's feet; and pork rinds.

Excludes

Organ meats, frankfurters, sausages, and luncheon meats.

Variable name	Food group	Food Code Number
MEAT2	Pork	220 ----- thru 227 ----- or 228 1-----

Lamb, veal, game

Includes

Lamb, veal, goat, venison, and other game.

Excludes

Organ meats, frankfurters, sausages, and luncheon meats.

Variable name	Food group	Food Code Number
MEAT3	Lamb, veal, game	230 ----- or 231 ----- or 232 ----- or 233 10--- thru 233 21--- or 233 2230- thru 233 50--- 234 -----

Organ meats

Includes

Liver, tripe, gizzards, and other organ meats.

Variable name	Food group	Food Code Number
MEAT4	Organ meats	251 -----

Frankfurters, sausages, luncheon meats

Includes

Frankfurters, sausages, and luncheon meats made from beef, pork, ham, veal, game (deer bologna), chicken, and turkey; and baby-food meat sticks.

Variable name	Food group	Food Code Number
MEAT5	Frankfurters, sausages luncheon meats	200 0009- or 228 2000- or 233 2210- or 247 05--- thru 247 06--- or 252 -----

Total poultry

Includes

Chicken, turkey, duck, Cornish game hen, and baby-food chicken and turkey.

Excludes

Organ meats (giblets), frankfurters, sausages, and luncheon meats.

Variable name	Food group	Food Code Number
MEAT6	Total poultry	241 ----- or 242 ----- or 243 ----- or 244 ----- or 247 01--- thru 247 03---

Chicken

Includes

Only chicken.

Excludes

Organ meats (giblets).

Variable name	Food group	Food Code Number
MEAT61	Chicken	241 ----- or 247 01---

Fish and shellfish

Includes

Finfish; shellfish, such as clams, crabs, lobster, oysters, scallops, and shrimp; and other seafood.

Variable name	Food group	Food Code Number
MEAT7	Fish and shellfish	26- -----

Mixtures mainly meat, poultry, fish

Includes

Mixtures having meat, poultry, or fish as a main ingredient, such as chicken cacciatore, beef loaf, chili con carne, venison stew, hash, tuna salad, corn dog, chicken soup; frozen meals in which the main course is a meat, poultry, or fish item; meat, poultry, or fish sandwiches coded as a single item (for example, cheeseburger on a bun); and baby-food meat and poultry mixtures.

Variable name	Food group	Food Code Number
MEAT8	Mixtures mainly meat, poultry, fish	27- ----- or 281 ----- thru 283 -----

Eggs; Legumes; Nuts and Seeds

Eggs

Includes

Whole eggs; egg whites; egg yolks; egg substitutes; and mixtures having egg as a main ingredient, such as omelets, egg salad, or egg sandwiches coded as a single item.

Excludes

Eggs that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, eggs in baked goods are tabulated under Grain Products.

Variable name	Food group	Food Code Number
EGG0	Eggs	3-- -----

Legumes

Includes

Cooked dry beans, peas, and lentils; mixtures having legumes as a main ingredient, such as baked beans or lentil soup; soybean-derived products, such as soy-based baby formulas, tofu, soy sauce, and soy-based meal replacements; and meat substitutes that are mainly vegetable protein.

Excludes

Peanuts, which are tabulated under Nuts and Seeds.
Legumes that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, beans in tacos are tabulated under Grain Products.

Variable name	Food group	Food Code Number
LEGUME0	Legumes	41- ----- or 113 2---- or 117 2---- or 951 0400- or 951 2005- or 952 0130- or 952 0150- or 952 3001- or 952 3003-

Nuts and seeds

Includes

Unroasted, roasted, and honey-roasted nuts and peanuts; coconut; peanut butter; peanut butter sandwiches coded as a single item; nut mixtures; and unroasted and roasted seeds.

Excludes

Chocolate-covered nuts, which are tabulated under Sugars and Sweets in the subgroup "candy."

Nuts and seeds that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, nuts in baked goods are tabulated under Grain Products.

Variable name	Food group	Food Code Number
NUTSEED0	Nuts and seeds	113 5----- or 42- ----- thru 44- -----

Grain Products

Total grain products

Includes

Yeast breads, rolls, cereals, pastas, quick breads, pancakes, French toast, cakes, cookies, pastries, pies, crackers, popcorn, pretzels, corn chips, and mixtures having a grain product as a main ingredient.

Excludes

Grain products that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, noodles in tuna-noodle casserole are tabulated under Meat, Poultry, and Fish. Also, the bread in a grilled cheese sandwich coded as a single item is tabulated under Milk and Milk Products.

Variable name	Food group	Food Code Number
GRAIN0	Total grain products	5-- -----

Yeast breads and rolls

Includes

White, whole-wheat, "wheat," cracked-wheat, rye, pumpernickel, oatmeal, multigrain, and other yeast breads and rolls (excluding sweet rolls), bread stuffing, English muffins, bagels, and croutons.

Variable name	Food group	Food Code Number
GRAIN1	Total yeast breads and rolls	510 ----- or 511 0100- thru 511 5900- or 511 8---- or 512 ----- thru 518 -----

Total cereals, rice, pasta

Includes

Macaroni, noodles, spaghetti, grits, oatmeal, rice, other cooked cereal grains, unsweetened and sweetened ready-to-eat cereals, baby food cereals, and mixtures of baby cereal and fruit.

Variable Name	Food group	Food Code Number
GRAIN2	Total cereals and pastas	56- ----- or 57- -----

Ready-to-eat cereals

Includes

Unsweetened and sweetened ready-to-eat cereals.

Variable name	Food group	Food Code Number
GRAIN21	Ready-to-eat cereals	571 ----- thru 574 ----- or 578 3010-

Rice

Includes

White, brown, and wild rice.

Variable name	Food group	Food Code Number
GRAIN22	Rice	562 05--- thru 562 051-- or 562 05205 thru 562 0521 or 562 053-- thru 562 054-- or 576 03---

Pasta

Includes

Macaroni, noodles, and spaghetti.

Variable name	Food group	Food Code Number
GRAIN23	Pasta	561 -----

Quick breads, pancakes, French toast

Includes

Biscuits, cornbread, tortillas, muffins, other quick breads, pancakes, waffles, and French toast.

Excludes

Quick-bread-type coffee cakes.

Variable name	Food group	Food Code Number
GRAIN3	Quick breads, pancakes, french toast	52- ----- or 55- -----

Cakes, cookies, pastries, pies

Includes

Yeast-type sweet rolls, yeast- and crumb- or quick-bread-type coffee cakes, croissants, cakes, cookies, pies, cobblers, turnovers, Danish pastries, doughnuts, breakfast bars and tarts, granola bars, and sweet crackers.

Variable name	Food group	Food Code Number
GRAIN4	Cakes, cookies, pastries, pies	511 6---- or 53- ----- or 541 0201- thru 541 0220-

Crackers, popcorn, pretzels, corn chips

Includes

Crackers and salty snacks from grain products.

Excludes

Sweet crackers

Variable name	Food group	Food Code Number
GRAIN5	Crackers, popcorn, pretzels, corn chips	542 ----- thru 544 -----

Mixtures mainly grain

Includes

Mixtures having a grain product as a main ingredient, such as burritos, tacos, pizza, egg rolls, quiche, spaghetti with sauce, rice and pasta mixtures; frozen meals in which the main course is a grain mixture; noodle and rice soups; and baby-food macaroni and spaghetti mixtures.

Variable name	Food group	Food Code Number
GRAIN6	Mixtures mainly grain	58- -----

Fruits

Total fruits

Includes

Citrus fruits and juices, dried fruits, and other fruits; mixtures having fruit as a main ingredient; and fruit juices.

Excludes

Fruits that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, apples in apple pie are tabulated under Grain Products.

Variable name	Food group	Food Code Number
FRUIT0	Total fruits	611 0--- thru 634 1--- or 641 ---- thru 676 ----

Total citrus fruits and juices

Includes

Oranges and other citrus fruits, mixtures of orange juice and other citrus juices, and baby-food citrus juices.

Excludes

Citrus fruit juice drinks and citrus fruit flavored drinks such as lemonade, which are tabulated under Beverages.

Variable name	Food group	Food Code Number
FRUIT1	Total citrus fruits and juices	611 ----- or 612 01--- thru 612 13-- or 672 0500-

Citrus juices

Includes

Fresh, frozen, canned, or bottled grapefruit, lemon, lime, orange, and other citrus juices; blends of citrus juices; and baby-food citrus juices.

Excludes

Mixtures of citrus juices with noncitrus juices, which are tabulated under "noncitrus juices and nectars."

Variable name	Food group	Food Code Number
FRUIT11	Citrus juices	612 01--- thru 612 13--- or 672 0500-

Dried fruits

Includes

Dried apples, apricots, dates, prunes, raisins, and other dried fruits.

Excludes

Juices such as prune juice, which are tabulated under "other fruits, mixtures, and juices."

Variable name	Food group	Food Code Number
FRUIT2	Dried fruits	621 -----

Total other fruits, mixtures, juices

Includes

Raw, frozen, cooked, and canned apples, bananas, melons, berries, and other fruits except citrus and dried fruit; mixtures that are mainly noncitrus fruit; noncitrus juices (including prune juice) and nectars; mixtures of citrus and noncitrus juices; and baby-food noncitrus fruits and juices, fruits with tapioca, and fruit desserts.

Excludes

Fruit juice drinks and fruit flavored drinks, which are tabulated under Beverages, and frozen fruit-juice bars and sorbets, which are tabulated under Sugars and Sweets.

Variable name	Food group	Food Code Number
FRUIT3	Total other fruits, mixtures, juices	631 01--- thru 631 49--- or 632 ----- or 633 ----- or 634 01--- thru 634 15--- or 641 0011- thru 642 2101- or 671 ----- or 672 02--- thru 672 04--- or 672 11--- thru 672 60--- or 673 ----- or 674 ----- or 675 ----- or 676 -----

Apples

Includes

Raw and cooked apples, applesauce, and baby-food applesauce.

Variable name	Food group	Food Code Number
FRUIT31	Apples	631 010-- thru 631 015-- or 671 003-- or 671 02---

Bananas

Includes

Raw and cooked bananas and baby-food bananas.

Excludes

The starchy vegetables called plantains or "green bananas," which are tabulated under Vegetables in the subgroup "other."

Variable name	Food group	Food Code Number
FRUIT32	Bananas	631 070-- thru 631 074-- or 671 05--- or 673 08---

Melons and berries

Includes

Cantaloupe, honeydew melon, watermelon, blueberries, blackberries, raspberries, strawberries, and cranberries.

Variable name	Food group	Food Code Number
FRUIT33	Melons and berries	631 0901- or 631 0961- or 631 10--- or 631 27--- or 631 49--- or 632 -----

Other fruits and mixtures, mainly fruit

Includes

Fruits other than citrus fruits, dried fruit, apples, bananas, melons, and berries; mixtures of noncitrus fruits and mixtures that are mainly noncitrus fruits coded as a single item such as fruit salad with salad dressing, marshmallow, or pudding; and baby-food noncitrus fruits and mixtures having fruit as a main ingredient.

Variable name	Food group	Food Code Number
FRUIT34	Other fruits and mixtures mainly fruit	631 0115- or 631 03--- thru 631 05--- or 631 074-- or 631 097-- or 631 11--- thru 631 26--- or 631 29--- thru 631 48--- or 633 ----- or 634 01--- thru 634 15--- or 671 0010- or 671 0020- or 671 01--- or 671 04--- or 671 06--- or 671 08--- thru 671 14--- or 673 ----- or 674 ----- or 675 ----- 676 -----

Noncitrus juices and nectars

Includes

Fruit juices, nectars, and baby-food juices other than citrus; and mixtures of citrus juices with noncitrus juices.

Excludes

Fruit juice drinks and fruit flavored drinks, which are tabulated under Beverages.

Variable name	Food group	Food Code Number
FRUIT35	Noncitrus juices and nectars	641 ----- thru 642 2101- or 672 02--- thru 672 04--- or 672 11--- thru 672 60---

Vegetables

Total vegetables

Includes

White potatoes, dark green and deep yellow vegetables, tomatoes, lettuce, green beans, corn, green peas, lima beans, and other vegetables; mixtures having vegetables as a main ingredient; and vegetable juices.

Excludes

Vegetables that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, potatoes or tomatoes in beef stew are tabulated under Meat, Poultry, and Fish.

Variable name	Food group	Food Code Number
VEG0	Total vegetables	7-- -----

White potatoes

Includes

Baked, boiled, mashed, scalloped, and fried potatoes; potato chips; and mixtures having potatoes as a main ingredient, such as potato salad, stuffed baked potatoes, and potato soup.

Variable name	Food group	Food Code Number
VEG1	White potatoes, total	710 ---- thru 717---- or 718 0---- or 764 2---- or 771 -----

Fried potatoes

Includes

French-fried, deep-fried, hash brown, and home-fried potatoes; potato skins; and potato chips.

Variable name	Food group	Food Code Number
VEG11	Fried potatoes	712 ----- or 714 ----- or 715 05--- or 771 21---

Dark green vegetables

Includes

Raw and cooked broccoli and dark green leafy vegetables such as romaine, collards, mustard and turnip greens, kale, and spinach; mixtures having dark green vegetables as a main ingredient, such as broccoli with cheese sauce; and baby-food spinach.

Variable name	Food group	Food Code Number
VEG2	Dark-green vegetables	72- ----- or 751 47--- or 761 ----- or 766 04000

Deep yellow vegetables

Includes

Raw and cooked deep yellow or orange vegetables such as carrots, pumpkin, winter squash, and sweet potatoes; mixtures having deep yellow vegetables as a main ingredient, such as peas and carrots and sweet potato casserole; and baby-food carrots, squash, and sweet potatoes.

Variable name	Food group	Food Code Number
VEG3	Deep-yellow vegetables	73- ----- or 762 ----- or 766 02--- or 766 04500

Tomatoes

Includes

Raw and cooked tomatoes; tomato juice; catsup, chili sauce, salsa, and other tomato sauces; and mixtures having tomatoes as a main ingredient, such as tomato-based soups and tomato and corn coded as a single item.

Variable name	Food group	Food Code Number
VEG4	Tomatoes	74- -----

Lettuce, lettuce-based salads

Includes

Lettuce and mixed salad greens; lettuce salad with assorted vegetables, cheese, or egg; and other lettuce-based salads.

Variable name	Food group	Food Code Number
VEG5	Lettuce	751 13--- thru 751 14--- or 751 43--- thru 751 46--- or 751 48--- or 752 2005-

Green beans

Includes

Raw or cooked green and yellow beans; mixtures having beans as a main ingredient, such as beans with tomatoes or onions, bean salad, and beans with cream or mushroom sauce; and baby-food green beans.

Variable name	Food group	Food Code Number
VEG6	Green beans	751 018-- or 752 049-- thru 752 060-- or 753 02--- or 754 03--- thru 754 04--- or 755 001-- or 764 01--- or 764 02--- or

Corn, green peas, lima beans

Includes

Raw or cooked green peas; cooked corn and lima beans; mixtures having corn, green peas, or lima beans as a main ingredient, such as creamed corn, corn pudding, peas and onions, or pea soup; and baby-food corn and green peas.

Excludes

Dry lima beans and peas, which are tabulated under Legumes.

Variable name	Food group	Food Code Number
VEG7	Corn, green peas, lima beans	751 020-- or 751 096-- or 751 20--- or 752 040-- thru 752 041-- or 752 160-- thru 752 163-- or 752 1749- thru 752 1752- or 752 24--- or 753 01--- or 753 03--- or 753 1500- thru 753 1521- or 753 153-- or 754 02--- or 754 11--- or 754 165-- thru 754 170-- or 755 01--- or 756 040-- or 756 09--- or 764 05--- or 764 09--- or 765 02---

Other vegetables

Includes

Raw and cooked vegetables other than the following: white potatoes, dark green and deep yellow vegetables, tomatoes, lettuce, green beans, corn, peas, and lima beans and their mixtures.

Vegetable soups; pickles, olives, and relishes; mixtures having "other" vegetables as a main ingredient; baby-food vegetables and baby-food vegetable mixtures with meat.

Variable name	Food group	Food Code Number
VEG8	Other vegetables	718 5---- or 719 ----- or 751 00--- thru 751 010-- or 751 025-- thru 751 095-- or 751 11--- thru 751 12--- or 751 15--- thru 751 19--- or 751 21--- thru 751 42--- or 752 006-- thru 752 030-- or 752 07--- thru 752 15--- or 752 1670- thru 752 1750- or 752 1801- thru 752 2002- or 752 201-- thru 752 230-- or 752 25--- thru 752 36--- or 753 06--- thru 753 11--- or 753 16--- thru 753 65--- or 754 00--- thru 754 01--- or 754 05--- thru 754 10--- or 754 120-- thru 754 160-- or 754 18--- thru 754 60--- or 755 002-- thru 755 005-- or 755 02--- thru 755 35--- or

		756 01--- thru 756 03--- or 756 046-- thru 756 082-- or 756 1---- thru 756 5---- or 764 03--- or 764 07--- or 765 01--- or 766 01--- or 766 03--- or 766 05--- thru 766 0702- or 766 090-- thru 766 110-- 772 ----- or 773 ----- or 775 ----- or
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Fats and Oils; Sugars and Sweets

Total fats and oils

Includes

Table fats, cooking fats, vegetable oils, salad dressings, nondairy cream substitutes, tartar sauce, and other sauces that are mainly fat or oil.

Excludes

Fats and oils that were ingredients in food mixtures coded as a single item and tabulated under another food group. For example, fats or oils used to fry chicken are tabulated under Meat, Poultry, and Fish. Also, mayonnaise in coleslaw is tabulated under Vegetables.

Variable name	Food group	Food Code Number
FAT0	Total fats and oils	8-- ----- or 122 ----- or 123 201--

Table fats

Includes

Butter, margarine, imitation margarine, margarine-like spreads, blends of butter with margarine or vegetable oil, and butter replacements.

Variable name	Food group	Food Code Number
FAT1	Table fats	811 -----

Salad dressings

Includes

Regular, light, and fat free salad dressings and mayonnaise.

Variable name	Food group	Food Code Number
FAT2	Salad dressings	83- -----

Total sugars and sweets

Includes

Sugar, sugar substitutes, syrups, honey, sweet toppings, frostings, sweet sauces, jellies, jams, preserves, fruit butters, marmalades, gelatin desserts, ices, fruit bars, popsicles, candy (including dietetic sweets), and chewing gum.

Excludes

Sugars that were ingredients in food mixtures coded as a single item and tabulated under another food group. For example, sugar in baked goods is tabulated under Grain Products. Sugar in carbonated soft drinks is tabulated under Beverages.

Variable name	Food group	Food Code Number
SUGAR0	Total sugars and sweets	634 2----- thru 634 3----- or 91- -----

Sugars

Includes

White sugar, brown sugar, saccharin, aspartame, and other sugar substitutes.

Variable name	Food group	Food Code Number
SUGAR1	Sugars	911 ----- or 912 -----

Candy

Includes

All types of candy (including dietetic sweets), chocolate-covered nuts, chocolate chips, fruit leather, and chewing gum.

Variable name	Food group	Food Code Number
SUGAR2	Candy	917 ----- or 918 -----

Beverages

Total beverages

Includes

Alcoholic and nonalcoholic beverages.

Excludes

Plain tap water and noncarbonated bottled water.

Beverages that are ingredients in food mixtures coded as a single item and tabulated under another food group. For example, wine in beef burgundy is tabulated under Meat, Poultry, and Fish.

Variable name	Food group	Food Code Number
BEV0	Total beverages	92- ----- or 93- ----- or 953 -----

Total alcoholic beverages

Includes

Wine, beer, ale, liqueurs, cocktails, other mixed drinks, and distilled liquors.

Variable name	Food group	Food Code Number
BEV1	Total alcoholic beverages	931 ----- thru 935 -----

Wine

Includes

Wine, light wine, and mixtures made with wine, such as wine coolers.

Excludes

Nonalcoholic wine, which is tabulated under "nonalcoholic beverages."

Variable name	Food group	Food Code Number
BEV11	Wine	934 -----

Beer and ale

Includes

Beer, ale, and light (lite) beer.

Excludes

"Near beer," which is tabulated under "nonalcoholic beverages."

Variable name	Food group	Food Code Number
BEV12	Beer and ale	931 -----

Total nonalcoholic beverages

Includes

Coffee, tea, fruit juice drinks and fruit flavored drinks, and soft drinks. Near beer and nonalcoholic wine are included under this total but not in any of the following subgroups.

Variable name	Food group	Food Code Number
BEV2	Total nonalcoholic beverages	92- ----- or 953 -----

Coffee

Includes

Decaffeinated and regular coffee made from ground or instant coffee, coffee mixes, and coffee substitutes.

Variable name	Food group	Food Code Number
BEV21	Coffee	921 ----- or 922 01--- thru 922 03--- or 922 9-----

Tea

Includes

Decaffeinated and regular tea obtained ready to drink or made from leaves or from instant tea mixes with or without lemon, sugar, or artificial sweetener; and herb and other teas.

Variable name	Food group	Food Code Number
BEV22	Tea	922 04--- or 922 05--- or 923 -----

Total fruit juice drinks and fruit flavored drinks

Includes

Regular and low-calorie fruit juice drinks and fruit flavored drinks, including those made from powdered mix and frozen concentrate.

Excludes

Fruit juices, which are tabulated under Fruits, and carbonated fruit drinks, which are tabulated under "carbonated soft drinks."

Variable name	Food group	Food Code Number
BEV23	Total fruit juice drinks and fruit flavored drinks	925 ----- or 929 ----- or 953 2----- or

Regular fruit juice drinks and fruit flavored drinks

Includes

All fruit juice drinks and fruit flavored drinks except low-calorie and low-sugar types.

Variable name	Food group	Food Code Number
BEV231	Regular fruit juice drinks and fruit flavored drinks	925 ----- thru 925 4----- 925 82--- or 929 001-- or 929 003--

Low-calorie fruit juice drinks and fruit flavored drinks

Includes

Low-calorie and low-sugar fruit juice drinks and fruit flavored drinks

Variable name	Food group	Food Code Number
BEV232	Low-calorie fruit juice drinks and fruit flavored drinks	925 5---- or 929 0020-

Fruit flavored thirst-quenching beverages

Includes

All thirst quencher beverages and sports drinks, both regular and low calorie

Variable name	Food group	Food Code Number
BEV233	Fruit flavored thirst-quenching beverages	929 003-or 953 2----

Total carbonated soft drinks

Includes

Regular and low-calorie carbonated soft drinks, such as colas, fruit-flavored and cream sodas, ginger ale, root beer; carbonated soft drinks containing fruit juice; carbonated fruit juice drinks; sweetened and unsweetened carbonated water. Soft drinks not specified as either regular or low calorie are tabulated here but not in either of the following subcategories.

Variable name	Food group	Food Code Number
BEV24	Total carbonated soft drinks	924 -----

Regular carbonated soft drinks

Includes

All carbonated soft drinks except unsweetened and sugar-free types.

Variable name	Food group	Food Code Number
BEV241	Regular carbonated soft drinks	924 1011- or 924 1031- or 924 1033- or 924 1034- or 924 1036- or 924 1039- or 924 1041- or 924 1051- or 924 1055- or 924 1061- or 924 1071- or 924 1081- or 924 1151- or 924 1152- or 924 1701- or 924 3100- or 924 3200- or 924 3300-

Low-calorie carbonated soft drinks

Includes

Unsweetened and sugar-free carbonated soft drinks, and unsweetened carbonated water.

Variable name	Food group	Food Code Number
BEV242	Low calorie carbonated soft drinks	924 0010- or 924 1021- or 924 1025- or 924 1031-5 or 924 1032- or 924 1035- or 924 1037- or 924 1040- or 924 1042- or 924 1052- or 924 1056- or 924 1062- or 924 1072- or 924 1082- or 924 1161- or 924 1162-

Total energy drinks

Includes

Regular and low-calorie energy drinks.

Variable name	Food group	Food Code Number
BEV25	Energy drinks	953 1----

Total water

Includes

Plain tap water and noncarbonated bottled water.

Excludes

Carbonated water.

Variable name	Food group	Food Code Number
WATER0	All noncarbonated water	940 ----- or 941 ----- or 942 ----- or 943 -----

Plain water

Variable name	Food group	Food Code Number
WATER1	Plain water	940 ----- or 941 0010- or 943 0010-

Appendix G. Explanations of Selected Terms

Additional food description -- A secondary description associated with a specific food code and its main description; shares the same nutrient profile and portion weights.

Change type code -- A letter signifying the type of change (data change (D) or food change (F)) to a value.

Data change -- A type of change to a value, represented by "D" (for data improvement) in the change type field.

End date -- Last date when a record was available for processing WWEIA data. Most FNDDS files include two date fields (Start date and End date) indicating the time period corresponding to the WWEIA data for which a record was used.

Fat change -- A factor applied during the calculation of a food's nutrient values in order to adjust nutrients for the amount of fat gained or lost during cooking. Expressed as a percentage, plus or minus, of the total food weight.

FNDDS-SR links -- A file which documents the SR codes, along with information applicable to each code, that is used to calculate FNDDS nutrient values. Many FNDDS food codes that represent food mixtures have multiple SR links.

Food change -- A type of change to a value, represented by "F" (for food change) in the change type field. A food change represents a real change to a food. Date fields designate the start and end point for the value. Relevant to the multi-year database.

Food code -- A unique 8-digit number assigned to a FNDDS main food description.

Fortification identifier -- A unique identifier code assigned to indicate a fortified product or product containing fortified ingredients.

Main food description -- Primary description for a food, identified by a unique 8-digit food code.

Moisture change -- A factor applied during the calculation of a food's nutrient values in order to adjust nutrients for the amount of moisture gained or lost during cooking. Expressed as a percentage, plus or minus, of the total food weight.

NFS or NS -- Abbreviation for "not further specified" or "not specified." Food codes containing NFS or NS in the description are used when a respondent cannot provide any details about a food.

Nutrient code -- A unique 5-digit number assigned to a nutrient.

Nutrient description -- The description (nutrient name) associated with a unique nutrient code.

Portion code -- A unique 5-digit number assigned to a portion description.

Portion description -- A description of an amount of food identified by a unique portion code.

Portion weight -- The weight (in grams) of a portion, indicated by a portion code.

Retention code -- A 4-digit number representing a set of retention factors (expressed as a percentage of nutrients retained). Retention factors are used to calculate the amount of nutrients retained in a food after cooking.

Start date -- Beginning date when a record was available for processing WWEIA data. Most FNDDS files include two date fields (Start date and End date) indicating the time period corresponding to the WWEIA data for which a record was used.

Subcode -- A unique 7-digit number assigned to a subcode description.

Subcode description -- A description associated with a specific food code and its main description; shares the same nutrient profile but has its own unique portion descriptions and weights.