

National Health and Nutrition Examination Survey

August 2021-August 2023 Data Documentation, Codebook, and Frequencies

Dietary Supplement Use 30-Day - Total Dietary Supplements (DSQTOT_L)

Data File: DSQTOT_L.xpt

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Component Description

The Dietary Supplement and Antacid (DSQ) Section collects information on: 1) prescription and non-prescription dietary supplements (DS), and 2) non-prescription antacids.

In response to the COVID-19 pandemic, the mode of the 30-day dietary supplement data collection changed from personal interviews conducted in participants' homes to telephone interviews conducted after the first 24-hour dietary recall in August 2021-August 2023. Because the 30-day supplement intake was collected by telephone, the interviewer asked survey participants to read to them all the text on the supplement container label. Additionally, the 24-hour supplement intake data collection was discontinued from the 24-hour Day 1 and Day 2 dietary recall. The NHANES August 2021-August 2023 dietary supplement questions are updated to adapt to the telephone mode. Questions on the duration of dietary supplement intake (how long the supplement has been taken) and the reasons for taking the supplement were dropped. Analysts are encouraged to read the documentation to understand the names and structure of the files as well as the variables.

Questions about non-prescription antacids, which contained calcium and/or magnesium (antacids), are also included in this data file.

The DS reported in NHANES August 2021-August 2023 are detailed in the NHANES Dietary Supplement Database (NHANES-DSD) 1999-2023.

30-Day Dietary Supplements Data Files: Two data files were produced from the 30-day dietary supplement and non-prescription antacid sub-sections of the DSQ interview: Total Dietary Supplements file and Individual Dietary Supplements file.

File Name	
Individual Dietary Supplements	DSQIDS_L
Total Dietary Supplements	DSQTOT_L

Individual Dietary Supplements File (DSQIDS_L): Contains detailed information about the types and amounts of individual DS and antacids reported by each participant. The names of the variables included in this file are listed in **Appendix 1**.

The Individual Dietary Supplements File includes one record for each dietary supplement or antacid reported by a survey participant. Only participants that reported taking a dietary supplement or an antacid are included in these files. Each dietary supplement or antacid is

identified by a supplement ID number (DSDPID) and each record contains, but is not limited to, the information listed below:

- Name and ID number of the supplement
- Amount of a dietary supplement consumed, which is calculated as the reported amount consumed divided by the serving size from the product label; and
- Amounts of 34 nutrients/dietary components (listed in **Appendix 2**) from each dietary supplement and antacid, as calculated using the NHANES-DSD. If data is missing for any of the variables needed to calculate the amounts consumed for the selected nutrients, this information will be missing for individuals, even though they reported a supplement(s).

This file only includes intake for a select group of nutrients. These records can be linked to the NHANES-DSD, using supplement ID numbers (DSDPID), to obtain more detailed information on reported products. The NHANES-DSD datasets provide information on nutrients in the dietary supplement as reported on the product label. Botanical ingredients would be an example of nutrients not released in the Individual Dietary Supplements files but can be obtained from the NHANES-DSD files.

Total Dietary Supplements Files (DSQTOT_L): Contains, for each participant, average daily total nutrient intakes from DS and antacids. The names for the variables are listed in **Appendix 3**.

The Total Dietary Supplement File provides a summary record of total nutrient intakes from DS and antacids for each individual. This includes users and non-users of DS and antacids. Each total intake record contains, but is not limited to, the following information:

- Whether a dietary supplement was consumed in the past 30 days
- Whether an antacid was consumed in the past 30 days
- Total number of supplements and antacids reported for that participant
- Mean daily intake aggregates of 34 nutrients/dietary components (listed in **Appendix 2**) from all supplements and antacids, as calculated using the NHANES-DSD. If data is missing for any of the variables needed to calculate mean daily intakes, this information will be missing for individuals, even though they may have reported a supplement(s).
- Starting in the 2017-2018 survey cycle, the new variable DSDPID, which indicates supplement ID, was added. The variable DSDSUPID now indicates the old version for supplement ID.

Eligible Sample

All survey participants were eligible for the DSQ.

Interview Setting and Mode of Administration

The DSQ was asked by trained dietary interviewers, using the Computer-Assisted Telephone Interview (CATI) system during the day 1 dietary recall interview. Interviews were conducted with a proxy for participants less than six years of age (who was generally the person most knowledgeable about the participant's intake). Interviews of children aged 6 to 8 were conducted with a proxy and the child was present to assist in reporting intake information. Interviews of children aged 9-11, were conducted with the child and the assistance of a proxy familiar with the child's intake. Participants 12 years or older answered for themselves. Dietary interviewers conducted telephone interviews in English and Spanish. The August 2021-August 2022 [survey questionnaire](#) can be found on the NHANES website.

Quality Assurance & Quality Control

Data were routinely examined for discrepancies and erroneous entries. Trained nutritionists reviewed incoming data and matched reported dietary supplement entries to known supplements from the in-house NCHS Product Label Database (PLD), where possible; sought additional product labels if feasible; assigned generic or default supplements as appropriate; transferred or removed products that were not considered DS (i.e., prescription medication); and assigned matching codes (confidence codes). All coding was reviewed by NCHS.

Data Processing and Editing

Data Collection Methods

Dietary Supplements (prescription and non-prescription)

During the interview, survey participants were asked if they had taken a dietary supplement in the past 30 days. Participants used a hand card that listed examples of DS (**Appendix 4**). Those who answered “yes” were asked by the interviewer to read to them all the text on the supplement container label of all the products used. For DS listed on the “Strength Only” List, only the nutrient was selected, and the strength was recorded (see **Appendix 5**). For all other DS reported, the interviewer entered the product’s complete name. Interviewers could record up to 30 DS. If the container(s) was not available, the interviewer asked the participant to report verbally the name of the dietary supplement.

Non-prescription antacids

During the telephone interview, survey participants were asked if they had taken non-prescription antacids in the past 30 days. Participants used a hand card that listed examples of non-prescription antacids. Those who answered “yes” were asked by the interviewer to read to them all the text on the antacid container label of all the products used. For each antacid reported, the interviewer entered the product’s complete name. If the containers were not available, the interviewer asked the participant to verbally report the name of the antacid.

When the interviewer entered the antacids name into the computer, the name was automatically matched to a prescription drug database (which also contained non-prescription antacid products) on the computer to identify an exact match or similar text matches. The interviewer then selected the best match from a list of possible matches. The original entry of the interviewer and the product selected from the computer list were saved under separate variables for quality control purposes. If an exact match of the product was not found, the interviewer was instructed to select “drug not found on list” from the list. Interviewers recorded up to 30 non-prescription antacids. Nutritionist at NCHS then processed the data collected to determine which products contained calcium and/or magnesium. The non-prescription antacids that contained calcium and/or magnesium were released with the dietary supplement data files.

Participants were also asked how many days each DS was taken in the past 30 days and the amount that was taken on those days. For a non-prescription antacid, participants were asked whether they were taking it as an antacid, as a calcium supplement, or both.

Matching reported dietary supplements to known products

Trained nutritionists, at NCHS, matched the product names entered by the interviewer (including prescription supplement, non-prescription supplement, and antacids) to a known product when possible. NCHS nutritionists first determined if the product is in our in-house PLD. If it is, then the nutritionist verified whether the product label was entered into the system within the 2-year cycle of data collection. If the product label was not entered into the

PLD, or the product label was entered before the beginning of the 2-year data collection cycle, NCHS nutritionist attempted to obtain a new product label. NCHS obtained labels for each dietary supplement or non-prescription antacid containing calcium and/or magnesium reported by participants from sources such as the manufacturer, distributor or retailer, the Internet, company catalogs, and the Physician's Desk Reference (PDR). Label information was also obtained from [The Dietary Supplement Label Database \(DSLDB\)](#), which is a joint project of the National Institutes of Health (NIH) Office of Dietary Supplements (ODS) and National Library of Medicine (NLM). The DSLDB contains the full label contents from a sample of dietary supplement products marketed in the U.S.

NCHS communicates with many major manufacturing company representatives to determine when various product re-formulations become available. Based upon manufacturer advice, we have used a lag time of 5 months after the new re-formulated product hit the market and matched products to participants' accordingly. Despite these precautions, there is no guarantee that the product taken by participants' is matched to the correct formulation in our release files.

NCHS nutritionist attempted to find the exact product(s) reported by participants'; however, this was done with varying degrees of precision. A "matching code or confidence code" (DSDMTCH located in file P_DSQIDS) accompanied each record to indicate the degree of matching certainty. The matches were: 1) Exact or near exact match; 2) Probable match; 3) Generic match; 4) Reasonable match; or 5) Default match. In some cases, no match was made with any certainty. These products were coded 6) No match. Products whose names were reported as "Refused" (DSDSUPP=7777) or "Don't know" (DSDSUPP=9999) have matching codes (DSDMTCH) of 7 and 9, respectively.

NCHS created generic and default DS and antacids, which were also maintained in the database. Generics were created in the database and used when we had collected information about a reported supplement, such as strength of all ingredients, but no brand name. These were generally single ingredient supplements, which included a strength (e.g., vitamin C 500 mg) or multiple vitamins and/or mineral supplements made by a private label manufacturer that was known to us and for which we had a label with identical ingredients and strengths (e.g., brand X all-purpose multivitamin was reported, and we had a label for brand Y, made by the same manufacturer). When all ingredient strengths were not known, a default supplement in the database was used to code the reported supplement. Defaults were created for single ingredient and multiple ingredient supplements based on our own data of most frequently reported supplements of that type, based on the survey cycle in which the data was collected. Created default and generic products and the actual products or strengths that were assigned to these defaults are listed in **Appendix 6**.

After the dietary supplement data was coded and matched to a product in our in-house database, various types of reviews were conducted to ensure the quality of the data. Interviewers' comments are reviewed to ensure that they have been accounted for in coding. Decisions were made about how to code new or unusual dietary supplement products or unusual quantities or units reported by survey participants. Dietary supplements that could not be matched to items in the database were resolved by NCHS nutritionist.

Product information is released from the in-house PLD as the NHANES-DSD, which contains detailed information on the DS and antacids reported by survey participants since NHANES 1999. The NHANES-DSD release consists of three datasets, which contain information on products:

Dietary Supplement Product Information (DSPI)
Dietary Supplement Ingredient Information (DSII)
Dietary Supplement Blend Information (DSBI)

The supplement ID numbers (DSDPID) located in the Individual Dietary Supplements File can be used to merge with the NHANES-DSD files. For more information on the NHANES-DSD,

please refer to the documentation and release files located on the [NHANES dietary website](#).

Data Editing

Non-prescription antacids containing calcium and/or magnesium that were reported in the non-prescription antacid section of the DSQ are included in the dietary supplement files.

Prescription products, the following prescription products are included in the dietary supplement files:

- All calcium products except calcium acetate;
- All fluoride products except those in topical gel or cream forms (e.g., stannous fluoride);
- Over-the-counter niacin, niacinamide, and nicotinic acid;
- All vitamin D products, with the exception of records for Paricalcitol (D2), were retained in the August 2021-August 2023 prescription medication data file; and
- All prenatal products, most prescription vitamins taken by mouth.

All prescription niacin, potassium, and sodium products are retained in the prescription medication file. Combination products that include prescription drug(s) and dietary supplement ingredients are also retained in the prescription medication file (e.g., combination drug alendronate with cholecalciferol or Fosamax with vitamin D3). In August 2021-August 2023, prescription medication section was reduced to two questions (taking prescription medicine and number of prescription medicines). Therefore, none of the above-mentioned prescription products are included in the DS section.

Specific variables and edits:

DSD010: Have you used or taken any vitamins, minerals or other dietary supplements in the past 30 days? Include prescription and non-prescription supplements

Participants with a record of having taken a product determined to be a dietary supplement in the last 30 days are coded "1." This variable was edited and considers DS reported in any of the sub-sections of the DSQ. Some products were mistakenly recorded in the prescription medication sub-section. These data were moved to the dietary supplement files and are counted as supplements for DSD010 and DSDCOUNT. Participants who reported an antacid containing calcium or magnesium as part of the dietary supplement sub-section are also coded "1"; this product was considered to be taken as a calcium supplement. Participants who reported taking an antacid containing calcium or magnesium in the last 30 days that was recorded only in the non-prescription antacid sub-section but did not take any dietary supplement are coded "2." Participants who did not take any product that was determined to be a dietary supplement in the last 30 days are also coded "2," even if they originally reported having taken a supplement. Examples of products that were determined not to be supplements included foods (garlic cloves, raisin bran cereal, PowerBar®), drinks (Ensure®, Gatorade®, tea), over the counter drugs (aspirin, laxatives, electrolyte replacement fluids), homeopathic medicines, and prescription medicines. Prescription medicines were moved from the dietary supplement files to the appropriate prescription medication files. A small number of persons refused to answer this question (coded 7) or did not know whether they used a dietary supplement in the 30 days (coded 9).

DSDCOUNT: The number of DS taken

This variable was computed at NCHS and represents the total number of DS reported by the participant including those DS identified as unknown (DSDPID = 666666XXX). Antacids that were reported in the dietary supplement sub-section were assumed to be taken as a dietary supplement and also included in the count. Antacids reported in the non-prescription antacid or the prescription medication sub-sections of the DSQ do not contribute to this count. There

were also participants who reported the use of a dietary supplement in the past 30 days but did not know the name of the dietary supplement (DSDSUPP = 99999) or refused to report the name of the dietary supplement (DSDSUPP = 77777). Each product reported as refused or don't know is still included in the total count of DS.

DSD010AN: Any non-prescription antacids taken?

This variable was created at NCHS to indicate whether or not an antacid was reported. This variable only considers these types of antacids reported in the non-prescription antacid sub-section of the DSQ. In previous data releases, there were a few antacids reported in the dietary supplement sub-section of the DSQ and these were considered to be taken as DS and included in the DSD010 and DSDCOUNT. There was 2 antacids reported in the dietary supplement sub-section in August 2021-August 2023.

DSDANCNT: The number of non-prescription calcium and/or magnesium - containing antacids taken

This variable was computed at NCHS and represents the total number of antacids reported by the participant. Only these antacids reported in the non-prescription antacid sub-section of the DSQ contributed to this count. Antacids that were reported in the dietary supplement sub-section were assumed to be taken as a supplement and included in the dietary supplement count.

DSDANTA: Created variable that indicates whether an antacid was reported in the DS sub-section or the non-prescription antacid sub-section of the DSQ.

Information on use of non-prescription antacids was sometimes recorded in the dietary supplement sub-section of the DSQ; other times in the non-prescription antacid sub-section. Due to their nutrient content, antacids that contain calcium and/or magnesium are released with the dietary supplement data, irrespective of where they were reported. Only non-prescription antacids that contain calcium and/or magnesium are released in these files; this is not a complete accounting of all non-prescription antacids. Thus, users are cautioned that analyses of these data to estimate the percentage of non-prescription antacids used would not be appropriate.

DSDPID: Supplement ID Number

New Supplement ID is a unique number assigned to each product entered in the in-house PLD.

DSDSUPP: Name of Supplement

This is the name from the front of the product label. The brand name was generally entered first (i.e., Nature's Way) and then the actual product name (i.e., lutein). Information such as the strength (i.e., 60 mg extract) of the product and other qualifiers that help distinguish a product from a similar product (i.e., mega, super, high potency, time release, chewable, extract) were also listed if they were on the front of the product label. Words like "dietary supplement" and health claims were not entered as part of the name.

DSDMTCH: Matching code confidence codes

Supplements were recorded during the DSQ of the SP questionnaire with varying degrees of accuracy and completeness. NCHS had created a system to specify how certain we were with matching a supplement recorded during the interview with the actual product label.

Exact or near exact match (DSDMTCH=1) indicated that this was the only product that could match this entry.

Probable match (DSDMTCH=2) indicated that the match was not exact, but knowledge of the company's products strongly suggested that this was the only possible match choice. For example, the entry may not have specified strength or include words such as timed release, but no other options were available for this brand according to manufacturer or retailer information.

Generic match (DSDMTCH=3) indicated we had information on the strength for all ingredients, either: a) as part of the name (e.g., vitamin C 500 mg) or b) because the manufacturer was known and NCHS had an identical product made by this manufacturer for a different distributor or retailer. Thus, the ingredients and amounts were considered to be accurate despite an exact brand match.

Reasonable match (DSDMTCH=4) indicated that the product name may have been incomplete or could have been complete, but other products of this brand also started with these same words so this could not be assured. In these cases, the entered name was matched to either: a) the most frequently reported of these products in the NHANES 2017-2018 and 2019-2020 data, if this could be determined; b) the best-selling product by this company that matched the entered name; or c) the most basic product by this company, as assessed by label wording.

Default match (DSDMTCH=5) indicated that the exact product could not be obtained because the name was imprecise, or the exact brand product could not be located, and no generic was assigned. In these cases, the entered product was matched to a created default product based upon: a) the most commonly reported strengths for single ingredients; b) the most commonly reported brands for major multiple ingredient products such as multivitamins and multivitamin/multi-minerals for children, seniors, or adults, if available; or c) products manufactured by a large, private-label manufacturer.

Finally, a match code of No match (DSDMTCH=6) indicated that no product was found and there was not enough detail in the name to assign a generic or default match with any confidence. The words "no product information available" were listed as the product name (DSDSUPP).

Analysts should be aware that for default matches and matches that chose between several similarly named supplements, there was less certainty that the ingredients and ingredient amounts in the supplement assigned exactly matched those in the supplement actually taken. Additionally, NCHS cannot guarantee in any case that the matched product was the exact product taken or even that any product actually was taken, as these data were self-reported.

DSD070: Dietary supplement container seen by interviewer?

This variable indicated whether the product container was seen by the interviewer. Containers were seen for approximately 87% of the records. A more precise name for a supplement could be recorded by the interviewer, and thus a more precise match to a known supplement can be made, when the interviewer saw the supplement container rather than recording the participant's report of the supplement name (for example, multivitamin/multiminerals were often reported as multivitamins). In general, this was reflected in the matching code, but analysts should be aware that precision was greater when a container was seen.

This variable was mostly unedited. Interviewers asked to see the containers in all three sub-sections of the DSQ. Therefore, most records included in the dietary supplement file contained this information.

DSD090: For how long have you been taking this product or a similar type of product?

This variable has been discontinued in survey cycle August 2021-August 2023.

DSD103: In the past 30 days, on how many days did you take the product?

This variable was unedited. Information was missing for dietary supplement data that was recorded in the prescription medication sub-section, since this question was not asked in that sub-section of the DSQ.

DSD122Q and DSD122U: On the days that you took the product how much did you usually take on a single day?

The data was edited to standardize the amount the participant reported taking and the amount according to the product label serving size. For example, if a participant reported taking 1 tablespoon of a supplement and the label serving size was 3 teaspoons, then the variable was edited to 3 teaspoons (1 tablespoon = 3 teaspoons). There were 581 records in which data was edited.

In most of the cases, using the alternative serving size (information available on some product labels), using simple conversions (i.e., teaspoons to tablespoons) or contacting the manufacturer for information on label serving size (i.e., actual amount for a "capful") provided enough information to make clear edits. However, in some cases the reported amount taken was very different from the product label serving size (n=23). For example, the participant may have reported 1 tablet, but the label serving size is 1 tablespoon. This was assumed to be an error in reporting or an interviewer data entry error. In these cases, the reported amount taken was assumed to be the label serving size. Additionally, all records that were assigned a default product were edited and the label serving size was assigned for DSD122Q and DSD122U.

Information was missing for dietary supplement data that was recorded in the prescription medication sub-section, since this question was not asked in that sub-section of the DSQ.

DSDACTSS: Reported serving size/label serving size

This variable was derived using the information from DSD122Q (reported quantity taken) and information from variable DSDSERVQ (serving size quantity from product label) from the "Dietary Supplement Product Information" file (DSPI) of the NHANES-DSD. File DSPI provided information on the serving size from the product label's supplement facts panel for which the nutrient amounts were based on. The reported amount taken (DSD122Q) was divided by the serving size amount from DSPI (variable DSDSERVQ). Values were set to missing if any information was missing for DSD122Q or DSDSERVQ.

DSD124: Took product on own or doctor advised

This variable has been discontinued in survey cycle August 2021-August 2023.

DSQ128A- DSD128NN: Reason(s) for taking dietary supplement

This variable has been discontinued in survey cycle August 2021-August 2023.

Nutrient variables in the Individual Dietary Supplements file, DSQIDS_L

These variables were created by using files from the NHANES_DSD that contain information on the serving size and the quantity of each nutrient from the product label's supplement facts panel. The participants reported usual amount taken was divided by the serving size from the

label in order to determine the actual amount of nutrient consumed. For example, a participant may have reported taking one tablet, but the serving size amount was 2 tablets. Therefore, only half of the nutrients on the label were being consumed. The variable DSDACTSS (Reported serving size/label serving size) indicated the actual amount of product that was consumed. The actual amount of product consumed was then multiplied by the ingredient amount for each dietary supplement or antacid. In the example above, 0.5 would be multiplied by each ingredient/nutrient to estimate the nutrient intake.

Analysts do need to be aware that in some cases data is missing for the amount consumed. In these cases, nutrients could not be calculated and are missing. Analyst should be aware of this, especially when estimating the prevalence of use of certain nutrients by using only the nutrient variables.

DSQIFDFE: Folate, DFE (mcg)

Dietary Folate Equivalents (DFE) were calculated by using a conversion factor of 1.7. This conversion is based on recommendations set by the Institute of Medicines Dietary Reference Intakes (National Academies Press, 2006).

Nutrient variables in the Total Dietary Supplements file, DSQTOT L

These variables were created by calculating a mean daily intake. The calculation was based on the number of days the participant reported taking each dietary supplement (variable DSD103). For example, if participant X took calcium 600 mg 15 days out of the month, the calculation would be $600\text{mg} \times 15 \text{ reported days} / 30 \text{ days per month}$. If participant X took more than one supplement or antacid containing calcium, they would then be added up for the total mean daily calcium intake from DS.

Analysts do need to be aware that in some cases data is missing for the amount consumed and the number of days the supplement was taken. In these cases, nutrients could not be calculated or mean daily intake could not be estimated and therefore values are missing. Analyst should be aware of this, especially when estimating the prevalence of use of certain nutrients by using only the nutrient variables.

Analytic Notes

Sample weights for 30-day dietary supplement data

The August 2021–August 2023 NHANES sample design is similar to past cycles that drew a multi-year, stratified, clustered four-stage sample of the U.S. civilian noninstitutionalized population to provide national health estimates. To adapt to the continuing pandemic environment, this cycle also included an updated sample design to minimize contact between interviewers and survey participants. An [overview of sample design, nonresponse bias assessment, and analytic guides for NHANES August 2021-August 2023](#) is provided on the NHANES website. In addition, [a document is also available online to provide additional information on the changes that pertain to the dietary supplement data collection in this survey cycle](#).

Similar to prior cycles, sample weights are constructed to encompass the unequal probabilities of selection, as well as adjustments for non-participation by selected sample persons. In order to produce national, representative estimates, the appropriate sample weights must be used.

As mentioned previously, in August 2021-August 2023, the 30-day dietary supplement use was collected following the conclusion of the first 24-hour dietary recall, therefore the same sample weights created for the day 1 recall (i.e., WTDRD1) is provided in the present dataset, and

should be used with analysis uses the 30-day dietary supplement data (either alone or when Dietary Supplement data are used in conjunction with MEC data). The set of weights (WTDRD1) is applicable to the 6,754 participants with 30-day dietary supplement data. These weights were constructed by taking the MEC sample weights (WTMEC2YR) and further adjusting for: (a) the additional non-response; and (b) the differential allocation by weekdays (Monday through Thursday) and weekends (Friday through Sunday) for the dietary intake data collection. These weights are more variable than the MEC weights, and the sample size is smaller, so estimated standard errors using 30-day dietary supplement data and these weights might be larger than standard errors for similar estimates based on MEC weights. Please refer to the NHANES Analytic Guidelines and the on-line NHANES Tutorial for further details on the use of sample weights and other analytic issues.

In NHANES August 2021-August 2023, a total of 11,375 dietary supplements or antacids were reported by survey participants as taken in the last 30 days prior to the interview. Approximately 0.1% of these reported records are missing information on the number of days the supplement was taken and/or the amount usually consumed. This is because no product information was available. Therefore, even though the use of particular supplements was reported, no nutrient content or mean daily intake data for selected nutrients was calculated because of the missing information on the amount usually consumed. Analysts should be cautious when estimating the prevalence of supplement use for specific nutrients. Nutrient variables released in the Individual or Total Dietary Supplements file (DSQIDS_L or DSQTOT_L) should not be used alone to produce such prevalence estimation. It is recommended that analysts merge participant datasets with the NHANES Dietary Supplement Database files to identify the reported supplements containing the nutrients of interest.

In some cases, it may appear as though a participant reported the same dietary supplement more than once. There are several reasons for these duplications. Participants' may have reported DS with the same generic ingredient but different brand names (i.e., 2 different brands of calcium, but calcium is collected generically with only the strength) or the supplement may have been different forms or dosages of the same product. There were a few cases where the participant did report the exact same dietary supplement, with the same length of use, frequency of use or amount used. In these cases, since the interviewer recorded that a separate dietary supplement container was seen for each reported dietary supplement both mentions of the dietary supplement were retained in the file.

During the data editing process, outlier values were examined. When there was insufficient information to conclude that values were invalid, they were left in the data set. Analysts should examine the distribution of the data and consider whether or not it is appropriate to include or exclude extreme values in a given analysis.

NCHS collects brand name information on supplements whenever feasible, to ensure as much accuracy as possible in finding the label information for the exact product taken and providing exact ingredient information for this product to data users. Brand names are not collected for DS listed on the "Strength Only" List (see **Appendix 5: Vitamins/Minerals**). Only the nutrient is selected, and the strength is recorded. Analyst should be aware that for these specific nutrients, NCHS releases generic information (i.e., calcium 600 mg). Thus, analyses of consumer usage by brand name using NHANES data may not be accurate and is not recommended. Brand names that are available in a limited geographic area of the U.S. are not released; generic names are used for these products.

Deriving nutrient estimates from dietary supplement data

Thirty-four nutrients have already been computed for this release. In order to compute average daily intakes for nutrients or bioactives other than these 34, analyst will need to combine the Individual Dietary Supplements File (DSQIDS_L) with the NHANES-DSD files (DSPI, DSII and DSBI), which contain information on each product and ingredients and amounts in those products.

Intake of multiple supplements with the same nutrient(s), multiple use of the same supplement on the same day, and nutrients in blends should be taken into account in nutrient calculations. Nutrient names and the quantity units need to be harmonized and nutrient amounts from all these calculations must then be summed. Some nutrient amounts are for a nutrient compound (generally a foreign-made product or an antacid) and these must be converted to a nutrient elemental amount.

Analysts need to be aware of question changes over the cycles when looking at trends. Dietary supplement data was reported as times per month in 1999-2000, days in the past month in 2001-2002, and days in the past 30 days in 2003-2023.

Please refer to the on-line [NHANES Dietary Tutorial](#), which is available on the [NHANES website](#), for further details on how to use these datasets.

Estimating total nutrient intakes from all sources (foods, beverages and DS)

To estimate total dietary nutrient intake, nutrients from diet, supplements, and antacids should be combined. Although in August 2021-August 2023, the 30-day DS data was collected with the first 24-hour dietary recall using similar data collection methods, the reference intake period is different. Therefore, combining nutrient intake from these different variables to estimate total nutrient intake requires thoughtful consideration of the analytic goal and methods, and deserves accurate description of methods, assumptions, and weaknesses in any presentation of results.

All the key concepts and caveats regarding estimating nutrient intakes from dietary (foods and beverages) intake apply when estimating total nutrient intake from both foods and supplements. For these analyses, the sample of participants with reliable data for both supplement intake and the First Day recall are selected. Then, for each participant the average daily nutrient intake of supplements from the 30-day supplements use files are determined and added to the nutrient intake from the 24-hour recall. The 30-day supplement files can be linked to the dietary files by the respondent sequence number (SEQN). For more information on the data, refer to the documentations accompanying the 24-hour dietary intakes and dietary supplement datasets.

Codebook and Frequencies

SEQN - Respondent sequence number

Variable Name:	SEQN
SAS Label:	Respondent sequence number
English Text:	Respondent sequence number.
Target:	Both males and females 0 YEARS - 150 YEARS

WTDRD1 - Dietary day one sample weight

Variable Name: WTDRD1

SAS Label: Dietary day one sample weight

English Text: Dietary day one sample weight

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
5708.632624 to 408505.81364	Range of Values	6754	6754	
0	Day 1 dietary recall not done/incomplete	2106	8860	
.	Missing	0	8860	

DSDCOUNT - Total # of Dietary Supplements Taken

Variable Name: DSDCOUNT

SAS Label: Total # of Dietary Supplements Taken

English Text: Includes all supplements and the antacids reported with supplements, but not antacids reported with medications.

English Instructions: < blank >

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 30	Range of Values	6731	6731	
77	Refused	13	6744	
99	Don't know	10	6754	
.	Missing	2106	8860	

DSDANCNT - Total # of Antacids Taken

Variable Name: DSDANCNT
SAS Label: Total # of Antacids Taken
English Text: Includes all antacids reported with medications.
Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 3	Range of Values	6720	6720	
77	Refused	3	6723	
99	Don't know	5	6728	
.	Missing	2132	8860	

DSD010 - Any Dietary Supplements Taken?

Variable Name: DSD010

SAS Label: Any Dietary Supplements Taken?

English Text: The next questions are about {your/SP's} use of dietary supplements and medications during the past month. {Have you/Has SP} used or taken any vitamins, minerals or other dietary supplements in the past month? Include those products prescribed by a health professional such as a doctor or dentist, and those that do not require a prescription. This card lists some examples of different types of dietary supplements.

English Instructions: HAND CARD DSQ1

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	3762	3762	
2	No	2969	6731	
7	Refused	13	6744	
9	Don't know	10	6754	
.	Missing	2106	8860	

DSD010AN - Any Antacids Taken?

Variable Name: DSD010AN

SAS Label: Any Antacids Taken?

English Text: **Target:**

Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	876	876	
2	No	5844	6720	
7	Refused	3	6723	
9	Don't know	5	6728	
.	Missing	2132	8860	

DSQTKCAL - Energy (kcal)

Variable Name: DSQTKCAL

SAS Label: Energy (kcal)

English Text: Energy (kcal)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.03 to 340	Range of Values	2100	2100	
.	Missing	6760	8860	

DSQTPROT - Protein (gm)

Variable Name: DSQTPROT

SAS Label: Protein (gm)

English Text: Protein (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.01 to 37	Range of Values	343	343	
.	Missing	8517	8860	

DSQTCARB - Carbohydrate (gm)

Variable Name: DSQTCARB

SAS Label: Carbohydrate (gm)

English Text: Carbohydrate (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.01 to 113	Range of Values	1750	1750	
.	Missing	7110	8860	

DSQTSUGR - Total sugars (gm)

Variable Name: DSQTSUGR

SAS Label: Total sugars (gm)

English Text: Total sugars (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.02 to 66	Range of Values	1284	1284	
.	Missing	7576	8860	

DSQTFIBE - Dietary fiber (gm)

Variable Name: DSQTFIBE

SAS Label: Dietary fiber (gm)

English Text: Dietary fiber (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.01 to 45	Range of Values	282	282	
.	Missing	8578	8860	

DSQTTFAT - Total fat (gm)

Variable Name: DSQTTFAT

SAS Label: Total fat (gm)

English Text: Total fat (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.03 to 30	Range of Values	763	763	
.	Missing	8097	8860	

DSQTSFAT - Total saturated fatty acids (gm)

Variable Name: DSQTSFAT

SAS Label: Total saturated fatty acids (gm)

English Text: Total saturated fatty acids (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.03 to 5.3	Range of Values	197	197	
.	Missing	8663	8860	

DSQTMFAT - Total monounsaturated fatty acids (gm)

Variable Name: DSQTMFAT

SAS Label: Total monounsaturated fatty acids (gm)

English Text: Total monounsaturated fatty acids (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.02 to 5	Range of Values	91	91	
.	Missing	8769	8860	

DSQTPFAT - Total polyunsaturated fatty acids (gm)

Variable Name: DSQTPFAT

SAS Label: Total polyunsaturated fatty acids (gm)

English Text: Total polyunsaturated fatty acids (gm)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.01 to 18	Range of Values	224	224	
.	Missing	8636	8860	

DSQTCHOL - Cholesterol (mg)

Variable Name: DSQTCHOL

SAS Label: Cholesterol (mg)

English Text: Cholesterol (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.1 to 56.7	Range of Values	417	417	
.	Missing	8443	8860	

DSQTLYCO - Lycopene (mcg)

Variable Name: DSQTLYCO

SAS Label: Lycopene (mcg)

English Text: Lycopene (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
10 to 20000	Range of Values	531	531	
.	Missing	8329	8860	

DSQTLZ - Lutein + zeaxanthin (mcg)

Variable Name: DSQTLZ

SAS Label: Lutein + zeaxanthin (mcg)

English Text: Lutein + zeaxanthin (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2 to 275000	Range of Values	741	741	
.	Missing	8119	8860	

DSQTVB1 - Thiamin (Vitamin B1) (mg)

Variable Name: DSQTVB1

SAS Label: Thiamin (Vitamin B1) (mg)

English Text: Thiamin (Vitamin B1) (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.003 to 401.5	Range of Values	1632	1632	
.	Missing	7228	8860	

DSQTVB2 - Riboflavin (Vitamin B2) (mg)

Variable Name: DSQTVB2

SAS Label: Riboflavin (Vitamin B2) (mg)

English Text: Riboflavin (Vitamin B2) (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.004 to 401.7	Range of Values	1663	1663	
.	Missing	7197	8860	

DSQTNIAAC - Niacin (mg)

Variable Name: DSQTNIAAC

SAS Label: Niacin (mg)

English Text: Niacin (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.1 to 2013.3	Range of Values	1829	1829	
.	Missing	7031	8860	

DSQTVB6 - Vitamin B6 (mg)

Variable Name: DSQTVB6

SAS Label: Vitamin B6 (mg)

English Text: Vitamin B6 (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.01 to 500	Range of Values	2237	2237	
.	Missing	6623	8860	

DSQTFA - Folic acid (mcg)

Variable Name: DSQTFA

SAS Label: Folic acid (mcg)

English Text: Folic acid (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1 to 9032	Range of Values	2183	2183	
.	Missing	6677	8860	

DSQTFDFE - Folate, DFE (mcg)

Variable Name: DSQTFDFE

SAS Label: Folate, DFE (mcg)

English Text: Folate, DFE (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1 to 15354	Range of Values	2183	2183	
.	Missing	6677	8860	

DSQTCHL - Total choline (mg)

Variable Name: DSQTCHL

SAS Label: Total choline (mg)

English Text: Total choline (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.001 to 1175	Range of Values	288	288	
.	Missing	8572	8860	

DSQTVB12 - Vitamin B12 (mcg)

Variable Name: DSQTVB12

SAS Label: Vitamin B12 (mcg)

English Text: Vitamin B12 (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.02 to 9333.33	Range of Values	2411	2411	
.	Missing	6449	8860	

DSQTVC - Vitamin C (mg)

Variable Name: DSQTVC

SAS Label: Vitamin C (mg)

English Text: Vitamin C (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.001 to 8000	Range of Values	2622	2622	
.	Missing	6238	8860	

DSQTVK - Vitamin K (mcg)

Variable Name: DSQTVK

SAS Label: Vitamin K (mcg)

English Text: Vitamin K (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.4 to 22500	Range of Values	1208	1208	
.	Missing	7652	8860	

DSQTV D - Vitamin D (D2 + D3) (mcg)

Variable Name: DSQTV D

SAS Label: Vitamin D (D2 + D3) (mcg)

English Text: Vitamin D (D2 + D3) (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.04 to 1262.08	Range of Values	3016	3016	
.	Missing	5844	8860	

DSQTCALC - Calcium (mg)

Variable Name: DSQTCALC

SAS Label: Calcium (mg)

English Text: Calcium (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.5 to 3383.3	Range of Values	2426	2426	
.	Missing	6434	8860	

DSQTPHOS - Phosphorus (mg)

Variable Name: DSQTPHOS
SAS Label: Phosphorus (mg)
English Text: Phosphorus (mg)
Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.2 to 583.3	Range of Values	834	834	
.	Missing	8026	8860	

DSQTMAGN - Magnesium (mg)

Variable Name: DSQTMAGN
SAS Label: Magnesium (mg)
English Text: Magnesium (mg)
Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.2 to 1691.7	Range of Values	1613	1613	
.	Missing	7247	8860	

DSQTIRON - Iron (mg)

Variable Name: DSQTIRON

SAS Label: Iron (mg)

English Text: Iron (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.003 to 150	Range of Values	1051	1051	
.	Missing	7809	8860	

DSQTZINC - Zinc (mg)

Variable Name: DSQTZINC

SAS Label: Zinc (mg)

English Text: Zinc (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.02 to 200	Range of Values	2314	2314	
.	Missing	6546	8860	

DSQTCOPP - Copper (mg)

Variable Name: DSQTCOPP

SAS Label: Copper (mg)

English Text: Copper (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.00001 to 6	Range of Values	1311	1311	
.	Missing	7549	8860	

DSQTSODI - Sodium (mg)

Variable Name: DSQTSODI

SAS Label: Sodium (mg)

English Text: Sodium (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.03 to 1092	Range of Values	1245	1245	
.	Missing	7615	8860	

DSQTPOTA - Potassium (mg)

Variable Name: DSQTPOTA

SAS Label: Potassium (mg)

English Text: Potassium (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.2 to 3120	Range of Values	960	960	
.	Missing	7900	8860	

DSQTSELE - Selenium (mcg)

Variable Name: DSQTSELE

SAS Label: Selenium (mcg)

English Text: Selenium (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.7 to 400	Range of Values	1351	1351	
.	Missing	7509	8860	

DSQTCAFF - Caffeine (mg)

Variable Name: DSQTCAFF

SAS Label: Caffeine (mg)

English Text: Caffeine (mg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
10 to 133	Range of Values	9	9	
.	Missing	8851	8860	

DSQTIODI - Iodine (mcg)

Variable Name: DSQTIODI

SAS Label: Iodine (mcg)

English Text: Iodine (mcg)

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0.5 to 1500	Range of Values	1816	1816	
.	Missing	7044	8860	

Appendix 1: Variables in the Individual Dietary Supplements File
(DSQIDS_L)

Variables	Variable Label
SEQN	Respondent sequence number
DSDPID	NCHS Supplement ID
DSDANTA	Antacid reported as a dietary supplement
DSD070	Was container seen?
DSDMTCH	Matching code
DSD103	Days supplement taken, past 30 days
DSD122Q	Quantity of supplement taken per day
DSD122U	Dosage form
DSDACTSS	Reported serving size/label serving size
DSQIKCAL	Energy (kcal)
DSQIPROT	Protein (gm)
DSQICARB	Carbohydrate (gm)
DSQISUGR	Total sugars (gm)
DSQIFIBE	Dietary fiber (gm)
DSQITFAT	Total fat (gm)
DSQISFAT	Total saturated fatty acids (gm)
DSQIMFAT	Total monounsaturated fatty acids (gm)
DSQIPFAT	Total polyunsaturated fatty acids (gm)
DSQICHOL	Cholesterol (mg)
DSQILYCO	Lycopene (mcg)
DSQILZ	Lutein + zeaxanthin (mcg)
DSQIVB1	Thiamin (Vitamin B1) (mg)
DSQIVB2	Riboflavin (Vitamin B2) (mg)
DSQINIAC	Niacin (mg)
DSQIVB6	Vitamin B6 (mg)
DSQIFA	Folic acid (mcg)
DSQIFDFE	Folate, DFE (mcg)
DSQICHL	Total choline (mg)
DSQIVB12	Vitamin B12 (mcg)
DSQIVC	Vitamin C (mg)
DSQIVK	Vitamin K (mcg)
DSQIVD	Vitamin D (D2 + D3) (mcg)
DSQICALC	Calcium (mg)
DSQIPHOS	Phosphorus (mg)
DSQIMAGN	Magnesium (mg)
DSQIIRON	Iron (mg)

Variables	Variable Label
DSQIZINC	Zinc (mg)
DSQICOPP	Copper (mg)
DSQISODI	Sodium (mg)
DSQIPOTA	Potassium (mg)
DSQISELE	Selenium (mcg)
DSQICAFF	Caffeine (mg)
DSQIIODI	Iodine (mcg)

Appendix 2: List of Nutrients/Dietary Components (Unit)

Energy and Macronutrients

Food energy (kcal) €
Protein (g) €
Carbohydrate (g) €
Fat, total (g) €
Alcohol (g)
Sugars, total (g) €
Dietary fiber, total (g) €
Water (moisture) (g)*
Saturated fatty acids, total (g) €
Monounsaturated fatty acids, total (g) €
Polyunsaturated fatty acids, total (g) €
Cholesterol (mg) €

Individual fatty acids:

4:0 (g)
6:0 (g)
8:0 (g)
10:0 (g)
12:0 (g)
14:0 (g)
16:0 (g)
18:0 (g)
16:1 (g)
18:1 (g)
20:1 (g)
22:1 (g)
18:2 (g)
18:3 (g)
18:4 (g)
20:4 (g)
20:5 n-3 (g)
22:5 n-3 (g)
22:6 n-3 (g)

Vitamins, Minerals, and Other Components

Vitamin A as retinol activity equivalents (µg) ¥
Retinol (µg) ¥
Carotenoids:
 Carotene, alpha (µg) ¥
 Carotene, beta (µg) ¥
 Cryptoxanthin, beta (µg) ¥
 Lycopene (µg) €
 Lutein + zeaxanthin (µg) €
Vitamin E as alpha-tocopherol (mg) ¥
 Added vitamin E as alpha-tocopherol (mg)
Vitamin D (D2 + D3) (µg) €
Vitamin K as phylloquinone (µg) €
Vitamin C (mg) €
Thiamin (mg) €
Riboflavin (mg) €
Niacin (mg) €
Vitamin B-6 (mg) €
Folate, total (µg)
 Folate as dietary folate equivalents (µg) €
 Folic acid (µg) €
 Food folate (µg)

Choline, total (mg) €
Vitamin B-12 (µg) €
 Added vitamin B-12 (µg)
Calcium (mg) €
Iron (mg) €
Magnesium (mg) €
Phosphorus (mg) €
Potassium (mg) €
Sodium (mg) €
Zinc (mg) €
Copper (mg) €
Selenium (µg) €
Caffeine (mg) €
Theobromine (mg)

Iodine (mcg)†

* Value reflects moisture present in all foods, beverages, and water consumed as a beverage
(variables DR1IMOIS, DR2IMOIS, DR1TMOIS, DR2TMOIS)

€Indicates nutrients in which data is available for dietary supplements and non-prescription
antacids containing calcium and/or magnesium

¥Indicates that data will be available in a later release cycle

† **Only included in the dietary supplement files**

Appendix 3: Variables in the Total Dietary Supplement File (DSQTOT_L)

Variables	Variable Label
SEQN	Respondent sequence number
DSD010	Any Dietary Supplements Taken?
DSDCOUNT	Total # of Dietary Supplements Taken
DSD010AN	Any Antacids Taken?
DSDANCNT	Total # of Antacids Taken
DSQTKCAL	Energy (kcal)
DSQTPROT	Protein (gm)
DSQTCARB	Carbohydrate (gm)
DSQTSUGR	Total sugars (gm)
DSQTFIBE	Dietary fiber (gm)
DSQTFAT	Total fat (gm)
DSQTSFAT	Total saturated fatty acids (gm)
DSQTMFAT	Total monounsaturated fatty acids (gm)
DSQTPFAT	Total polyunsaturated fatty acids (gm)
DSQTCHOL	Cholesterol (mg)
DSQTLYCO	Lycopene (mcg)
DSQTLZ	Lutein + zeaxanthin (mcg)
DSQTVB1	Thiamin (Vitamin B1) (mg)
DSQTVB2	Riboflavin (Vitamin B2) (mg)
DSQTNIA	Niacin (mg)
DSQTVB6	Vitamin B6 (mg)
DSQTFA	Folic acid (mcg)
DSQTFDFE	Folate, DFE (mcg)
DSQTCHL	Total choline (mg)
DSQTVB12	Vitamin B12 (mcg)
DSQTV	Vitamin C (mg)
DSQTVK	Vitamin K (mcg)
DSQTV	Vitamin D (D2 + D3) (mcg)
DSQTCALC	Calcium (mg)
DSQTPHOS	Phosphorus (mg)
DSQTMAGN	Magnesium (mg)
DSQTI	Iron (mg)
DSQTZINC	Zinc (mg)
DSQTCOPP	Copper (mg)
DSQTSODI	Sodium (mg)
DSQTPOTA	Potassium (mg)

Variables	Variable Label
DSQTSELE	Selenium (mcg)
DSQTCAFF	Caffeine (mg)
DSQTIODI	Iodine (mcg)

Appendix 4: Dietary Supplement Hand card

VITAMINS MINERALS	Calcium, Vitamin C, Calcium and Iron, Vitamin E, Magnesium, Zinc, Calcium plus Vitamin D
MULTI-VITAMIN--MULTI-MINERALS	Flintstones, One a Day, Prenatals, Tri-Vi-Flor, B-Complex, Centrum
HERBALS AND BOTANICALS	Echinacea, Garlic, Saw Palmetto, Ginkgo, Ginseng
FIBER	Metamucil, Fibercon, Benefiber
AMINO ACIDS	Lysine, Methionine, Tryptophan
OTHERS	Fish Oil, Chondroitin, Glucosamine

Appendix 5: Vitamins/Minerals on the "Strength Only" List

- Vitamin A
- Vitamin B6
- Vitamin B12
- Vitamin C
- Vitamin D (D3)
- Vitamin E
- Calcium
- Chromium (Chromium Picolinate)
- Folate (Folic Acid)
- Iron (Ferrous Xxxate)
- Magnesium
- Potassium
- Selenium
- Zinc (Zinc Gluconate)

Appendix 6: Created Default Supplements and Antacids

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
5-HTP (5-Hydroxytryptophan)	100 mg	Most Commonly Reported Strength
Acetyl L-Carnitine	500 mg	Most Commonly Reported Strength
Alpha Lipoic Acid	300 mg	Commonly Available Strength
Amino Acid	ON Optimum Nutrition Superior Amino 2222 Tablets	Commonly Available Product
Apple Cider Vinegar Tablets	Nature's Bounty Apple Cider Vinegar 480 mg Per Serving	Commonly Available Product
Arginine Powder	3000 mg	Commonly Available Strength
Artichoke	500 mg	Most Commonly Reported Strength
Ashwagandha	500 mg	Most Commonly Reported Strength
B 50 B-Complex	GNC B-Complex 50	Commonly Available Product
Balanced B 100 B-Complex	Nature Made Time Release B-100 Complex	Commonly Available Product
BCAA Powder	ON Optimum Nutrition Instantized BCAA 5000 Powder	Commonly Available Product
Beet Powder	7 grams	Commonly Available Strength
Biotin	5000 mcg	Most Commonly Reported Strength
Black Cumin Seed Oil	500 Mg	Commonly Available Strength
Borage Oil	1000 mg	Commonly Available Strength
Brewer's Yeast Powder	Solgar Brewer's Yeast Powder	Commonly Available Product
Calcium	600 mg	Most Commonly Reported Strength
Calcium & Magnesium	Calcium 500 mg, Magnesium 250 mg	Most Commonly Reported Strengths
Calcium + D + K	Viactiv Calcium+ Max Formula Bone Strengthening 650 mg Calcium	Commonly Available Product
Calcium + Magnesium Liquid	Calcium 1000 mg, Magnesium 500 mg	Commonly Available Strengths
Calcium + Vitamin D 20 mcg	Calcium 600 mg, Vitamin D 20 mcg	Most Commonly Reported Strengths

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Calcium + Vitamin D 2000 IU	Calcium 600 mg, Vitamin D 2000 IU	Commonly Available Strengths
Calcium 1200 mg with Vitamin D	Calcium 600 mg, Vitamin D 40 mcg	Commonly Available Strengths
Calcium 250 mg With Vitamin D	Calcium 250 mg, Vitamin D 3.1 mcg	Commonly Available Strengths
Calcium 500 mg With Vitamin D	Calcium 500 mg, Vitamin D 10 mcg	Most Commonly Reported Strengths
Calcium 600 mg With Vitamin D	Calcium 600 mg, Vitamin D 20 mcg	Most Commonly Reported Strengths
Calcium Magnesium & Zinc	Calcium 333 mg, Magnesium 133 mg & Zinc 5 mg	Commonly Available Strengths
Calcium With Vitamin D	Calcium 600 mg, Vitamin D 20 mcg	Most Commonly Reported Strengths
Calcium With Vitamin D & Minerals	Caltrate Bone Health Advanced Calcium 600+D3 Plus Minerals	Commonly Available Product
CBD Gummies	Wyld CBD Gummies 500 mg CBD 25 mg CBD Per Gummy	Commonly Available Product
CBD Oil	Sunsoil CBD Oil 10 mg CBD Servings	Commonly Available Product
Children's Multivitamin/Multimineral	Flintstones Complete Children's Multivitamin	Most Commonly Reported Product
Chromium	200 mcg	Most Commonly Reported Strength
Cinnamon	500 mg	Most Commonly Reported Strength
Citrus Bergamot	500 mg	Commonly Available Strength
Cod Liver Oil Softgels	Spring Valley Cod Liver Oil Plus Vitamins A & D3	Commonly Available Product
Coenzyme Q-10	100 mg	Most Commonly Reported Strength
Collagen	1000 mg	Commonly Available Strength
Collagen & Vitamin C	Neocell Super Collagen + Vitamin C Collagen Type 1 & 3	Commonly Available Product
Collagen Powder	Neocell Super Collagen Peptides Collagen Type 1&3	Commonly Available Product
Collinsonia Root	500 mg	Commonly Available Strength
CoQ10 + Red Yeast Rice	CoQ10 60 mg, Red Yeast Rice 600 mg	Commonly Available Strengths
Cranberry	500 mg	Most Commonly Reported Strength

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Creatine Capsules	750 mg	Commonly Available Strength
Creatine Monohydrate	5000 mg	Most Commonly Reported Strength
Curcumin	500 mg	Commonly Available Strength
Dairy Digestive Caplets	Lactaid Original Lactase Enzyme	Commonly Available Product
DHA	200 mg	Commonly Available Strength
DHEA	25 mg	Most Commonly Reported Strength
Echinacea	400 mg	Most Commonly Reported Strength
Echinacea Liquid	1.0 ml	Commonly Available Strength
Elderberry	575 mg	Commonly Available Strength
Elderberry Liquid	Nature's Way Sambucus Standardized Elderberry Original Syrup	Commonly Available Product
Enzymes	Genuine N-Zimes Dr. Howell's Original Formula Digestive Enzyme	Commonly Available Product
Evening Primrose Oil	1000 mg	Most Commonly Reported Strength
Eye Health Complex	Equate Advanced Eye Health Complex	Commonly Available Product
Eye Multi-Vitamin and Mineral	Bausch + Lomb Preservision Eye Vitamin And Mineral AREDS Formula Soft Gels	Commonly Available Product
Fiber Capsules	Metamucil Psyllium Fiber 3-In-1 Fiber Multiple Health Benefits	Most Commonly Reported Product
Fiber Powder	Metamucil Psyllium Fiber 4-In-1 Fiber Made With Real Sugar Unflavored Stone Ground Texture	Commonly Available Product
Fish Oil	Nature's Bounty Fish Oil 1000 Mg 300 mg Of Omega-3	Commonly Available Product
Fish, Flax and Borage Oils	Puritan's Pride Maximum Strength Triple Omega 3-6-9 Fish, Flax & Borage Oils	Commonly Available Product
Flax Seed Oil	1000 mg	Most Commonly Reported Strength
Folate	1333 mcg DFE	Most Commonly Reported Strength
GABA	500 mg	Commonly Available Strength

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Garcinia Cambogia	500 mg	Commonly Available Strength
Garlic	1000 mg	Most Commonly Reported Strength
Ginger	550 mg	Most Commonly Reported Strength
Ginkgo Biloba	120 mg	Most Commonly Reported Strength
Ginseng	250 mg	Most Commonly Reported Strength
Glucosamine	1000 mg	Most Commonly Reported Strength
Glucosamine & MSM	750 mg & 750 mg	Most Commonly Reported Strengths
Glucosamine 1500 mg with MSM	1500 mg & 1500 mg	Most Commonly Reported Strengths
Glucosamine Chondroitin	750 mg & 600 mg	Most Commonly Reported Strengths
Glucosamine Chondroitin & MSM	Puritan's Pride Glucosamine Chondroitin MSM 3 Per Day Formula	Commonly Available Product
Glutamine Powder	4500 mg	Commonly Available Strength
Green Tea	500 mg	Commonly Available Strength
Greens Powder	Newvitality Royal Greens Original Blend	Commonly Available Product
Gummy Adult Apple Cider Vinegar	Vitafusion Gummy Vitamins Apple Cider Vinegar	Commonly Available Product
Gummy Adult Calcium + Vitamin D	Vitafusion Gummy Vitamins Calcium 500 mg Per Serving with Vitamin D3 & Calcium	Commonly Available Product
Gummy Adult Coq10	Vitafusion Gummy Supplements Coq10 200 mg Per Serving	Commonly Available Product
Gummy Adult Cranberry	Spring Valley Adult Gummy Cranberry 500 mg Per Serving	Commonly Available Product
Gummy Adult Elderberry with Vitamin C & Zinc	Sambucol Black Elderberry Black Elderberry Gummies with Vitamin C & Zinc	Commonly Available Product
Gummy Adult Fiber	Vitafusion Fiber Well Gummies Sugar Free 5g Fiber Per Serving	Commonly Available Product
Gummy Adult Hair, Skin & Nails	Nature's Bounty Optimal Solutions Hair, Skin & Nails Gummies 2,500 mcg Biotin Per Serving	Commonly Available Product
Gummy Adult Lion's Mane Mushroom	500 mg	Commonly Available Strength

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Gummy Adult Melatonin	Vitafusion Melatonin Sugarfree Gummy 3 mg Of Melatonin Per Serving	Commonly Available Product
Gummy Adult Melatonin Extra Strength	Vitafusion Gummy Supplements Melatonin Extra Strength 5 mg Per Serving	Commonly Available Product
Gummy Adult Melatonin Max Strength	Vitafusion Gummy Supplements Melatonin Max Strength 10 mg Per Serving	Commonly Available Product
Gummy Adult Men's Multivitamin / Multimineral	Vitafusion Adult Gummy Vitamins Men's Multi Daily Multivitamin	Commonly Available Product
Gummy Adult Multivitamin / Multimineral	Vitafusion Adult Gummy Vitamins Multivites Multivitamin Gummies	Commonly Available Product
Gummy Adult Omega-3	Vitafusion Gummy Vitamins Omega-3 EPA/DHA	Commonly Available Product
Gummy Adult Prenatal Multivitamin	Vitafusion Gummy Vitamins Prenatal Multivitamin with Folate & 50 mg DHA Per Serving	Commonly Available Product
Gummy Adult Probiotic	Schiff Digestive Advantage Daily Probiotic Gummies	Commonly Available Product
Gummy Adult Vitamin C	Vitafusion Gummy Vitamins Power C High Potency Vitamin C	Commonly Available Product
Gummy Adult Vitamin C Extra Strength	Vitafusion Gummy Vitamins Power C 500 mg Per Serving Extra Strength	Commonly Available Product
Gummy Adult Vitamin D	Vitafusion Gummy Vitamins Vitamin D3 High Potency	Commonly Available Product
Gummy Adult Vitamin D Extra Strength	Vitafusion Gummy Vitamins Vitamin D3 Extra Strength 75 mcg Per Serving	Commonly Available Product
Gummy Adult Women's Multivitamin / Multimineral	Vitafusion Adult Gummy Vitamins Women's Multi Daily Multivitamin	Commonly Available Product
Gummy Adult Zinc	Vitafusion Power Zinc Gummy Vitamins	Commonly Available Product
Gummy Bear Elderberry	Flintstones Supplements Elderberry Gummies With Immunity Support From Vitamin C + Zinc	Commonly Available Product
Gummy Bear Melatonin	Natrol Kids Melatonin Gummies	Commonly Available Product
Gummy Bear Multivitamin	L'il Critters Gummy Vites Daily Multivitamin Plus Vitamins C & D	Most Commonly Reported Product
Gummy Bear Multivitamin + Probiotic	Olly Kids Multi + Probiotic	Commonly Available Product
Gummy Bear Probiotic	Schiff Digestive Advantage Daily Probiotics Kids Gummies	Commonly Available Product
Gummy Bear Vitamin D	Nature Made Kids First Vitamin D3	Commonly Available Product

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Hair, Skin and Nails	Nature's Bounty Optimal Solutions Hair, Skin & Nails 3,000 mcg Biotin Per Serving	Commonly Available Product
Horny Goat Weed	500 mg	Commonly Available Strength
Iodine Drops	150 mcg	Commonly Available Strength
Iron	65 mg	Most Commonly Reported Strength
Krill Oil	Schiff MegaRed Superior Omega-3 Krill Oil 350 mg	Commonly Available Product
Lactobacillus Acidophilus	Nature's Bounty Acidophilus Probiotic 100 Million Organisms	Commonly Available Product
Lion's Mane Mushroom	500 mg	Commonly Available Strength
Lion's Mane Mushroom Powder	1000 mg	Commonly Available Strength
Liquid B Complex	Nature's Bounty Sublingual Liquid B Complex	Commonly Available Product
Liquid Coenzyme Q-10	100 mg	Commonly Available Strength
Liquid Fish Oil	Carlson Norwegian The Very Finest Fish Oil 1,600 mg Omega-3s	Commonly Available Product
Liquid Flaxseed Oil	Barlean's Fresh Flax Oil Organic Pure & Unrefined Fresh Cold Pressed	Commonly Available Product
Liquid Vitamin B-12	5000 mcg	Commonly Available Strength
Liquid Vitamin C	1000 mg	Commonly Available Strength
L-Tyrosine	500 mg	Commonly Available Strength
Lutein	20 mg	Most Commonly Reported Strength
Lutein & Zeaxanthin	Lutein 25 mg, Zeaxanthin 5 mg	Most Commonly Reported Strengths
Lysine	500 mg	Most Commonly Reported Strength
Maca	500 mg	Commonly Available Strength
Magnesium	250 mg	Most Commonly Reported Strength
Magnesium Powder	325 mg	Commonly Available Strength

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Melatonin	5 mg	Most Commonly Reported Strength
Men's 50+ Multivitamin / Multimineral	Centrum Silver Men 50+ Multivitamin/Multimineral	Most Commonly Reported Product
Men's Multivitamin/Multimineral	One A Day Men's Complete Multivitamin Multivitamin/Multimineral Bayer	Most Commonly Reported Product
Moringa	400 mg	Commonly Available Strength
Moringa Powder	6 grams	Commonly Available Strength
Multivitamin / Multimineral	Centrum Adults Multivitamin/Multimineral GSK	Most Commonly Reported Product
Multivitamin / Multimineral Liquid	Centrum Liquid Adults Multivitamin/Multimineral	Commonly Available Product
Multivitamin Multimineral Pack	Nature Made Daily Diabetes Health Pack	Commonly Available Product
Myo-Inositol & D-Chiro Inositol Powder	Theralogix Ovasitol Inositol Powder 40:1 Inositol Blend	Commonly Available Product
Neem	475 mg	Commonly Available Strength
Oil of Oregano Liquid	34 mg	Commonly Available Strength
Omega 3	Carlson Wild Caught Super Omega-3 Gems 1,200 mg Omega-3s	Commonly Available Product
Pediatric Iron Drops	Enfamil Fer-In-Sol Essential Iron For Infants & Toddlers Iron Drops	Commonly Available Product
Pediatric Vitamin D Drops	Enfamil D-Vi-Sol Vitamin D Drops	Commonly Available Product
Poly-Vitamin With Iron Drops	Enfamil Multivitamin & Iron Infant & Toddler Poly-Vi-Sol With Iron	Commonly Available Product
Potassium	99 mg	Most Commonly Reported Strength
Prenatal Vitamins	Spring Valley Prenatal Multivitamin/Multimineral For Pregnant Or Nursing Women	Commonly Available Product
Probiotic	Shaklee +Probiotic Optiflora Pearl Bifidus & Acidophilus	Commonly Available Product
Protein Powder	Pure Protein 100% Whey Protein	Commonly Available Product
Psyllium Fiber	Metamucil Psyllium Fiber 4-In-1 Fiber Made With Real Sugar Unflavored Stone Ground Texture	Commonly Available Product
Red Yeast Rice	600 mg	Most Commonly Reported Strength

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
Reishi Mushroom	600 mg	Commonly Available Strength
Saw Palmetto	450 mg	Most Commonly Reported Strength
Selenium	200 mcg	Most Commonly Reported Strength
Senior Multivitamin / Multimineral	Centrum Silver Adults 50+ Multivitamin/Multimineral GSK	Most Commonly Reported Product
Silica	35 mg	Commonly Available Strength
Sodium Fluoride Drops	0.5 mg	Commonly Available Strength
Spirulina Powder	BareOrganics Raw Organic Spirulina Powder	Commonly Available Product
Stress B-Complex	Nature Made Stress B-Complex With Key B Vitamins +Vitamin C & Zinc	Commonly Available Product
Super B-Complex	Nature Made Super B-Complex With C	Commonly Available Product
Tart Cherry Extract	1200 mg	Commonly Available Strength
Tribulus Terrestris	500 mg	Commonly Available Strength
Turkey Tail Mushroom Mycelium Powder	1000 mg	Commonly Available Strength
Turmeric	500 mg	Most Commonly Reported Strength
Ubiquinol	100 mg	Commonly Available Strength
Valerian	500 mg	Commonly Available Strength
Vitamin A	2400 mcg	Most Commonly Reported Strength
Vitamin B-1 (Thiamin)	100 mg	Most Commonly Reported Strength
Vitamin B-12	1000 mcg	Most Commonly Reported Strength
Vitamin B-6	100 mg	Most Commonly Reported Strength
Vitamin B-Complex	GNC B-Complex 50	Commonly Available Product
Vitamin C	500 mg	Most Commonly Reported Strength
Vitamin C Packet	Emergen-C 1,000 Mg Vitamin C Antioxidants, B Vitamins & Electrolytes	Most Commonly Reported Product

Default Supplement	Assigned Strength or Supplement	Selection of Assigned Strength or Supplement Based On:
	Fizzy Drink Mix	
Vitamin C Powder	1000 mg	Commonly Available Strength
Vitamin D	50 mcg	Most Commonly Reported Strength
Vitamin E	180 mg	Most Commonly Reported Strength
Vitamin K	100 mcg	Most Commonly Reported Strength
Vitamins D & K	Vitamin D 125 mcg, Vitamin K 90 mcg	Most Commonly Reported Strengths
Vitamins D & K Liquid	Vitamin D 25 mcg, Vitamin K 10 mcg	Commonly Available Strengths
Whey Protein	Pure Protein 100% Whey Protein	Commonly Available Product
Women's 50+ Multivitamin / Multimineral	Centrum Silver Women 50+ Multivitamin/Multimineral GSK	Most Commonly Reported Product
Women's Multivitamin / Multimineral	One A Day Women's Complete Multivitamin Multivitamin/Multimineral Bayer	Most Commonly Reported Product
Zinc	50 mg	Most Commonly Reported Strength
Zinc Liquid	15 mg	Most Commonly Reported Strength
ZMA	Magnesium 450 mg, Zinc 30 mg, Vitamin B-6 10.5 mg	Commonly Available Strengths

Default Antacid	Antacid Assigned	Selection of Assigned Antacid Based On:
Default Antacid & Antigas Liquid	Equate Regular Strength Antacid Antacid & Antigas	Commonly Available Product
Default Antacid Aluminum & Magnesium	Gaviscon Regular Strength Alumina & Magnesium Trisilicate Tablets / Antacid	Commonly Available Product
Default Antacid Calcium & Magnesium	Rolaids Regular Strength Antacid / Calcium & Magnesium	Most Commonly Reported Product
Default Antacid Plus Tablets	Rolaids Advanced Antacid Plus Anti-Gas Multi-Symptom	Commonly Available Product
Default Calcium Antacid	Tums Calcium Carbonate Antacid Regular Strength 500 GSK	Most Commonly Reported Product

