

## National Health and Nutrition Examination Survey

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

### Demographic Variables and Sample Weights (DEMO\_L)

Data File: DEMO\_L.xpt

First Published: September 2024

Last Revised: NA

#### Component Description

After suspension of NHANES field operations in March 2020 due to the COVID-19 pandemic, data collection began for a new 2-year cycle in August 2021. The August 2021-August 2023 nationally representative data are based on an updated sample design and modified interview as well as examination procedures. See the [Plan and Operations report of the NHANES August 2021-August 2023](#) for details on the survey content and procedures for the cycle. For more detail on changes to sample design and analytic guidelines specific to this cycle, please see the "Analytic Notes" section below.

This demographics file provides information on the following topics:

- Survey participant's household interview and examination status;
- Interview and examination sample weights;
- Masked variance units;
- The six-month time period when the examination was performed;
- Pregnancy status;
- The ratio of family income to poverty guidelines;
- Total number of people in the Household;
- Demographic information about the household reference person; and
- Other selected demographic information, such as gender, age, race/Hispanic origin, education, marital status, military service status, country of birth, and years of U.S. residence.

#### Eligible Sample

All participants in the NHANES August 2021-August 2023 sample are included in this dataset. The target age group for individual demographic variables in this file varies by the topic. Please review the codebook carefully.

#### Interview Setting and Mode of Administration

The family and sample person demographics questionnaires were asked by trained interviewers using the Computer-Assisted Personal Interview (CAPI) system in the participant's home or by telephone. The respondent selected the language of interview (English or Spanish) or requested that an interpreter be used. Hand cards, showing response choices or information that survey participants needed to answer the questions, were used for some questions. When necessary, the interviewer further assisted the respondent by reading the response choices listed on the hand cards.

Participants 16 years and older and emancipated minors were interviewed directly. A proxy provided information for survey participants who were under 16 and for participants who could not answer the questions themselves.

The [NHANES August 2021-August 2023 demographics questionnaires](#) are available on the NHANES website.

#### Quality Assurance & Quality Control

The CAPI system is programmed with built-in consistency checks to reduce data entry errors and online help screens to assist interviewers in defining key terms.

After collection, interview data were reviewed by the NHANES field office staff for accuracy and completeness of selected items. The interviewers were required to audio record interviews and the recorded interviews were reviewed by NCHS staff and interviewer supervisors.

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- References
- Codebook
  - SEQN - Respondent sequence number
  - SDDSRVYR - Data release cycle
  - RIDSTATR - Interview/Examination status
  - RIAGENDR - Gender
  - RIDAGEYR - Age in years at screening
  - RIDAGEMN - Age in months at screening - 0 to 24 mos
  - RIDRETH1 - Race/Hispanic origin
  - RIDRETH3 - Race/Hispanic origin w/ NH Asian
  - RIDEXMON - Six-month time period
  - RIDEXAGM - Age in months at exam - 0 to 19 years
  - DMQMLIZ - Served active duty in US Armed Forces
  - DMDBORNA - Country of birth
  - DMDYRUSR - Length of time in US
  - DMDEDUC2 - Education level - Adults 20+
  - DMDMARTZ - Marital status
  - RIDEXPGR - Pregnancy status at exam
  - DMDHHSIZ - Total number of people in the Household
  - DMDHRGN - HH ref person's gender
  - DMDHRAGZ - HH ref person's age in years
  - DMDHREDZ - HH ref person's education level
  - DMDHRMAZ - HH ref person's marital status
  - DMDHSEDZ - HH ref person's spouse's education level
  - WTINT2YR - Full sample 2-year interview weight
  - WTMEC2YR - Full sample 2-year MEC exam weight
  - SDMVSTRA - Masked variance pseudo-stratum
  - SDMVPUSU - Masked variance pseudo-PSU
  - INDMPIR - Ratio of family income to poverty

## Data Processing and Editing

Frequency counts were checked, "skip" patterns were verified, and the plausibility of question responses was reviewed. Edits were made to some variables to ensure the completeness, consistency, and analytic usefulness of the data. Edits were also made to address data disclosure concerns.

**SDDSRVYR:** identifies the specific data release cycle. A value of "12" denotes NHANES August 2021-August 2023 data.

**RIDSTATR:** identifies whether a participant was both interviewed at home or by telephone and examined in the mobile examination center (MEC), or was only interviewed but never participated in the examination.

**RIDAGEYR:** Age in years at the time of the screening interview for survey participants between the ages of 1 and 79 years of age. Due to disclosure concerns, all responses of participants aged 80 years and older are coded as "80." In NHANES August 2021-August 2023, the weighted mean age for participants 80 years and older is 85 years.

RIDAGEYR was calculated based on the participant's date of birth. In rare cases, if the actual date of birth was missing but the participant's age in years was provided, the reported age was used.

**RIDAGEMN:** Age in months, at the time of the screening interview, is provided for participants who were less than 25 months of age at the time of examination (RIDEXAGM < 25). If the exact date of birth was not provided by the respondent, the age in months was calculated based on the imputed age in years at the time of the screening interview.

**RIDEXAGM:** Age in months, at the time of examination, for participants who were less than 240 months of age at the time of examination (RIDEXAGM < 240).

**RIDRETH3:** race-ethnicity categories used since the 2011-2012 survey cycle to accommodate the oversample of Asian Americans. It was derived from responses to the survey questions on race and Hispanic origin. Respondents who self-identified as "Mexican American" were coded as such (i.e., RIDRETH3=1) regardless of their other race-ethnicity identities. Otherwise, participants who self-identified as "Hispanic" were coded as "2, Other Hispanic." Non-Hispanic participants were categorized based on their self-reported races: non-Hispanic White (RIDRETH3=3), non-Hispanic Black (RIDRETH3=4), non-Hispanic Asian (RIDRETH3=6), and other non-Hispanic races, including non-Hispanic multiracial (RIDRETH3=7). Code "5" was not used in RIDRETH3.

**RIDRETH1:** race-ethnicity variable that can be linked to the previous NHANES race-ethnicity variable in 1999-2010. Non-Hispanic Asian participants are grouped with other non-Hispanic races in code "5" (other non-Hispanic race including non-Hispanic multiracial) in RIDRETH1. Codes "6" and "7" were not used in RIDRETH1. Coding procedures for other categories in RIDRETH1 were compatible to RIDRETH3.

**RIDEXMON:** indicates the six-month time period when the examination was performed.

**DMQMILIZ:** provides information on whether the participant has ever served on active duty in the U.S. Armed Forces, military Reserves, or National Guard. Active duty does not include training for the Reserves or National Guard, but does include activation, for service in the U.S. or in a foreign country, in support of military or humanitarian operations.

This variable has been included in NHANES since 2011-2012. Prior to 2011, the information was collected using a question with different wording that asked if the participant had served in the U.S. Armed Forces, and released in variable DMQMILIT.

**DMDBORN4:** To address disclosure risk concerns, starting in 2011, country of birth was recoded into two categories: 1) Born in 50 U.S. states or Washington, DC; and 2) Born in other countries, including U.S. territories.

**DMDYRUSR:** the number of years the participant has lived in the United States. Participants born outside the U.S. were asked the month and year when they came to live in the U.S. (DMQ160). Responses were used to calculate the length of U.S. residency and recoded into 6 categories: 1 = Less than 1 year, 2 = 1 to 4 years, 3 = 5 to 9 years, 4 = 10 to 14 years, 5 = 15 to 19 years, and 6 = 20 year or more. For participants who did not report the month of their arrival, a value of 7 (July) was used.

**DMDEDUC2:** the highest grade or level of education completed by adults 20 years and older.

**DMDMARTZ:** The marital status question was asked of people 14 years of age and older. Due to disclosure risk, marital status is only released for people 20 years of age and older, and recoded from the original 6 categories to 3 categories (1 = Married/Living with partner; 2 = Widowed/Divorced/Separated; 3 = Never married).

**RIDEXPRG:** Pregnancy status at the time of the health examination was ascertained for females 8–59 years of age. Due to disclosure risk, pregnancy status is released only for women 20–44 years of age. RIDEXPRG values are based on self-reported pregnancy status and urine pregnancy test results. People who reported they were pregnant at the time of exam were assumed to be pregnant (RIDEXPRG=1). Those who reported they were not pregnant or did not know their pregnancy status were further classified based on the results of the urine pregnancy test. If the respondent reported "no" or "don't know" and the urine test result was positive, the respondent was coded as pregnant (RIDEXPRG=1). If the respondent reported "no" and the urine test was negative, the respondent was coded not pregnant (RIDEXPRG=2). If the respondent reported did not know her pregnancy status and the urine test was negative, the respondent was coded "could not be determined" (RIDEXPRG=3). People who were interviewed, but not examined also have an RIDEXPRG value = 3 (could not be determined).

**DMDHHSIZ:** the number of people in the participant's household, ranging from 1 to 7. Due to disclosure concerns, individuals living in households with 7 or more people are included in the category "7 or more".

**INDFMPIR:** the ratio of family income to poverty level. The Department of Health and Human Services (HHS) poverty guidelines were used as the poverty measure to calculate this ratio. These guidelines are issued annually in the Federal Register and are used to determine financial eligibility for certain federal programs, such as Head Start, Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the National School Lunch Program. The poverty guidelines vary by family size and geographic location.

INDFMPIR was calculated by dividing total annual family (or individual) income by the poverty guidelines specific to the survey year.

During the household interview, the respondent was asked to report total income for the entire family in the last calendar year in dollars. A family is defined as a group of two people or more related by birth, marriage, or adoption and residing together. Annual individual income was asked for households with one person, or households comprised of unrelated individuals.

If the respondent was not willing or able to provide an exact dollar figure, the interviewer asked an additional question to determine whether the income was < \$20,000 or ≥ \$20,000. Based on the respondent's answer to this question, he/she was asked to select a category of income from a hand card. For respondents who selected an income category, their family incomes were set as the midpoint of the selected range. INDFMPIR was not computed if the respondent only reported income as < \$20,000 or ≥ \$20,000 without additional details. INDFMPIR values at or above 5.00 were coded as 5.00 or more because of disclosure concerns. Values were not computed if income data were missing.

**Household Reference Person:** The household reference person is defined as the first household member 18 years of age or older listed on the household member roster who owns or rents the household residence. The household reference person is comparable to "family reference person" in NHANES programs prior to 1999. Household reference person data have often been used in analysis as indicators characterizing the socioeconomic status for youth. This public use demographics file contains household reference person information for participants aged 0 to 19 years, including data on gender (DMDHRGND), age (DMDHRAGZ), education level (DMDHREDZ), and marital status (DMDHRMAZ), as well as the education level of the household reference person's spouse (DMDHSEDZ). Household reference person information for adult participants 20 years and older is available through [NCHS Research Data Center](#).

Due to disclosure concerns, the household reference person's age was recoded into a categorical variable (<20, 20-39, 40-59, or 60+ years); the household reference person's education level and their spouse's education level variables were recoded from the original 5 categories to 3 categories (1 = Less than high school; 2 = High school grad/GED or some college/AA degree; 3 = College graduate or above); and the household reference person's marital status variable was recoded from the original 6 categories to 3 categories (1 = Married/Living with partner; 2 = Widowed/Divorced/Separated; 3 = Never married).

[https://www.cdc.gov/Nchs/Data/Nhanes/Public/2021/DataFiles/DEMO\\_L.htm](https://www.cdc.gov/Nchs/Data/Nhanes/Public/2021/DataFiles/DEMO_L.htm)