

# Package ‘AsthmaNHANES’

May 6, 2026

**Type** Package

**Title** Asthma Data Sets from NHANES

**Version** 1.1.0

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**Description**

Data sets and examples from National Health and Nutritional Examination Survey (NHANES).

**License** GPL-3

**Depends** R (>= 3.5.0)

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AsthmaNHANES-package    *Asthma Data Sets from National Health and Nutritional Examination Survey (NHANES)*

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### Description

This package provides two datasets (metal and percent) that are related to the work of "Serum cadmium and lead, current wheeze, and lung function in a nationwide study of adults in the United States" (Journal of Allergy and Clinical Immunology: In Practice, DOI:10.1016/j.jai-p.2019.05.029).

### Author(s)

- Tao Sun
- Qiyao Qin
- Zihan Qian
- Yang Li

### Source

Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2021][<https://www.cdc.gov/nchs/nhanes/>].

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metal

*metal*

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### Description

The metal data frame has 30,442 rows and 27 columns.

### Usage

```
data(metal)
```

### Format

This data frame contains the following columns:

**RIAGENDR** Gender of the sample person

**RIDAGEYR** Best age in years of the sample person at time of screening

**RIDRETH1** Recode of reported race and ethnicity information

**WTMEC5YR** Both interviewed and MEC examined sample persons

**SDMVPSU** Masked Variance Unit Pseudo-PSU variable for variance estimation

**SDMVSTRA** Masked variance unit pseudo-stratum variable for variance estimation  
**BMXBMI** Body mass index (kg/m<sup>2</sup>)  
**LBXBPB** Lead (ug/dL)  
**LBXBCD** Cadmium (ug/L)  
**LBXCOT** Cotinine (ng/mL)  
**MCQ010** Ever been told you have asthma  
**RDQ070** Wheezing or whistling in chest - past year  
**SMQ040** Do you now smoke cigarettes?  
**SMQ020** Smoked at least 100 cigarettes in life  
**MCQ035** Still have asthma?  
**OCD390G** Kind of work you have done the longest  
**HIQ011** Covered by health insurance  
**MCQ300B** Close relative had asthma?  
**INDHHIN2** Annual household income  
**ENQ090** Close relative had asthma?  
**ENXTRIQ** Trial 1 FENO measurement (ppb)  
**SPXNFVC** Baseline 1st test spirometry, forced vital capacity  
**SPXNFEV1** Baseline 1st test spirometry, forced expiratory volume in the first 1 second  
**SPDBRONC** Best test FEV1/FVC ratio below Lower Limit of Normal and/or less than 0.7  
**SPXBFVC** Bronchodilator 2nd test spirometry, forced vital capacity  
**SPXBFEV1** Bronchodilator 2nd test spirometry, forced expiratory volume in the first 1 second  
**LBXVIDMS** 25-hydroxyvitamin D2 and D3

### Source

Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2021][<https://www.cdc.gov/nchs/nhanes/>].

### Examples

```
# Load data
data(metal)
# View data
summary(metal)
```

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percent	<i>percent</i>
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### Description

The percent data frame has 40,979 rows and 6 columns.

### Usage

```
data(percent)
```

### Format

This data frame contains the following columns:

**FEV1FVC\_percent\_predicted** Percent predicted FEV1/FVC

**FEV1FVC\_z\_score** Z score of FEV1/FVC

**FEV1\_percent\_predicted** Percent predicted FEV1

**FEV1\_z\_score** Z score of FEV1

**FVC\_percent\_predicted** Percent predicted FVC

**FVC\_z\_score** Z score of FVC

### Source

Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2021][<https://www.cdc.gov/nchs/nhanes/>].

### Examples

```
# Load data
data(percent)
# View data
summary(percent)
```

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