

Package ‘nhanes’

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Title nhanes Data Retrieval Library for R

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Depends R (>= 3.0.0)

Imports stringr, SASxport

Description Utility to retrieve publicly available data from the CDC National Health and Nutrition Examination Survey (NHANES)

License GPL (>= 2)

LazyData TRUE

URL <https://github.com/cjendres1/nhanes>

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get_nh_survey_years	<i>An internal function that converts a year into the nhanes interval.</i>
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Description

E.g. 2003 is converted to '2003-2004'

Usage

```
get_nh_survey_years(year)
```

Arguments

year	where year is numeric in yyyy format
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Value

The 2-year interval that includes the year, e.g. 2001-2002

nhanesAttributes	<i>Returns the attributes of an NHANES data table</i>
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Description

Returns the attributes of an NHANES data table

Usage

```
nhanesAttributes(year, nh_table)
```

Arguments

year	The year in yyyy format where 1999 <= yyyy <= 2012
nh_table	The name of the specific table to retrieve

Details

nhanesAttributes allows one to check the size and other characteristics of a data table before importing into R. To retrieve these characteristics, the specified table is downloaded, characteristics are determined, then the table is deleted.

Value

The following attributes are returned as a list

nrow = number of rows

ncol = number of columns

names = name of each column

unique = true if all SEQN values are unique

na = number of 'NA' cells in the table

size = total size of table in bytes

types = data types of each column

Examples

```
nhanesAttributes(2007, 'BPX_E')  
nhanesAttributes(2009, 'FOLATE_F')
```

```
nhanesDisplayTableNames
```

Returns a list of table names for the specified survey group

Description

Returns a list of table names for the specified survey group

Usage

```
nhanesDisplayTableNames(nh_surveygroup, year, details = FALSE)
```

Arguments

nh_surveygroup	The type of survey (DEMOGRAPHIC, DIETARY, EXAMINATION, LABORATORY, QUESTIONNAIRE)
year	The year in yyyy format where 1999 <= yyyy <= 2012
details	If true then a more detailed description of the tables is returned

Details

The first step in browsing NHANES data is to display the table names. The table names are stored internal to the nhanes package, i.e. the information is retrieved from local tables such as vars_EXAMINATION_2005-2006 that are stored in a *.Rdata file in the data folder.

Value

The names of the tables in the specified survey group

Examples

```
nhanesDisplayTableNames('EXAM', 2007)  
nhanesDisplayTableNames('LAB', 2009, details=TRUE)
```

nhanesDisplayTableVariables

Displays a list of variables in the specified NHANES table.

Description

If truncated = TRUE then only the field names and field descriptions are returned.

Usage

```
nhanesDisplayTableVariables(nh_surveygroup, year, nh_table, truncated = FALSE,
  nchar = 100)
```

Arguments

nh_surveygroup	The type of survey (DEMOGRAPHIC, DIETARY, EXAMINATION, LABORATORY, QUESTIONNAIRE)
year	The year in yyyy format where 1999 <= yyyy <= 2012
nh_table	The name of the specific table to retrieve
truncated	If true then only the variable names and descriptions are returned, which is often sufficient
nchar	The number of characters in the Variable Description to print. Values are limited to 0<=nchar<=127. This is used to enhance readability, cause variable descriptions can be very long.

Details

Each data table contains multiple, sometimes more than 100, fields. It is helpful to list the field descriptions to ascertain quickly if a data table is of interest.

Value

The names of the tables in the specified survey group

Examples

```
nhanesDisplayTableVariables('EXAM', 2007, 'BPX_E')
nhanesDisplayTableVariables('EXAM', 2007, 'OHX_E', truncated=TRUE)
```

nhanesDownload	<i>Download an XPT table and return as a data frame</i>
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Description

Download an XPT table and return as a data frame

Usage

```
nhanesDownload(year, nh_table)
```

Arguments

year	The year in yyyy format where 1999 <= yyyy <= 2012
nh_table	The name of the specific table to retrieve

Details

Currently, a table is downloaded in its entirety. Other than `nhanesAttributes`, this is the only function that actually accesses data from the `nhanes` site directly.

Value

The table is returned as a data frame

Examples

```
nhanesDownload(2007, 'BPX_E')
nhanesDownload(2009, 'FOLATE_F')
```

nhanesTranslate	<i>Translates code to it's text value</i>
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Description

Many of the NHANES data tables have encoded values. E.g. 1 = 'Male', 2 = 'Female' We want to access the code as needed either by simply displaying the code translation, or applying the translation directly to the table. E.g, for gender we may want to translate the code (1,2) to the represented values (Male, Female).

Usage

```
nhanesTranslate(nh_surveygroup, colname)
```

Arguments

nh_surveygroup	The survey group that contains the columns to be translated.
colname	The name of the column to translate

Details

Any coded column will have a specific data code, and many columns may share the same code translation.

Code translations are done internally in the *nhanes* package. Specifically, the translations are indicated in the *nhanesCodeMapXXXXX.R* files.

Value

The code translation

Examples

```
nhanesTranslate('DEMO', 'DMQADFC')  
nhanesTranslate('LAB', 'DCD030')
```

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