Package ‘MedDietCalc’

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Description Multi Calculator of different scores to measure adherence to Mediterranean Diet, to compute them in nutriepidemiological data. Additionally, a sample dataset of this kind of data is provided, and some other minor tools useful in epidemiological studies.
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computeCardio

Description

Computes Cardioprotective Mediterranean Diet Index

Usage

computeCardio(data = NULL, Vegetables, Fruit, OliveOil, OOmeasure = "gr", Legumes, Fish, Meat, RefinedRice, RefinedBread, WholeBread, Wine, frequency = "percent", output = "percent", rm.na = FALSE)

Arguments

data
Vegetables
Fruit
OliveOil
OOmeasure
Legumes
Fish
Meat
RefinedRice
RefinedBread
WholeBread
Wine

Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.

Numeric variable with vegetables consumption as servings.

Numeric variable with fruit consumption as servings.

Numeric variable with olive oil consumption, measure is set with the 'OOmeasure' argument.

Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 tablespoon (15 ml).

Numeric variable with legumes consumption as servings.

Numeric variable with fish consumption as servings.

Numeric variable with meat and meat products consumption as servings.

Numeric variable with consumption of refined rice as servings.

Numeric variable with consumption of refined bread as servings.

Numeric variable with consumption of whole bread as servings.

Numeric variable with wine consumption as glasses.
computeCardio

**frequency**
A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. whether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

**output**
A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

**rm.na**
Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

**Details**
In the score, the item about refined and whole cereals is scored positively if consumption of both white bread and rice is low or when consumption of whole-grain bread is high. Rice and whole-grain bread are considered weekly, and white bread daily: [White bread (< 1 serving/day) AND rice (< 1 serving/week)] OR whole-grain bread (> 5 servings/week). The function takes as arguments the three foods, with whatever periodicity they have been recorded in the data, as long as it is provided with the 'frequency' argument. Internally function sets them in the suitable fashion to test this score item.

There is an additional item in the score, computed internally, that provides one point if both vegetables and fruit consumption have received 1 point each one.

**Value**
Computed Cardio score. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.)

if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

**Author(s)**
Miguel Menendez
References
Martinez-Gonzalez, M. A., E. Fernandez-Jarne, M. Serrano-Martinez, M. Wright, and E. Gomez-
Gracia. 2004. 'Development of a Short Dietary Intake Questionnaire for the Quantitative Estimation
of Adherence to a Cardioprotective Mediterranean Diet'. European Journal of Clinical Nutrition 58

Examples

data(nutriSample)

MedDiet <- computeCardio(data = nutriSample,
OliveOil = Aceitegr,
OMeasure = "gr",
Fruit = P50rac + P52rac,
Vegetables = P41rac + P42rac,
Legumes = P46rac,
Fish = P35rac + P36rac + P37rac + P38rac,
Wine = P96rac,
Meat = P29rac + P30rac + P31rac + P32rac,
RefinedBread = P55rac,
RefinedRice = P61rac,
WholeBread = P56rac,
frequency = "daily", output = "percent", rm.na = FALSE)

hist(MedDiet)

computeFRESCO

Description
Computes 10-year risk of fatal or non-fatal stroke and Coronary Heart Disease according to FRESCO
score ('Función de Riesgo ESpañola de acontecimientos Coronarios y Otros', 'Spanish risk function
of coronary and other cardiovascular events').

Usage

computeFRESCO(data, outcome = c("Coronary", "Stroke", "All"), simplified = FALSE,
Sex, Age, Smoker, BMI,
Diabetes, SBP, TotChol, HDL, HBPill,
men = "male", women = "female")

Arguments

data list or data.frame which contains the variables
outcome character string indicating for which outcome risk is to be computed. Allowed
values are "Coronary", "Stroke" or "All", which means the output is the risk of a
coronary event, stroke, or both
computeFRESCO

simplified logical. Original FRESCO score was derived in two versions: the full one, which includes all the following variables; and the other is de simplified one, which uses just sex, age, smoking status and body mass index. If TRUE, the simplified version will be computed.

Sex variable containing gender of the people. It can be character, factor or numeric, as far as the 'men' and 'women' arguments specify how the formula should handle this variable (See below)

Age numeric with people age in years

Smoker numeric variable containing smoking status. 0 = non smoker, 1 = currently smoker

BMI numeric variable with Body Mass Index (weight[kilograms] / height²[meters])

Diabetes numeric which informs whether the person is diabetic. 0 = no, 1 = yes.

SBP numeric variable with Systolic Blood Pressure in mmHg

TotChol numeric with total serum cholesterol in mg/dl

HDL numeric with serum High Density Lipoprotein cholesterol in mg/dl

HBPill numeric which means if the person is currently under treatment because of High Blood Pressure. 0 = no, 1 = yes.

men character with informs of how males have been recorded in the 'Sex' argument, default is 'male'. If 'Sex' is numeric, a quoted number should be provided (for instance, men = '1'

women character. Same meaning as 'men' argument, but for females.

Details

In Spanish population, Framingham-REGICOR function tends to overestimate cardio and cerebrovascular risk. So, FRESCO score was developed among people from 35 to 79 years, which includes a simplified version with no laboratory results, and another one a bit harder to compute with slightly improved prediction ability.

Value

Numeric vector of same length as rows in 'data' with estimated percentage of 10-year risk of fatal or non-fatal event (Coronary Heart Disease, or stroke or both depending on 'outcome' argument).

Author(s)

Miguel Menendez

References

computeGoulet

Examples

myself <- list(sex = "male", age = 32, tobacco = 0, bmi = 21.5)
computeFRESCO(data = myself, outcome = "All", simplified = TRUE,
       Sex = sex, Age = age, Smoker = tobacco, BMI = bmi)

computeGoulet

Description

Computes Mediterranean Diet adherence score according to Goulet et al. in 2003.

Usage

computeGoulet(data, WholeCereals, Vegetables, Fruit, LegumesAndNuts, OliveOil,
    OMeasure = "gr", Olives, Dairy, Fish, Poultry, Eggs, Sweets, Meat,
    output = "percent", frequency = "daily", rm.na = FALSE)

Arguments

data  Your data set with nutritional information about food or nutrient consumption.  
Each row is expected to be a person, and food or nutrient intake are in columns.
WholeCereals Numeric variable with consumption of whole grain products as servings.
Vegetables Numeric variable with vegetables consumption as servings.
Fruit Numeric variable with fruit consumption as servings.
LegumesAndNuts Numeric variable with legumes, nuts and seed consumption as servings.
OliveOil Numeric variable with olive oil consumption, measure is set with the 'OMeasure' argument.
OMeasure Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 table spoon (15 ml).
Olives Numeric variable with olives consumption as servings.
Dairy Numeric variable with dairy consumption as servings.
Fish Numeric variable with fish consumption as servings.
Poultry Numeric variable with poultry (other than breaded) consumption as servings.
Eggs Numeric variable with eggs consumption as servings.
Sweets Numeric variable with sweets consumption as servings.
Meat Numeric variable with red meat and meat products consumption as servings.
frequency A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')
computeGoulet

output  A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

rm.na  Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

Details

Computes Mediterranean Diet adherence score according to Goulet et al. in 2003. It can be found as Mediterranean Score (MS) [Mila-Villarroel et al., 2011].

Value

Computed Mediterranean Diet Adherence score according to Goulet et al. 2003. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 44 (max.)

if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

Author(s)

Miguel Menendez

References


Examples

data(nutriSample)
MedDiet <- computeGoulet(data = nutriSample, 
  WholeCereals = P56rac + ifelse(nutriSample$P63_2 == 2, nutriSample$P61rac, 0), 
  Vegetables = P41rac + P42rac, 
  Fruit = P50rac + P52rac, 
  LegumesAndNuts = P46rac + P53rac + P75rac, 
  OliveOil = Aceitegr, 
  OMeasure = "gr", 
  Olives = P54rac, 
  Dairy = P19rac + P20rac + P21rac + P22rac + P23rac + P24rac + P25rac + P26rac + P27rac, 
  Fish = P35rac + P36rac + P37rac + P38rac, 
  Poultry = P33rac, 
  Eggs = P28rac, 
  Sweets = P69rac + P70rac + P71rac + P72rac + P73rac, 
  Meat = P29rac + P30rac + P31rac + P32rac, 
  output = "percent", frequency = "daily", rm.na = FALSE)
hist(MedDiet)

Description

Computes Mediterranean Adequacy Index according to Alberti-Fidanza et al. 1999.

Usage

computeMAI99(data, Bread, Cereals, Legumes, Potatoes, 
  Vegetables, FruitAndNuts, Fish, Wine, Oil, 
  Milk, Cheese, Meat, Eggs, AnimalFats, SoftDrinks, Pastries, Sugar, 
  Kcal, output = NULL, rm.na = FALSE)

Arguments

data Your data set with nutritional information about food or nutrient consumption. 
  Each row is expected to be a person, and food or nutrient intake are in columns.

Bread Numeric with energy (as Kilocalories) attributable to bread. The argument is 
  the energy measured as Kcal, although the function will score it as percentage 
  of energy respect total energy intake (see Details).

Cereals Numeric with energy (as Kilocalories) attributable to cereals.

Legumes Numeric with energy (as Kilocalories) attributable to legumes.

Potatoes Numeric with energy (as Kilocalories) attributable to potatoes.

Vegetables Numeric with energy (as Kilocalories) attributable to vegetables.

FruitAndNuts Numeric with energy (as Kilocalories) attributable to FruitAndNuts.

Fish Numeric with energy (as Kilocalories) attributable to fish.
Wine Numeric with energy (as Kilocalories) attributable to wine.
Oil Numeric with energy (as Kilocalories) attributable to vegetal oils.
Milk Numeric with energy (as Kilocalories) attributable to milk.
Cheese Numeric with energy (as Kilocalories) attributable to cheese.
Meat Numeric with energy (as Kilocalories) attributable to meat.
Eggs Numeric with energy (as Kilocalories) attributable to eggs.
AnimalFats Numeric with energy (as Kilocalories) attributable to fats of animal origin.
SoftDrinks Numeric with energy (as Kilocalories) attributable to soft drinks.
Pastries Numeric with energy (as Kilocalories) attributable to pastries.
Sugar Numeric with energy (as Kilocalories) attributable to sugar.
Kcal Numeric with total energy intake measured as Kcal.
output A character string to set which output should the formula give, allowed values are 'data.frame' and 'index'.
rm.na Logical. If set to FALSE (default), a diet score will be computed only if a person
has all score components informed. If set to TRUE, NA values in score com-
ponents will be drop off and a value of available components will be returned,
but percent of score adherence will be computed with basis of the whole score
range (see Details)

Details

The index components are scored as percent of calories. But to make it easier to the user, arguments
should provide the energy each food item provides. Also the total energy intake should be provided,
so formula can internally relate them.

Mediterranean Adequacy Index is a ratio of Kcal attributable to healthy foods over Kcal attributable
to unhealthy foods, so values could range from 0 to more than 100 (Alberti et al. 2009). The refer-
ence italian-mediterranean diet is 7.5 (Alberti-Fidanza et al. 1999). So, value is not a percentage,
and comparability with other scores is not direct.

Periodicity argument is not provided, as the equation is a ratio and it is not to vary if food is recorded
daily, weekly or monthly.

Value

Computed Mediterranean Adequacy Index. Depending on 'output' argument, value can be a data.frame,
or a vector:

if output = 'data.frame'
   A data frame with a row corresponding to each person in data. Columns are the
   score of each component, as well as the global score as natural sum ('absolute'
   column) and as percentage ('percent' column)

if output = 'index'
   Instead of the full data.frame, just the numeric vector corresponding to the abso-
   lute points of adherence to Mediterranean Diet for each person. Range can vary
   widely (see Details).
Author(s)

Miguel Menendez

References


Examples

data(nutriSample)

MedDiet <- computeMAI99(data = nutriSample,
  Bread = P55Kcal + P56Kcal + P57Kcal,
  Cereals = P55Kcal + P56Kcal + P57Kcal + P59Kcal + P60Kcal + P61Kcal + P62Kcal,
  Legumes = P46Kcal,
  Potatoes = P43Kcal + P44Kcal + P45Kcal,
  Vegetables = P41Kcal + P42Kcal,
  FruitAndNuts = P50Kcal + P53Kcal,
  Fish = P35Kcal + P36Kcal + P37Kcal + P38Kcal,
  Wine = P90Kcal,
  Oil = AceiteKcal,
  Milk = P19Kcal + P20Kcal + P21Kcal,
  Cheese = P26Kcal + P27Kcal,
  Meat = P29Kcal + P30Kcal + P31Kcal + P32Kcal,
  Eggs = P28Kcal,
  AnimalFats = P29grGrasa + P30grGrasa + P31grGrasa + P32grGrasa + P33grGrasa + P34grGrasa,
  SoftDrinks = P89Kcal + P90Kcal,
  Pastries = P69Kcal + P70Kcal + P71Kcal + P72Kcal + P73Kcal,
  Sugar = P84Kcal,
  Kcal = totalKcal,
  output = "index", rm.na = FALSE)

hist(MedDiet)

Description

Computes Mediterranean Diet adherence score known as Mediterranean Dietary Pattern, by Martinez-Gonzalez et al. 2002.
Usage

```r
computeMDP02(data, OliveOil, OOmeasure = "gr", Fiber, Fruit, Vegetables, Fish,
        Alcohol, Meat, RefinedCereals,
        output = "percent", rm.na = FALSE, frequency = "daily")
```

Arguments

data: Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns

OliveOil: Numeric variable with olive oil consumption, measure is set with the 'OOmeasure' argument

OOmeasure: Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 table spoon (15 ml).

Fiber: Numeric variable with consumption of Dietary Fiber as grams.

Fruit: Numeric variable with consumption of Fruits as grams.

Vegetables: Numeric variable with Vegetables consumption as grams

Fish: Numeric variable with Fish consumption as grams.

Alcohol: Numeric variable with Alcohol consumption as etanol grams from any beverage origin.

Meat: Numeric variable with Meat and Meat Products consumption as grams.

RefinedCereals: Numeric variable with Refined Cereals consumption as grams.

output: A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

rm.na: Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details).

frequency: A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

Value

Computed MDP02 score. Depending on 'output' argument, value can be a data.frame, or a vector:

- **if output = 'data.frame'**
  - A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

- **if output = 'score'**
  - Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 5 (min.) to 40 (max.)
if output = 'percent'

Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

Author(s)

Miguel Menendez

References


Examples

data(nutriSample)
MedDiet <- computeMDP02(data = nutriSample,
                          OliveOil = Aceitegr,
                          OOMeasure = "gr",
                          Fiber = totalFibra,
                          Fruit = P50grCom,
                          Vegetables = P41grCom + P42grCom,
                          Fish = P35grCom + P36grCom + P37grCom + P38grCom,
                          Alcohol = 12 * (P94rac + P96rac + P97rac + P98rac + P99rac),
                          Meat = P29grCom + P30grCom + P31grCom + P32grCom,
                          RefinedCereals = P55grCom + P61grCom,
                          output = "percent", rm.na = FALSE, frequency = "daily")
hist(MedDiet)

Description

Computes Mediterranean Diet Quality Index.

Usage

computeMDQI(data, FruitAndVegetables, OliveOil, OOMeasure = "gr", Fish, Cereals,
             Meat, SatFats, Cholesterol,
             Kcal = NULL, invert = TRUE,
             frequency = NULL, output = "percent", rm.na = FALSE)
**Arguments**

- **data**
  Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.

- **FruitAndVegetables**
  Numeric variable with consumption of fruit and vegetables as grams.

- **OliveOil**
  Numeric variable with olive oil consumption, measure is set with the 'OOmeasure' argument.

- **OOmeasure**
  Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, mililiters and servings of 1 table spoon (15 ml).

- **Fish**
  Numeric variable with fish consumption as grams.

- **Cereals**
  Numeric variable with cereals consumption as grams.

- **Meat**
  Numeric variable with Meat consumption as grams.

- **SatFats**
  Numeric variable with energy contribution of saturated fats to diet. The formula will score it as percent of total energy intake, but it can be provided in one of two ways (see Details).

- **Cholesterol**
  Numeric variable with cholesterol consumption as miligrams.

- **Kcal**
  Optional numeric variable with total energy intake as kilocalories. If provided, it makes a modification in 'SatFats' argument (see Details).

- **invert**
  Logical. If set to TRUE (default), the score is inverted, if set to FALSE, the score is kept as in the original (see Details).

- **frequency**
  A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month').

- **output**
  A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

- **rm.NA**
  Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details).

**Details**

This score is a mediterranean adaptation [Scali et al., 2000; Gerber 2006] from a previous Diet Quality Index (DQI) by Patterson et al. [Patterson et al., 1994], thus it was named MDQI (Mediterranean DQI).

In this score, originally, higher puntuations mean LOWER adherence. As this is not the usual in mediterranean diet scores, the argument 'invert' can make it reverse. If invert = TRUE (default), higher puntuations mean higher adherence.

Saturated fats (SFA) are scored as percent of total energy that is provided by SFA. This information can be provided in one of two ways: 1) 'SatFats' argument can be directly the percent of total energy intake provided by SFA, if so, the 'Kcal' argument must be missing or NULL. 2) 'SatFats'
argument can be the amount of kilocalories provided by SFA, if so, the 'Kcal' argument must be provided, for formula to know the required percentage.
Cholesterol should be provided as miligrams. If mean consumption of cholesterol is lower than 1, a warning will be produce to ask user to check units.

Value
Computed MDQI score. Depending on 'output' argument, value can be a data.frame, or a vector:

```r
if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)
```

```r
if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, ranging from 0 to 14. Depending on 'invert' argument higher puntuations can mean higher or lower adherence (see Details)
```

```r
if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person. Depending on 'invert' argument higher puntuations can mean higher or lower adherence (see Details)
```

Author(s)
Miguel Menendez

References

Examples
```r
data(nutriSample)
# If Saturated Fats are provided as the energy they provide,
# and Kcal arguments informs about total energy intake:
MedDiet <- computeMDQI(data = nutriSample,
FruitAndVegetables = P50grCom + P52grCom + P41grCom + P42grCom,
OliveOil = Aceitegr,
Oomeasure = "gr",
Fish = P35grCom + P36grCom + P37grCom + P38grCom,
Cereals = P55grCom + P56grCom + P57grCom + P59grCom +
P60grCom + P61grCom + P62grCom,
```
computeMDS03

Meat = P29grCom + P30grCom + P31grCom + P32grCom,
SatFats = totalGrasasat,
Cholesterol = totalCol,
Kcal = totalKcal,
invert = TRUE,
frequency = "daily", output = "percent", rm.na = FALSE)

# If Saturated Fats are provided as the percent of energy they provide, so Kcal is not provided:
nutrisample$MySFApercent <- 100 * nutrisample$totalGrasasat / nutrisample$totalKcal

MedDiet2 <- computeMDQI(data = nutrisample,
                          FruitAndVegetables = P50grCom + P52grCom + P41grCom + P42grCom,
                          OliveOil = Aceitegr,
                          OliveOilmeasure = "gr",
                          Fish = P35grCom + P36grCom + P37grCom + P38grCom,
                          Cereals = P55grCom + P56grCom + P57grCom + P59grCom +
                                 P60grCom + P61grCom + P62grCom,
                          Meat = P29grCom + P30grCom + P31grCom + P32grCom,
                          SatFats = MySFApercent,
                          Cholesterol = totalCol,
                          # don't provide Kcal
                          invert = TRUE,
                          frequency = "daily", output = "percent", rm.na = FALSE)

hist(MedDiet2)

computeMDS03 | computeMDS03

Description

Mediterranean Adherence score index, as modified in 2003, with the addition of fish item.

Usage

computeMDS03(data, Vegetables, Legumes, FruitAndNuts, Cereals, Potatoes = NULL, Fish,
               Meat, Dairy, Alcohol, Fats = NULL, MUFA = NULL, SFA = NULL,
               Sex, men = "male", women = "female",
               frequency = "daily", output = "percent", rm.na = FALSE)

Arguments

data | Your data set with nutritional information about food or nutrient consumption.
      | Each row is expected to be a person, and food or nutrient intake are in columns
Vegetables | Numeric variable with Vegetables consumption as grams
Legumes | Numeric variable with Legumes consumption as grams
FruitAndNuts | Numeric variable with consumption of Fruits and Nuts as grams
Cereals Numeric variable with Cereals consumption as grams
Potatoes Numeric variable with Potatoes consumption as grams
Fish Numeric variable with Fish consumption as grams
Meat Numeric variable with Meat consumption as grams
Dairy Numeric variable with Dairy consumption as grams
Alcohol Numeric variable with Alcohol consumption as etanol grams from any beverage origin
Fats Optional. Numeric variable with a ratio of consumption of Mono Unsaturated Fatty Acids (MUFA) over Saturated Fatty Acids (SFA). If it is not provided, then individual MUFA and SFA should be provided
MUFA Optional if Fats is provided. Numeric variable with consumption of Mono Unsaturated Fatty Acids, units should be the same as used with PUFA and SFA
SFA Optional if Fats is provided. Numeric variable with consumption of Saturated Fatty Acids
Sex Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments. If 'Sex' argument is character or factor, and values for male are either 'man', 'male', 'MAN' or 'MALE', and for females are 'woman', 'female', 'WOMAN' or 'FEMALE', then, the arguments 'men' and 'women' can be missing
men A character string with the value of male gender, default is "male"
women A character string with the value of female gender, default is "female"
frequency A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')
output A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).
rm.na Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

Details
This score is an update of the landmark first Mediterranean Diet Score (MDS), published in 1995, but including fish consumption.

Value
Computed MDS03 score. Depending on 'output' argument, value can be a data.frame, or a vector:
if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)
if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.)

if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

Author(s)
Miguel Menendez

References


Examples
```r
MedDiet <- computeMDS05(data = nutrisample,
Vegetables = P41grCom + P42grCom,
Legumes = P46grCom,
FruitAndNuts = P50grCom + P52grCom + P53grCom,
Cereals = P55grCom + P56grCom + P57grCom + P59grCom + P60grCom + P61grCom + P62grCom,
Fish = P35grCom + P36grCom + P37grCom + P38grCom,
Meat = P29grCom + P30grCom + P31grCom + P32grCom,
Dairy = P19grCom + P20grCom + P21grCom + P22grCom + P23grCom + P24grCom + P25grCom + P26grCom + P27grCom,
Alcohol = 12 * (P94rac + P96rac + P97rac + P98rac + P99rac),
Potatoes = P43grCom + P44grCom + P45grCom,
MUFA = totalGrasaMonoins,
SFA = totalGrasaSat,
Sex = SEXO, men = "Hombre", women = "Mujer", frequency = "daily",
output = "percent", rm.na = FALSE)
hist(MedDiet)
```

Description
Computes the Mediterranean Diet adherence score developed by Trichopoulou et al. in 2005 (MDS05), which is an update of their previously developed version.
Usage

```r
computeMDS05(data, Vegetables, Legumes, FruitAndNuts,
             Cereals, Potatoes = NULL, Fish, Meat, Dairy, Alcohol,
             Fats = NULL, MUFA = NULL, PUFA = NULL, SFA = NULL,
             Sex, men = "male", women = "female",
             frequency = NULL, output = "percent", rm.na = FALSE)
```

Arguments

data Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns

Vegetables Numeric variable with Vegetables consumption as grams

Legumes Numeric variable with Legumes consumption as grams

FruitAndNuts Numeric variable with consumption of Fruits and Nuts as grams

Cereals Numeric variable with Cereals consumption as grams

Potatoes Numeric variable with Potatoes consumption as grams

Fish Numeric variable with Fish consumption as grams

Meat Numeric variable with Meat consumption as grams

Dairy Numeric variable with Dairy consumption as grams

Alcohol Numeric variable with Alcohol consumption as etanol grams from any beverage origin

Fats Optional. Numeric variable with a ratio of consumption of Mono and Poli Unsaturated Fatty Acids (MUFA + PUFA) over Saturated Fatty Acids (SFA). If it is not provided, then individual MUFA, PUFA and SFA should be provided

MUFA Optional if Fats is provided. Numeric variable with consumption of Mono Unsaturated Fatty Acids, units should be the same as used with PUFA and SFA

PUFA Optional if Fats is provided. Numeric variable with consumption of Poli Unsaturated Fatty Acids

SFA Optional if Fats is provided. Numeric variable with consumption of Saturated Fatty Acids

Sex Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments.

men A character string with the value of male gender, default is "male"

women A character string with the value of female gender, default is "female"

frequency A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

output A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

rm.na Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)
Details

This score is an update of the landmark first Mediterranean Diet Score (MDS), published in 1995, which includes fish consumption (previously introduced) and which sums MUFA + PUFA.

Original 1995 paper of Trichopoulou et al. included potatoes with cereals, but later research has challenged this view. If you want to compute the score as originally developed, provide potato consumption as 'Potatoes' argument, and you will get a NOTE informing you that both have been used together in the score. If you don’t want to compute potatoes consumption, don’t provide 'Potatoes' argument, and you will receive a NOTE informing you that you are diverting from the very original score.

Some score components are a combination of foods you may have as separated variables, if so, you can just add them together (v.gr. miFruitVariable + miNutsVariable).

Score values (MUFA + PUFA) / SFA. Depending in how your data has been developed, you can provide the ratio as 'Fats' argument or the triada 'MUFA', 'PUFA' and 'SFA', but if you provide this information by both of the ways, just 'Fats' argument will be computed, and you will receive a warning asking you to check the arguments.

Value

Computed MDS05 score. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
   A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
   Instead of the full checking package dependencies ... NOTE No repository set, so cyclic dependency check skipped data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.)

if output = 'percent'
   Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

References


Examples

data(nutriSample)
MedDiet <- computeMDS05(data = nutriSample,
Vegetables = P41grCom + P42grCom,
Legumes = P46grCom,
FruitAndNuts = P50grCom + P52grCom + P53grCom,
Cereals = P55grCom + P56grCom + P57grCom + P59grCom +
P60grCom + P61grCom + P62grCom,
Fish = P35grCom + P36grCom + P37grCom + P38grCom,
Meat = P29grCom + P30grCom + P31grCom + P32grCom,
Dairy = P19grCom + P20grCom + P22grCom + P23grCom +
P24grCom + P25grCom + P26grCom + P27grCom,
Alcohol = 12 * (P94rac + P96rac + P97rac + P98rac + P99rac),
Potatoes = P43grCom + P44grCom + P45grCom,
MUFA = totalGrasaMonoins,
PUFA = totalGrasaPoliins,
SFA = totalGrasaSat,
Sex = SEXO, men = "Hombre", women = "Mujer", frequency = "daily",
output = "percent", rm.na = FALSE)
hist(MedDiet)

data

Description

Computes a 2012 update of the widely used Mediterranean Diet Score.

Usage

computeMDS12(data, Vegetables, Legumes, FruitAndNuts, Cereals, Potatoes = NULL,
Fish, Dairy, Meat, Alcohol,
OOpprincipal, Sex, men = "male", women = "female",
frequency = NULL, output = "percent", rm.na = FALSE)

Arguments

data
Vegetables
Legumes
FruitAndNuts
Cereals
Potatoes
Fish
Dairy

Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.

Numeric variable with Vegetables consumption as grams
Numeric variable with Legumes consumption as grams
Numeric variable with consumption of Fruits and Nuts as grams
Numeric variable with Cereals consumption as grams
Numeric variable with Potatoes consumption as grams
Numeric variable with Fish consumption as grams
Numeric variable with Dairy consumption as grams
Meat: Numeric variable with Meat consumption as grams
Alcohol: Numeric variable with Alcohol consumption as etanol grams from any beverage origin
00principal: Integer. This item scores whether olive oil is the main dietary fat as a dichotomous variable (1-yes, 0-no).
Sex: Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments.
men: A character string with the value of male gender, default is "male"
women: A character string with the value of female gender, default is "female"
frequency: A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. whether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')
output: A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).
rm.na: Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be dropped off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

Details
This score is an update of the widely used MDS (Mediterranean Diet Score), with some modifications, the most relevant are the following: First, it uses fixed ('a priori') cut-offs, instead of using sample derived medians. Second, instead of scoring all variables dichotomously (0-1), it scores from 0 (minimum) to 2 (maximum), with items which can receive 1 point. As another difference, it stops evaluating Mono and Poli Unsaturated fats, but instead scores Olive Oil consumption. Olive Oil is considered dichotomously.

Value
Computed MDS score according to 2012 version. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 18 (max.)

if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)
Author(s)
Miguel Menendez

References

See Also
computeMDS95 computeMDS03 computeMDS05

Examples
```r
data(nutriSample)
MedDiet <- computeMDS12(data = nutriSample,
    Vegetables = P41grCom + P42grCom,
    Legumes = P46grCom,
    FruitAndNuts = P50grCom + P52grCom + P53grCom,
    Cereals = P55grCom + P56grCom + P57grCom + P59grCom + P60grCom + P61grCom + P62grCom,
    Fish = P35grCom + P36grCom + P37grCom + P38grCom,
    Meat = P29grCom + P30grCom + P31grCom + P32grCom,
    Dairy = P19grCom + P20grCom + P22grCom + P23grCom + P24grCom + P25grCom + P26grCom + P27grCom,
    Alcohol = 12 * (P94rac + P96rac + P97rac + P98rac + P99rac),
    Potatoes = NULL,
    OOpprincipal = ifelse(nutriSample$AceiteTipo == 1, 1, 0),
    Sex = SEXO, men = "Hombre", women = "Mujer", frequency = "daily",
    output = "percent", rm.na = FALSE)
hist(MedDiet)
```

Description
Fist Mediterranean Adherence score index, developed by Trichopoulou et al. which has been extensively used and modified.

Usage
```r
computeMDS95(data, Vegetables, Legumes, FruitAndNuts,
    Cereals, Potatoes = NULL, Meat, Dairy, Alcohol,
    Fats = NULL, MUFA = NULL, SFA = NULL,
    Sex, men = "male", women = "female",
    frequency = NULL, output = "percent", rm.na = FALSE)
```
Arguments

data  Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns

Vegetables  Numeric variable with Vegetables consumption as grams
Legumes  Numeric variable with Legumes consumption as grams
FruitAndNuts  Numeric variable with consumption of Fruits and Nuts as grams
Cereals  Numeric variable with Cereals consumption as grams
Potatoes  Numeric variable with Potatoes consumption as grams
Meat  Numeric variable with Meat consumption as grams
Dairy  Numeric variable with Dairy consumption as grams
Alcohol  Numeric variable with Alcohol consumption as etanol grams from any beverage origin

Fats  Optional. Numeric variable with a ratio of consumption of Mono Unsaturated Fatty Acids (MUFA) over Saturated Fatty Acids (SFA). If it is not provided, then individual MUFA and SFA should be provided

MUFA  Optional if Fats is provided. Numeric variable with consumption of Mono Unsaturated Fatty Acids, units should be the same as used with PUFA and SFA

SFA  Optional if Fats is provided. Numeric variable with consumption of Saturated Fatty Acids

Sex  Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments. If 'Sex' argument is character or factor, and values for male are either 'man', 'male', 'MAN' or 'MALE', and for females are 'woman', 'female', 'WOMAN' or 'FEMALE', then, the arguments 'men' and 'women' can be missing

men  A character string with the value of male gender, default is "male"

women  A character string with the value of female gender, default is "female"

frequency  A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. whether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

output  A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

rm.na  Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

Details

This is the first Mediterranean Diet Score, which was developed by Antonia Trichopoulou and colleagues. At present, this score is not widely used, since it was later updated by its authors.
Nevertheless, as it is the first Mediterranean Diet Score developed, and is the basis of most of them, we think it deserves a place here.

Original 1995 paper of Trichopoulou et al. included potatoes with cereals, but later research has challenged this view. If you want to compute the score as originally developed, provide potato consumption as 'Potatoes' argument, and you will get a warning informing you that both have been used together in the score. If you don’t want to compute potatoes consumption, don’t provide 'Potatoes' argument, and you will receive a warning informing you that you are diverting from the very original score.

Value

Computed MDS95 score. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
  A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
  Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.)

if output = 'percent'
  Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

Author(s)

Miguel Menendez

References


Examples

data(nutriSample)
MedDiet <- computeMDS95(data = nutriSample,
  Vegetables = P41grCom + P42grCom,
  Legumes = P46grCom,
  FruitAndNuts = P50grCom + P52grCom + P53grCom,
  Cereals = P55grCom + P56grCom + P57grCom + P59grCom +
            P60grCom + P61grCom + P62grCom,
  Meat = P29grCom + P30grCom + P31grCom + P32grCom,
  Dairy = P19grCom + P20grCom + P20grCom + P22grCom + P23grCom +
            P24grCom + P25grCom + P26grCom + P27grCom,
  Alcohol = 12 * (P94rac + P96rac + P97rac + P98rac + P99rac),
  Potatoes = P43grCom + P44grCom + P45grCom,
**computeMSDPS**

```
MUFA = totalGrasaMonoins,
SFA = totalGrasaSat,
Sex = SEXO, men = "Hombre", women = "Mujer", frequency = "daily",
output = "percent", rm.na = FALSE)
hist(MedDiet)
```

**Description**

Computes Mediterranean-Style Dietary Pattern Score (MSDPS).

**Usage**

```
computeMSDPS(data, WholeCereals, Fruit, Vegetables, Dairy, Wine,
              Fish, Poultry, LegumesAndMore, Potatoes, Eggs, Sweets,
              Meat, OOprincipal,
              WholeCerealsK, FruitK, VegetablesK, DairyK, WineK,
              FishK, PoultryK, LegumesAndMoreK, PotatoesK, EggsK, SweetsK,
              MeatK, OliveOilK, Kcal,
              Sex, men = "male", women = "female",
              output = "percent", frequency = "daily", rm.na = FALSE)
```

**Arguments**

- **data**  
  Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.
- **WholeCereals**  
  Numeric variable with consumption of whole grain products as servings.
- **Fruit**  
  Numeric variable with fruit consumption as servings.
- **Vegetables**  
  Numeric variable with vegetables consumption as servings.
- **Dairy**  
  Numeric variable with dairy consumption as servings.
- **Wine**  
  Numeric variable with wine consumption as glasses.
- **Fish**  
  Numeric variable with fish consumption as servings.
- **Poultry**  
  Numeric variable with poultry consumption as servings.
- **LegumesAndMore**  
  Numeric variable with legumes, nuts and olives consumption as servings.
- **Potatoes**  
  Numeric variable with potatoes consumption as servings.
- **Eggs**  
  Numeric variable with eggs consumption as servings.
- **Sweets**  
  Numeric variable with sweets consumption as servings.
- **Meat**  
  Numeric variable with red meat and meat products consumption as servings.
- **OOprincipal**  
  Integer. This argument informs wether olive oil is the main dietary fat. 0 = olive oil is not usually consumed. 1 = olive oil and other vegetable oils are usually consumed. 2 = only olive oil is usually consumed.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WholeCerealsK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of whole grain products.</td>
</tr>
<tr>
<td>FruitK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of fruit.</td>
</tr>
<tr>
<td>VegetablesK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of vegetables.</td>
</tr>
<tr>
<td>DairyK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of dairy.</td>
</tr>
<tr>
<td>WineK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of wine.</td>
</tr>
<tr>
<td>FishK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of fish.</td>
</tr>
<tr>
<td>PoultryK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of poultry.</td>
</tr>
<tr>
<td>LegumesAndMoreK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of legumes, nuts and olives.</td>
</tr>
<tr>
<td>PotatoesK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of potatoes.</td>
</tr>
<tr>
<td>EggsK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of eggs.</td>
</tr>
<tr>
<td>SweetsK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of sweets.</td>
</tr>
<tr>
<td>MeatK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of red meat.</td>
</tr>
<tr>
<td>OliveOilK</td>
<td>Numeric variable with energy (as Kcal) due to consumption of olive oil.</td>
</tr>
<tr>
<td>Kcal</td>
<td>Numeric with total energy intake (as Kcal).</td>
</tr>
<tr>
<td>Sex</td>
<td>Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments.</td>
</tr>
<tr>
<td>men</td>
<td>A character string with the value of male gender, default is &quot;male&quot;</td>
</tr>
<tr>
<td>women</td>
<td>A character string with the value of female gender, default is &quot;female&quot;</td>
</tr>
<tr>
<td>frequency</td>
<td>A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')</td>
</tr>
<tr>
<td>output</td>
<td>A character string to set which output should the formula give, allowed values are 'data.frame' and 'percent' (default).</td>
</tr>
<tr>
<td>rm.na</td>
<td>Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)</td>
</tr>
</tbody>
</table>

**Details**

Computes Mediterranean-Style Dietary Pattern Score according to Rumawas et al. 2009.

\[ MSDPS = \frac{\sum S_i}{130} \times 100 \times P \]

Where

\[ S_i = 10 - \frac{\text{desviation from recommended} [\%]}{10} \]
As this scoring schema is not similar to others, we briefly explain it:

Step 1: The Score "S" of an item "i" has full score (10 points) if its consumed amount is the same as the standard recommendation (for instance, for fruit, 3 servings a day). If the amount is different, both as a lack or as an excess, more or less points are taken from the maximum possible, depending on how big this difference is.

For instance, if a particular food consumption is 80% of the recommended, the deviation from the recommendation is 20%. This "0% takes 2 points (1 point per each ten), so, instead of the maximum 10, this item deserves \( S_i = 10 - 2 = 8 \) points.

Olive oil is not measured the same way as the other items. It is considered categorically: only olive oil (10 points), olive oil and other vegetable oils (5 points), no olive oil (0 points).

Step 2: After all items have been computed, they are summed, and considered a percentage of maximum possible (13 items * 10 points = 130). So, at this step range goes from 0 to 100%.

Step 3: The previous percentage is adjusted with a correction factor "P", ranging from 0 to 1. This correction factor is the proportion of total energy intake provided by all foods included in the Mediterranean diet pyramid, i.e., each of the 13 foods included in the score, over total energy intake. This allows the use of the score in non-Mediterranean populations, where large proportion of energy intake comes from foods that wouldn’t be found in a Mediterranean diet pyramid (like sugar sweetened soft drinks or margarine). All the arguments about energy intake information are used to compute this correction factor.

This way a 100% is hard to reach.

Please note that Legumes are included with Nuts and Olives.

Value

Computed Mediterranean-Style Dietary Pattern Score. Depending on 'output' argument, value can be a data.frame, or a vector:

- if output = 'data.frame'
  
  A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

- if output = 'percent'
  
  Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to a theoretical maximum of 100% (max. adherence)

Author(s)

Miguel Menendez
References


Examples

data(nutriSample)

# wether olive oil is principal or not is stored in the sample dataset
# in a different way than asked by formula.
# In the data set it is 1=olive oil, 2=seeds oil, 3=both
# so a transformation is performed:
Oil <- ifelse(nutriSample$AceiteTipo == 2, 0,
                ifelse(nutriSample$AceiteTipo == 3, 1,
                        ifelse(nutriSample$AceiteTipo == 1, 2, 0))))

MedDiet <-
computeMSDPS(data = nutriSample,
           # group of arguments about food consumption:
           WholeCereals = P56rac + ifelse(nutriSample$P63_2 == 2, nutriSample$P61rac, 0),
           Fruit = P50rac + P52rac,
           Vegetables = P41rac + P42rac,
           Dairy = P19rac + P20rac + P20rac + P22rac + P23rac +
                   P24rac + P25rac + P26rac + P27rac,
           Wine = P96rac,
           Fish = P35rac + P36rac + P37rac + P38rac,
           Poultry = P33rac,
           LegumesAndMore = P46rac + P53rac + P54rac,
           Potatoes = P43grCom + P44grCom + P45grCom,
           Eggs = P28rac,
           Sweets = P69rac + P70rac + P71rac + P72rac + P73rac,
           Meat = P29rac + P30rac + P31rac + P32rac,
           O0principal = Oil,

           # group of arguments about energy intake to compute correction factor:
           WholeCerealsK = P56Kcal + ifelse(nutriSample$P63_2 == 2, nutriSample$P61Kcal, 0),
           FruitK = P50Kcal + P52Kcal,
           VegetablesK = P41Kcal + P42Kcal,
           DairyK = P19Kcal + P20Kcal + P20Kcal + P22Kcal + P23Kcal +
                    P24Kcal + P25Kcal + P26Kcal + P27Kcal,
           WineK = P96Kcal,
           FishK = P35Kcal + P36Kcal + P37Kcal + P38Kcal,
           PoultryK = P33Kcal,
           LegumesAndMoreK = P46Kcal + P53Kcal + P54Kcal,
           PotatoesK = P43grCom + P44grCom + P45grCom,
           EggsK = P28Kcal,
           SweetsK = P69Kcal + P70Kcal + P71Kcal + P72Kcal + P73Kcal,
           MeatK = P29Kcal + P30Kcal + P31Kcal + P32Kcal,
           OliveOilK = AceiteKcal,
           Kcal = totalKcal,
The `computePitsavos` function computes the Mediterranean Diet adherence score developed by Pitsavos et al. in 2005, which can also be found as the Dietary Score (see Details).

### Usage

```r
computePitsavos(data, WholeCereals, Fruit, Vegetables, Potatoes, Legumes, OliveOil, OOmeasure = "gr", Fish, Meat, Poultry, WholeDairy, Wine, output = "percent", frequency = "daily", rm.na = FALSE)
```

### Arguments

- **data**: Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.
- **WholeCereals**: Numeric variable with Whole Cereals consumption as servings.
- **Fruit**: Numeric variable with Fruit consumption as servings.
- **Vegetables**: Numeric variable with Vegetables consumption as servings.
- **Potatoes**: Numeric variable with Potatoes consumption as servings.
- **Legumes**: Numeric variable with Legumes consumption as servings.
- **OliveOil**: Numeric variable with olive oil consumption, measure is set with the `OOmeasure` argument.
- **OOmeasure**: Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 table spoon (15 ml).
- **Fish**: Numeric variable with Fish consumption as servings.
- **Meat**: Numeric variable with Meat consumption as servings.
- **Poultry**: Numeric variable with Poultry consumption as servings.
- **WholeDairy**: Numeric variable with fish consumption as servings.
- **Wine**: Numeric variable with Wine consumption as glasses.
- **output**: A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).
**computePitsavos**

**frequency**
A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. whether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

**rm.na**
Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

**Details**

We have chosen to name this score by its first author name (Pitsavos), although it can be found in the literature as Dietary Score (DS) [Milà-Villarroel, 2011; D’Alesandro-De Pergola, 2015] or as a derivate from MDS (Waijers et al. [Waijers et al., 2007] refer to it as MDS-a IV)

**Value**

Computed score. Depending on ‘output’ argument, value can be a data.frame, or a vector:

- `if output = 'data.frame'`
  
  A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

- `if output = 'score'`
  
  Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.)

- `if output = 'percent'`
  
  Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

**Author(s)**

Miguel Menendez

**References**


**Examples**

```r
data(nutriSample)

MedDiet <- computePitsavos(data = nutriSample,
    WholeCereals = P56rac + ifelse(nutriSample$P63_2 == 2, nutriSample$P61rac, 0),
    Fruit = P50rac + P52rac,
    Vegetables = P41rac + P42rac,
    Potatoes = P43rac + P44rac + P45rac,
    Legumes = P46rac,
    OliveOil = Aceitegr,
    OOMeasure = "gr",
    Fish = P35rac + P36rac + P37rac + P38rac,
    Meat = P29rac + P30rac + P31rac + P32rac,
    Poultry = P33rac,
    WholeDairy = P19grCom + P22grCom,
    Wine = P96rac,
    output = "percent", frequency = "daily", rm.na = FALSE)

hist(MedDiet)
```

**Description**

Computes the Mediterranean Diet adherence score used in PreDiMed trial (Prevencion con Dieta Mediterranea, Spanish which means Prevention with Mediterranean Diet)

**Usage**

```r
computePredimed(data, OliveOil, OOMeasure = "gr", OOpprincipal,
    Vegetables, Fruit, RedMeat, Butter, SoftDrinks,
    Wine, Legumes, Fish, Pastries, Nuts, WhiteMeat,
    Sofritos, output = "percent", rm.na = FALSE, frequency = NULL)
```

**Arguments**

- **data**
  
  Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns.

- **OliveOil**

  Numeric with olive oil consumption. Units are set with the argument 'OOMeasure'.
**computePredimed**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>OOmeasure</code></td>
<td>Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 tablespoon (10 ml).</td>
</tr>
<tr>
<td><code>OOprincipal</code></td>
<td>Integer. This item scores whether olive oil is the main dietary fat as a dichotomous variable (1-yes, 0-no).</td>
</tr>
<tr>
<td><code>Vegetables</code></td>
<td>Numeric. Vegetables consumption measured as servings.</td>
</tr>
<tr>
<td><code>Fruit</code></td>
<td>Numeric. Fruit consumption measured as servings.</td>
</tr>
<tr>
<td><code>Butter</code></td>
<td>Numeric. Butter consumption measured as servings.</td>
</tr>
<tr>
<td><code>SoftDrinks</code></td>
<td>Numeric. SoftDrinks consumption measured as servings.</td>
</tr>
<tr>
<td><code>Wine</code></td>
<td>Numeric. Wine consumption measured as servings (glasses).</td>
</tr>
<tr>
<td><code>Legumes</code></td>
<td>Numeric. Legumes consumption measured as servings.</td>
</tr>
<tr>
<td><code>Fish</code></td>
<td>Numeric. Fish consumption measured as servings.</td>
</tr>
<tr>
<td><code>Pastries</code></td>
<td>Numeric. Pastries consumption measured as servings.</td>
</tr>
<tr>
<td><code>Nuts</code></td>
<td>Numeric. Nuts consumption measured as servings.</td>
</tr>
<tr>
<td><code>WhiteMeat</code></td>
<td>Integer. This item scores whether white meats are preferred over red meats. So it is a dichotomous variable (1-yes, 0-no).</td>
</tr>
<tr>
<td><code>Sofritos</code></td>
<td>Numeric. Number of times 'sofrito' is consumed (see Details).</td>
</tr>
<tr>
<td><code>output</code></td>
<td>A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).</td>
</tr>
<tr>
<td><code>rm.NA</code></td>
<td>Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be dropped off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details).</td>
</tr>
<tr>
<td><code>frequency</code></td>
<td>A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. whether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month').</td>
</tr>
</tbody>
</table>

**Details**

This score was used in the landmark PreDiMed trial (Prevencion con Dieta Mediterranea, Spanish which means Prevention with Mediterranean Diet) (Estruch et al. 2013). It can also be found under the name MEDAS (MEditerranean Diet Adherence Screener) (Schroder et al. 2011).

Please note that olive oil is in three items: one measuring the amount of servings, other measuring if it is the main dietary fat, and another asking about 'sofrito' consumption. Supplementary material of Estruch et al. 2013 informs that one tablespoon is 10ml.

'Sofrito' is a special way to cook, a sauce made with tomato and onion, leek, or garlic, simmered with olive oil.
computePredimed

Value

Computed Predimed score. Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'

A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column).

if output = 'score'

Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 9 (max.).

if output = 'percent'

Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence).

Author(s)

Miguel Menendez

References


Examples

data(nutriSample)
MedDiet <- computePredimed(data = nutriSample, OliveOil = AceiteGr, O0Measure = "gr", O0Principal = ifelse(nutriSample$AceiteTipo == 1, 1, 0), Vegetables = P41rac + P42rac, Fruit = P50rac + P52rac, RedMeat = P29rac + P31rac, Butter = P79rac, SoftDrinks = P89rac + P90rac, Wine = P96rac, Legumes = P46rac, Fish = P35rac + P36rac + P37rac + P38rac, Pastries = P69rac + P70rac + P71rac + P72rac + P73rac, Nuts = P53rac,
WhiteMeat = ifelse(nutriSample$P30rac > nutriSample$P29rac, 1, 0),
Sofritos = rep(0, nrow(data)), # data lacks this variable, so we go on without it
output = "percent", rm.na = FALSE, frequency = "daily")

hist(MedDiet)

computeRMED

Description
Computes the Revised Mediterranean Diet adherence score according to Buckland et al. in 2009,
also known as rMED.

Usage

computeRMED(data, FruitAndNuts, Vegetables, Legumes, Cereals, Fish,
OliveOil, OOmeasure = "gr", Meat, Dairy, Alcohol,
Kcal, Sex, men="male", women="female",
frequency = NULL, output = "percent", rm.na = FALSE)

Arguments

data: Your data set with nutritional information about food or nutrient consumption.
Each row is expected to be a person, and food or nutrient intake are in columns
FruitAndNuts: Numeric variable with consumption of Fruits and Nuts as grams.
Vegetables: Numeric variable with Vegetables consumption as grams
Legumes: Numeric variable with Legumes consumption as grams
Cereals: Numeric variable with Legumes consumption as grams
Fish: Numeric variable with Fish consumption as grams
OliveOil: Numeric variable with olive oil consumption, measure is set with the 'OOmeasure' argument
OOmeasure: Character string which informs about the unit of the argument 'OliveOil'. Allowed values are 'gr', 'ml' and 'serving', which means respectively grams, milliliters and servings of 1 table spoon (15 ml).
Meat: Numeric variable with Meat consumption as grams
Dairy: Numeric variable with Dairy consumption as grams
Alcohol: Numeric variable with Alcohol consumption as etanol grams from any beverage origin
Kcal: Numeric variable with energy consumption in kilocalories.
Sex: Vector with gender, it can be numeric, factor or character, as long as its values are provided by 'men' and 'women' arguments. If 'Sex' argument is character or factor, and values for male are either 'man', 'male', 'MAN' or 'MALE', and for females are 'woman', 'female', 'WOMAN' or 'FEMALE', then, the arguments 'men' and 'women' can be missing
computeRMED

men A character string with the value of male gender, default is "male"

women A character string with the value of female gender, default is "female"

frequency A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

output A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

rm.na Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

Details

the rMED questionnaire scores food consumption as grams by 1000Kcal/day, but arguments are expected to be provided as grams eaten by day.

Value

Computed RMed score.Depending on 'output' argument, value can be a data.frame, or a vector:

if output = 'data.frame'
A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

if output = 'score'
Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 18 (max.)

if output = 'percent'
Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

Author(s)
Miguel Menendez

References

Examples

data(nutriSample)

MedDiet <- computeMED(data = nutriSample,
Kcal = totalKcal,
FruitAndNuts = P50grCom + P52grCom,
Vegetables = P41grCom + P42grCom,
Legumes = P46grCom,
Cereals = P55grCom + P56grCom + P57grCom + P59grCom +
P60grCom + P61grCom + P62grCom,
Fish = P35grCom + P36grCom + P37grCom + P38grCom,
OliveOil = Aceitegr,
Meat = P29grCom + P30grCom + P31grCom + P32grCom,
Dairy = P19grCom + P20grCom + P22grCom + P23grCom +
P24grCom + P25grCom + P26grCom + P27grCom,
Alcohol = 10 * (P94rac + P96rac + P97rac + P98rac + P99rac),
Sex = SEXO, men = "Hombre", women = "Mujer",
frequency = "daily", output = "percent", rm.na = FALSE)

summary(MedDiet)

computeSofi  ComputeSofi

Description

Computes Mediterranean Diet adherence score according to the literature review by Sofi et al. in 2014.

Usage

computeSofi(data, Fruit, Vegetables, Legumes, Cereals,
Fish, Meat, Dairy, Alcohol, OliveOil,
output = "percent", rm.na = FALSE, frequency = NULL)

Arguments

data  Your data set with nutritional information about food or nutrient consumption. Each row is expected to be a person, and food or nutrient intake are in columns

Fruit  Numeric variable with fruit consumption as servings (1 serving: 150g)

Vegetables  Numeric variable with vegetables consumption as servings (1 serving: 100g)

Legumes  Numeric variable with legumes consumption as servings (1 serving: 70g)

Cereals  Numeric variable with cereal consumption as servings (1 serving: 130g)

Fish  Numeric variable with fish consumption as servings (1 serving: 100g)

Meat  Numeric variable with meat and meat products consumption as servings (1 serving: 80g)
**computeSofi**

- **Dairy**: Numeric variable with dairy consumption as servings (1 serving: 180g)
- **Alcohol**: Numeric variable with alcohol intake as Alcohol Units (1 Alcohol Unit: 12g)
- **OliveOil**: Integer variable indicating if olive oil consumption is consumed as 0 = occasional use, 1 = frequent use or 2 = regular use

**output**: A character string to set which output should the formula give, allowed values are 'data.frame', 'score' and 'percent' (default).

**rm.na**: Logical. If set to FALSE (default), a diet score will be computed only if a person has all score components informed. If set to TRUE, NA values in score components will be drop off and a value of available components will be returned, but percent of score adherence will be computed with basis of the whole score range (see Details)

**frequency**: A character string. Allowed values are 'daily', 'weekly' and 'monthly'. It informs about the frequency which food or nutrient consumption refers to (i.e. wether the rest of arguments are 'grams per day' or 'grams per week' or 'grams per month')

**Details**

This questionnaire was developed after a systematic literature review (Sofi et al., 2014). To set its cut-offs it considered the amounts of food in the included studies, which studied adherence to mediterranean diet and health status.

**Value**

Computed score according to Sofi et al. 2014. Depending on 'output' argument, value can be a data.frame, or a vector:

- **if output = 'data.frame'**
  - A data frame with a row corresponding to each person in data. Columns are the score of each component, as well as the global score as natural sum ('absolute' column) and as percentage ('percent' column)

- **if output = 'score'**
  - Instead of the full data.frame, just the integer vector corresponding to the absolute points of adherence to Mediterranean Diet for each person, from 0 (min.) to 18 (max.)

- **if output = 'percent'**
  - Instead of the full data.frame, just the numeric vector corresponding to the percent of adherence to Mediterranean Diet for each person, from 0 (min. adherence) to 100 percent (max. adherence)

**Author(s)**

Miguel Menendez

**References**

Examples

```r
data(nutriSample)

# wether olive oil is principal or not is stored in the sample dataset
# in a different way than asked by formula.
# In the data set it is 1=olive oil, 2=seeds oil, 3=both
# so a transformation is performed:
Oil <- ifelse(nutriSample$AceiteTipo == 2, 0,
               ifelse(nutriSample$AceiteTipo == 3, 1,
                      ifelse(nutriSample$AceiteTipo == 1, 2, 0))

Sofi <- computeSofi(data = nutriSample,
                      Fruit = P50rac + P52rac,
                      Vegetables = P41rac + P42rac,
                      Legumes = P46rac,
                      Cereals = P55rac + P56rac + P57rac + P59rac + P60rac + P61rac + P62rac,
                      Fish = P35rac + P36rac + P37rac + P38rac,
                      Meat = P29rac + P30rac + P31rac + P32rac,
                      Dairy = P19rac + P20rac + P21rac + P22rac + P23rac +
                          P24rac + P25rac + P26rac + P27rac,
                      Alcohol = P94rac + P96rac + P97rac + P98rac + P99rac,
                      OliveOil = Oil,
                      output = "data.frame", rm.na = FALSE, frequency = "daily")

hist(Sofi$percent)
```

---

### nutriSample

**Sample from a nutriepidemiological study**

### Description

A sample of 192 Spanish people from a nutriepidemiological study, from DRECE group (Dieta y Riesgo de Enfermedad Cardiovascular en España [Diet and Cardiovascular Risk in Spain]). Food consumption was assessed by a Frequency Food Questionnaire. For all foods or nutrients, food consumption is stored as daily consumption.

### Usage

data("nutriSample")

### Format

A data frame with 192 observations on the following variables.

- **IDE** integer, identification number
- **PROVINCIA** geographic region of procedence of the person
- **SEXO** gender information
- **EDAD** age as years
FUMADOR smoking habit of the person 0 = never smoker, 1 = current smoker, 2 = former smoker
HIPERTENSO if the person has prior diagnose of High Blood Pressure
MEDIC_TENS if the person is under blood lowering pressure treatment
HIPER_COLES if the person has prior diagnose of Dyslipidemia
MEDIC_COLES if the person is under lipid lowering treatment
ANT_CARDIO if the person has a history of coronary events
DIABETES if the person has prior diagnose of Diabetes Mellitus
peso weight in kg
altura heigth in cm
TAS1 first systolic blood pressure measurement in mmHg
TAD1 first diastolic blood pressure measurement in mmHg
TAS2 second systolic blood pressure measurement in mmHg
TAD2 second diastolic blood pressure measurement in mmHg
Colestero1 plasmatic total Cholesterol
LDL plasmatic Low Density Lipoprotein
HDL plasmatic High Density Lipoprotein
TG plasmatic triglycerides
APO.B plasmatic Apolipoprotein B
APO.A plasmatic Apolipoprotein A
P19grCom Edible portion (in grams) of whole milk
P19Kcal Kcal attributable to consumption of whole milk
P19rac Servings of whole milk
P20grCom Edible portion (in grams) of skimmed or semi-skimmed milk
P20Kcal Kcal attributable to consumption of skimmed or semi-skimmed milk
P20rac Servings of skimmed or semi-skimmed milk
P21Kcal Kcal attributable to consumption of milk enriched with omega-3 acid
P22grCom Edible portion (in grams) of whole yogurt
P22rac Servings of whole yogurt
P22Kcal Kcal attributable to consumption of whole yogurt
P23grCom Edible portion (in grams) of skimmed or semi-skimmed yogurt
P23rac Servings of skimmed or semi-skimmed yogurt
P23Kcal Kcal attributable to consumption of skimmed or semi-skimmed yogurt
P24grCom Edible portion (in grams) of enriched with probiotics yogurt
P24rac Servings of enriched with probiotics yogurt
P24Kcal Kcal attributable to consumption of enriched with probiotics yogurt
P25grCom Edible portion (in grams) of dairy products, usually desserts, like custard, junket, flan or requeson
Servings of dairy products, usually desserts, like custard, junket, flan or requeson
Kcal attributable to consumption of dairy products, usually desserts, like custard, junket, flan or requeson
Edible portion (in grams) of unripened cheese
Kcal attributable to consumption of unripened cheese
Servings of cheese (hard, semi-hard, ball, blue...)
Edible portion (in grams) of cheese (hard, semi-hard, ball, blue...)
Kcal attributable to consumption of cheese (hard, semi-hard, ball, blue...)
Servings of eggs
Edible portion (in grams) of red meat (cattle, lamb, pork)
Fat intake attributable to consumption of red meat (cattle, lamb, pork)
Kcal attributable to consumption of red meat (cattle, lamb, pork)
Servings of red meat (cattle, lamb, pork)
Edible portion (in grams) of white meat (poultry, rabbit)
Fat intake attributable to consumption of white meat (poultry, rabbit)
Kcal attributable to consumption of white meat (poultry, rabbit)
Servings of white meat (poultry, rabbit)
Edible portion (in grams) of cold cuts ("embutido")
Fat intake attributable to consumption of cold cuts ("embutido")
Kcal attributable to consumption of cold cuts ("embutido")
Servings of cold cuts ("embutido")
Edible portion (in grams) of serrano ham
Fat intake attributable to consumption of serrano ham
Kcal attributable to consumption of serrano ham
Servings of serrano ham
Fat intake attributable to consumption of York ham
Servings of York ham
Kcal attributable to consumption of York ham
Fat intake attributable to consumption of offal (guts, pluck or organ meats)
Edible portion (in grams) of white fish
Kcal attributable to consumption of white fish
Servings of white fish
Edible portion (in grams) of blue fish
Kcal attributable to consumption of blue fish
Servings of blue fish
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P37grCom</td>
<td>Edible portion (in grams) of shellfish</td>
</tr>
<tr>
<td>P37Kcal</td>
<td>Kcal attributable to consumption of shellfish</td>
</tr>
<tr>
<td>P37rac</td>
<td>Servings of shellfish</td>
</tr>
<tr>
<td>P38grCom</td>
<td>Edible portion (in grams) of tinned fish</td>
</tr>
<tr>
<td>P38Kcal</td>
<td>Kcal attributable to consumption of tinned fish</td>
</tr>
<tr>
<td>P38rac</td>
<td>Servings of tinned fish</td>
</tr>
<tr>
<td>P41grCom</td>
<td>Edible portion (in grams) of salads</td>
</tr>
<tr>
<td>P41Kcal</td>
<td>Kcal attributable to consumption of salads</td>
</tr>
<tr>
<td>P41rac</td>
<td>Servings of salads</td>
</tr>
<tr>
<td>P42grCom</td>
<td>Edible portion (in grams) of boiled or grilled vegetables</td>
</tr>
<tr>
<td>P42Kcal</td>
<td>Kcal attributable to consumption of boiled or grilled vegetables</td>
</tr>
<tr>
<td>P42rac</td>
<td>Servings of boiled or grilled vegetables</td>
</tr>
<tr>
<td>P43grCom</td>
<td>Edible portion (in grams) of boiled or roasted potatoes</td>
</tr>
<tr>
<td>P43Kcal</td>
<td>Kcal attributable to consumption of boiled or roasted potatoes</td>
</tr>
<tr>
<td>P43rac</td>
<td>Servings of boiled or roasted potatoes</td>
</tr>
<tr>
<td>P44grCom</td>
<td>Edible portion (in grams) of fried home cooked potatoes (not frozen)</td>
</tr>
<tr>
<td>P44Kcal</td>
<td>Kcal attributable to consumption of fried home cooked potatoes (not frozen)</td>
</tr>
<tr>
<td>P44rac</td>
<td>Servings of fried home cooked potatoes (not frozen)</td>
</tr>
<tr>
<td>P45grCom</td>
<td>Edible portion (in grams) of fried frozen potatoes or eaten in restaurants or fast food</td>
</tr>
<tr>
<td>P45Kcal</td>
<td>Kcal attributable to consumption of fried frozen potatoes or eaten in restaurants or fast food</td>
</tr>
<tr>
<td>P45rac</td>
<td>Servings of fried frozen potatoes or eaten in restaurants or fast food</td>
</tr>
<tr>
<td>P46grCom</td>
<td>Edible portion (in grams) of legumes</td>
</tr>
<tr>
<td>P46Kcal</td>
<td>Kcal attributable to consumption of legumes</td>
</tr>
<tr>
<td>P46rac</td>
<td>Servings of legumes</td>
</tr>
<tr>
<td>P50grCom</td>
<td>Edible portion (in grams) of fresh fruit</td>
</tr>
<tr>
<td>P50Kcal</td>
<td>Kcal attributable to consumption of fresh fruit</td>
</tr>
<tr>
<td>P50rac</td>
<td>Servings of fresh fruit</td>
</tr>
<tr>
<td>P52grCom</td>
<td>Edible portion (in grams) of dried figs, dried grapes, dried plums or dates</td>
</tr>
<tr>
<td>P52Kcal</td>
<td>Kcal attributable to consumption of dried figs, dried grapes, dried plums or dates</td>
</tr>
<tr>
<td>P52rac</td>
<td>Servings of dried figs, dried grapes, dried plums or dates</td>
</tr>
<tr>
<td>P53grCom</td>
<td>Edible portion (in grams) of nuts (almonds, pistachios, walnuts, hazelnuts or peanuts)</td>
</tr>
<tr>
<td>P53Kcal</td>
<td>Kcal attributable to consumption of nuts (almonds, pistachios, walnuts, hazelnuts or peanuts)</td>
</tr>
<tr>
<td>P53rac</td>
<td>Servings of nuts (almonds, pistachios, walnuts, hazelnuts or peanuts)</td>
</tr>
<tr>
<td>P54Kcal</td>
<td>Kcal attributable to consumption of olives</td>
</tr>
<tr>
<td>P54rac</td>
<td>Servings of olives</td>
</tr>
<tr>
<td>P55grCom</td>
<td>Edible portion (in grams) of white bread</td>
</tr>
</tbody>
</table>
P55Kcal  Kcal attributable to consumption of white bread
P55rac  Servings of white bread
P56grCom  Edible portion (in grams) of whole grain bread
P56Kcal  Kcal attributable to consumption of whole grain bread
P56rac  Servings of whole grain bread
P57grCom  Edible portion (in grams) of toast bread
P57Kcal  Kcal attributable to consumption of toast bread
P57rac  Servings of toast bread
P59grCom  Edible portion (in grams) of breakfast cereals
P59Kcal  Kcal attributable to consumption of breakfast cereals
P59rac  Servings of breakfast cereals
P60grCom  Edible portion (in grams) of fiber enriched breakfast cereals
P60Kcal  Kcal attributable to consumption of fiber enriched breakfast cereals
P60rac  Servings of fiber enriched breakfast cereals
P61grCom  Edible portion (in grams) of white rice
P61Kcal  Kcal attributable to consumption of white rice
P61rac  Servings of white rice
P62grCom  Edible portion (in grams) of paella (a traditional Spanish dish based on rice with yellow colorant)
P62Kcal  Kcal attributable to consumption of paella (a traditional Spanish dish based on rice with yellow colorant)
P62rac  Servings of paella (a traditional Spanish dish based on rice with yellow colorant)
P63_2  A question about consumption of whole bread (1) or white bread (0)
P69Kcal  Kcal attributable to consumption of pastries
P69rac  Servings of pastries
P70Kcal  Kcal attributable to consumption of churros and fritters
P70rac  Servings of churros and fritters
P71Kcal  Kcal attributable to consumption of cakes
P71rac  Servings of cakes
P72Kcal  Kcal attributable to consumption of chocolate or bonbons
P72rac  Servings of chocolate or bonbons
P73Kcal  Kcal attributable to consumption of ice cream
P73rac  Servings of ice cream
P75rac  Servings of sunflower seeds
P79rac  Servings of butter
P84Kcal  Kcal attributable to consumption of sugar
P89Kcal  Kcal attributable to consumption of soft drinks
P89rac  Servings of soft drinks
\( P90Kcal \) Kcal attributable to consumption of diet soft drinks
\( P90rac \) Servings of diet soft drinks
\( P94rac \) Servings of beer
\( P96Kcal \) Kcal attributable to consumption of wine
\( P96rac \) Servings of wine
\( P97rac \) Servings of vermouth, fine wine or sweet wine
\( P98rac \) Servings of liquor or anisette
\( P99rac \) Servings of spirits (whiskey, cognac, gin)
\( AceiteGr \) olive oil consumption in grams
\( AceiteKcal \) Kcal attributable to olive oil consumption
\( AceiteTipo \) kind of oil preferred by the surveyed person (1 = olive oil, 2 = seeds oil, 3 = both)
\( totalGr \) Total Food consumption, included edible and not edible, in grams
\( totalGrCom \) Total Edible food consumption, in grams, including liquid foods like milk
\( grBebidas \) total beverage intake in ml not coming directly from drinken water
\( grSinBebidas \) total food consumption in grams, without liquid components
\( totalCH \) total Carbohydrates consumption (grams per day)
\( totalProt \) total Protein consumption (grams per day)
\( totalGrasa \) total Fat consumption (grams per day)
\( totalGrasaSat \) total Saturated Fat consumption (grams per day)
\( totalGrasaMonoins \) total Monounsaturated Fat consumption (grams per day)
\( totalGrasaPoliins \) total Polyunsaturated Fat consumption (grams per day)
\( totalCol \) total Cholesterol consumption (in mg per day)
\( totalFibra \) total Fiber consumption (grams per day)
\( totalKcal \) total kcal eaten per day

References


periodicity


Examples

data(nutriSample)
summary(nutriSample$totalKcal)

| periodicity | Transforms data codified as daily, weekly or monthly, to any other of them. |

Description

Different scores of Mediterranean Diet set cutoffs of daily, weekly or monthly consumption. Additionally, a dataset can be stored as different frequency of consumption. This function has been created to be called by others, it just multiplies or divides by the suitable number (for instance, from 'daily' to 'weekly' it just multiplies by 7)

Usage

periodicity(x, OriginalFreq, TargetFreq)

Arguments

- x numeric variable or a list of numeric variables, which want to be converted
- OriginalFreq character string. The frequency in which information was captured (should be provided by user). Allowed values are 'daily', 'weekly' or 'monthly'
- TargetFreq character string. The frequency in which information has to be transformed. Allowed values are 'daily', 'weekly' or 'monthly'. Usually it will be provided by another formula, depending in its scoring scheme

Value

A numeric vector, or a list of numeric vectors.

Author(s)

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Examples

foodA <- c(1,2,3)
foodB <- c(3,2,1)
L <- list(foodA = foodA, foodB = foodB)

# Use with a numeric variable
periodicity(foodA, "daily", "weekly")

# Use with a list
periodicity(L, "daily", "weekly")
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