

# Package ‘cansim’

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**Type** Package

**Title** Accessing Statistics Canada Data Table and Vectors

**Version** 0.4.2

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**Description** Searches for, accesses, and retrieves Statistics Canada data tables, as well as individual vectors, as tidy data frames. This package enriches the tables with metadata, deals with encoding issues, allows for bilingual English or French language data retrieval, and bundles convenience functions to make it easier to work with retrieved table data. For more efficient data access the package allows for caching data in a local database and database level filtering, data manipulation and summarizing.

**License** MIT + file LICENSE

**Encoding** UTF-8

**ByteCompile** yes

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**LazyData** true

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**Imports** digest (>= 0.6), dplyr (>= 1.1), httr (>= 1.0.0), tidyr (>= 1.3), readr (>= 2.1), rlang (>= 1.1), stringr (>= 1.5), purrr (>= 1.0), tibble (>= 3.2), arrow (>= 18.1), DBI (>= 1.2), RSQLite (>= 2.3), utils (>= 4.3), dbplyr (>= 2.5)

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**URL** <https://github.com/mountainMath/cansim>,  
<https://mountainmath.github.io/cansim/>,  
<https://www.statcan.gc.ca/>

**BugReports** <https://github.com/mountainMath/cansim/issues>

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---

`add_cansim_vectors_to_template`*Retrieve series info for given table id and coordinates*

---

**Description**

Retrieves vector information for given table and coordinates. This can be used to query data by vectors, it only returns vector information on coordinates which are present in the data table, so it gives an effective way to filter coordinates. Vector information is not available for census data tables.

**Usage**

```
add_cansim_vectors_to_template(template, refresh = FALSE)
```

**Arguments**

template	A (possibly filtered) cansim table template as returned by ‘get_cansim_table_template’
refresh	Refresh the data from the Statistics Canada API

**Value**

a tibble containing the table template with added vector information

**Examples**

```
## Not run:  
template <- get_cansim_table_template("34-10-0013")  
template |> filter(Geography=="Canada") |>  
  add_cansim_vectors_to_template()  
  
## End(Not run)
```

---

`add_provincial_abbreviations`*Add provincial abbreviations as factor*

---

**Description**

Add provincial abbreviations as factor

**Usage**

```
add_provincial_abbreviations(data)
```

**Arguments**

data                    A tibble as returned by `get_cansim` with provincial level data

**Value**

The input tibble with additional factor `GEO.abb` that contains language-specific provincial abbreviations

**Examples**

```
## Not run:  
df <- get_cansim("17-10-0005")  
df <- add_provincial_abbreviations(df)  
  
## End(Not run)
```

---

cansim_old_to_new	<i>Translate deprecated CANSIM table number into new NDM-format table catalogue number</i>
-------------------	--

---

**Description**

Returns NDM table catalogue equivalent given a standard old-format CANSIM table number

**Usage**

```
cansim_old_to_new(oldCansimTableNumber)
```

**Arguments**

oldCansimTableNumber  
                          deprecated style CANSIM table number (e.g. "427-0001")

**Value**

A character string with the new-format NDM table number

**Examples**

```
## Not run:  
cansim_old_to_new("026-0018")  
  
## End(Not run)
```

---

cansim\_repartition\_cached\_table

*Repartitions a cached cansim table to a new partitioning scheme*


---

## Description

Repartitions and already downloaded and cached parquet or feather dataset

## Usage

```
cansim_repartition_cached_table(
  cansimTableNumber,
  new_partitioning = c(),
  language = "english",
  format = "parquet",
  cache_path = getOption("cansim.cache_path")
)
```

## Arguments

cansimTableNumber	the NDM table number to load
new_partitioning	(Optional) Partition columns to use for parquet or feather formats.
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
format	(Optional) The format of the data table to retrieve. Either "parquet", "feather", or sqlite (default is "parquet").
cache_path	(Optional) Path to where to cache the table permanently. By default, the data is cached in the path specified by 'getOption("cansim.cache_path")', if this is set. Otherwise it will use 'tempdir()'.

## Examples

```
## Not run:
cansim_repartition_cached_table("34-10-0013", new_partitioning=c("GeoUID"))

## End(Not run)
```

---

categories\_for\_level *Use metadata to extract categories for column of specific level*

---

### Description

For tables with data with hierarchical categories, metadata containing hierarchy level descriptions is used to extract categories at a specified level of hierarchy only.

### Usage

```
categories_for_level(  
  data,  
  column_name,  
  level = NA,  
  strict = FALSE,  
  remove_duplicates = TRUE  
)
```

### Arguments

data	data table object as returned from <code>get_cansim()</code>
column_name	the quoted name of the column to extract categories from
level	the hierarchy level depth to which to extract categories, where 0 is top category
strict	(default FALSE) when TRUE will only extract that specific hierarchy level
remove_duplicates	(default TRUE) When set to TRUE higher level grouping categories already captured by lower level hierarchy data will be removed

### Value

A vector of categories

### Examples

```
## Not run:  
data <- get_cansim("16-10-0117")  
categories_for_level(data,"North American Industry Classification System (NAICS)",level=2)  
  
## End(Not run)
```

---

collect\_and\_normalize *Collect data from a parquet, feather or sqlite query and normalize cansim table output*

---

### Description

Collect data from a parquet, feather or sqlite query and normalize cansim table output

### Usage

```
collect_and_normalize(  
  connection,  
  replacement_value = "val_norm",  
  normalize_percent = TRUE,  
  default_month = "07",  
  default_day = "01",  
  factors = TRUE,  
  strip_classification_code = FALSE,  
  disconnect = FALSE  
)
```

### Arguments

connection	A connection to a local arrow connection as returned by <code>get_cansim_connection</code> , possibly with filters or other dplyr verbs applied
replacement_value	(Optional) the name of the column the manipulated value should be returned in. Defaults to adding the 'val_norm' value field.
normalize_percent	(Optional) When true (the default) normalizes percentages by changing them to rates
default_month	The default month that should be used when creating Date objects for annual data (default set to "07")
default_day	The default day of the month that should be used when creating Date objects for monthly data (default set to "01")
factors	(Optional) Logical value indicating if dimensions should be converted to factors. (Default set to FALSE).
strip_classification_code	(Optional) Logical value indicating if classification code should be stripped from names. (Default set to false).
disconnect	(Optional) Only used when format is sqlite. Logical value to indicate if the SQLite database connection should be disconnected. (Default is FALSE)

### Value

A tibble with the collected and normalized data

**Examples**

```
## Not run:
library(dplyr)

con <- get_cansim_connection("34-10-0013")
data <- con %>%
  filter(GEO=="Ontario") %>%
  collect_and_normalize()

## End(Not run)
```

---

disconnect\_cansim\_sqlite

*Disconnect from a cansim database connection*

---

**Description**

Disconnect from a cansim database connection

**Usage**

```
disconnect_cansim_sqlite(connection)
```

**Arguments**

connection      connection to database

**Value**

‘NULL‘

**Examples**

```
## Not run:
con <- get_cansim_sqlite("34-10-0013")
disconnect_cansim_sqlite(con)

## End(Not run)
```



---

get_cansim	<i>Retrieve a Statistics Canada data table using NDM catalogue number</i>
------------	---

---

### Description

Retrieves a data table using an NDM catalogue number as a tidy data frame. Retrieved table data is cached for the duration of the current R session only by default.

### Usage

```
get_cansim(  
  cansimTableNumber,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200,  
  factors = TRUE,  
  default_month = "07",  
  default_day = "01"  
)
```

### Arguments

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.
factors	(Optional) Logical value indicating if dimensions should be converted to factors. (Default set to TRUE).
default_month	The default month that should be used when creating Date objects for annual data (default set to "07")
default_day	The default day of the month that should be used when creating Date objects for monthly data (default set to "01") Set to higher values for large tables and slow network connection. (Default is 200).

### Value

A tibble with StatCan Table data and added Date column with inferred date objects and added val\_norm column with normalized value from the VALUE column.

**Examples**

```
## Not run:  
get_cansim("34-10-0013")  
  
## End(Not run)
```

---

get\_cansim\_changed\_tables

*Retrieve a list of modified tables since a given date*

---

**Description**

Retrieve a list of tables that have been modified or updated since the specified date.

**Usage**

```
get_cansim_changed_tables(start_date, end_date = NULL)
```

**Arguments**

start_date	Starting date in YYYY-MM-DD format to look for changes that changed on or after that date
end_date	Optional end date in YYYY-MM-DD format to look for changes that changed on or before that date, default is same as start date

**Value**

A tibble with Statistics Canada data table product ids and their release times

**Examples**

```
## Not run:  
get_cansim_changed_tables("2018-08-01")  
  
## End(Not run)
```

---

get\_cansim\_code\_set     *Get NDM code sets*

---

**Description**

Useful to get a list of surveys or subjects and used internally

**Usage**

```
get_cansim_code_set(  
  code_set = c("scalar", "frequency", "symbol", "status", "uom", "survey", "subject",  
              "wdsResponseStatus"),  
  refresh = FALSE  
)
```

**Arguments**

code_set	the code set to retrieve.
refresh	Default is FALSE, repeated calls during the same session will hit the cached data. To refresh the code list during a running R session set to TRUE

**Value**

A tibble with english and french labels for the given code set

**Examples**

```
## Not run:  
get_cansim_code_set("survey")  
  
## End(Not run)
```

---

get\_cansim\_column\_categories  
*Retrieve Statistics Canada data table categories for a specific column*

---

**Description**

Returns table column details given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

**Usage**

```
get_cansim_column_categories(
  cansimTableNumber,
  column,
  language = "english",
  refresh = FALSE,
  timeout = 200
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
column	the specified column for which to retrieve category information for
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

**Value**

A tibble with detailed information on StatCan table categories for the specified field

**Examples**

```
## Not run:
get_cansim_column_categories("34-10-0013", "Geography")

## End(Not run)
```

---

```
get_cansim_column_list
```

*Retrieve Statistics Canada data table column list*

---

**Description**

Returns table column details given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

**Usage**

```
get_cansim_column_list(
  cansimTableNumber,
  language = "english",
  refresh = FALSE,
  timeout = 200
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

**Value**

A tibble listing the column names of the StatCan table.

**Examples**

```
## Not run:  
get_cansim_column_list("34-10-0013")  
  
## End(Not run)
```

---

get\_cansim\_connection *Retrieve a Statistics Canada data table using NDM catalogue number as parquet, feather, or sqlite database connection*

---

**Description**

Retrieves a data table using an NDM catalogue number as parquet, feather, or SQLite database connection. Retrieved table data is cached permanently if a cache path is supplied or for duration of the current R session. If the table is cached the function will check if a newer version is available and emit a warning message if the cached table is out of date.

**Usage**

```
get_cansim_connection(  
  cansimTableNumber,  
  language = "english",  
  format = "parquet",  
  partitioning = c(),  
  refresh = FALSE,  
  timeout = 1000,  
  cache_path = getOption("cansim.cache_path")  
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
format	(Optional) The format of the data table to retrieve. Either "parquet", "feather", or sqlite (default is "parquet").
partitioning	(Optional) Partition columns to use for parquet or feather formats.
refresh	(Optional) Valid options are FALSE (the default), TRUE, and "auto". When set to TRUE, forces a reload of data table, when set to "auto" it will refresh the table by downloading the newest version from StatCan if the table is out of date. If set to FALSE and the table is out of date a warning will be emitted to alert the user that the data is outdated.
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.
cache_path	(Optional) Path to where to cache the table permanently. By default, the data is cached in the path specified by 'getOption("cansim.cache_path")', if this is set. Otherwise it will use 'tempdir()'.

**Value**

A database connection to a local parquet, feather, or sqlite database with the StatCan Table data. The data frames after calling 'collect()' or 'collect\_and\_normalize()' are identical up to possibly different row order.

**Examples**

```
## Not run:
con <- get_cansim_connection("34-10-0013")

# Work with the data connection
glimpse(con)

## End(Not run)
```

---

```
get_cansim_cube_metadata
```

*Retrieve table metadata from Statistics Canada API*

---

**Description**

Retrieves table metadata given an input table number or vector of table numbers using either the new or old table number format. Patience is suggested as the Statistics Canada API can be very slow. The 'list\_cansim\_tables()' function can be used as an alternative to retrieve a (cached) list of CANSIM tables with (more limited) metadata.

**Usage**

```
get_cansim_cube_metadata(cansimTableNumber, type = "overview", refresh = FALSE)
```

**Arguments**

cansimTableNumber	A new or old CANSIM/NDM table number or a vector of table numbers
type	Which type of metadata to get, options are "overview", "members", "notes", or "corrections".
refresh	Refresh the data from the Statistics Canada API

**Value**

a tibble containing the table metadata

**Examples**

```
## Not run:  
get_cansim_cube_metadata("34-10-0013")  
  
## End(Not run)
```

---

```
get_cansim_data_for_table_coord_periods
```

*Retrieve data for specified Statistics Canada data product for last N periods for specific coordinates*

---

**Description**

Allows for the retrieval of data for a Statistics Canada data table with specific table and coordinates. This allows partial targeted download of tables and can be effectively combined with the `get_cansim_table_template` function to help pinpoint data series of interest. The StatCan API can only process 300 coordinates at a time, if more than 300 coordinates are specified the function will batch the requests to the API.

**Usage**

```
get_cansim_data_for_table_coord_periods(  
  tableCoordinates,  
  periods = NULL,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200,  
  factors = TRUE,  
  default_month = "07",  
  default_day = "01"  
)
```

**Arguments**

tableCoordinates	Either a list with vectors of coordinates by table number, or a (filtered) data frame as returned by get_cansim_table_template.
periods	Optional numeric value for number of latest periods to retrieve data for, default is NULL in which case data for all periods is downloaded. Alternatively this can be specified by coordinate if tableCoordinates is a data frame, this argument will be ignored if that data frame as a "periods" column.
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.
factors	(Optional) Logical value indicating if dimensions should be converted to factors. (Default set to TRUE).
default_month	The default month that should be used when creating Date objects for annual data (default set to "07")
default_day	The default day of the month that should be used when creating Date objects for monthly data (default set to "01")

**Value**

A tibble with data matching specified coordinate and period input arguments

**Examples**

```
## Not run:
get_cansim_data_for_table_coord_periods(list("35-10-0003"=c("1.1","1.12")),periods=3)

## End(Not run)
```

---

get\_cansim\_key\_release\_schedule

*Major economic indicator release schedule*

---

**Description**

Returns every release date of major economic indicators since March 14, 2012. This also includes scheduled future releases.

**Usage**

```
get_cansim_key_release_schedule()
```



**Value**

a tibble with data, and details for major economic indicator release

**Examples**

```
## Not run:  
get_cansim_key_release_schedule()  
  
## End(Not run)
```

---

`get_cansim_series_info_cube_coord`

*Retrieve series info for given table id and coordinates*

---

**Description**

Retrieves series information by coordinates

**Usage**

```
get_cansim_series_info_cube_coord(  
  cansimTableNumber,  
  coordinates,  
  timeout = 1000,  
  refresh = FALSE  
)
```

**Arguments**

<code>cansimTableNumber</code>	A new or old CANSIM/NDM table number or a vector of table numbers
<code>coordinates</code>	A vector of coordinates
<code>timeout</code>	Timeout for the API call
<code>refresh</code>	Refresh the data from the Statistics Canada API

**Value**

a tibble containing the table template

**Examples**

```
## Not run:  
get_cansim_table_template("34-10-0013")  
  
## End(Not run)
```

---

get\_cansim\_table\_info *Retrieve Statistics Canada data table information*

---

### Description

Returns table information given an NDM table catalogue number in English or French. Retrieved table information data is cached for the duration of the R session only.

### Usage

```
get_cansim_table_info(  
  cansimTableNumber,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200  
)
```

### Arguments

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

### Value

A tibble with the table overview information

### Examples

```
## Not run:  
get_cansim_table_info("34-10-0013")  
  
## End(Not run)
```

---

`get_cansim_table_last_release_date`*Get the latest release data for a StatCan table, if available*

---

**Description**

This can be used to check when a table has last been updated.

**Usage**

```
get_cansim_table_last_release_date(cansimTableNumber)
```

**Arguments**

```
cansimTableNumber  
    the NDM table number
```

**Value**

A datetime object if a release data is available, NULL otherwise.

**Examples**

```
## Not run:  
get_cansim_table_last_release_date("34-10-0013")  
  
## End(Not run)
```

---

`get_cansim_table_notes`*Retrieve Statistics Canada data table notes and column categories*

---

**Description**

Returns table notes given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

**Usage**

```
get_cansim_table_notes(  
  cansimTableNumber,  
  language = "en",  
  refresh = FALSE,  
  timeout = 200  
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

**Value**

A tibble with table notes.

**Examples**

```
## Not run:
get_cansim_table_notes("34-10-0013")

## End(Not run)
```

---

```
get_cansim_table_overview
```

*Retrieve Statistics Canada data table overview text*

---

**Description**

Prints table overview information as console output. In order to display table overview information, the selected CANSIM table must be loaded entirely to display overview information. Overview information is printed in console an in English or French, as specified.

**Usage**

```
get_cansim_table_overview(
  cansimTableNumber,
  language = "english",
  refresh = FALSE
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)

**Value**

none

**Examples**

```
## Not run:  
get_cansim_table_overview("34-10-0013")  
  
## End(Not run)
```

---

get\_cansim\_table\_short\_notes

*Retrieve Statistics Canada data table short notes*

---

**Description**

Returns table notes given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

**Usage**

```
get_cansim_table_short_notes(  
  cansimTableNumber,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200  
)
```

**Arguments**

cansimTableNumber	the NDM table number to load
language	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

**Value**

A tibble with the StatCan Notes for the table

**Examples**

```
## Not run:  
get_cansim_table_short_notes("34-10-0013")  
  
## End(Not run)
```

---

`get_cansim_table_subject`*Retrieve Statistics Canada data table subject detail*

---

### Description

Returns table subject detail given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

### Usage

```
get_cansim_table_subject(  
  cansimTableNumber,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200  
)
```

### Arguments

<code>cansimTableNumber</code>	the NDM table number to load
<code>language</code>	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
<code>refresh</code>	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
<code>timeout</code>	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

### Value

A tibble with the table subject code and name.

### Examples

```
## Not run:  
get_cansim_table_subject("34-10-0013")  
  
## End(Not run)
```

---

`get_cansim_table_survey`*Retrieve Statistics Canada data table survey detail*

---

### Description

Returns table survey detail given an NDM table number in English or French. Retrieved table information data is cached for the duration of the R session only.

### Usage

```
get_cansim_table_survey(  
  cansimTableNumber,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200  
)
```

### Arguments

<code>cansimTableNumber</code>	the NDM table number to load
<code>language</code>	"en" or "english" for English and "fr" or "french" for French language versions (default set to English)
<code>refresh</code>	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
<code>timeout</code>	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.

### Value

A tibble with the table survey code and name

### Examples

```
## Not run:  
get_cansim_table_survey("34-10-0013")  
  
## End(Not run)
```

---

```
get_cansim_table_template
```

*Retrieve table template from Statistics Canada API*

---

### Description

A table template consists of the dimensions and members and coordinates of a table that can be used to explore and filter table data before downloading subsets of the table. To add vector Ids to (a possibly filtered) template the 'add\_cansim\_vectors\_to\_template' function can be used.

### Usage

```
get_cansim_table_template(cansimTableNumber, language = "eng", refresh = FALSE)
```

### Arguments

cansimTableNumber	A new or old CANSIM/NDM table number or a vector of table numbers
language	Language for the dimension and member names, either "eng" or "fra"
refresh	Refresh the data from the Statistics Canada API

### Value

a tibble containing the table template

### Examples

```
## Not run:
get_cansim_table_template("34-10-0013")

## End(Not run)
```

---

```
get_cansim_table_url Retrieve a Statistics Canada data table URL given a table number
```

---

### Description

Retrieve URL of a table from the API given a table number. Offers a more stable approach than manually guessing the URL of the table.

### Usage

```
get_cansim_table_url(cansimTableNumber, language = "en")
```



**Arguments**

cansimTableNumber  
the NDM table number to load

language  
"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)

**Value**

String object containing URL for specified table number

**Examples**

```
## Not run:
get_cansim_table_url("34-10-0013")
get_cansim_table_url("34-10-0013", language = "fr")

## End(Not run)
```

---

get_cansim_vector	<i>Retrieve data for a Statistics Canada data vector released within a given time frame</i>
-------------------	---

---

**Description**

Allows for the retrieval of data for specified vector series for a given time window. Accessing data by vector allows for targeted extraction of time series. Discovering vectors of interest can be achieved using the StatCan table web interface or using `get_cansim_table_template` function to help pinpoint data series of interest, and then chaining the `add_cansim_vectors_to_template` function to add cansim vector information to the template data. The StatCan API can only process 300 coordinates at a time, if more than 300 coordinates are specified the function will batch the requests to the API.

**Usage**

```
get_cansim_vector(
  vectors,
  start_time = as.Date("1800-01-01"),
  end_time = Sys.time(),
  use_ref_date = TRUE,
  language = "english",
  refresh = FALSE,
  timeout = 200,
  factors = TRUE,
  default_month = "07",
  default_day = "01"
)
```

**Arguments**

vectors	The list of vectors to retrieve
start_time	Starting date in YYYY-MM-DD format, applies to REF_DATE or releaseTime, depending on use_ref_date parameter
end_time	Set an optional end time filter in YYYY-MM-DD format (defaults to current system time)
use_ref_date	Optional, TRUE by default. When set to TRUE, uses REF_DATE of vector data to filter, otherwise it uses StatisticsCanada's releaseDate value for filtering the specified vectors.
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.
factors	(Optional) Logical value indicating if dimensions should be converted to factors. (Default set to TRUE).
default_month	The default month that should be used when creating Date objects for annual data (default set to "07")
default_day	The default day of the month that should be used when creating Date objects for monthly data (default set to "01")

**Value**

A tibble with data for vectors released between start and end time

**Examples**

```
## Not run:
get_cansim_vector("v41690973", "2015-01-01")

## End(Not run)
```

---

```
get_cansim_vector_for_latest_periods
```

*Retrieve data for specified Statistics Canada data vector(s) for last N periods*

---

**Description**

Allows for the retrieval of data for specified vector series for the N most-recently released periods. Accessing data by vector allows for targeted extraction of time series. Discovering vectors of interest can be achieved using the StatCan table web interface or using `get_cansim_table_template` function to help pinpoint data series of interest, and then chaining the `add_cansim_vectors_to_template` function to add cansim vector information to the template data. The StatCan API can only process 300 coordinates at a time, if more than 300 coordinates are specified the function will batch the requests to the API.

**Usage**

```
get_cansim_vector_for_latest_periods(  
  vectors,  
  periods = NULL,  
  language = "english",  
  refresh = FALSE,  
  timeout = 200,  
  factors = TRUE,  
  default_month = "07",  
  default_day = "01"  
)
```

**Arguments**

vectors	The list of vectors to retrieve
periods	Numeric value for number of latest periods to retrieve data for, but default all data is retrieved.
language	"en" or "english" for English and "fr" or "french" for French language versions (defaults to English)
refresh	(Optional) When set to TRUE, forces a reload of data table (default is FALSE)
timeout	(Optional) Timeout in seconds for downloading cansim table to work around scenarios where StatCan servers drop the network connection.
factors	(Optional) Logical value indicating if dimensions should be converted to factors. (Default set to TRUE).
default_month	The default month that should be used when creating Date objects for annual data (default set to "07")
default_day	The default day of the month that should be used when creating Date objects for monthly data (default set to "01")

**Value**

A tibble with data for specified vector(s) for the last N periods

**Examples**

```
## Not run:  
get_cansim_vector_for_latest_periods("v41690973", 10)  
  
## End(Not run)
```

---

```
get_cansim_vector_info
```

*Retrieve metadata for specified Statistics Canada data vectors*

---

### Description

Allows for the retrieval of metadata for Statistics Canada data vectors

### Usage

```
get_cansim_vector_info(vectors)
```

### Arguments

vectors            a vector of cansim vectors

### Value

A tibble with metadata for selected vectors

### Examples

```
## Not run:  
get_cansim_vector_info("v41690973")  
  
## End(Not run)
```

---

```
list_cansim_cached_tables
```

*List cached cansim arrow and SQLite databases*

---

### Description

List cached cansim arrow and SQLite databases

### Usage

```
list_cansim_cached_tables(  
  cache_path = getOption("cansim.cache_path"),  
  refresh = FALSE  
)
```

### Arguments

cache\_path        Optional, default value is 'getOption("cansim.cache\_path")'.  
refresh            Optional, refresh the last updated date of cached cansim tables

**Value**

A tibble with the list of all tables that are currently cached at the given cache path.

**Examples**

```
## Not run:  
list_cansim_cached_tables()  
  
## End(Not run)
```

---

list_cansim_cubes	<i>Get overview list for all Statistics Canada data cubes</i>
-------------------	---

---

**Description**

Generates an overview table containing metadata of available Statistics Canada data cubes.

**Usage**

```
list_cansim_cubes(lite = FALSE, refresh = FALSE, quiet = FALSE)
```

**Arguments**

lite	Get the version without cube dimensions and comments for faster retrieval, default is FALSE.
refresh	Default is FALSE, repeated calls during the same session will hit the cached data.
quiet	Optional, suppress messages To refresh the code list during a running R session set to TRUE

**Value**

A tibble with available Statistics Canada data cubes, including NDM table number, cube title, start and end dates, achieve status, subject and survey codes, frequency codes and a list of cube dimensions.

**Examples**

```
## Not run:  
list_cansim_cubes()  
  
## End(Not run)
```

---

`remove_cansim_cached_tables`*Remove cached cansim SQLite and parquet database*

---

**Description**

Remove cached cansim SQLite and parquet database

**Usage**

```
remove_cansim_cached_tables(  
  cansimTableName,  
  format = c("parquet", "feather", "sqlite"),  
  language = NULL,  
  cache_path = getOption("cansim.cache_path")  
)
```

**Arguments**

<code>cansimTableName</code>	Vector of the table(s) to be removed, or a (filtered) table as returned by <code>'list_cansim_cached_tables'</code> with the list of tables to be removed.
<code>format</code>	Format of cache to remove, possible values are <code>"parquet"</code> , <code>"feather"</code> or <code>"sqlite"</code> or a subset of these (the default is all of these)
<code>language</code>	Language for which to remove the cached data. If unspecified ( <code>'NULL'</code> ) tables for all languages will be removed.
<code>cache_path</code>	Optional, default value is <code>'getOption("cansim.cache_path")'</code>

**Value**

`'NULL'`

**Examples**

```
## Not run:  
con <- get_cansim_connection("34-10-0013", format="parquet")  
remove_cansim_cached_tables("34-10-0013", format="parquet")  
  
## End(Not run)
```

---

search\_cansim\_cubes     *Search through Statistics Canada data cubes*

---

**Description**

Searches through Statistics Canada data cubes using a search term.

**Usage**

```
search_cansim_cubes(search_term, refresh = FALSE)
```

**Arguments**

search_term	User-supplied search term used to find Statistics Canada data cubes with matching titles, table numbers, subject and survey codes.
refresh	Default is FALSE. The underlying cube list is cached for the duration of the R sessions and will regenerate the cube list if set to TRUE

**Value**

A tibble with available Statistics Canada data cubes, listing title, Statistics Canada data cube catalogue number, deprecated CANSIM table number, survey and subject.

**Examples**

```
## Not run:  
search_cansim_cubes("Labour force")  
  
## End(Not run)
```

---

view\_cansim\_webpage     *View CANSIM table or vector information in browser*

---

**Description**

Opens CANSIM table or vector on Statistics Canada's website using default browser. This may be useful for getting further info on CANSIM table and survey methods.

**Usage**

```
view_cansim_webpage(cansimTableNumber = NULL)
```

**Arguments**

cansimTableNumber

CANSIM or NDM table number or cansim vectors with "v" prefix. If no number is provided, the vector search page on the Statistic Canada website will be opened.

**Value**

none

**Examples**

```
## Not run:  
view_cansim_webpage("34-10-0013")  
  
## End(Not run)
```



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