

# Install R package ctrdata

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## Install package ctrdata on an R system

The R Project website (<https://www.r-project.org/>) provides installers for the R system. It can be used with software products and graphical user interfaces such as R Studio, or Microsoft R Open, or from Visual Studio Code.

General information on the `ctrdata` package is available here: <https://rfhb.github.io/ctrdata/>.

In R, execute:

```
install.packages("ctrdata")
```

For using the development version of package `ctrdata`, install from GitHub:

```
# install package under development
install.packages(c("remotes"))
remotes::install_github("rfhb/ctrdata", dependencies = TRUE, build_vignettes = TRUE)
```

Either of the above should install package `ctrdata` into the user's library.

## Internet access via proxy

Functions in package `ctrdata` that start with `ctr...` require access to trial registers over the internet via the `https` protocol. Many organisations use transparent proxies that may *not* require users to do any configurations. However, if necessary, package `ctrdata` can use proxy settings set by users in their R session such as follows:

```
Sys.setenv(https_proxy = "your_proxy.server.domain:8080") # if needed
Sys.setenv(https_proxy_user = "your_userid:your_password") # if needed
```

## Databases to use

At this time, a PostgreSQL, DuckDB, an SQLite or a MongoDB (local or remote) database can be used with the package `ctrdata`. A full SQLite database is provided in the R package `RSQLite`. Suggested installation instructions for PostgreSQL are here and for a local MongoDB server are here; a remote MongoDB database server is accessible here. See here for a speed comparison of the databases; recommended: DuckDB, PostgreSQL or MongoDB local server.

| Purpose  | Function call  |
|--|--|
| Create <b>SQLite</b> database connection           | <code>dbc &lt;- nodbi::src_sqlite(dbname = "name_of_my_database", collection = "name_of_my_collection")</code>                     |
| Create <b>MongoDB</b> database connection          | <code>dbc &lt;- nodbi::src_mongo(db = "name_of_my_database", collection = "name_of_my_collection")</code>                          |
| Create <b>PostgreSQL</b> database connection       | <code>dbc &lt;- nodbi::src_postgres(dbname = "name_of_my_database"); dbc[["collection"]] &lt;- "name_of_my_collection"</code>      |
| Create <b>DuckDB</b> database connection           | <code>dbc &lt;- nodbi::src_duckdb(dbname = "name_of_my_database", collection = "name_of_my_collection")</code>                     |
| Use connection with <code>ctrdata</code> functions | <code>ctrdata::{ctrLoadQueryIntoDb, dbQueryHistory, dbFindIdsUniqueTrials, dbFindFields, dbGetFieldsIntoDf}(con = dbc, ...)</code> |

## Attach package `ctrdata`

After completing the installation, attach the package from the user's library. This will also check the availability of the additional installation requirements as mentioned above:

```
library(ctrdata)
```

Remember to respect the registers' terms and conditions (see `ctrOpenSearchPagesInBrowser(copyright = TRUE)`). Please cite this package in any publication as follows: Ralf Herold (2024). `ctrdata`: Retrieve and Analyze Clinical Trials in Public Registers. R package version 1.17.2. <https://cran.r-project.org/package=ctrdata>