

# Package: rCoros (via r-universe)

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**Title** Access COROS Training Hub Fitness Data

**Version** 0.1.0

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**Description** Provides a tidy interface to the 'COROS' Training Hub API (<<https://coros.com/traininghub>>), the web platform that accompanies 'COROS' GPS sports watches. Retrieves activities, daily wellness metrics (heart rate variability, resting heart rate, VO2 max and training load), workout programmes and training calendars. All results are returned as tibbles, ready for analysis with 'dplyr' and 'ggplot2'. Both the US and EU regional endpoints are supported.

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**Encoding** UTF-8

**Depends** R (>= 4.1.0)

**Imports** digest (>= 0.6.30), dplyr (>= 1.1.0), httr2 (>= 1.0.0), purrr (>= 1.0.0), tibble (>= 3.2.0)

**Suggests** ggplot2 (>= 3.4.0), knitr (>= 1.40), rmarkdown (>= 2.20), testthat (>= 3.0.0), withr (>= 2.5.0)

**VignetteBuilder** knitr

**URL** <https://github.com/mattyoreilly/rCoros>,  
<https://mattyoreilly.github.io/rCoros/>

**BugReports** <https://github.com/mattyoreilly/rCoros/issues>

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coros_activities	<i>List activities</i>
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## Description

Returns a tidy tibble of activities recorded within a date range, one row per activity.

## Usage

```
coros_activities(
  auth,
  start_day = format(Sys.Date() - 30, "%Y%m%d"),
  end_day = format(Sys.Date(), "%Y%m%d"),
  page = 1L,
  size = 30L,
  n_max = Inf
)
```

## Arguments

auth	A coros_auth object from <code>coros_login()</code> .
start_day	Start of date range in "YYYYMMDD" format. Defaults to 30 days ago.
end_day	End of date range in "YYYYMMDD" format. Defaults to today.
page	Page number for paginated results (default 1L).
size	Number of results per page (default 30L).
n_max	Maximum total activities to return. Set to Inf to fetch all pages automatically (default Inf).

**Value**

A `tibble::tibble()` with columns:

**activity\_id** Unique activity identifier (character).

**name** Activity name or remark.

**sport\_type** Numeric sport type code.

**sport\_name** Human-readable sport name.

**date** Date of activity (Date).

**start\_time** Start timestamp (POSIXct, UTC).

**duration\_s** Duration in seconds.

**duration\_min** Duration in minutes.

**distance\_m** Distance in metres.

**distance\_km** Distance in kilometres.

**elevation\_gain** Elevation gain in metres.

**avg\_hr** Average heart rate (bpm).

**calories** Calories (kcal).

**training\_load** Training load score.

**avg\_power** Average power (watts).

**device** Device name.

**Examples**

```
auth <- coros_login()

# All activities in the last 30 days
acts <- coros_activities(auth)

# Running and trail-running only
library(dplyr)
runs <- coros_activities(auth) |>
  filter(sport_type %in% c(100L, 102L))
```

---

`coros_activity_detail` *Fetch detailed metrics for a single activity*

---

**Description**

Returns a list of three tibbles — a one-row summary, per-lap splits, and time-in-zone heart rate data — for the given activity.

**Usage**

```
coros_activity_detail(auth, activity_id, sport_type)
```

## Arguments

`auth` A `coros_auth` object from `coros_login()`.  
`activity_id` Activity identifier (from `coros_activities()` `activity_id` column).  
`sport_type` Numeric sport type code (from `coros_activities()` `sport_type` column).

## Value

A named list with three tibbles:

`summary` One-row tibble with overall activity metrics.

`laps` One row per lap with splits.

`hr_zones` Heart-rate zone breakdown (seconds and percent).

## Examples

```
auth <- coros_login()
acts <- coros_activities(auth)

# Detail for the most recent activity
detail <- coros_activity_detail(
  auth,
  activity_id = acts$activity_id[[1]],
  sport_type = acts$sport_type[[1]]
)
detail$summary
detail$laps
detail$hr_zones
```

---

`coros_daily_metrics` *Fetch daily health and training metrics*

---

## Description

Returns a tidy tibble of per-day wellness metrics from the COROS `/analyse/dayDetail/query` endpoint, including HRV, resting heart rate, training load, VO2max, and stamina.

## Usage

```
coros_daily_metrics(
  auth,
  start_day = format(Sys.Date() - 28, "%Y%m%d"),
  end_day = format(Sys.Date(), "%Y%m%d")
)
```

## Arguments

<code>auth</code>	A <code>coros_auth</code> object from <code>coros_login()</code> .
<code>start_day</code>	Start of date range in "YYYYMMDD" format. Defaults to 28 days ago.
<code>end_day</code>	End of date range in "YYYYMMDD" format. Defaults to today.

## Value

A `tibble::tibble()` sorted by date with columns:

<b>date</b>	Calendar date (Date).
<b>hrv</b>	Average overnight HRV (ms).
<b>hrv_baseline</b>	Personal HRV baseline (ms).
<b>rhr</b>	Resting heart rate (bpm).
<b>training_load</b>	Daily training load.
<b>load_ratio</b>	Training load ratio (acute:chronic).
<b>tired_rate</b>	Fatigue rate.
<b>ati</b>	Acute training impulse.
<b>cti</b>	Chronic training impulse.
<b>t7d</b>	7-day training load.
<b>t28d</b>	28-day training load.
<b>vo2max</b>	Estimated VO2max (mL/kg/min).
<b>lthr</b>	Lactate threshold heart rate (bpm).
<b>ltspeed</b>	Lactate threshold speed.
<b>stamina</b>	Current stamina level.
<b>stamina_7d</b>	7-day stamina level.
<b>performance</b>	Performance score.
<b>tib</b>	Time in bed (minutes).

## Examples

```
auth <- coros_login()

# Last 28 days (default)
metrics <- coros_daily_metrics(auth)

# Custom range
metrics <- coros_daily_metrics(auth, start_day = "20240101", end_day = "20240131")
```

---

`coros_hrv`*Fetch recent HRV readings*

---

**Description**

Retrieves the last ~7 days of overnight HRV data from the COROS dashboard endpoint.

**Usage**

```
coros_hrv(auth)
```

**Arguments**

`auth` A `coros_auth` object from `coros_login()`.

**Value**

A `tibble::tibble()` sorted by date with columns:

**date** Calendar date (Date).

**hrv** Average overnight HRV (ms).

**baseline** Personal HRV baseline (ms).

**hrv\_sd** Standard deviation of overnight HRV (ms).

**See Also**

`coros_daily_metrics()` for a longer historical HRV series.

**Examples**

```
auth <- coros_login()
coros_hrv(auth)
```

---

`coros_login`*Authenticate with the COROS Training Hub API*

---

**Description**

Logs in with an email/password pair and returns an `auth` object that must be passed to every other `coros_*` function. Credentials are read from environment variables by default so they are never hard-coded in scripts.

**Usage**

```
coros_login(  
  email = Sys.getenv("COROS_EMAIL"),  
  password = Sys.getenv("COROS_PASSWORD"),  
  region = c("us", "eu")  
)
```

**Arguments**

email	COROS account e-mail. Defaults to the COROS_EMAIL environment variable.
password	COROS account password. Defaults to COROS_PASSWORD.
region	API region: "us" (default) or "eu".

**Details**

Set credentials once per session with:

```
Sys.setenv(COROS_EMAIL = "you@example.com", COROS_PASSWORD = "secret")
```

or add them to your ~/.Renviron file for persistence.

**Value**

A named list with fields `access_token`, `user_id`, `base_url`, `region`, and `timestamp`. Treat this object as opaque and pass it directly to other `coros_*` functions.

**Examples**

```
auth <- coros_login() # reads COROS_EMAIL / COROS_PASSWORD from env  
  
# EU region  
auth_eu <- coros_login(region = "eu")
```

---

coros_schedule	<i>Fetch the training calendar</i>
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---

**Description**

Returns a tibble of planned activities from the COROS training schedule within the given date window.

**Usage**

```
coros_schedule(  
  auth,  
  start_day = format(Sys.Date(), "%Y%m%d"),  
  end_day = format(Sys.Date() + 14, "%Y%m%d")  
)
```

**Arguments**

<code>auth</code>	A <code>coros_auth</code> object from <code>coros_login()</code> .
<code>start_day</code>	Start of the window in "YYYYMMDD" format. Defaults to today.
<code>end_day</code>	End of the window in "YYYYMMDD" format. Defaults to 14 days from today.

**Value**

A `tibble::tibble()` with one row per scheduled item and columns:

<b><code>plan_id</code></b>	Training plan identifier.
<b><code>id_in_plan</code></b>	Item position within the plan.
<b><code>plan_program_id</code></b>	Associated workout program identifier.
<b><code>happen_day</code></b>	Scheduled date (Date).
<b><code>name</code></b>	Workout name.
<b><code>sport_type</code></b>	Numeric sport type code.
<b><code>sport_name</code></b>	Human-readable sport name.
<b><code>estimated_min</code></b>	Estimated duration in minutes.
<b><code>completed</code></b>	Logical; TRUE if the workout has been completed.

**Examples**

```
auth <- coros_login()

# Upcoming two weeks
schedule <- coros_schedule(auth)

# Narrower window
schedule <- coros_schedule(
  auth,
  start_day = format(Sys.Date(), "%Y%m%d"),
  end_day   = format(Sys.Date() + 7, "%Y%m%d")
)
```

---

coros\_workouts

*List structured workout programs*

---

**Description**

Retrieves all workout programs stored in the COROS Training Hub, returning a list of two tidy tibbles: a summary of each workout and its constituent steps.

**Usage**

```
coros_workouts(auth)
```

### Arguments

auth                    A coros\_auth object from [coros\\_login\(\)](#).

### Value

A named list with two tibbles:

workouts One row per workout with columns id, name, sport\_type, sport\_name, duration\_min, and n\_steps.

steps One row per step, linked to workouts via workout\_id, with columns step\_name, duration\_s, duration\_min, power\_low\_w, power\_high\_w, and sets.

### Examples

```
auth <- coros_login()
result <- coros_workouts(auth)
result$workouts
result$steps
```

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