

Lilly Clinical Open Innovation REST API Reference

This is a reference guide for the Lilly Clinical Open Innovation API (LCOI-API). It is divided into these sections:

[Getting Started](#), [Trial Resource API Requests](#), [Topic Catalog API Requests](#), [Appendix](#)

Getting Started

Resource Overview

- All resources are accessed using HTTP
- Our server is located at <http://api.lillycoi.com>
- This document is for Version 1 of the api, which is read-only: <http://api.lillycoi.com/v1/>
- All responses are formatted as **JSON**
- Some resources support JSON that is specially formatted for use by the [MIT Exhibit application](#). ClinicalCollections.org is an example Django and JS app that consumes the exhibit format.
- Status codes that any resource may return are listed here: [Common Status Codes](#). Codes that are specific to a resource are listed in the documentation for that resource.
- When making requests to the API server, values that you supply are shown in *italics*.

Clinical Trial Resources

- The information returned by this resource is sourced from NIH clinicaltrials.gov registry. The data is refreshed daily.
- The responses are augmented with additional data such as geo-spatial location data, and ranges for dates and ages.
- Trials resources can be requested via search, list, or by trial id.
- Each resource has a description, URL, HTTP methods, parameters, formats, authentication, limits, examples, and specific status codes.
- See [appendix](#) for details on augmented data added to responses by Lilly COI.

/trials

Description

- This endpoint will return all trials.

Resource URL

<http://api.lillycoi.com/v1/trials.{format}>

HTTP Methods

- GET

Parameters

limit: (*optional, number, default: 10*)

- limits the number of results returned
- example: limit=20

offset: (*optional, number, default: 0*)

- determines where to begin getting data
- example: offset=23

fields: (*optional, string of comma separated fields names, defaults to all fields*)

- the response will be constrained to only the fields listed in this parameter. *NOTE:* only top-level fields will be targeted.
- see the [appendix](#) for a list of fields that can be supplied in this parameter
- example for .json request: fields=id,location

Formats

- .json
- .exhibit

Authentication Required: No

Rate Limit: No Limit

Example Usage

- <http://api.lillycoi.com/v1/trials.json>
- <http://api.lillycoi.com/v1/trials.json?limit=50>
- <http://api.lillycoi.com/v1/trials.json?offset=20&limit=100>
- <http://api.lillycoi.com/v1/trials.json?offset=20&limit=100&fields=id,location>

/trials/{id}

Description

- This endpoint will return a single trial
- {id} is an NCT identifier from clinicaltrials.gov

Resource URL

<http://api.lillycoi.com/v1/trials/{id}.{format}>

HTTP Methods

- GET

Parameters

fields: (*optional, string of comma separated fields names, defaults to all fields*)

- the response will be constrained to only the fields listed in this parameter. *NOTE:* only top-level fields will be targeted.
- example for .json request: fields=id,location

Formats

- .json
- .exhibit

Authentication Required: No

Rate Limit: No Limit

Example Usage

- <http://api.lillycoi.com/v1/trials/NCT00552448.json>
- http://api.lillycoi.com/v1/trials/NCT00552448.json?fields=id,overall_status,location

/trials/search

Description

- This endpoint performs a search against trial data. If the provider parameter is passed (i.e.: provider=ctgov), the search is performed on that provider's servers and returns IDs to get from our database.
- See [appendix](#) for details on the clinicaltrials.gov search engine.

Resource URL

<http://api.lillycoi.com/v1/trials/search.{format}>

HTTP Methods

- GET

Parameters

query: (*required, a string query*)

- the query to execute on a search provider
- the query syntax is provided in the provider's query language (See [appendix](#) for details on the clinicaltrials.gov search engine.)
- for clinicaltrials.gov, by default only the first 20 results are returned; to get more, include 'count' in the query, which represents the maximum number of trials to return from the query
- example: query=cond:spondylitis,recr:open,count:500

provider: (*optional, one of: 'ctgov', default: ctgov*)

- determines which search provider to use
- for this version of the API the clinicaltrials.gov search engine is the only one available
- example: provider=ctgov

fields: (*optional, string of comma separated fields names, defaults to all fields*)

- the response will be constrained to only the fields listed in this parameter. *NOTE:* only top-level fields will be targeted.
- example for .json request: fields=id,location

limit: (*optional, number, default: 20*)

- limits the number of results returned
- example: limit=30

offset: (*optional, number, default: 0*)

- determines where to begin getting data
- example: offset=12

Formats

- .json
- .exhibit

Authentication Required: No

Rate Limit: No Limit

Example Usage

- <http://api.lillycoi.com/v1/trials/search.json?query=cond:spondylitis,recr:open,count:500>
- <http://api.lillycoi.com/v1/trials/search.json?query=cond:spondylitis,recr:open,count:500&fields=id,location>
- <http://api.lillycoi.com/v1/trials/search.json?query=cond:spondylitis,recr:open,count:500&fields=id,location&offset=30&limit=:>

Topic Resources

- The Topics resources are cloned from the clinicaltrials.gov Topics taxonomy.
- See <http://clinicaltrials.gov/ct2/search/browse>

/studytopics/categories

Description

- This endpoint will return the root categories

Resource URL

<http://api.lillycoi.com/v1/studytopics/categories.{format}>

HTTP Methods

- GET

Parameters

- none

Formats

- .json

Authentication Required: No **Rate Limit:** No Limit **Example Usage**

- <http://api.lillycoi.com/v1/studytopics/categories>

/studytopics/categories/{parent_id}

Description

- This endpoint will return the sub categories of the passed parent category

Resource URL

http://api.lillycoi.com/v1/studytopics/categories/{parent_id}.{format}

HTTP Methods

- GET

Parameters

- none

Formats

- .json

Authentication Required: No Rate Limit: No Limit Example Usage

- <http://api.lillycoi.com/v1/studytopics/categories/conditions>

Appendix

Common Status Codes

Status Code	Description
200	Request succeeded with no error
404	url is not found
500	Request failed with an error

Augmented Data

- We copy data from clinicaltrials.gov into the LCOI repository. We do not modify the values in this data for the .json responses.
- Some data in the .exhibit responses are formatted with html to support layout.
- We augment clinicaltrials.gov data with the following geographic data:

Lilly COI Data	Format	Derived from	Type	Description
.location.geodata.latitude	.json	ct.gov facility address	float	Latitude (city level)
.location.geodata.longitude	.json	ct.gov facility address	float	Longitude (city level)
.location.geodata.original	.json	N/A	string	Data sent to the geo-encoding service
.location.geodata.formatted	.json	N/A	string	formatted version of the "original" field
location_latlong	.exhibit	ct.gov facility address	array of strings	latitude/longitude coordinate (city level)

When we inject CT.gov data into the LCOI repository, the following fields are added or enhanced by LCOI in support of Exhibit facets and views:

.exhibit field	comments
primary_outcomes	formatted w/ HTML by LCOI
pubmed_links	formatted w/ HTML by LCOI
results_links	formatted w/ HTML by LCOI
secondary_outcomes	formatted w/ HTML by LCOI
study_design	CT.gov string converted by LCOI to json array
completion_date_iso8601	added by LCOI when injected to LCOI repository
completion_date_range	added by LCOI when injected to LCOI repository
ctgov_results_link	added by LCOI when injected to LCOI repository

duration_months	added by LCOI when injected to LCOI repository
eligibility_maximum_age_range	added by LCOI when injected to LCOI repository
eligibility_minimum_age_range	added by LCOI when injected to LCOI repository
enrollment_range	added by LCOI when injected to LCOI repository
has_results	added by LCOI when injected to LCOI repository
last_changed_iso8601	added by LCOI when injected to LCOI repository
last_injected	added by LCOI when injected to LCOI repository
location_latlong	added by LCOI when injected to LCOI repository
primary_completion_date_iso8601	added by LCOI when injected to LCOI repository
primary_completion_date_range	added by LCOI when injected to LCOI repository
start_date_iso8601	added by LCOI when injected to LCOI repository
start_date_range	added by LCOI when injected to LCOI repository
type_name	added by LCOI when injected to LCOI repository
start_date_range	added by LCOI at http request time
completion_date_range	added by LCOI at http request time
primary_completion_date_range	added by LCOI at http request time

clinicaltrials.gov Search Engine

- See clinicaltrials.gov/ct2/help/help for explanation of CT.gov's search engine
- We pass search queries to the CT.gov server. If their service is down, then LCOI API searches will fail as well.
- The API uses a slightly different syntax for search expression. Search terms are separated by comma's instead of the & sign. Our API uses a colon in place of the = sign. Here is an example illustrating the syntactical differences:
 - **CT.gov API:** <http://clinicaltrials.gov/ct2/results?type=Intr&cond=Albinism>
 - **LCOI API:** <http://api.lillycoi.com/v1/trials/search.json?query=type:Intr,cond:Albinism>

Top Level Fields

- NIH has a page with [definitions](#) for data that we have sourced from their clinicaltrials.gov registry.
- The data returned in trial responses can be constrained to specific top-level fields in .json and .exhibit Trial responses.
- The LCOI .json format mimics the [CT.gov XML schema](#)

Here are the top-level fields for the .json format responses:

.json Top-level Fields	Type	Source
acronym	string	CT.gov
arm_group	array	CT.gov
attributes	array	CT.gov
biospec_descr	object	CT.gov
biospec_retention	string	CT.gov
brief_summary	object	CT.gov
brief_title	string	CT.gov
clinical_results	object	CT.gov
completion_date	string	CT.gov
condition	array	CT.gov
condition_browse	object	CT.gov
detailed_description	object	CT.gov

eligibility	object	CT.gov
end_date	string	CT.gov
enrollment	object	CT.gov
firstreceived_date	object	CT.gov
firstreceived_results_date	string	CT.gov
has_expanded_access	string	CT.gov
id	string	CT.gov
id_info	object	CT.gov
intervention	array	CT.gov
intervention_browse	object	CT.gov
is_fda_regulated	string	CT.gov
is_section_801	string	CT.gov
keyword	array	CT.gov
last_injected	string	LCOI
lastchanged_date	object	CT.gov
link	array	CT.gov
location	array	CT.gov
location_countries	object	CT.gov
number_of_arms	string	CT.gov
number_of_groups	string	CT.gov
official_title	string	CT.gov
overall_contact	object	CT.gov
overall_contact_backup	object	CT.gov
overall_official	array	CT.gov
overall_status	string	CT.gov
oversight_info	object	CT.gov
phase	string	CT.gov
primary_completion_date	object	CT.gov
primary_outcome	array	CT.gov
reference	array	CT.gov
removed_countries	object	CT.gov
required_header	object	CT.gov
responsible_party	object	CT.gov
results_reference	array	CT.gov
secondary_outcome	array	CT.gov
source	string	CT.gov
sponsors	object	CT.gov
start_date	object	CT.gov
study_design	string	CT.gov
study_type	string	CT.gov
verification_date	object	CT.gov
why_stopped	string	CT.gov

Here are the top-level fields for the .exhibit format responses:

.exhibit Top-level Fields	Type	Source
acronym	string	CT.gov

alt_link	string	CT.gov
arm_groups	array	CT.gov
biospec_description	string	CT.gov
biospec_retention	string	CT.gov
brief_summary	string	CT.gov
cities	array	CT.gov
collaborators	array	CT.gov
completion_date	string	CT.gov
completion_date_iso8601	string	LCOI
completion_date_range	string	LCOI
completion_date_type	string	CT.gov
condition_mesh_terms	array	CT.gov
conditions	array	CT.gov
countries	array	CT.gov
ctgov_results_link	string	LCOI
detailed_description	string	CT.gov
duration_months	num	LCOI
eligibility_criteria	string	CT.gov
eligibility_gender	string	CT.gov
eligibility_healthy_volunteers	string	CT.gov
eligibility_maximum_age_range	string	LCOI
eligibility_maximum_age_years	num	CT.gov
eligibility_minimum_age_range	string	LCOI
eligibility_minimum_age_years	num	CT.gov
eligibility_sampling_method	string	CT.gov
eligibility_study_population	string	CT.gov
enrollment	num	CT.gov
enrollment_range	string	LCOI
enrollment_type	string	CT.gov
funded_by	string	CT.gov
has_expanded_access	string	CT.gov
has_results	string	CT.gov
has_results	string	LCOI
health_authorities	array	CT.gov
id	string	CT.gov
intervention_mesh_terms	array	CT.gov
intervention_types	array	CT.gov
interventions	array	CT.gov
is_fda_regulated	string	CT.gov
is_section_801	string	CT.gov
keywords	array	CT.gov
label	string	CT.gov
last_changed	string	CT.gov
last_changed_iso8601	string	LCOI
last_injected	string	LCOI

lead_sponsor	string	CT.gov
lead_sponsor	string	CT.gov
location_latlong	array	LCOI
locations	array	CT.gov
nct_id	string	CT.gov
number_of_arms	num	CT.gov
official_title	string	CT.gov
org_study_id	string	CT.gov
overall_contact_backup_email	string	CT.gov
overall_contact_backup_last_name	string	CT.gov
overall_contact_backup_phone	string	CT.gov
overall_contact_backup_phone_extension	string	CT.gov
overall_contact_email	string	CT.gov
overall_contact_last_name	string	CT.gov
overall_contact_phone	string	CT.gov
overall_contact_phone_extension	string	CT.gov
overall_officials	array	CT.gov
overall_status	string	CT.gov
primary_completion_date	string	CT.gov
primary_completion_date_iso8601	string	LCOI
primary_completion_date_range	string	LCOI
primary_completion_date_type	string	CT.gov
primary_measures	array	CT.gov
primary_outcomes	array	CT.gov formatted w/ LCOI HTML
pubmed_links	array	CT.gov formatted w/ LCOI HTML
responsible_party_name_title	string	CT.gov
responsible_party_organization	string	CT.gov
results_links	array	CT.gov formatted w/ LCOI HTML
secondary_id	array	CT.gov
secondary_measures	array	CT.gov
secondary_outcomes	array	CT.gov formatted w/ LCOI HTML
start_date	string	CT.gov
start_date_iso8601	string	LCOI
start_date_range	string	LCOI
states	array	CT.gov
study_design	array	CT.gov string converted by LCOI to array
study_phase	string	CT.gov
study_type	string	CT.gov
type_name	string	LCOI
url	string	CT.gov
why_stopped	string	CT.gov

Comments

Janakiraman GOPINATH says:

JANUARY 13, 2013 AT 12:58 AM



Hello, My name is GOPINATH and I work for Merck & CO. I am trying out the API's, it works great, however I always get null for clinical_results. I know this trial has data in clinicaltrials.gov and I am not sure whether I am using the API wrong or the clinical_results does not work. Please let me know either way how can I access clinical_results using this API. I checked with few other trials as well for which I know clinicaltrials.gov has results.

Regards
GOPI

http://api.lillycoi.com/v1/trials/search.json?query=id:NCT00092677,count:20&fields=id,clinical_results



davecrumbacher says:

JANUARY 14, 2013 AT 6:28 PM

Gopi, thank you for your interest in our API. The clinical_results element in the clinicaltrials.gov XML schema is very new (see <http://clinicaltrials.gov/ct2/html/images/info/public.xsd>). At this time it appears that while the clinical_results element is present in the schema, the data is not being provided in the XML view of the trial (which is how we get the data). I have reached out to my contact at clinicaltrials.gov to see if we can get an update on this and will relay any pertinent info I get.

Regards,
Dave



davecrumbacher says:

JANUARY 14, 2013 AT 7:38 PM

Gopi, we have discovered that clinicaltrials.gov does indeed provide study results in XML (see <http://clinicaltrials.gov/ct2/resources/download>), but we are currently not downloading that data. We will look into what it will take to import this data and make it available through our API.

Thanks,
Dave



GOPI says:

JANUARY 14, 2013 AT 7:13 PM

Hello David, Thanks for your response. I am using ClinicalTrials.gov and I can consistently see the data in clinical_results for the trials which says "has results" in the XML. We have developed an application using Clinical Trials.gov data directly, and so far I have not encountered any situation where the trial says "has results" and there is no data in clinical_results.

We wanted to switch over and start using lilly api due to the the additional attributes to add to the dataset. I am trying a small POC to see what it would take to switch over and thatz how I noticed it.

I am attaching 3 example trials, they all have clinical results in the xml.

<http://clinicaltrials.gov/show/NCT00462748?resultsxml=true>

<http://clinicaltrials.gov/show/NCT00654628?resultsxml=true>

<http://clinicaltrials.gov/show/NCT00783263?resultsxml=true>

Regards
GOPI



davecrumbacher says:

JANUARY 14, 2013 AT 8:14 PM

Yes, you are right. I have checked and we are currently pulling data from clinicaltrials.gov without the results. We will look into seeing what it will take to include the results data. Thank you for bringing this to our attention.

Regards,
Dave



davecrumbacher says:

JANUARY 15, 2013 AT 3:30 PM

Gopi, we have just pushed an update to our API that now includes the clinical results data. Can you please take a look and see if it is working as you expect? Thank you.



GOPI says:

JANUARY 15, 2013 AT 4:09 PM

Dave, Thanks I checked it and it works

Regards
GOPI



davecrumbacher says:

JANUARY 15, 2013 AT 4:40 PM

Glad to hear it works for you, Gopi. Thanks again for your feedback!



Jerry Matczak says:

JANUARY 17, 2013 AT 7:12 PM

Hi GOPI – any chance you might be working with or know of Greg T. at Merck? Just curious. He and I chatted a bit at the DPharm conference in Boston and I was curious whether your effort might be connected to Greg in any way. If so, please pass along greetings. Thanks for taking an interest in the API and please do feel free to let us know of ways it might be improved.



GOPI says:

JANUARY 17, 2013 AT 9:10 PM

Hello Jerry, Yes I know him well. Gregg is aware of this work and he is helping me to stand in a framework for this development

Regards
GOPI



Jerry Matczak says:

JANUARY 18, 2013 AT 8:26 PM

Thanks much GOPI – please do pass on my best wishes. I'd welcome a reconnection with Gregg at some point, as he was just getting started when we chatted. And, if there's anything we might collaborate on we're certainly open to that.



GOPI says:

JANUARY 30, 2013 AT 11:59 AM

Hello Jerry and Dave, Using your API I have developed an IPAD app and I wanted to share and collect your feedback, I also wanted to discuss further on Clinical Collections, Can you please send your official email through which I can contact you ?

REgards
GOPI



Jerry Matczak says:

JANUARY 30, 2013 AT 2:29 PM

HI GOPI! We're very excited to learn more about the IPAD app and to have the discussion on Clinical Collections. If you could send a quick e-mail to coi@Lilly.com I'll send along a response from my official Lilly e-mail that we can use to coordinate the discussions. Thanks for sharing!



Gregory Vaughan says:

AUGUST 6, 2013 AT 11:45 AM

Hi guys, just a little bug report, the fields parameter for the /trials/{id} endpoint as documented above seems not to work, all fields are returned. Example:
<http://api.lillycoi.com/v1/trials/NCT00462748.json&fields=id,location> However
<http://api.lillycoi.com/v1/trials/search.json?query=id:NCT00462748,count:1&fields=id,location>
works fine and achieves the same thing. Just starting to tinker with this, thanks for what you've done here.



davecrumbacher says:

AUGUST 6, 2013 AT 2:51 PM

Gregory,

Thanks for your interest in our API. The first URL you provided is malformed. If you use a question mark instead of an ampersand, it will work correctly —

<http://api.lillycoi.com/v1/trials/NCT00462748.json?fields=id,location>

Let us know if we can of any more assistance.



Gregory Vaughan says:

AUGUST 6, 2013 AT 3:04 PM

That's what I get for copying and pasting instead of thinking; but note that the example in your documentation above makes the same error. Thanks!



davecrumbacher says:

AUGUST 6, 2013 AT 3:35 PM

Ah yes, you are right. So WE had the malformed URL. I have updated the document accordingly, and also used a real example trial that better shows how the filtering works. Thanks for bringing this to our attention!



Hiking My Desk (@hikingmydesk) says:

NOVEMBER 1, 2013 AT 11:33 AM

Do you have any plans to support searches which would compare to CT.gov's RSS feed? Currently, I can create an RSS feed out of an arbitrary search scoped to condition "Show studies that were added or modified in the last 14 days".

This is useful for keeping my local data in sync with CT; ideally, I just want to poll for all studies which were changed in the n hours since the last sync.

Thanks for the great work!



davecrumbacher says:

NOVEMBER 1, 2013 AT 11:46 AM

Thanks for your interest in our API. At this time we do not have any plans to support searches against the clinicaltrials.gov RSS feed. We have found that there are some changes made to trials that are not reflected in the RSS feed (although few), so we are doing a full compare on a daily basis (note the clinicaltrials.gov site updates its data once a day). But your question is helpful to know there is interest in such information. Our team will discuss this for future possibilities.

Thanks again!

Kate Lau says:

DECEMBER 26, 2013 AT 8:27 PM



Hello, My name is Kate Lau and I am working for my challenge on the Patient Engagement Project.

I am trying out the API's (get a list of clinical trials, get clinical detail by ID), it works great. However, I am trying to query an impact explanation of a specific clinical trial and a detail description of the treatment, However I can not find out any relevant information on the clinical detail.

I am not sure whether I am using the API wrong or the impact and detail description of the treatment does not store on clinical.gov. Please let me know either way how can I access to any information relevant to impact and detail description of the treatment/ trial by using this API.

Regards
Kate.



Jerry Matczak says:

DECEMBER 30, 2013 AT 1:35 PM

Hi Kate. It is quite possible that the impact and detail description of the treatment is not available in Clinicaltrials.gov. A suggestion would be to query using the same NCTID (the unique ClinicalTrials.gov identifier) for the trial you are interested in directly from Clinicaltrials.gov web-site, and then compare the results with what is returned from the API. If you find the data you need from the ClinicalTrials.gov directly but can't find it in the API then we know there's an issue with the API. Please give this a try, and let us know what you find. If there is an API issue I'll pass the issue on to our technical team when they return in the New Year.



Kate Lau says:

DECEMBER 31, 2013 AT 5:15 AM

Hi Jerry,

Thank for your suggestion. I have made a search clinical trial detail by Lilly API and ClinicalTrial.gov. The search results is really different . The Detail Description, Eligibility, Location are available on ClinicalTrial.gov, but not available on the Lilly API's result.

Please refer to <http://api.lillycoi.com/v1/trials/NCT00843700.json>

and [http://clinicaltrials.gov/ct2/show/NCT00843700?](http://clinicaltrials.gov/ct2/show/NCT00843700?term=Effectiveness+of+IPT+Adapted+for+Depressed+Women+With+Trauma+Histories+in+a+Commun)

[term=Effectiveness+of+IPT+Adapted+for+Depressed+Women+With+Trauma+Histories+in+a+Commun](http://clinicaltrials.gov/ct2/show/NCT00843700?term=Effectiveness+of+IPT+Adapted+for+Depressed+Women+With+Trauma+Histories+in+a+Commun)

Thank for any advice. and Happy New Year !



Jerry Matczak says:

JANUARY 2, 2014 AT 3:51 PM

Hi Kate,

Happy New Year! It looks like the data retrieved does match what's in CT.gov. Although he data is returned in JSON format (as the API enables), the data is the same. As example, search for "eligibility" (or the other attributes you mention) in the link you shared to the returned data from the API and you'll see the data matches what's on the CT.gov page. Here are two blog posts that give a little more info about the API (<http://portal.lillycoi.com/2012/07/10/lcoi-api-series-introducing-the-lilly-clinical-open-innovation-api/> and <http://portal.lillycoi.com/2012/07/20/lcoi-api-series-features-json-and-on/>). We'll have folks in the office next week who can help provide a bit more guidance if you like. Still, I wanted to share that the links you shared confirm that the data is the same. Hope this helps some!



Kate Lau says:

JANUARY 2, 2014 AT 8:17 PM

Hi Jerry,

Thank you so much , now I got the same data in Detail Description, Eligibility, Location. Your

suggested links are really helpful. Again, thank you very much.



Kate Lau says:

JANUARY 7, 2014 AT 4:21 AM

Hello,

One quick question, do you support the API to update/retrieve schedule with health provider/researcher? Thank in advance



davecrumbacher says:

JANUARY 7, 2014 AT 6:48 AM

Hello Kate. No, our API does not manage schedules for the investigator sites. At this time we only reflect the information that was provided to clinicaltrials.gov. For investigator sites this includes facility and contact information.



Kate Lau says:

JANUARY 7, 2014 AT 9:20 PM

Hi Davecrumbacher, thank for your prompt response.



Roger Serrat says:

JANUARY 13, 2014 AT 5:56 AM

Hi,

we are testing the API and we are trying to search by country or state besides the condition or others fields, but we don't know how do we have to build the GET request.

If we search only by disease (e.g. fabry disease) and status (open) we use

<http://api.lillycoi.com/v1/trials/search.json?query=cond:fabry,recr:open>. How can we add here the country or state fields?

Thanks.



davecrumbacher says:

JANUARY 13, 2014 AT 12:09 PM

Hi Roger. The terms used for filtering by country and state are a little tricky. We are using the same terms that clinicaltrials.gov uses in their advanced search — <http://clinicaltrials.gov/ct2/search/advanced>, but applying them to the format of our API.

For example, to limit your example to studies in Germany, it would be

<http://api.lillycoi.com/v1/trials/search.json?query=cond:fabry,recr:open,cntry1=EU%3ADE>. If you wanted to filter by a US state, say California, it would be <http://api.lillycoi.com/v1/trials/search.json?query=cond:fabry,recr:open,state1=NA%3AUS%3ACA>. You can get the values for the various countries and states by viewing the source of the clinicaltrials.gov advanced search page. Look for the select elements with ID "Country1", "State1", "Country2", "State2", etc. and see the values of the options elements within each.

Note the %3A is a URL encoded colon, which is necessary because a colon is a reserved character in our API.

I hope this helps. Let us know if you need any additional assistance. Thanks for using our API!



mpheindl says:

MARCH 29, 2014 AT 3:17 PM

Hi,

Thanks for all of your work.

Under the .exhibit query, in the "primary_outcomes" field, there is a key named "SI". What does this

acronym mean? Is there any standard field that indicates if the outcome of a study was positive or negligible?



davecrumbacher says:

MARCH 31, 2014 AT 2:34 PM

Thanks for your question. "SI" stands for safety issue. This is a field provided by clinicaltrials.gov. Here is the help text they provide on this field —

http://clinicaltrials.gov/ct2/help/safety_issue.

To our knowledge, there is no specific field indicating study results such as "positive or negligible". There are, however, two fields in the data available through our API that may be helpful:

1. A Lilly COI derived field indicating whether or not results have been posted ("has_results")
2. The associated clinicaltrials.gov link for viewing results ("ctgov_results_link")

Here is an example using our ClinicalCollections application that makes use of these two fields for filtering on results and providing links to the results:

http://www.clinicalcollections.org/trials/viewer?phase=1&cond=ALS&title=Advanced%20Search%20%3E%20ALS%20Phase%20II#has_results=Yes&

Let us know if you have any other questions. Thanks for using our API!



erin says:

JUNE 4, 2014 AT 10:14 AM

Thanks so much for this wonderful resource! We've been using your API, and had a few questions about how often it's updated, and which studies were included in the results from ClinicalTrials.gov and which are not.

For example, a "completed" trial from May 25 that appears on ClinicalTrials.gov (like this study:

<http://clinicaltrials.gov/ct2/show/NCT02152865>) returns no results from your API

(<http://api.lillycoi.com/v1/trials/NCT02152865.json>) whereas a different "completed" study from on the

same day (<http://clinicaltrials.gov/ct2/show/NCT02149979>) returns perfect results from your API

(<http://api.lillycoi.com/v1/trials/NCT02149979.json>)

Do you have a certain selection criteria for which studies you include and which you don't? Any information would be very helpful! Thanks and all the best.



Jerry Matczak says:

JUNE 4, 2014 AT 11:03 AM

Hi erin – thank you for using the API, and for your questions. We do include all studies from ClinicalTrials.gov, and update nightly any changes made to the source CT.gov data. However – you've helped us identify a problem we are having with our update process. Our technical team is on it, and we expect to have this problem addressed today. Thank you so much for bringing this problem to our attention! We'll report back here when the problem is solved.



erin says:

JUNE 4, 2014 AT 11:05 AM

Thanks so much Jerry! That would be amazing. You guys are awesome!



Jerry Matczak says:

JUNE 4, 2014 AT 2:20 PM

erin (and all!) – We have addressed the problem, and all should be well now. Please do let us know if we may be of assistance. Again, thank you for letting us know!

erin says:



JUNE 4, 2014 AT 2:25 PM

Fantastic! Thanks so much for your incredibly fast response. This really is a wonderful API, thanks for taking such good care of it!



erin says:

JUNE 4, 2014 AT 4:06 PM

Hi again Jerry! Just wondering – is your code open source? If so, where might it be available?



Jerry Matczak says:

JUNE 9, 2014 AT 12:26 PM

Hi erin (and all). The API code is not open source currently. We're in process of working through our long term strategy, while continuing to forge ahead with some nearer term advances in the API. We'll be sharing more as we evolve on these fronts.



Atul says:

JUNE 16, 2014 AT 5:27 PM

1. Is there a nomenclature (dictionary of conditions) that could be shown to users as a drop down (ajax) when searching for conditions such lung cancer.
2. Same for location? That is when one enters the first few letters, choices show up.
3. Also how to use distance from a zip code or location as a search/filtering criteria?



davecrumbacher says:

JUNE 17, 2014 AT 2:09 PM

Hello Autl. Thanks for your interest in our API. We do extract study topics from clinicaltrials.gov that may help. See the "studytopics" section on this reference page for more info. You can do a simple filter on the results by adding a "filter=" query parameter, e.g.:

<http://api.lillycoi.com/v1/studytopics/links/conditions?filter=lung>

Use the "callback=" parameter to wrap the result as a JSONP callback.

As for your last two questions, we actually developed a sample app that demonstrates these features — <http://trials4me.lillycoi.com>. This app actually has its own API that includes these two features:

1. Cities: <http://trials4me.lillycoi.com/cities/us/> and <http://trials4me.lillycoi.com/cities/ous/>. It will return a maximum of 10 results that match the string. So the more characters you provide, the better the results will be of course. Note these results come from a cities database (<http://download.geonames.org/export/dump/cities1000.zip>) for the purpose of the Trials4Me app. They are not associated with the actual cities in the clinicaltrials.gov data.

2. Proximity: <http://trials4me.lillycoi.com/near?query=&lat=&lng=&mi=>. It will return the trials that have locations within the radius of the location specified, arranged by location. You can use km instead of mi to specify kilometers for the radius. The query parameter uses the same format as the trials API described on this page (see /trials/search endpoint). For example:

<http://trials4me.lillycoi.com/near?query=cond:asthma,recr:open&lat=41.85&lng=-87.65&mi=300>

Also, instead of providing lat/lng coordinates, you can provide an address, e.g.:

<http://trials4me.lillycoi.com/near?query=cond:asthma,recr:open&addr=1600+Pennsylvania+Avenue+NW,Washington,+DC+20500&mi=3>

A couple notes:

1. All of these API calls can be wrapped with JSONP by adding the "callback=" parameter.
2. The API at trials4me.lillycoi.com is only a sample. While the data is updated daily, it is not supported

and performance may vary depending on how it is called.

I hope this helps. Let us know if you have any further questions.



Atul K says:

JUNE 19, 2014 AT 12:52 AM

Dear Dave, Greatly appreciate for your response. At <http://api.lillycoi.com> searching by long/lat is unavailable while at <http://trials4me.lillycoi.com>, data related to eligibility/etc is unavailable. How do we access access the data points comprehensively?



davecrumbacher says:

JUNE 19, 2014 AT 10:04 AM

Atul, you are correct. The Trials4Me app provides limited trial information in its API. At this time there isn't a single API to do what you want, but what you could do is mash up the two APIs, keyed on NCT ID. i.e. once you do the Trials4Me API call, you can use the resulting NCT IDs to call the main trials API to get the eligibility/etc info.



Atul K says:

JUNE 20, 2014 AT 11:29 AM

Hello Dave, Greatly appreciate your feedback!

1. How do we get around the problem of having to make multiple calls? For example for retrieving 10 records we end up making 11 calls. Which significantly degrades performance.
2. Would one way be for you to club the additional information in your trials4me api or for you to allow /trials/{id} API to accept multiple NCT IDs?
3. Furthermore, does trials4me API support offset and limit?

Have a great weekend! Hopefully its as nice in Indiana as it is on Long Island. Cheers.



davecrumbacher says:

JUNE 20, 2014 AT 12:08 PM

Atul, you can retrieve multiple NCT IDs using our trials API by passing through a query to clinicaltrials.gov. For example:

<http://api.lillycoi.com/v1/trials/search?query=id:NCT02017795+OR+NCT01446315+OR+NCT00688792+OR+NCT02091869+OR+NCT>

I believe clinicaltrials.gov supports up to 50 NCT IDs using this approach.

The Trials4Me API does not support offset and limit at this time, as it was developed primarily for the Trials4Me web application instead of being used as a "first class" API.

I hope this helps. Thanks again for your interest in our work.



Sourabh says:

OCTOBER 28, 2014 AT 12:14 AM

Hello Dave,

This is Sourabh on behalf of Atul. As you said we're using trials4me api for Proximity search of clinical trial. It was working fine but today it stopped working as expected and giving no results. It is also not working on <http://trials4me.lillycoi.com/>. Please let me know if you have modified your api.



davecrumbacher says:

OCTOBER 28, 2014 AT 9:32 AM

Hello Sourabh. We too see this problem and are looking into it. I will let you know when we

have an update.



davecrumbacher says:

OCTOBER 28, 2014 AT 6:48 PM

Sourabh, the problem has been resolved, so the API is now working again. Please let us know if you have any questions. Thanks.



Sourabh says:

OCTOBER 29, 2014 AT 12:29 AM

Thanks Dave, One thing I wanna know is regarding eligibility criteria. The api gives eligibility criteria as string or text block containing all inclusion and exclusion criteria. Also it is not consistent with one to another clinical trial as for some clinical trials criteria are numbered while in some they are having hyphen(-) instead numbers. Is there any api to get all these as separate criteria instead a single text block or any way to segregate the text block in to different criteria. Please suggest and thanks in anticipation.



Tyler Trueg says:

OCTOBER 30, 2014 AT 3:59 PM

Hi Sourabh! The eligibility criteria pulled from our V1 API is structured the same way it is presented from clinicaltrials.gov: a string of text from a free-text block. You are correct in that it can contain both inclusion and exclusion criteria and structure/format is highly dependent on the sponsor. We do not restructure this prior to being stored in the API.

We are currently working to create a more consistent and structured representation of eligibility criteria based on the information available via clinicaltrials.gov. We are calling these “target profiles” (read our latest post about the project here: <http://portal.lillycoi.com/2014/09/10/aiming-at-target-profiles-to-create-better-patient-experiences/>).

All target profiles created will be made available via our V2 API. For more information on how to use the V2 API and about how to access target profiles, go to <https://developer.lillycoi.com>. Feel free to use the forums if you have any questions or comments.
