

EMBASE 102

SEARCHING IN EMBASE

OPTIMAL METHODS OF FINDING BIOMEDICAL LITERATURE

This is the second in our series of guides to Embase. It shows you how to use the six search forms to retrieve biomedical literature. You'll see which search form best fits the needs of each search type and learn the definitions of the mapping options for Embase.

Search options

Embase has six search options: Quick, Advanced, Drug, Disease, Device and Article. You can choose your search option from the Search dropdown menu at the top left of any page.

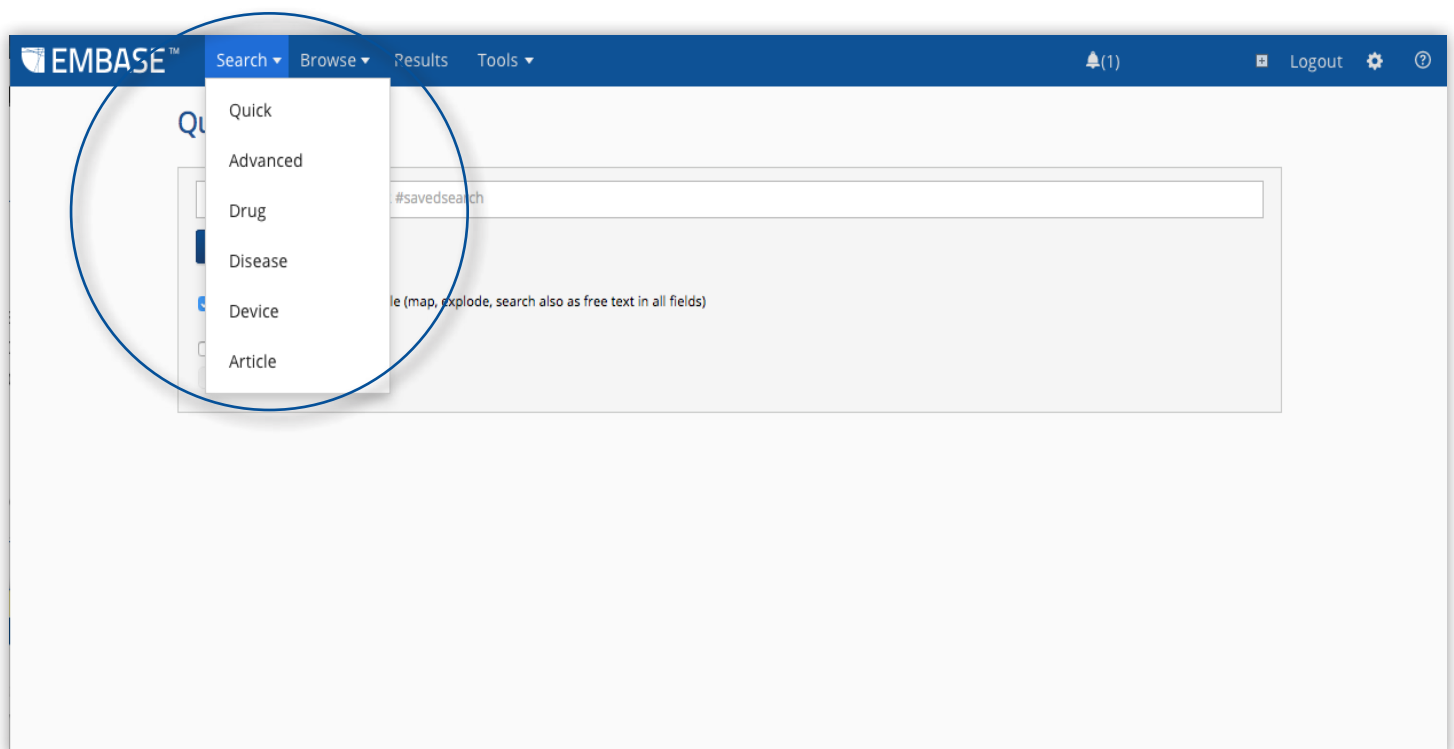


Figure 1. Access the search options from the Search dropdown menu.

Quick Search allows you to perform quick and easy searches using key words and phrases. Advanced Search gives you a whole range of options to structure your search for greater precision: you can limit results to those that mention your search query in a specific search field or limit your search to records that are most commonly used in evidence-based medicine. Drug, Disease and Device Searches have specialist options for searches focused on drugs, diseases and medical devices, respectively. Article Search lets you track down specific references.

The input field

In all of the search forms, the autocomplete function suggests the term to use from Emtree, the biomedical thesaurus that is used to index the content in Embase.

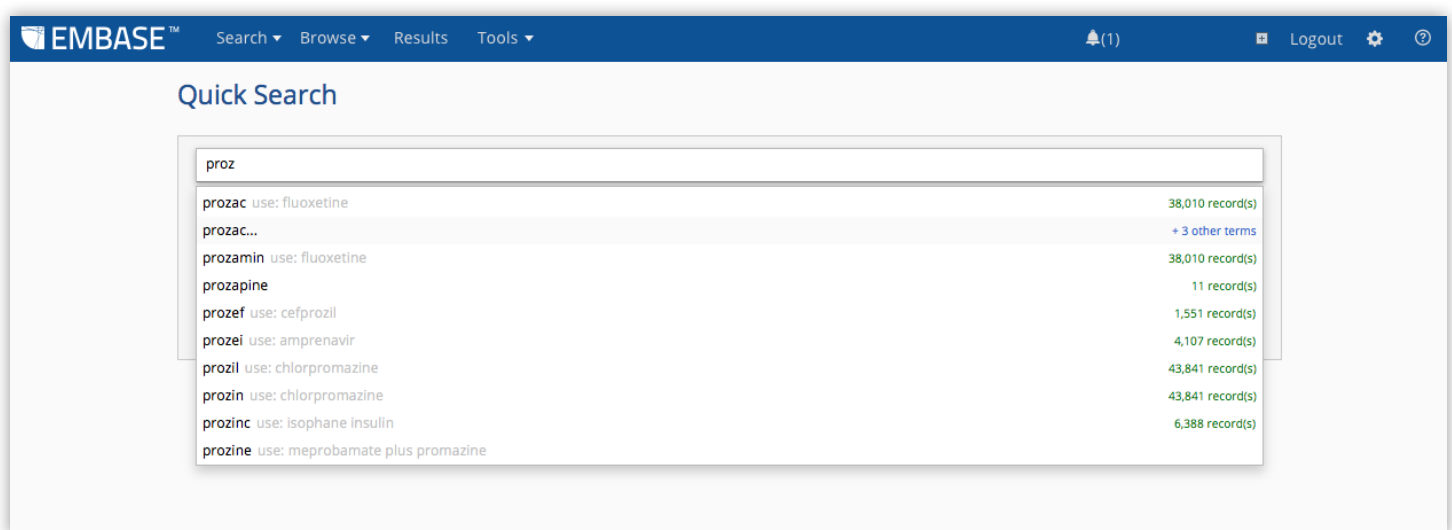


Figure 2. The terms from Emtree are suggested when you start typing in the search field.

Definitions of the Embase mapping options

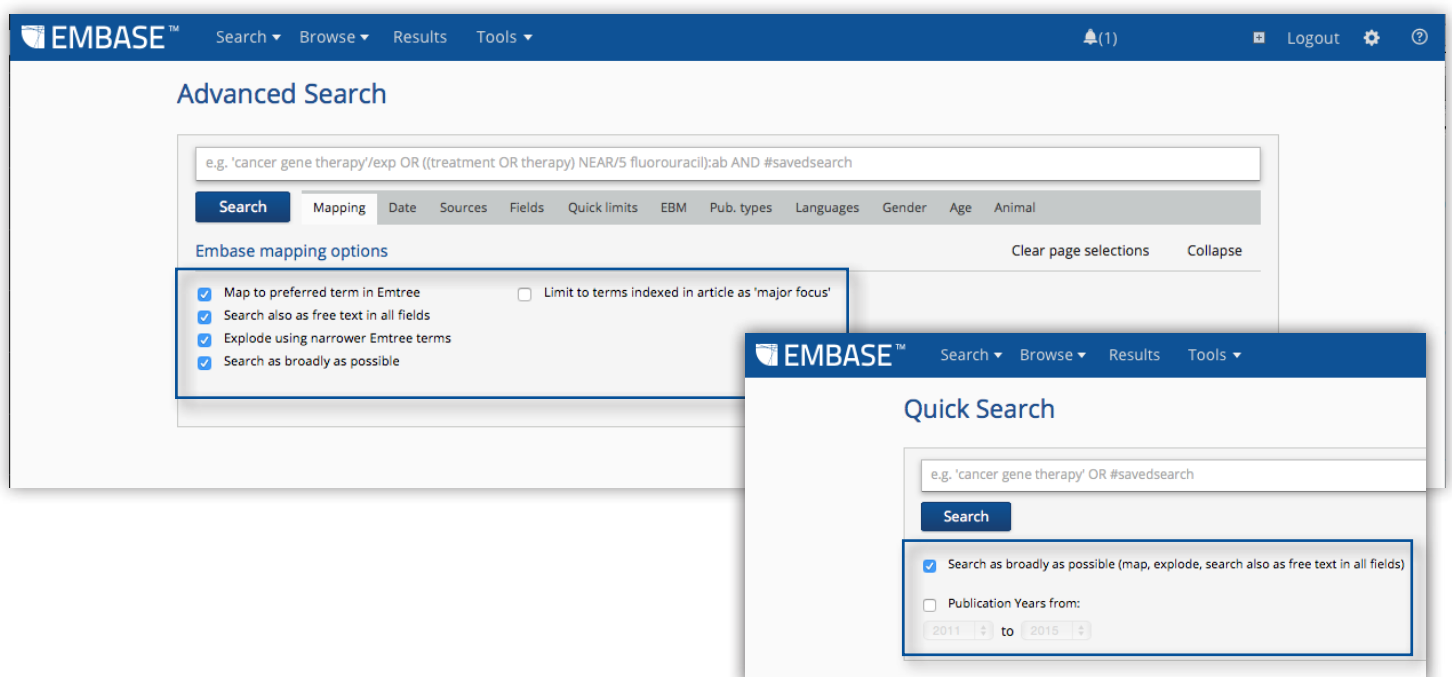


Figure 3. Mapping options can be selected for your search.

Map to preferred term in Emtree: Our experts use the Emtree thesaurus for deep, full-text indexing of all journal articles. Articles are indexed using both their preferred terms and their synonyms. Emtree contains the preferred terms used for indexing papers. For example, 'heart infarction' is the preferred term; 'myocardial infarction' and 'heart attack' are mapped to it as synonyms. 'Prozac' maps to the preferred generic name 'fluoxetine'.

If you check this option, all the synonyms for your search word or phrase are included. Whatever you enter as a search word or phrase will be mapped to the preferred indexing term and your search will return papers related to this term. This means your searches will be more consistent and comprehensive because you're searching for all the synonyms related to the term. Also, this option allows Embase to perform explosion searches for you if you also check 'Explode using narrower Emtree terms', returning results for narrower terms relevant for your search (see below).

If you uncheck this option, Embase performs a free text search.

Search also as free text in all fields: This option runs a free text search for all the terms entered in the search box. A free text search means that all the fields included in the results are searched – i.e., Embase will search the title, abstract, keywords, index terms and so on for the word or phrase.

If you uncheck this option, a free text search will not occur unless you have used words or phrases that cannot be mapped to an Emtree preferred term or you have also unchecked 'Map to preferred term in Emtree'.

Explode using narrower Emtree terms: This option maps your search terms to the Emtree preferred indexing term and then searches for the related narrower or child terms. It explodes your search, returning results for all the relevant narrower terms.

The screenshot shows a search interface for the term 'dentistry'. At the top, it says 'For term: **dentistry**'. Below this, there are two options for 'Extend your search: or': 'Explosion' (checked) and 'As major focus' (unchecked). To the right of these options are two buttons: 'Take this query to Advanced Search' and 'Add to Query Builder'. Below the search options is an Emtree tree diagram. The tree starts with 'biomedical disciplines, science and art', which branches into 'biomedicine'. 'biomedicine' further branches into 'dentistry' (with a record count of 100,668) and 'endodontics'. 'dentistry' also branches into 'endodontics' and 'orthodontics'.

Figure 4. Endodontics and orthodontics are narrower terms for dentistry and will also be searched in an explosion search.

Checking 'Explode using narrower Emtree terms' automatically turns on 'Map to preferred term in Emtree' as the two options work together.

If you uncheck this option, Embase will not perform an explosion search.

Search as broadly as possible: This option performs three functions simultaneously: it maps your search word or phrase to the preferred term in Emtree; it explodes the search using the narrower Emtree terms; and it searches for your word or phrase as free text in all fields. These three functions are performed as a search with the Boolean operator AND.

If this option is unchecked on the Advanced, Drug, Disease or Device Search forms, 'Map to preferred term in Emtree', 'Search also as free text in all fields' and 'Explode using narrower Emtree terms' will automatically be unchecked. On Quick Search, this is the only mapping option.

Limit to terms indexed in article as 'major focus': This option focuses your search on articles where your search word or phrase is the main topic. Indexers designate selected terms representing the focus of the article as major terms. If your search words or phrases match the main focus of the article, the search will retrieve that article. Checking this option means excluding all records where your terms are indexed but not considered to be the main focus of the article.

If you uncheck this option, your search will return articles indexed with your search word or phrase, even if it is not the main focus of the article.

Quick Search

Use Quick Search to perform quick and easy searches using key words and phrases. Simply type in a word or phrase and click **Search**. To search for a phrase, use single or double quotes around the phrase. It doesn't matter whether you use single quotes or double quotes, as long as they match: 'myocardial infarction' or "myocardial infarction".

Quick Search is good for getting an overview of the literature. It also helps you to define terms for a more complex search.

You can use the **Search as broadly as possible** option with Quick Search. You can also limit your search to records from a particular time period.

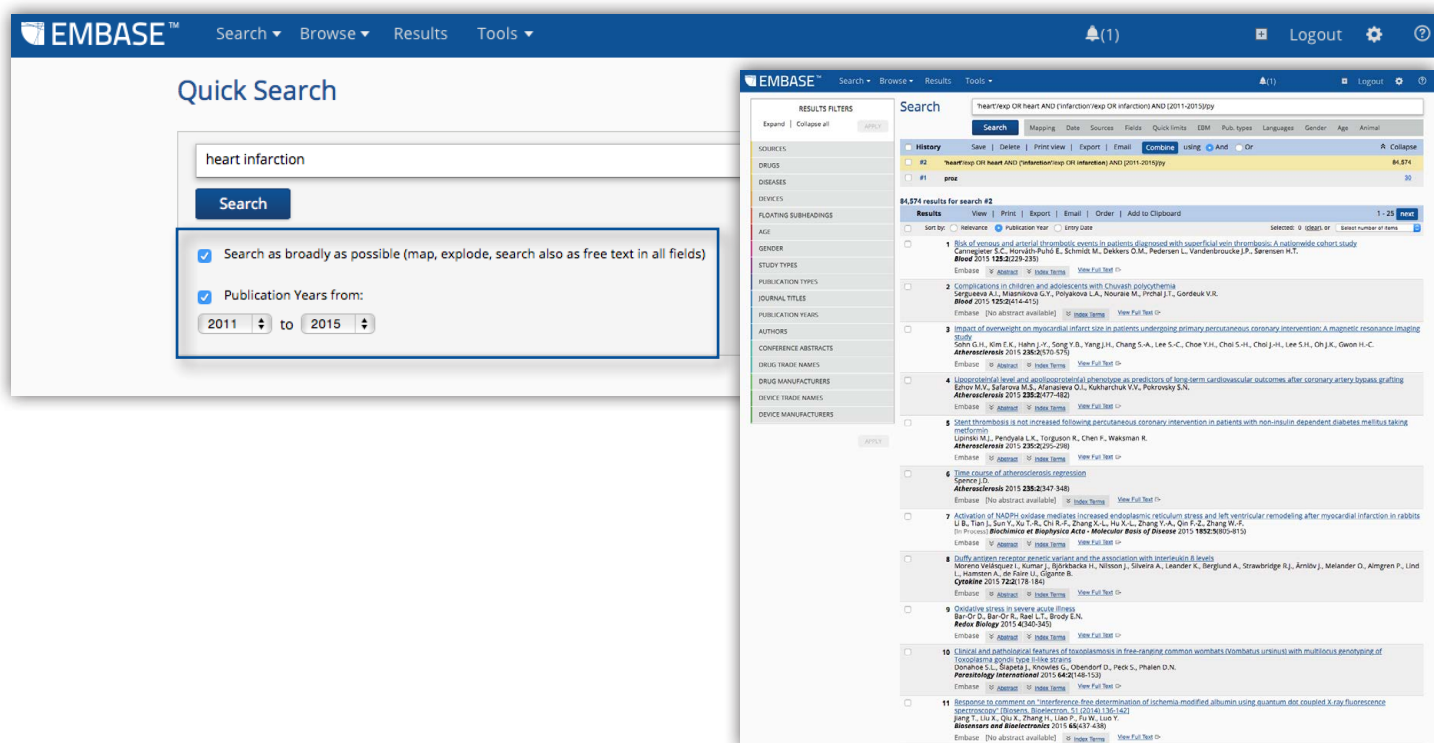


Figure 5. Quick Search for records published between 2011 and 2015 and indexed with the term 'heart infarction'.

Advanced, Drug, Disease and Device searches

These four options are constructed in a similar way so that you don't have to learn multiple ways of constructing a search. Each one contains the a search input field where you can type key words and phrases with or without Boolean Operators, field codes, etc. They also have a number of options (subheadings) that let you define your search more precisely and these are the same in most cases. Check the subheadings of interest to apply them to the search. You can choose to apply as many subheadings as you want and then select the operator AND or OR to decide whether the results should be those where all apply or those where any one applies.

Advanced Search

The Advanced Search form contains the essential set of options to limit your search to a specific set of results. For example, you can limit your search to a particular range of years or publication types, focus your search on particular subject ages, or on one gender.

Advanced Search



Figure 6. The limits categories for Advanced Search.

Example:

If you wanted to find information on cancer gene therapy in conference abstracts published in 2012, you would type 'cancer gene therapy' in quotes in the search field; click on the 'Date' option and set 'Publication Years from:' to '2012 to 2012'; and click on the 'Pub. types' option and select 'Conference Abstracts'; and click search.

Advanced Search

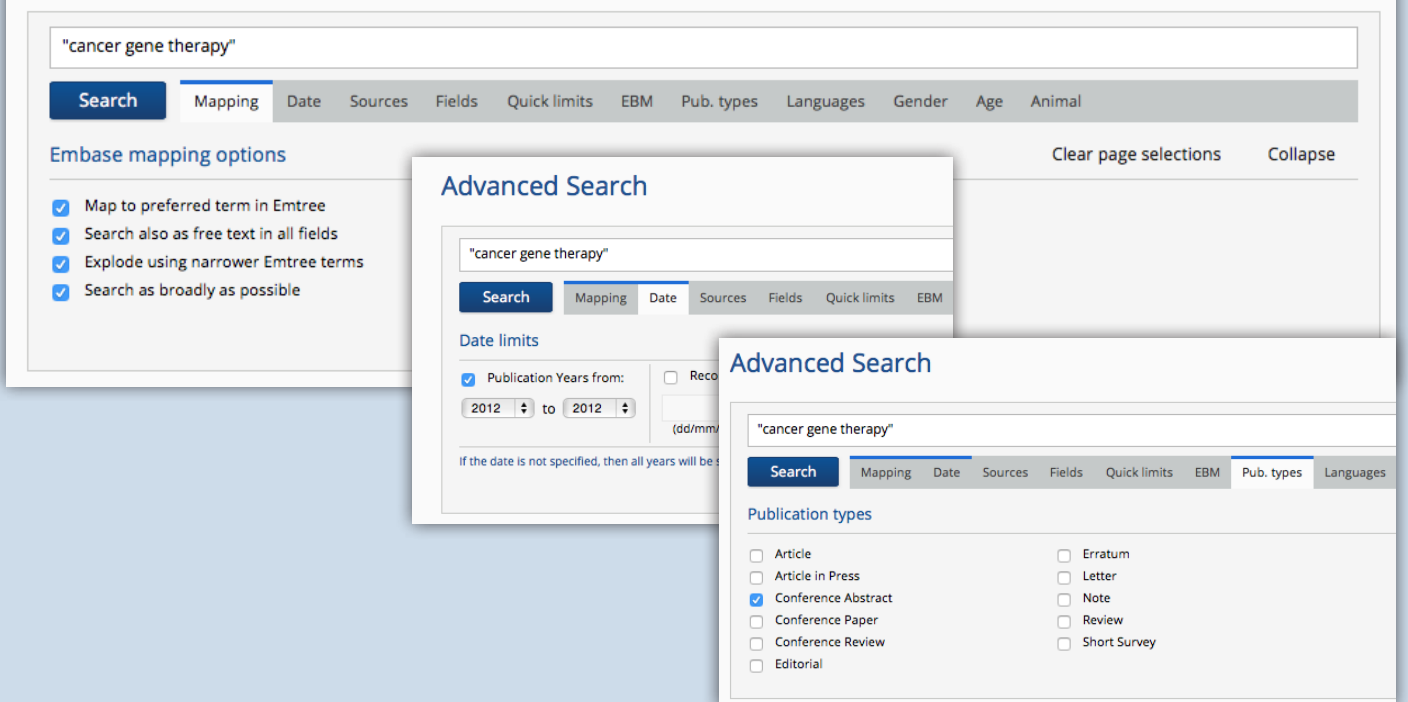


Figure 7. Building a search for conference abstracts from 2012 that reference cancer gene therapy.

Drug Search

The Drug Search form has the option 'Drug fields', which lists the field codes specific to drug searches, and 'Drug subheadings', which contains limits such as 'Adverse drug reaction', 'Drug concentration' and 'Endogenous compound'. You can add these to focus your search on particular aspects of the available drug information. The Drug Search form also has the option 'Routes', which contains subheadings for every route of administration for drugs.

Drug Search

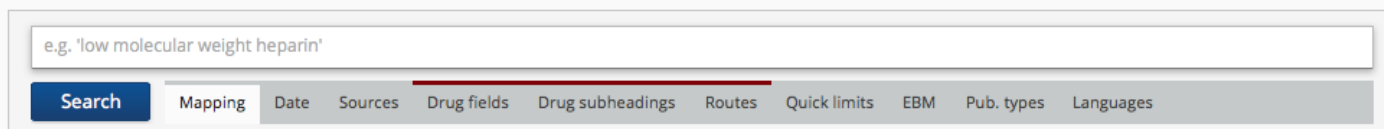


Figure 8. The limits categories for Drug Search.

Example:

If you wanted to find information on records indexed with an adverse drug reaction for Vioxx, you would type 'Vioxx' in the search field (although note that 'rofecoxib' is the preferred Emtree term) and check 'Adverse drug reaction' under 'Drug subheadings'.

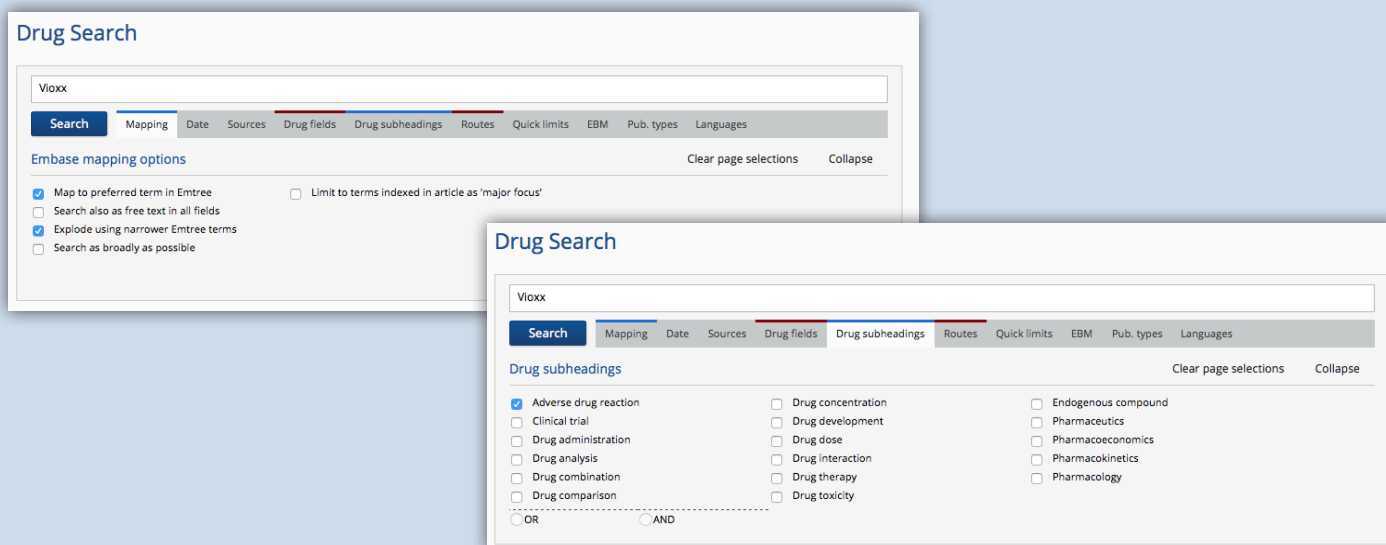


Figure 9. Building a search for adverse drug reactions to Vioxx.

Disease Search

The Disease Search form has the option 'Disease subheadings', which contains a selection of subheadings that apply to diseases in general. This is not a list of diseases or disease families, but rather a set of terms that most frequently come up in association with disease information searches, such as 'Complication', 'Disease management' and 'Side effect'.

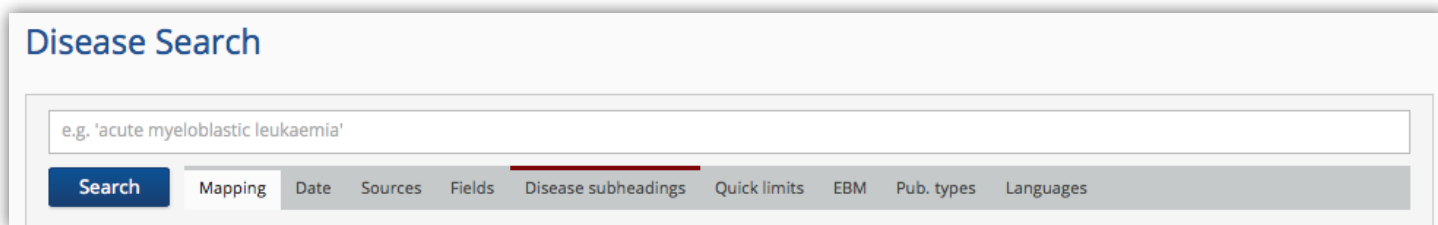


Figure 10. The limits categories for Disease Search.

Example:

If you wanted to find information on diabetes and prevention, you'd type 'diabetes' in the search field and check 'Prevention' under 'Disease subheadings'.

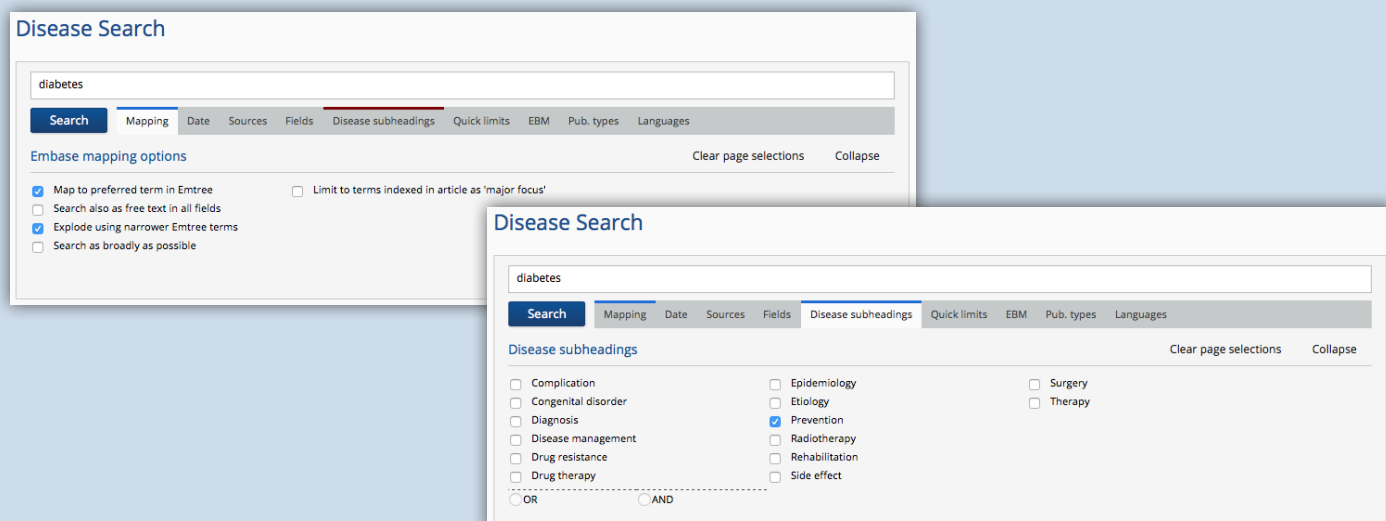


Figure 11. Building a search to find information on diabetes and prevention.

Device Search

The Device Search form has the option 'Device fields', which lists the field codes specific to medical device searches, and 'Device subheadings', which contain a selection of subheadings that apply to medical devices.

Device Search

The screenshot shows the top of the Device Search interface. A search input field contains the placeholder text "e.g. mydevice". Below the input field is a horizontal navigation bar with several tabs: "Search" (highlighted in blue), "Mapping", "Date", "Sources", "Device fields", "Device subheadings", "Quick limits", "EBM", "Pub. types", and "Languages".

Figure 12. The limits categories for Device Search.

Example:

If you wanted to find a comparison of two types of stent, you'd type the names of the two stents in the search field (e.g., 'covered stent' AND 'vascular stent') and check 'Device comparison' under 'Device subheadings'.

The figure consists of two overlapping screenshots of the Device Search interface. The top screenshot shows the search bar containing the text "'covered stent' AND 'vascular stent'". Below the search bar is a navigation bar with tabs: "Search", "Mapping", "Date", "Sources", "Device fields", "Device subheadings", "Quick limits", "EBM", "Pub. types", and "Languages". Below the navigation bar is the "Embse mapping options" section, which includes several checkboxes: "Map to preferred term in Emtree" (checked), "Search also as free text in all fields" (unchecked), "Explose using narrower Emtree terms" (checked), and "Search as broadly as possible" (unchecked). There are also links for "Clear page selections" and "Collapse". The bottom screenshot shows the "Device subheadings" section, which includes a list of checkboxes: "Adverse device effect" (unchecked), "Device comparison" (checked), "Device economics" (unchecked), and "Clinical trial" (unchecked). Below this list are radio buttons for "OR" and "AND", with "AND" selected.

Figure 13. Building a search for records that compare covered and vascular stents.

Article Search

The final type of search is the Article Search, which lets you track down specific references by typing in whatever information you have in a number of fields. If Embase cannot identify a citation uniquely based on your input, it will retrieve a list of the best-matching records.

The screenshot shows the 'Article Search' interface. It features a grid of search fields:

- Article title:** A text input field.
- ISSN:** A text input field.
- Author Name:** A text input field.
- CODEN:** A text input field with a note: 'This is only available for titles added before 2005'.
- Journal Title:** A text input field with a checked 'Exact' checkbox.
- Volume:** A text input field.
- Abbreviated Journal Title:** A text input field with a checked 'Exact' checkbox.
- Issue:** A text input field.
- Publication Years from:** A section with a checked checkbox, two year dropdown menus (both set to 2012), and a 'to' separator.
- First page:** A text input field.

 A blue 'Search' button is located at the bottom left of the form area.

Figure 14. The interface for Article Search.

All of the fields accept text input. You can also define the publication years.

Go to Embase Help for more information on searching.

You'll find it by clicking on the question mark icon at the top right of any Embase page. Embase Help also has information about our Embase webinar series. These webinars will give you more detailed tips on the various types of search.



Figure 15. Click the question mark symbol to access Embase Help.