



Medical Library guide to finding information

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QG MED012 [<https://abdn.ac.uk/library/documents/guides/qgmed012.pdf>]

Introduction

This guide aims to give an introduction to the process of searching for biomedical information for research purposes.

If you would like more help please contact the staff in the Medical Library by email: medlib@abdn.ac.uk

There are many models available regarding how to carry out the research process. The 7-step method explained in this guide is a simple and effective strategy for finding and documenting information for use in research.

Step 1: Identify and develop the topic

Your first step should be to define your question in detail. Identify the different concepts. For example, your question may be “**what are the roles of genetic and environmental factors in the pathogenesis of breast cancer?**” The concepts here are as follows: **breast cancer; pathogenesis; genetic factors; environmental factors**. Think of all the keywords that may relate to the concept(s) you wish to research.

Step 2: Background information

You should then check each of these concepts in a dictionary and encyclopaedia. They will give you definitions in your subject area and possibly a few good general references. Perhaps as important is the ability to trace (via dictionaries and encyclopaedias) synonyms (words that mean the same thing) for your search terms; these synonyms (e.g. **heart attack, cardiac arrest, myocardial infarction**) will become vital later in your search for current information. You should try to use both British and American dictionaries, such as the [Oxford English Dictionary](#) online or the [Medical Dictionary](#), and encyclopaedias as these will increase your range of synonyms and variant spellings.

In the Medical Library we hold a wide range of dictionaries and encyclopaedias in the Reference section on the first floor.



Keep references

Throughout your search for information you will continually come across references to other people's work and publications. It is important that you get into the habit of recording references correctly and in full. When you then need to find the resource the reference applies to, either in the library or by requesting a copy of an article (perhaps via our **Inter Library Loan** service), you will have all the information to hand that you require to locate it. It is equally important that you cite references correctly when submitting your own work for assessment or publication – poor referencing may lead to lost marks or rejected articles.

For more information on referencing there are a number of library guides dealing with the various styles, including Harvard and Vancouver, the two styles most commonly used in medical texts. You can find all available guides [here](#).

Step 3: Use library catalogues to find resources

After your initial search in a dictionary and/or encyclopaedia, you will need to find written work relating to your subject. The first place to search is [Primo](#), the University of Aberdeen Library's resource discovery tool. Primo contains information about all the Library's books, pamphlets and periodical titles as well as many of the journal articles that are available to library users either on paper or in electronic format.

Narrow down your search using the "Refine your results" toolbar to the left of your results. Using the refine options you can search all resource types or just books or articles etc.. **Please note that when using the articles option that Primo will only show a small proportion of the individual journal articles that are actually available through the library.** That is why we strongly recommend that you search for articles using the available medical databases (see Step 4 below). When doing a subject search, keep your search terms broad; Primo searches titles and related information, but cannot search the text inside books or journals.

For more detailed information on using Primo see [QGPR1001: Primo – Quick Guide](#).

Access to the catalogues of other University and College libraries is available via the Internet e.g. [Jisc Library Hub Discover](#) gives access to the collections of many UK university libraries. Material you find via library catalogues will undoubtedly be of some value to you. However, you should bear in mind that any book, even one published this year, cannot contain all of the most recent information, simply because of the relatively slow nature of book publishing and the incredibly fast pace of change within the biomedical sciences. Reliance on books alone is therefore discouraged.

Step 4: Use bibliographic databases

In order to bring your search more up-to-date, you should consult the periodical (journal) literature. Periodicals are published far more frequently – some weekly – and so can contain information that is very current. It can be quite difficult to get to know all the relevant periodicals in your subject area, and any one library is unlikely to subscribe to all of the titles appropriate to your discipline. To overcome this you should turn to one or more of the major online databases.

These databases will give detailed access to the content of each issue of each journal part indexed, and can be searched by a minimum of subject concept, author, journal title, keyword etc. The more detailed databases offer a vast range of searching options and many include the author's abstract of the original paper. Many of these databases have good retrospective coverage – usually at least the last ten years, some much longer.

The main databases in the **Biomedical** field are: **Medline, Embase, CINAHL, Cochrane Library, Amed, CAB Abstracts, Biosis, Web of Science, PsycInfo, and Scopus.**



All of these are available at the University of Aberdeen, as are many other non-medical databases. Most databases can be launched from [Primo](#) by typing the name of the database you wish to use in the appropriate search box under the **Find Databases** tab. You will require your university computer username and password to access these resources. If you are unsure as to which database you would like to use, see Step 5: Find internet resources.

Medline is the main indexing service for clinical medicine and allows you to retrieve journal references within very specific medically-related subject areas. **Medline** is available via **Primo**.

There are guides on how to use some of our databases [here](#).



Different types of journal article

1. **Review articles** give you an overview of a subject, almost a potted history, and will also provide a fairly extensive bibliography of related items. These articles can be very good for an introduction to a subject. You will find review journals amongst ordinary journals. Typically, titles start with phrases like **Advances in...**, **Progress in...**, **Recent results in...**, etc. You will also find individual review articles in many of the major research journals. Most computerised databases will allow you to limit your results to review articles only if you choose.
2. **Primary research papers** are the written results of new research. Much of the content can be very specific, very detailed and perhaps too narrow in scope for a beginner but ideal for researchers in similar fields.
3. **Randomised controlled trials** compare the outcomes of trials where patients are assigned randomly to groups, one of whom are given the treatment being studied and the other a placebo/usual treatment.
4. **Systematic reviews** combine the results of individual randomised controlled trials. They can strengthen the evidence by drawing all the studies together and condensing the results to make it easier to see if something is beneficial or harmful rather than by checking the results of all individual studies in isolation.

These latter two article types form the present pinnacle of evidence on which basis clinicians may be willing to change their current practices. Further detailed information on the latest evidence base can be found by using the [Cochrane Library](#) database or by limiting a **Medline** search to one or all of four evidence-based medicine review options.



Find journals in the Medical Library



Having established which journal articles are relevant, if the database does not link you to the electronic full-text via **Find It** then check Primo to find out if they are available in paper-based journals in the library. The library catalogue gives information about all of the library's journal titles and the years that are held. In the Medical Library all journal titles are shelved in alphabetical order by main title words. They are in the following locations:

Date Range	Location	Floor
Current year	Cupboards	Floor 2
1995-onwards	Open shelves	Floor 2
Up to 1994	Mobile shelving	Ground Floor



Current awareness

The next stage on from conducting a literature search is to keep yourself up-to-date by regularly scanning the new literature on your subject. You can do this either by consulting a major database every time it is updated and re-running your previously saved search strategy or by consulting databases of contents pages.

Many individual journal publishers (e.g. BMJ) are now offering a free electronic alert service. You may register free of charge for these services provided you have a current e-mail account. [ZETOC](#) permits access to the British Library's Electronic Table of Contents database, containing over 15 million article titles from 20,000 important research journals. **ZETOC Alert** will e-mail contents pages of journals to you as they are added to the database.

Step 5: Find internet resources

By far the biggest information resource is the internet. In addition to whole journal full texts, the contents of libraries, museums and scientific establishments are represented, giving varying degrees of access to their material, while millions of commercial sites are also available. The library maintains its own web pages; see [here](#).

In addition, however, you should not forget other more traditional resources such as newspapers, audiovisual resources and so on. Remember that our holdings can be checked via Primo.

Step 6: Evaluate what you find

At the end of your search for biomedical information you will still be left with the task of evaluating what you have found. Not all that you have found will be relevant to your project – some items may be too detailed or too general, perhaps only of peripheral interest. Only you can decide which items are of true value to you.

Step 7: Reference management

Having established a range of books, journal articles etc. that are of use to you, you will need to give some thought to how to manage your list of references. Reference management databases are useful because they not only maintain your useful references, but also enable you to easily create and edit bibliographies and reference lists within your essays by means of a write and cite feature.

If you wish to upload the references you have found into a reference management database (e.g. **RefWorks**, **Reference Manager**, **Procite**, **Endnote** etc.) you must be careful of how you download or e-mail your references. RefWorks is available to all staff and students of the University [here](#).

There are a number of guides on how to use RefWorks on our [web pages](#).



NOTE

Workshops on using the library's electronic resources can be [booked online](#).

Problems?

If in difficulty, please ask the Medical Library staff – we are always happy to help.

Adapted with permission:

Olin Library Reference
Research & Learning Services
Cornell University Library
Ithaca, NY, USA

www.library.cornell.edu/olinuris/ref/research/skill1.htm