



What are Boolean Operators?

Boolean Operators are a means of linking two or more words or phrases when searching databases such as CINAHL or using an internet search engine such as Google. They make searching large databases much more precise. The three main operators are:

- **AND**
- **OR**
- **NOT**

Many databases will have Boolean Operators displayed as an option or as pre-set search boxes. If not, always read carefully any instructions given on how they should be entered.

Combining terms

A search using single words or phrases can produce multiple items which are not relevant to your search needs. It is time consuming to review a long list of citations for only a few which are directly relevant to your subject. Linking keywords and phrases to define the concepts of a search more clearly can reduce the number of citations considerably.

AND
(A and B)



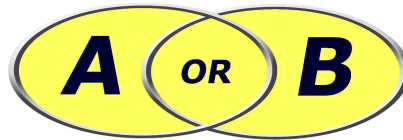
AND finds items which include both search terms. Use **and** to combine two or more words or phrases, e.g.

- **Author and title:** Clamp **and** Resources for Nursing
- **Subject and author:** Nursing **and** Reeves
- **Author and author:** Burnett **and** Taylor
- **Subject and subject:** Elderly **and** Social Work

AND can also be used in the form **ADJACENT TO**, **NEXT TO** or **NEAR**. These place the words next or near to each other and are therefore useful in searching for an exact phrase, such as the title of a document. On most databases - including library catalogues, journal article databases and internet search engines (advanced options) - there is a pre-set field for a title search so these will not be needed.

Note that when using two or more words to search as a phrase, unless you specify that it is a phrase ("*exact phrase*" in Google or Search.com) a search engine will look for each of the words individually. This can mean that a search for *social work* can find a page which has the sentence at the beginning "My *social* life was very good at university" and then another sentence at the end "My *work* now restricts the time I can spend enjoying myself".

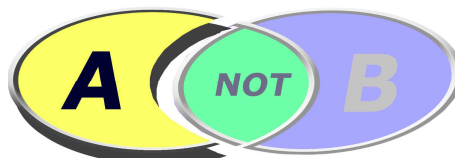
OR
(A or B)



OR broadens the search by finding items that contain at least one of the search terms anywhere in the record. Use **or** to look for:

- **Synonyms and related subjects:** one day surgery **or** ambulatory surgery
- **Opposites (when both are of interest):** colour **or** monochrome
- **Terms which may be abbreviated or spelled out in full:** BCU **or** Birmingham City University
- **Variant spellings:** paediatric **or** pediatric
- **Geographical areas (when all are of interest individually):** England **or** Wales **or** Scotland

NOT
(A not B)



NOT excludes terms. Using **not** finds items containing the first search term but excludes any that also contain the second, e.g.

- Blind **not** partially sighted: Excludes from a search on the blind all references to the partially sighted.
- Aphasia **not** Stroke: Excludes from a search on Aphasia all references to Stroke.
- Pressure ulcer **not** wound care: Excludes from a search on pressure ulcers all references to wound care.
- Child **not** infant: Excludes infants from a search on children.
- Radiography **not** orthopaedic: Finds items on Radiography in general but excludes references to orthopaedic radiography.

Search Engines

Many web search engines also use Boolean Operators. In Google Advanced Search they appear as:

with **all** the words = **AND**

with the **exact phrase** = **AND** but the words must be next to each other

with **at least one** of the words = **OR**

without the words = **NOT**