When to use AND and OR (Boolean operators)  
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## Before we start

It isn’t a different language – the words mean the same as they do if you ask yourself if you want

flights AND accommodation

on a travel search site, or you want

tea OR coffee

at your friend’s house

AND and OR are usually written in capital letters, but most databases don’t care whether you capitalise them or not. Because I use and and or so often in sentences, I’m going to keep them in capitals so you can see where I’m talking specifically about search terms

## OR

When we use OR, we’re giving ourselves alternatives.

Imagine we’re looking for articles about children.

We could just search on a database for the term child. But (most of) the databases don’t recognise this as an idea, they just look for every time those letters occur, in that order, in the records on the database.

So we wouldn’t have found an article which didn’t use the word child, but used the word children…

We also wouldn’t find an article which talked about teenagers, or used the medical term, paediatric (or the American spelling pediatric) – unless they specifically use the word child.

## OR

So, to get articles which talk about children using any of these terms, we can join the terms together using OR

Child OR children OR teen OR teenager OR teenagers OR paediatric OR pediatric

## OR

If you want to look at it another way

All the articles which mention child in this circle

All the articles which mention teenagers in this circle

These articles, in the overlapping area, mention both terms

If you use OR, every article in the whole of the blue area will come up on your results list.

## OR

Only use OR where the terms are interchangeable. Where it doesn’t matter to you which of those terms appears in the article

If you’re struggling to find results, using OR can increase the number of results, as you are looking for more alternatives on the database

## AND

We use AND where we have 2 things and we need both of those things to be in the article to make it useful.

Imagine we are looking for an article which talks about the link between diabetes and obesity.

Here, we can’t join the terms with an OR because an article which talks about only diabetes without mentioning obesity, or only talks about obesity without mentioning diabetes is no use to us.

## AND

All the articles which mention diabetes in this circle

All the articles which mention obesity in this circle

These articles, in the overlapping area, mention both terms

If you use AND, you get only the articles in the blue overlapping area in your results list.

## AND

Use AND to join 2 different ideas when you want to both appear in your results

If you have too many results, using AND and adding another thing which your results aren’t relevant without is a good way of narrowing your search

## Using AND and OR together

Once you know where AND and OR should go, you can use as many as you need in your search. One example of a more complex search is shown on the next slide

You should be able to work out what is being searched for and how it works

Practice with your own topics

## Using multiple ANDs and ORs

Educat\* OR train\*OR knowledge

AND

Quality of care OR care quality OR well-being OR well being

AND

Dementia OR alzheimer\* OR cognitive\* impair\*

AND

Hospital\* OR ward\* OR acute care

## Further help

If you’re wondering what the \* means, then you can look at our guide Truncation and Wildcards

If you’re having trouble using AND and OR on a particular database, look at the database specific guide on our How to… guides pages

If you have questions you’d like to ask a librarian…

## Any Questions?

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Ask for help if you need it.