



Best Practices in OvidSP's Basic Search

Updated February 1, 2008

What is Basic Search?

OvidSP's Basic Search is a new tool featuring Natural Language Processing. Natural Language Processing was designed to retrieve the most relevant results possible from complete search query.

It is important to point out here that while it has been coined "Basic Search", it is in no way inferior to command-line searching in regards to relevancy of results. In fact, the Basic Search function using NLP was designed to take a complex search query without the need for syntax rules, search conventions, or complicated and redundant search strategies, and return the most appropriate results possible.

How does it work?

Basic Search was designed to allow researchers to query OvidSP effectively using complex search terms. Generally speaking, three types of queries work best when using Basic Search:

1. Group of terms: a concise expression of a concept

`Childhood obesity in America`

2. Full query: a question or phrase stated in plain English

`What are the most effective treatments for childhood obesity?`

3. Copy and paste a title: a variation of one or both of the other query types

`Efficacy of maintenance treatment approaches for child overweight`

Basic Search will take the search criteria (as in the examples above) and filter out words that are deemed to be irrelevant, or "noise" words. With these words removed, OvidSP can identify concepts and validated terms to search for.

Examples of these are below:

ORIGINAL QUERY	FILTERED WORDS	VALIDATED TERMS
childhood obesity in america	In	childhood, obesity, america
What are the most effective treatments for childhood obesity?	what, are, the, most, for	treatments, childhood, obesity
efficacy of maintenance treatment approaches for childhood overweight	of, approaches, for	efficacy, maintenance, treatment, childhood, overweight

What is 'Include Related Terms'?

One of the ways that OvidSP's Basic Search extracts accurate results is to allow the researcher to expand upon the original search criteria with word variations, strong synonyms, and acronyms. This powerful strategy removes the need for the redundant searching of like terms. For instance, from our above example, we can see the validated terms from the original search criteria and the expanded search terms for which OvidSP searches:

VALIDATED TERMS	EXPANDED TERMS
treatments	treatment, therapy, palliative, relieve, ameliorate, alleviate, therapeutic, relief, therapies, therapeutics, amelioration, relieving, alleviated, alleviation, alleviating, ameliorates, relieves, alleviates, reliefs, management, intervention, cure, treated
childhood	childhood, childhoods, child, children, kid, kids
obesity	adiposes, adiposis, adiposities, adiposity, obesities, overweight, overweights

What is 'Relevancy Ranking'?

Researchers who are accustomed to command-line searching are used to seeing results that match their search criteria exactly. While this can be an effective approach in some instances, it leads to an enormous number of results and, in many cases, does not always deliver relevant results. This can require a number of additional searches in order to target desired content.

In contrast, Basic Search was designed to retrieve the *most relevant* results, not *all* results. The way in which OvidSP achieves this is by evaluating certain criteria:

Count: *How many search concepts appear in the result*

Basic search assigns the highest relevancy to results that include all of the validated terms within the original search criteria. For example, from the search in our original example, a passage that includes the terms "treatments" "childhood" and "obesity" will have a more profound ranking than a passage that only includes "treatments" and "obesity".

Importance: *How rare the terms are in the database*

Terms that are rare are given greater weight than more common terms.

Prominence: *Where terms appear in a result*

Terms that occur in the title of a citation or chapter are given greater weight than those that occur in descriptor fields or section headings, while those that occur in abstracts or full text are given even less weight.

Frequency: *How often the concepts appear in the passage (frequency criteria applies only to books)*

Fairly self-explanatory; concepts that appear a number of times within a passage gain higher ranking than if that same concept appears seldom within the passage.

Best Practices

In order to make the most of OvidSP's Basic Search, we have detailed below a few tips for searching best practices.

- **Be mindful of search query types** - There are three types of searches that work best:
 1. **Group of terms:** a concise expression of a concept
 2. **Full query:** a question or phrase stated in plain, everyday English (free text)
 3. **Copy and paste a title:** a variation of one or both of the above query types
- **Using Include Related Terms** - When you select "Include Related Terms", OvidSP will expand upon the entered search criteria by including synonyms, acronyms, and variants of the original term(s).
- **State queries concisely** - For example, "noise" words detract from the concept: *really big ekg changes in highly advanced hypokalemia*. Instead, keep it simple: *ekg changes in hypokalemia*.
- **Use nouns more than verbs** - Nouns are the natural home for concepts. They are easy to identify and have less ambiguity. There is research supporting the idea that search quality is high when the strategy extracts noun phrases from queries and we've adopted that approach.
- **Do not force phrasing** - Imposing quotation marks, parenthesis, or hyphens within a query causes OvidSP to not consider possible expansions. For example in the search `weather related migraine`, if you force a hyphen in the phrase `weather-related`, you lose all expansions on the word *weather* because OvidSP perceives the hyphenated phrase as a single term that has no possible expansions.
- **Select the spell check option** - Use the Basic Search spell checker to avoid common spelling errors. In addition, the Basic Search tab provides a spell checking option that checks your spelling against all terms in the lexicon and the database.