Database syntax guide for systematic reviewers

This guide is one of a series available that discusses systematic reviews, methodology, searching and sources. For research assistance contact the [Flinders University Library](#)

	OvidSP: Medline, JBI, PsycINFO	PubMed	Cochrane Library	CINAHL	Scopus	Web of Science	Informit	ProQuest: ERIC, Sociological Abstracts
Boolean operators	AND, OR and NOT	AND, OR and NOT	AND, OR and NOT	AND, OR and NOT	AND, OR and NOT	AND, OR and NOT	AND, OR, XOR and NOT XOR finds either one term or another but not both simultaneously. e.g. Hip XOR knee will find citations referring to either hip *or* knee but not hip *and* knee together	AND, OR and NOT

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Capitals needed for operators?	No	Yes	No	No	No	No	Yes	No
End (tight-sided) truncation	* or $ for unlimited end truncation Can also specify the allowed number of characters after the truncation mark, e.g. dog$2 finds *dog, dogs, dogma*, but not *dogmatic*	* for first 600 variations only Truncation turns off PubMed's automatic term mapping and automatic explosion of MeSH terms	* for unlimited end truncation ? replaces zero or one final characters, e.g. system? finds *system* and *systems* but not *systematic* **Automatic stemming** e.g. clear finds *clears, cleared, clearing*	* for unlimited end truncation	* for unlimited end truncation **Automatic singular, plural, and possessive searching**, e.g. criterion finds *criteria* as well as *criterion*	* for unlimited end truncation	* for unlimited end truncation	* for unlimited end truncation ? replaces exactly one final character, e.g. nurse? finds *nurses, nursed*, but not *nurse*
Double quotes for phrase searching?	No	Yes but turns off PubMed's automatic term mapping and automatic explosion of MeSH terms	Yes, but can't use truncation within quote marks. To include truncation, replace quote marks with command **NEXT** between words, e.g. hearing NEXT aid*	Yes, but can't include stopwords (e.g. and, or, the) within quote marks. e.g. "on field drug testing" interpreted as "field drug testing"	Yes Plural and possessive forms will still be included in results e.g. "heart attack" also finds "heart attacks"	Yes	Yes, but can't use truncation *within* quote marks. Truncation symbol must come **after** the final quote mark. E.g. "hip joint"*	Yes

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Proximity searching	**Adj1** Words occur directly next to each other in either order. E.g. *health reform* or *reform health* **ADJx** Search term occur within a specified number (x) of words from each other *in any order*	Proximity searching is not supported in PubMed.	**NEAR/x** Search terms must occur within a specified number (x) of words from each other *in any order*	**Nx** Search terms must occur within a specified number (x) of words from each other *in any order*	**W/x** Search terms must occur within a specified number (x) of words from each other *in any order*	**NEAR/x** Search terms must occur within a specified number (x) of words from each other *in any order* Applies in different tools too	**%x** Search terms must occur within a specified number (x) of words from each other *in any order* Use only one term to the right of this symbol: (knee OR hip) %2 replacement	**NEAR/x** Search terms must occur within a specified number (x) of words from each other *in any order*
				Wx Search terms must occur within a specified number (x) of words from each other and *in the order in which you entered them*	**PRE/x** Search terms must occur within a specified number (x) of words from each other and *in the order in which you entered them*		**!x** Search terms must occur within a specified number (x) of words from each other and *in the order entered* Important: Only ever use one term to the right of this symbol: (knee OR hip) %2 joint*	**PRE/x** Search terms must occur within a specified number (x) of words from each other and *in the order in which you entered them*

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Wildcards	**#** substitutes for one character only, e.g. *wom#n* finds *woman* and *women*	Wildcards are not supported in PubMed	**?** substitutes for one character only, e.g. *wom?n* finds *woman* and *women*	**?** substitutes for one character only, e.g. *wom?n* finds *woman* and *women*	**?** substitutes for one character only **anywhere in a word**. Use one question mark for each character you want to replace. e.g. *wom?n* finds *woman* and *women*	**?** substitutes for one character only, e.g. *wom?n* finds *woman* and *women*	**?** substitutes for one character only, e.g. *wom?n* finds *woman* and *women*	**?** substitutes for one character only, e.g. *wom?n* finds *woman* and *women*
	? substitutes for zero or one characters, e.g. colo?r finds *color* and *colour*		***** substitutes for one or more characters when used **within a word**, e.g. leuk*mia will find both *leukemia* and *leukaemia*	**#** substitutes for zero or one characters, e.g. colo#r finds *color* and *colour*	***** substitutes for zero or multiple characters when used **anywhere in a word** e.g. *tocopherol finds *tocopherol* as well as *α-tocopherol*	**$** substitutes for zero or one character, e.g. colo$r finds *color* and *colour*	***** substitutes for zero or one characters, e.g. colo*r finds *color* and *colour* Can also specify number of characters substituted by the internal truncation mark e.g. dra*3t finds *draft* and *draught*	***** substitutes for zero or multiple characters when used **at the start or within a word** e.g. colo*r finds *colour*, *color* *old finds *told*, *household, bold*

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			* substitutes for any number of characters if used *at the beginning of a word* *glycemia finds *hyperglycemia & hypoglycemia*	* can be used between words to *match any word* e.g. A midsummer * dream finds A *midsummer night's* dream		* substitutes for any number of characters, including zero characters e.g. s*food finds *seafood* and *soyfood*		
Subject heading thesaurus available?	Yes Exceptions are JBI EBP Database and Medline's In Process & Non-Indexed Citations subset	Yes Use MeSH database to search on MeSH terms. MeSH searching will, however, omit PubMed's unique, non-indexed content from the search results https://www.nlm.nih.gov/pubs/factsheets/dif_med_pub.html	Yes MeSH term search option available but textword searching easier	Yes	No Both Medline's MeSH terms and Embase's Emtree terms are present but can't be searched specifically. Textword searching is best.	No	No	Some databases have their own thesaurus. Use textwords if searching multiple databases. Check Advanced Search settings to see if *full text searching* is the default option. Full text searching will reduce search effectiveness.

Team:	College & Research Library Services
Subject:	Systematic Reviews
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Last Updated:	4 November 2020