PubMed Part 2: Sophisticated and Simple

The PubMed of 2017 is sophisticated.

It doesn't have worldly experience with fashion or culture. It is complex. Intricate. High-tech. Its sophistication belies our searching abilities and results. And for that, we should be grateful.

But if PubMed searching is sophisticated, why do we get incomplete or incorrect results? Like most sophisticates, PubMed appreciates a knowledgeable audience and performs better with one.

Why PubMed
PubMed (http://pubmed.gov) has a number of advantages—free searching, links to free articles and 24/7 worldwide online availability. Getting great results really boils down to selecting PubMed for two other factors.

One, you know what is included. PubMed includes citations to articles from approximately 5,500 biomedical journals; you can look at the source lists. That's important because you don't know what was searched, or perhaps more importantly what was missed, with general searches (e.g., Google, Google Scholar).

Two, PubMed's search algorithm is designed to assist you. If you know a bit about it, you can receive good results. If you learn a bit more, you can receive great results.

Whether you are new to PubMed or an old hand, here are some tips for simple searches and great results.

Think before you search
Whether you use a structured technique, e.g., PICO, or consider your topic without a structure, the goal is to identify the sub-topics needed in your results. For example, you probably want to include species, condition and intervention. To read more about PICOs, visit the Ask section at http://ebvmlearning/org.

Let PubMed do the work
PubMed's algorithm includes match-

By Heather K. Moberly
Coordinator of Veterinary Services, Medical Sciences Library, Texas A&M University

ing your search terms to standardized terms. It is called Automatic Term Mapping (ATM); it is responsible for the good results you get. For example, enter heart attack and, through ATM, PubMed searches myocardial infarction.

Begin sparsely
Begin by entering as few search terms as possible. Start with one term for each concept in your search. A common mistake is searching too many terms at once.

Skip punctuation and phrases
Do not use () [] & | / , : "" # * ! $ % + - . ; <> = ? \ ^ _ {} ~ even if you use in other searches. Do not enclose phrases in "" in your initial search. Visit the PubMed help book to see how symbols are interpreted by PubMed; it may surprise you.

Skip connecting words
Do not use AND, OR or NOT in your initial search. PubMed automatically combines the terms together with AND between each search term.

Skip truncation
Broadly, truncating and wildcarding are techniques in which a symbol is added to the end of a search term to instruct the database to include variant endings of the term. Truncating is an important technique, but skip it in this initial search.

The devil is in the details
On your results screen, look to the right side to find the Search Details box. Click on See More just below it to display both the search you entered and PubMed's interpretation. This provides you with the opportunity to see what went right and wrong so you can decide how to improve or correct your search.

Peruse results
Look at your initial set of results. Do you see what you expected? If not, what is surprising? Too many? Missing a sub-topic? Wrong altogether? Use what you see here and what you saw in Search Details to improve your next search.

Filter results
If you have a larger results list than you want and the content is appropriate, don't change the search; filter the results. Filters reduce results without changing the search by limiting via other characteristics. Filters are on the left side of the results screen. Popular choices include date, language and article type.

To read more:
Handouts in a veterinary context about ATM, filters and using Boolean operators: http://hdl.handle.net/1969.1/158203

PubMed Help book: https://www.ncbi.nlm.nih.gov/books/NBK3827/ **TV**

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