

# Building Today's Library Media Skills

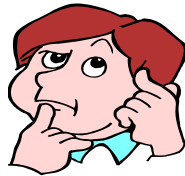


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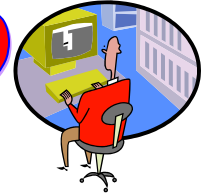
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**Search Strategies:**



## Taking Turmeric?



Developing search strategies is the key to efficient Internet searches. To illustrate this, *Building Today's Library Media Skills* staff decided to format an obscure, yet potentially vital research topic, develop a general search strategy, and apply that strategy to some typical on-line search tools to find out how they would respond to requests for information.

**Research Topic:** *Does turmeric have any value as an anti-inflammatory drug? Does it interact with any other drugs to change their effects?*

### General Strategy

Note that this research topic is actually 2 questions and they are clearly stated. This is fortunate for the researchers, because it will easy to follow analyze a 2-step question:

1. Does turmeric act as an inflammatory agent?
2. Does turmeric interact with other drugs and change their intended impact?

### Keywords

Using these 2 queries as a guide, the next step was to identify sets of keywords that would provide an overview of what information would be available in the sources that our

editors identified. In order to keep our evaluation of search tools valid, it was decided to limit our keyword searches and keep them narrowly focused.

While we are looking for valid answers to these questions, our challenge was to compare and contrast the way our search tools performed. Preliminary research indicated that plain keyword searches would not allow results to be properly screened or ranked according to the stated information needs. In order to more fully ensure that search results would have some relevance, the following 2 Boolean strategies were developed:

1. Turmeric AND anti-inflammatory
2. Turmeric AND "drug interactions"

Armed with these strategies and keywords, the next step was to look at the tools in question and determine how to best apply this search. It was decided to use "*Advanced Search*" help screens wherever possible, because these walk users through the syntax of applying search strategies with use-friendly, intuitive interfaces.

### Research Tools & Results

**AltaVista** ([www.altavista.com](http://www.altavista.com)). Clicking on the *Advanced Search* button, 2 choices are available. One search box locates Webs with all of the words specified, the other allows users to enter their Boolean search

terms. We started with the former and entered our first set of keywords (without the word AND).

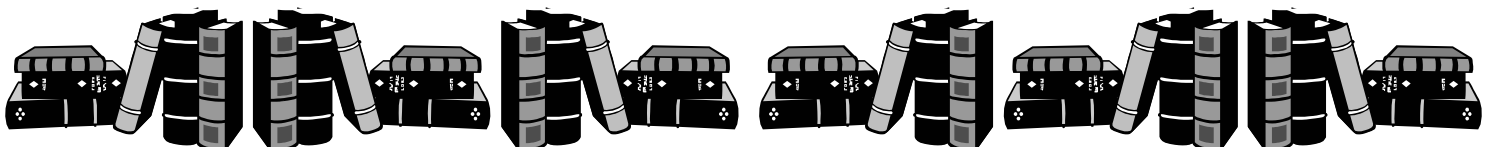
This returned many pages that indicated turmeric would provide the desired effects. While these pages were .com sites and looked like they were selling herbs and natural remedies, the listings returned emphasized the results we were looking for.

We repeated the search, this time using the *Boolean Search* box (and using the term AND). The AltaVista results seemed virtually identical.

We applied the second set of keywords in both advanced search boxes and got many results for each – it was not readily apparent that there was a significant difference between the two searches. It was not our purpose to review each of the many pages to definitively determine an answer – though both searches had, as their second ranking, a page that proclaimed that turmeric did not have any known interactive effects with other drugs.

**AskJeeves** ([www.ask.com](http://www.ask.com)). This page has a clean, simple interface and no advanced search option. While AskJeeves is designed to perform with natural language inquiries, we decided to directly enter our Boolean phrases to assess the results.

The first Boolean inquiry resulted in many "hits" that stated that turmeric was a natural anti-inflammatory and



emphasized that it was for sale. If a person was looking for information and not searching for turmeric, this could have been extremely annoying.

The second query also returned many sites with an emphasis on marketing. The second ranked Web source was the same site that was ranked second in AltaVista and seemed to indicate that there were no known drug interactions with turmeric.

**All the Web ([www.alltheweb.com](http://www.alltheweb.com)).** This clean interface has its Boolean search box right on its main page. The results for each search were clear, uncluttered and, like AltaVista, the results emphasized how sites met our search criteria and not what the sites were promoting. Each search confirmed the results of the other inquiries.

#### **BadgerLinks/EBSCOhost**

**AcademicSearch.** The first Boolean search returned 7 articles from health-oriented magazines that specifically addressed medicinal uses for turmeric. 5 of these articles were full text. Two of these articles were specifically about the medicinal value of turmeric (or one of its components, curcumin). A third article specifically identified potential for adverse interactions with analgesic drugs. This article indicated that anti-inflammatory herbs like Turmeric have the potential to enhance the risk of bleeding when used with aspirin.

The second Boolean search yielded no results – this would not be problematic because the issues of drug interaction were addressed in some of the full-text results from the first Boolean search.

#### **BadgerLink/EBSCOhost**

**MasterFile Premier.** The first Boolean search returned 4 “hits” from health related magazines, only 2 of which were full text. The two that were not full text appeared to be the most useful articles for our research

topic. Four of the listings appeared the same as AcademicSearch.

The second Boolean search yielded no results – this would be problematic because the issues of drug interaction did not appear to be addressed in the 2 full-text results from the first Boolean search.

#### **BadgerLink/EBSCOhost**

**HealthSource: Consumer.** The first Boolean search returned 5 articles from health-oriented magazines, 3 of which were available full-text. They appeared to contain the listings from the previous search. The second Boolean search also yielded no results

#### **Medline Plus ([www.herbmed.org](http://www.herbmed.org)).**

This URL generated a *Page Not Found* error – illustrating a challenge of working with Internet resources, the stability of Web sites.

#### **Mayo Clinic ([www.mayoclinic.com](http://www.mayoclinic.com)).**

The first Boolean search yielded no results. Thinking that perhaps this site might not fully support Boolean logic, I did a keyword search for just Turmeric – this yielded only 1 document about international patients and it was in Spanish.

The second Boolean search also returned no results – given that only 1 resource was found with the term “turmeric,” this was not surprising.

## Conclusions

**Best Strategy.** Clearly, Boolean logic provided the best strategy – not specifying that a search should contain either the terms “*anti-inflammatory*” or “*drug interactions*” did not provide results that had meaningful rankings.

Internet and database searches can return far more results than anyone will want to (or be able to) review. Without Boolean logic or some other type of advanced search features, keyword searches can be meaningless or overwhelming.

**Best Source.** EBSCOhost, AcademicSearch provided the most meaningful results because the articles that were returned were not from sites that had a direct interest in selling or advocating turmeric as a health aid. Of course, the articles themselves and the magazines would need to be reviewed in terms of potential biases.

**Determining Usefulness.** To ascertain the validity and objectivity of the information located, traditional criterion for information evaluation would be appropriate:

- Accuracy
- Authority
- Objectivity
- Currency
- Coverage

In addition, Web sites should be evaluated by:

- **Hyperlinks** – how do the sources that a Web page links to meet traditional criteria for information (may differ sharply from the initial page)
- **Frames** and how they contain (and obscure) separate pages that need to be evaluated independently.
- **Search engine results** that may return results that present Web pages out of context.
- **Marketing and advocacy pages** that might present information in a biased manner or only from one point of view.

**Site’s Points of View.** While *AltaVista* did not seem to present its results with an emphasis on selling herbs and turmeric, its results were dominated by .com sites that did sell herbal supplements. *AskJeeves* appeared to present its results with an emphasis on marketing.

