

# PubMed: Expanding Your Search

Performing a basic search in PubMed can produce some relevant articles in your search results, but you may not find all the information you need after conducting your first search query. Fortunately, there are ways that you can expand your searches so that you can discover new articles.

## 1) New Keywords – MeSH Terms

The first way is using **new keywords** in the search bar at the top of the results page. Keywords can be found within the **articles** that you discovered or in the **Search Details** of previous queries.

The screenshot shows the PubMed search results page for the query "ebola virus and pregnancy". The search bar at the top contains the query. The results list five articles. On the right side, the "Search details" panel is expanded and circled in red, showing the search query: `("ebolavirus" [MeSH Terms] OR "ebolavirus" [All Fields] OR "ebola" [All Fields] AND ("virus" [All Fields]) OR "ebola virus" [All Fields]) AND ("pregnancy" [MeSH Terms] OR ...)`

The **Search Details** are located on the search results page (See Above) and consist of terms that were used to generate your results. Some of the terms listed in the Search Details will match the keywords that you entered into your search and others will be related to them. You can use these terms to create new searches and discover different articles.

When examining the Search Details for new terms, we highly recommend including the **MeSH Terms** in your search queries.

### Search details

```
("ebolavirus"[MeSH Terms] OR
"ebolavirus"[All Fields] OR
("ebola"[All Fields] AND
"virus"[All Fields]) OR "ebola
virus"[All Fields]) AND
("pregnancy"[MeSH Terms] OR
```

MeSH (Medical Subject Headings) Terms are special keywords carefully selected by the National Library of Medicine's indexers to best describe the subject of an article.

More MeSH Terms can be found on the abstract page of an article under the **MeSH Terms heading** (See Below). If you click on the **arrows** to the right of the heading, a list will drop down that contains all of the MeSH Terms that were assigned to that particular article.

[Obstet Gynecol.](#) 2015 Jun;125(6):1293-8. doi: 10.1097/AOG.0000000000000853.

### **Ebola virus disease and Marburg disease in pregnancy: a review and management considerations for filovirus infection.**

[Bebell LM](#)<sup>1</sup>, [Riley LE](#).

⊕ **Author information**

#### **Abstract**

The largest-ever recorded outbreak of viral hemorrhagic fever is ongoing. As a result of the epidemic and rural nature of outbreaks, little is published about the Filovirus infections Ebola virus disease and Marburg disease in pregnancy. This review of viral hemorrhagic fever focusing on Marburg and Ebola uses knowledge of disease in nonpregnant individuals and pregnancy-specific data to inform management for pregnant women. Filovirus infection presentation is similar between pregnant and nonpregnant patients, although infections may be more severe in pregnancy. Although labeled as hemorrhagic fevers, Marburg and Ebola do not commonly cause gross bleeding and should be conceptualized as diseases of high gastrointestinal losses. Early, aggressive supportive care is the mainstay of Filovirus infection management with massive fluid resuscitation as the key management principle. Patients often require 5-10 L or more per day of intravenous or oral fluid to maintain circulating blood volume in the setting of ongoing gastrointestinal loss. Fluid shifts warrant aggressive monitoring and correction of potassium levels and acid-base disturbances to prevent life-threatening arrhythmias and metabolic complications. Regardless of maternal survival, fetal loss rates are nearly 100% in Filovirus infection, likely resulting from unchecked transplacental and hematogenous viral spread. High fetal loss rates support the placenta as a difficult-to-eradicate Filovirus infection reservoir. In conclusion, the management of Filovirus infection in pregnancy should focus on stabilizing the mother with intensive monitoring and aggressive fluid and electrolyte repletion as well as maintaining strict infection control to minimize transmission to others.

PMID: 2600499 [PubMed - indexed for MEDLINE] PMCID: PMC4443859 [Available on 2016-06-01]



### **Publication Types, MeSH Terms, Substances, Grant Support**

#### **Publication Types**

[Review](#)

#### **MeSH Terms**

[Animals](#)

[Female](#)

[Fluid Therapy\\*](#)

[Hemorrhagic Fever, Ebola/blood](#)

[Hemorrhagic Fever, Ebola/diagnosis](#)

[Hemorrhagic Fever, Ebola/prevention & control](#)

[Hemorrhagic Fever, Ebola/therapy\\*](#)

[Hemorrhagic Fever, Ebola/transmission](#)

[Humans](#)

[Marburg Virus Disease/blood](#)

[Marburg Virus Disease/diagnosis](#)

[Marburg Virus Disease/prevention & control](#)

[Marburg Virus Disease/therapy\\*](#)

[Marburg Virus Disease/transmission](#)

[Occupational Exposure/prevention & control\\*](#)

[Potassium/blood](#)

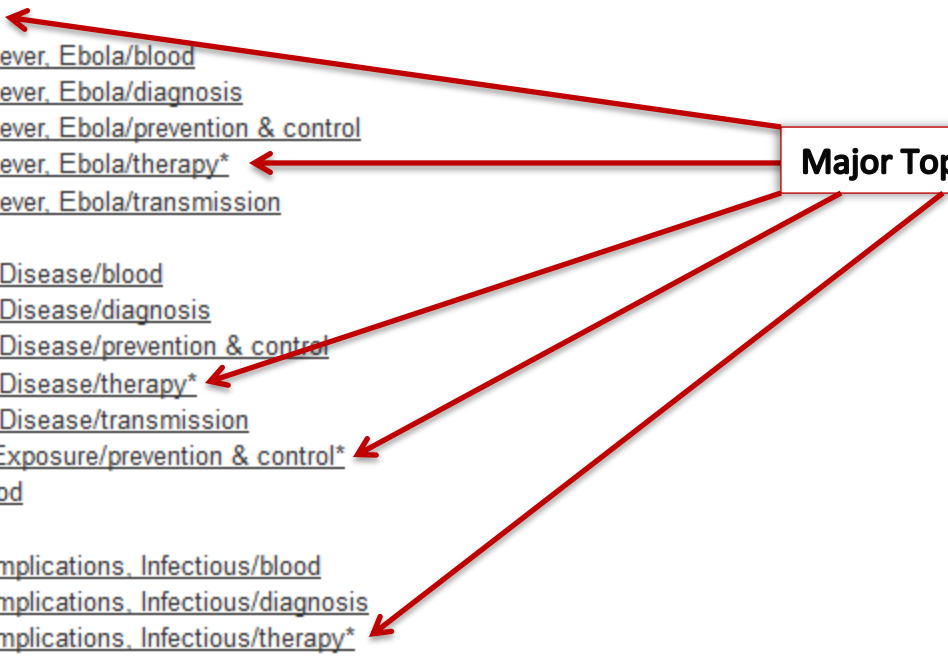
[Pregnancy](#)

If you take a closer look at the list of MeSH Terms, you will notice tiny asterisks (\*) next to some of the terms.

**MeSH Terms**

- [Animals](#)
- [Female](#)
- [Fluid Therapy\\*](#)
- [Hemorrhagic Fever, Ebola/blood](#)
- [Hemorrhagic Fever, Ebola/diagnosis](#)
- [Hemorrhagic Fever, Ebola/prevention & control](#)
- [Hemorrhagic Fever, Ebola/therapy\\*](#)
- [Hemorrhagic Fever, Ebola/transmission](#)
- [Humans](#)
- [Marburg Virus Disease/blood](#)
- [Marburg Virus Disease/diagnosis](#)
- [Marburg Virus Disease/prevention & control](#)
- [Marburg Virus Disease/therapy\\*](#)
- [Marburg Virus Disease/transmission](#)
- [Occupational Exposure/prevention & control\\*](#)
- [Potassium/blood](#)
- [Pregnancy](#)
- [Pregnancy Complications, Infectious/blood](#)
- [Pregnancy Complications, Infectious/diagnosis](#)
- [Pregnancy Complications, Infectious/therapy\\*](#)
- [Pregnancy Complications, Infectious/virology](#)

**Major Topic**



The asterisks indicate that a particular term is a **major topic** for an article which can help you determine if the article is relevant for your research. Major topics can also be used to expand your searches to find new articles.

When you click on a MeSH Term in the list an **action box** will appear with the options to search for the terms in PubMed, search in the MeSH database or add the term(s) to the basic search bar at the top of the Screen.

### MeSH Terms

- [Animals](#)
- [Female](#)
- [Fluid Therapy\\*](#)
- [Hemorrhagic Fever, Ebola/blood](#)
- [Hemorrhagic Fever, Ebola/diagnosis](#)
- [Hemorrhagic Fever, Ebola/prevention & control](#)
- [Hemorrhagic Fever, Ebola/therapy\\*](#)
- [Hemorrhagic Fever, Ebola/transmission](#)
- [Humans](#)
- [Marburg Virus Disease/blood](#)
- [Marburg Virus Disease/diagnosis](#)
- [Marburg Virus Disease/prevention & control](#)
- [Marburg Virus Disease/therapy\\*](#)
- [Marburg Virus Disease/transmission](#)
- [Occupational Exposure/prevention & control\\*](#)
- [Potassium/blood](#)
- [Pregnancy](#)
- [Pregnancy Complications, Infectious/blood](#)
- [Pregnancy Complications, Infectious/diagnosis](#)
- [Pregnancy Complications, Infectious/therapy\\*](#)
- [Pregnancy Complications, Infectious/virology](#)

**Actions**

- [Search in PubMed](#)
- [Search in MeSH](#)
- [Add to Search](#)

Selecting the **Search in PubMed** option will have the database automatically search for all articles that contain the selected term(s).

The screenshot shows the NCBI PubMed search results page. At the top, the search bar contains the query "Hemorrhagic Fever, Ebola/therapy"[MAJR]. The page is filtered to show 1124 results on page 1 of 57. The search results are listed as follows:

- Changes in the primary outcome in Ebola vaccine trial--Authors' reply.**  
Kiény MP, Longini IM, Henao-Restrepo AM, Watson CH, Egger M, Edmunds WJ. *Lancet*. 2016 Apr 9;387(10027):1509-10. doi: 10.1016/S0140-6736(16)00686-3. Epub 2016 Apr 7. No abstract available. PMID: 27115974
- Changes in the primary outcome in Ebola vaccine trial.**  
Zhang Y, Feng S, Cowling BJ. *Lancet*. 2016 Apr 9;387(10027):1509. doi: 10.1016/S0140-6736(16)30127-1. Epub 2016 Apr 7. No abstract available. PMID: 27115973
- A review of the role of training in WHO Ebola emergency response.**  
[No authors listed] *Wkly Epidemiol Rec*. 2016 Apr 8;91(14):181-6. English, French. No abstract available. PMID: 27066609
- Synthesis of giant globular multivalent glycofullerenes as potent inhibitors in a model of Ebola virus infection.**  
Muñoz A, Sigwalt D, Illescas BM, Luczkowiak J, Rodríguez-Pérez L, Nierengarten I, Holler M, Remy JS, Buffet K, Vincent SP, Rojo J, Delgado R, Nierengarten JF, Martín N. *Nat Chem*. 2016 Jan;8(1):50-7. PMID: 27055288

On the right side of the page, there are sections for "Results by year" (a bar chart), "Titles with your search terms" (listing related titles like "A mouse model for evaluation of prophylaxis and therapy of Ebola hemorrhage"), "Find related data" (a dropdown menu), and "Search details" (showing the search query and filter).

**Search in MeSH** will search for the selected term in the MeSH database. This option is only recommended for **very advanced** searches.

The screenshot shows the MeSH search interface. At the top, there is a search bar with the text "Hemorrhagic Fever, Ebola" and a "Search" button. Below the search bar, there are options for "Create alert", "Limits", and "Advanced". The main content area is titled "Hemorrhagic Fever, Ebola" and includes a description: "A highly fatal, acute hemorrhagic fever, clinically very similar to MARBURG VIRUS DISEASE, caused by EBOLAVIRUS, first occurring in the Sudan and adjacent northwestern (what was then) Zaire. Year introduced: 1996". Below the description, there are "PubMed search builder options" and a link to "Subheadings:". A grid of subheadings is displayed, each with a checkbox: analysis, anatomy and histology, blood, classification, complications, cytology, diagnosis, drug therapy, economics, enzymology, epidemiology, ethnology, etiology, genetics, history, immunology, metabolism, microbiology, mortality, nursing, organization and administration, pathology, physiology, physiopathology, prevention and control, psychology, radiography, statistics and numerical data, surgery, therapy, transmission, ultrasonography, urine, veterinary, and virology. There are also checkboxes for "Restrict to MeSH Major Topic" and "Do not include MeSH terms found below this term in the MeSH hierarchy". Below these, the "Tree Number(s)", "MeSH Unique ID", and "Entry Terms" are listed. The "Entry Terms" include: Ebola Infection, Infection, Ebola, Ebola Virus Infection, Infection, Ebola Virus, Virus Infection, Ebola, Ebola Hemorrhagic Fever, and Ebola Virus Disease. On the right side, there is a "PubMed Search Builder" section with an "Add to search builder" button and a "Search PubMed" button. Below that, there is a "Related information" section with links to PubMed, PubMed - Major Topic, Clinical Queries, NLM MeSH Browser, and MedGen. At the bottom right, there is a "Recent Activity" section with a list of recent searches, including "Hemorrhagic Fever, Ebola" and "Hemorrhagic Fever, Ebola/therapy"[MAJR] (1124)".

The **Add to Search** option will place the selected term into the search box at the top of the page, but will **NOT** search for the term until you hit enter or click on the search button. With this option, you have the freedom to add other terms to the search.

The screenshot shows the PubMed search interface. At the top, there is a search bar with the text "Hemorrhagic Fever, Ebola/therapy"[MAJR] AND pregnancy" and a "Search" button. Below the search bar, there are options for "Resources" and "How To". The main content area is titled "PubMed" and includes the text "US National Library of Medicine National Institutes of Health". Below the search bar, there are options for "Advanced" and "Search".

## 2) Advanced Search

Another way to expand your searches is through the **Advanced Search** option. Advanced searching provides users with more options for finding articles including Author search, subject (MeSH) search, title search and journal name search. The link to the Advanced Search page is located beneath the basic search box on the results page and the PubMed home page.

The screenshot shows the PubMed search results page for the query "ebola virus and pregnancy". The search bar at the top contains the query and a "Search" button. Below the search bar, the "Advanced" link is circled in red. The search results are displayed in a list format, with two items shown. The first item is "Why Zika virus infection has become a public health concern?" by Chen HL, Tang RB, published in J Chin Med Assoc. The second item is "Evaluation of Convalescent Plasma for Ebola Virus Disease in Guinea." by van Griensven J, et al., published in N Engl J Med. The page also includes a sidebar with filters for article types, text availability, and publication dates, and a "Search details" section with a search query box.

### Search Results Page

The screenshot shows the PubMed home page. The search bar at the top contains the query "ebola virus and pregnancy" and a "Search" button. Below the search bar, the "Advanced" link is circled in red. The page features a "PubMed Commons" section with a featured comment from Cicely Saunders Institute Journal Club. Below this, there are three columns of links: "Using PubMed" (including Quick Start Guide, Full Text Articles, FAQs, Tutorials, and New and Noteworthy), "PubMed Tools" (including Mobile, Citation Matcher, Clinical Queries, and Topic-Specific Queries), and "More Resources" (including MeSH Database, Journals in NCBI Databases, Clinical Trials, E-Utilities (API), and LinkOut).

### Home Page

The Advanced Search page includes a search builder where you can customize your searches and a chart of your search history containing the search terms and number of results from previous queries.

NCBI Resources How To Sign in to NCBI

PubMed Home More Resources Help

### PubMed Advanced Search Builder

YouTube Tutorial

Use the builder below to create your search

[Edit](#) [Clear](#)

**Builder**

All Fields  - [Show index list](#)

AND All Fields  + - [Show index list](#)

[Search](#) or [Add to history](#)

**History** [Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#3	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/therapy"[MAJR]	<a href="#">1145</a>	13:42:55
#4	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/transmission"[MeSH Terms]	<a href="#">513</a>	13:42:44
#1	<a href="#">Add</a>	Search ebola virus and pregnancy	<a href="#">36</a>	13:41:20

The search builder consists of multiple search bars which you can add or delete from the builder using the plus and minus icons on the right hand side. It also includes drop down menus on the left that tells the search where in the article citation to look for your terms. For example you can have the search look for terms in just the article title, the article title and abstract or even in only the MeSH Terms. If you are looking for a specific author or journal title, there are options to search in those categories as well.

#### Builder

All Fields  - [Show index list](#)

AND All Fields  + - [Show index list](#)

[Search](#) or [Add to history](#)

The small box to the far left of the search builder contains the terms AND, OR and NOT. These small words are called Boolean Operators and they help connect the keywords in the search boxes together and determine the number of results you receive and which articles that will be included in the results.

Each Boolean Operator has its own function and can provide you with different results. The chart below explains these functions in more detail.

Operator	Function	Results
<b>AND</b>	Searches for articles that contain ALL of the terms that were entered into the search boxes.	Will reduce the total number of results. Results are more focused.
<b>OR</b>	Searches for articles that contain at least one, two or more terms from the search boxes	Will increase the total number of results. Results are less focused.
<b>NOT</b>	Eliminates any articles that contain the terms in the search box that appears after the Boolean Operator box.	Articles containing eliminated term will not be included in the results.

### **AND Operator**

If we enter the term Ebola into the first box and pregnancy into the second with the Boolean Operator AND, we are going to get fewer, more focused results that discuss both the Ebola Virus and pregnancy.

#### Builder

[Show index list](#)  
   [Show index list](#)  
   [Show index list](#)

or [Add to history](#)

Summary ▾ 20 per page ▾ Sort by Most Recent ▾

Send to: ▾

### Search results

Items: 1 to 20 of 63

<< First < Prev Page 1 of 4 Next > Last >>

- [Pregnancy, Labor, and Delivery after Ebola Virus Disease and Implications for Infection Control in Obstetric Services, United States.](#)  
 1. Kamali A, Jamieson DJ, Kpaduwa J, Schrier S, Kim M, Green NM, Ströher U, Muehlenbachs A, Bell M, Rollin PE, Mascola L.  
 Emerg Infect Dis. 2016 Jul 15;22(7). doi: 10.3201/eid2207.160269. [Epub ahead of print]  
 PMID: 27191253 **Free Article**  
[Similar articles](#)
- [Why Zika virus infection has become a public health concern?](#)  
 2. Chen HL, Tang RB.  
 J Chin Med Assoc. 2016 Apr;79(4):174-8. doi: 10.1016/j.jcma.2016.03.001. Epub 2016 Mar 24. Review.  
 PMID: 27052792 **Free Article**  
[Similar articles](#)
- [Evaluation of Convalescent Plasma for Ebola Virus Disease in Guinea.](#)  
 3. van Griensven J, Edwards T, de Lamballerie X, Semple MG, Gallian P, Baize S, Horby PW, Raoul H, Magassouba N, Antierens A, Lomas C, Faye O, Sall AA, Fransen K, Buyze J, Ravinetto R, Tiberghien P, Claeys Y, De Crop M, Lynen L, Bah EI, Smith PG, Delamou A, De Weggheleire A, Haba N; **Ebola-Tx Consortium.**  
 N Engl J Med. 2016 Jan 7;374(1):33-42. doi: 10.1056/NEJMoa1511812.  
 PMID: 26735992 **Free Article**  
[Similar articles](#)



## OR Operator

If we enter Ebola into the first box and pregnancy into the second box and use the operator OR, we will receive more results, but not all of the articles will be focused on Ebola Virus and pregnancy. Instead, the results may include articles that are just about pregnancy and do not discuss the Ebola Virus's effects on pregnant women. Or the articles will discuss the Ebola Virus, but not include information about pregnant women.

### Builder

	All Fields	Ebola	⊖	<a href="#">Show index list</a>
OR	All Fields	pregnancy	⊖	<a href="#">Show index list</a>
AND	All Fields		⊖ ⊕	<a href="#">Show index list</a>

[Search](#) or [Add to history](#)

Summary ▾ 20 per page ▾ Sort by Most Recent ▾

Send to: ▾

## Search results

Items: 1 to 20 of 853841

<< First < Prev Page 1 of 42693 Next > Last >>

- [Efficacy and pregnancy outcomes of laparoscopic single sheet mesh sacrohysteropexy.](#)
  1. Pandeva I, Mistry M, Fayyad A.  
Neurourol Urodyn. 2016 May 25. doi: 10.1002/nau.23026. [Epub ahead of print]  
PMID: 27224927  
[Similar articles](#)
  
- [Effect of Multiple Alcohol-Based Hand Rub Applications on the Tensile Properties of Thirteen Brands of Medical Exam Nitrile and Latex Gloves.](#)
  2. Gao P, Horvatin M, Niezgodna G, Weible R, Shaffer R.  
J Occup Environ Hyg. 2016 May 25:1-35. [Epub ahead of print]  
PMID: 27224677  
[Similar articles](#)
  
- [Risk of Allergic Rhinitis, Allergic Conjunctivitis, and Eczema in Children Born to Mothers with Gum Inflammation during Pregnancy.](#)
  3. Hsieh VC, Liu CC, Hsiao YC, Wu TN.  
PLoS One. 2016 May 25;11(5):e0156185. doi: 10.1371/journal.pone.0156185. eCollection 2016.  
PMID: 27224053  
[Similar articles](#)
  
- [Buprenorphine compared with methadone to treat pregnant women with opioid use disorder: a systematic review and meta-analysis of safety in the mother, fetus and child.](#)
  4. Zedler BK, Mann AL, Kim MM, Amick HR, Joyce AR, Murrelle EL, Jones HE.  
Addiction. 2016 May 25. doi: 10.1111/add.13462. [Epub ahead of print] Review.  
PMID: 27223595  
[Similar articles](#)

## NOT Operator

If we enter Ebola into the first box and pregnancy into the second box with the operator NOT, any articles that contain the term pregnancy will be eliminated from the results list. In the end we will only receive information about the Ebola Virus.

### Builder

	All Fields	Ebola	-	<a href="#">Show index list</a>
NOT	All Fields	pregnancy	-	<a href="#">Show index list</a>
AND	All Fields		- +	<a href="#">Show index list</a>

or [Add to history](#)

Summary ▾ 20 per page ▾ Sort by Most Recent ▾

Send to: ▾

## Search results

Items: 1 to 20 of 5232

<< First < Prev Page 1 of 262 Next > Last >>

- [Effect of Multiple Alcohol-Based Hand Rub Applications on the Tensile Properties of Thirteen Brands of Medical Exam Nitrile and Latex Gloves.](#)  
1. Gao P, Horvatin M, Niezgoda G, Weible R, Shaffer R.  
J Occup Environ Hyg. 2016 May 25;1-35. [Epub ahead of print]  
PMID: 27224677  
[Similar articles](#)
- [Aerosol Transmission of Filoviruses.](#)  
2. Mekibib B, Ariën KK.  
Viruses. 2016 May 23;8(5). pii: E148. Review.  
PMID: 27223296  
[Similar articles](#)
- [Standard finishing categories for high-throughput sequencing of viral genomes.](#)  
3. Ladner JT, Kuhn JH, Palacios G.  
Rev Sci Tech. 2016 Apr;35(1):43-52. doi: 10.20506/rst.35.1.2416.  
PMID: 27217167  
[Similar articles](#)
- [Addressing the role of medical students using community mobilization and social media in the Ebola response.](#)  
4. Chapman HJ, Animasahun VJ, Tade AE, Naveed A.  
Perspect Med Educ. 2016 May 23. [Epub ahead of print]  
PMID: 27216169  
[Similar articles](#)
- [Practices and thinking of laboratory detection in the aid to West Africa to fight against Ebola.](#)  
5. Sun YS, Zhao XY, Zhang BK, Jiang JF, Lu HJ, Cao YX, Wu GZ, Qian J, Sun YS, Zeng YJ.  
Bratisl Lek Listy. 2016;117(5):254-7.  
PMID: 27215960  
[Similar articles](#)

Below the Search Builder is a chart that contains the search terms that you used in previous search queries. If you want to reuse these terms to create new searches, they can be added to the search builder clicking to the Add icon under the Add to Builder section.

**History**

[Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#3	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/therapy"[MAJR]	<a href="#">1145</a>	13:42:55
#4	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/transmission"[MeSH Terms]	<a href="#">513</a>	13:42:44
#1	<a href="#">Add</a>	Search ebola virus and pregnancy	<a href="#">36</a>	13:41:20

For example, if I want to add my third search query which was “Hemorrhagic Fever, Ebola/therapy”[MAJR] to the search builder all I would have to do is click on Add and then the terms will appear in the first available box.

**Builder**

All Fields Show index list

AND All Fields Show index list

[Search](#) or [Add to history](#)

**History**

[Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#3	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/therapy"[MAJR]	<a href="#">1145</a>	13:42:55
#4	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/transmission"[MeSH Terms]	<a href="#">513</a>	13:42:44
#1	<a href="#">Add</a>	Search ebola virus and pregnancy	<a href="#">36</a>	13:41:20

You can add as many previous searches to the builder as you desire or type in other keywords that you wish to include into the query.

**Builder**

All Fields Show index list

AND All Fields Show index list

AND All Fields Show index list

[Search](#) or [Add to history](#)

**History**

[Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#3	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/therapy"[MAJR]	<a href="#">1145</a>	13:42:55
#4	<a href="#">Add</a>	Search "Hemorrhagic Fever, Ebola/transmission"[MeSH Terms]	<a href="#">513</a>	13:42:44
#1	<a href="#">Add</a>	Search ebola virus and pregnancy	<a href="#">36</a>	13:41:20

Conducting searches for relevant articles does take time and a series of trial and error with different terms. But if you are willing to put in the effort, the information you gain from your research will be worth it. The librarians at the Touro-Middletown Medical Library are available to assist you with any questions that you may have as you search through PubMed or any of our other databases. We are always happy to help!!