Using Keywords in PubMed when MeSH Terms don’t Work

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Find a Cochrane Review via PubMed

- You have been asked to locate a specific Cochrane Review in PubMed, about whether or not cocoa can be used to lower blood pressure, but are unable to find this particular review using MeSH terms.
The MeSH Term for Cocoa is Cacao

Display Settings: Summary

Results: 4

1. Cacao
   A tree of the family Sterculiaceae (or Byttneriaceae), usually Theobroma cacao, or its seeds, which after fermentation and roasting, yield cocoa and chocolate.

2. ASP protein, Theobroma cacao [Supplementary Concept]
   amino acid sequence given in first source; has homology to the soybean trypsin inhibitor (Kunitz) family of protease inhibitors
   Date introduced: September 4, 1991

3. cocoa butter [Supplementary Concept]
   predominantly saturated fat; RN given refers to parent cpd
   Date introduced: July 2, 1987

4. Hps3 protein, mouse [Supplementary Concept]
   the gene is mutated in cocoa mice, carrying a defect of organelle biogenesis, is a homolog of the human Hermansky-Pudlak syndrome-3 gene: GenBank AF396630-46; RefSeq NM_080634
   Date introduced: January 5, 2002
Add to Search Builder

1. Cacao
   A tree of the family Sterculiaceae (or Byttneriaceae), usually Theobroma cacao, or its seeds, which after fermentation and roasting, yield cocoa and chocolate.
   Year introduced: 1991(1986)-1963

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Second MeSH Term: blood pressure or blood pressure determination

Blood Pressure Determination
1. Techniques for measuring blood pressure.

Blood Pressure
2. PRESSURE of the BLOOD on the ARTERIES and other BLOOD VESSELS.

Blood Pressure Monitoring, Ambulatory
3. Method in which repeated blood pressure readings are made while the patient undergoes normal daily activities. It allows quantitative analysis of the high blood pressure load over time, can help distinguish between types of HYPERTENSION, and can assess the effectiveness of antihypertensive therapy.
Year introduced: 1995

Blood Pressure Monitors
4. Devices for continuously measuring and displaying the arterial blood pressure.
Year introduced: 1990

Venous Pressure
5. The blood pressure in the VEINS. It is usually measured to assess the filling pressure to the HEART VENTRICLE.
Year introduced: 1970
But you could also use

6. **Hypotension**
   Abnormally low **BLOOD PRESSURE** that can result in inadequate blood flow to the brain and other vital organs. Common symptom is **DIZZINESS** but greater negative impacts on the body occur when there is prolonged deprivation of oxygen and nutrients.

7. **Hypertension**
   Persistently high systemic arterial **BLOOD PRESSURE**. Based on multiple readings (**BLOOD PRESSURE DETERMINATION**), hypertension is currently defined as when **SYSTOLIC PRESSURE** is consistently greater than 140 mm Hg or when **DIASTOLIC PRESSURE** is consistently 90 mm Hg or more.

8. **HBP1 protein, human [Supplementary Concept]**
   RefSeq NM_012257
   Date introduced: August 6, 2004
and can assess the effectiveness of antihypertensive therapy.

Year introduced: 1995

4. **Blood Pressure Monitors**

   Devices for continuously measuring and displaying the arterial blood pressure.
   
   Year introduced: 1990

5. **Venous Pressure**

   The blood pressure in the VEINS. It is usually measured to assess the filling PRESSURE to the HEART VENTRICLE.
   
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8. **HBP1 protein, human [Supplementary Concept]**

   RefSeq NM_012257
PubMed Search Builder will automatically “AND” facets (PICO elements) of your search and “OR” alternative terms if you click more than one term.
Search PubMed: Results 9 articles with filters

No articles from CDSR – Try this search for yourself
Result: 6 systematic reviews. None from CDSR – Try this for yourself
What to Do?
Try a Search String of Keywords in PubMed (not MeSH)

Note: NO “AND” in keyword search
Results with Activated Filters

13 articles, including the one you want from CDSR

Effect of cocoa on blood pressure.
PMID: 22895979 [PubMed - in process]
Related citations

The effectiveness and cost effectiveness of dark chocolate consumption as prevention therapy in people at high risk of cardiovascular disease: best case scenario analysis using a Markov model.
PMID: 22653982 [PubMed - indexed for MEDLINE] Related citations
Reason

- To see how PubMed has searched for your terms, see the search details box on the right hand side of the screen.
- Then click on See more ...
See more: Query Translation

Search Details

Query Translation:

```sql
("cacao"[MeSH Terms] OR "cacao"[All Fields] OR "cocoa"[All Fields]) AND ("blood pressure"[MeSH Terms] OR "blood"[All Fields] AND "pressure"[All Fields]) OR "blood pressure"[All Fields] OR "blood pressure determination"[MeSH Terms] OR ("blood"[All Fields] AND "pressure"[All Fields] AND "determination"[All Fields]) OR "blood pressure determination"[All Fields] OR ("blood"[All Fields] AND "pressure"[All Fields])) AND (systematic[sb] AND English[lang])
```

Result:

13

Translations:

<table>
<thead>
<tr>
<th>Term</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>blood</td>
<td>&quot;blood pressure&quot;[MeSH Terms] OR (&quot;blood&quot;[All Fields] AND &quot;pressure&quot;[All Fields]) OR &quot;blood pressure&quot;[All Fields] OR &quot;blood pressure determination&quot;[MeSH Terms] OR (&quot;blood&quot;[All Fields] AND &quot;pressure&quot;[All Fields] AND &quot;determination&quot;[All Fields]) OR &quot;blood pressure determination&quot;[All Fields] OR (&quot;blood&quot;[All Fields] AND &quot;pressure&quot;[All Fields])</td>
</tr>
<tr>
<td>cocoa</td>
<td>&quot;cacao&quot;[MeSH Terms] OR &quot;cacao&quot;[All Fields] OR &quot;cocoa&quot;[All Fields]</td>
</tr>
</tbody>
</table>

Database:

PubMed
In this case

• PubMed “mapped” the keyword *blood pressure* to the MeSH term, and also mapped it to the MeSH term *blood pressure determination*.

• *Hypertension* or *Hypotension* was not used as an index term for this article, and so the earlier search was unsuccessful.
Unfortunately ...

• Using computers to interpret the meaning of words/terms not an exact science
• Remember how to interpret “good” in the search strategy “is jogging good for pigs?”
• You need to try a combination of terms and keywords in order to maximise search results
• Experience helps ... search more often!
• When in doubt, @sk your medical librarian!
Also

• The CDSR was quite recent (August 2012)
• Note that the article is still “in process” in PubMed
• This means that index (MeSH) terms have not yet been assigned
What is the accuracy of the digital (finger) anal examination in women with fecal incontinence? (Hint: Find a study that was published in 2011)
Add 2011 filter

Results: 7


Article not so recent, but still “in process”
Knowing how to search in PubMed

- Key to finding the evidence you need
- Using MeSH terms will always enhance your search
- However, not always possible to discover what terms indexers have used to describe the article
- Best to use all possible alternatives (eg. Keywords if MeSH does not provide correct answer)
- This is not always feasible in an OSCE situation, so watch for clues as to how to search in OSCE question paper
For evidence base searching ...

- Revise everything relating to evidence-based searching
- **Relevant LibGuides** (http://libguides.wits.ac.za):
  - WHSL Asking the Clinical Question
  - WHSL Clinical Questions using PubMed
  - WHSL Evidence-Based Medicine
  - WHSL Finding the Evidence
  - WHSL Medical Subject Headings for PubMed Searching
  - WHSL Systematic Reviews