

Systematic Searching Systematic Reviews

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Training Course in Sexual and Reproductive Health Research
Geneva 2010



Systematic Searching for Systematic Reviews

- **Where to Begin**
- **Which Resources to use**
- **How to Create a strategy**
- **How to be Comprehensive**
- **How to be Extensive**
- **Test the strategy**
- **Documenting the search**



What this course is not !

Systematic Review vs. Systematic Searching

- **Deciding on the Question**
- **Determination of the Quality of studies**
- **Analysis of selected studies**
- **Reporting of the results**
- **Publishing and dissemination of the results
(beyond documenting the search process)**

Cochrane Collaborating Groups.

- Conducts systematic reviews.
- Extensive resources (human and financial)
- In-depth searching
- Broad searching (language/global)

<http://www.cochrane.org>



The Cochrane Library

- The Cochrane Library contains high-quality, independent evidence to inform healthcare decision-making. It includes reliable evidence from Cochrane and other systematic reviews, clinical trials, and more. Cochrane reviews bring you the combined results of the world's best medical research studies, and are **recognized as the gold standard in evidence-based health care.**
- <http://www.thecochranelibrary.org>

<http://www.TheCochraneLibrary.com>

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The Cochrane Library

Evidence for healthcare decision-making



BROWSE

Cochrane Reviews: [By Topic](#) | [New Reviews](#) | [Updated Reviews](#) | [A-Z](#) | [By Review Group](#)

Other Resources: [Other Reviews](#) | [Clinical Trials](#) | [Methods Studies](#) | [Technology Assessments](#) | [Economic Evaluations](#)

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SEARCH

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Welcome to The Cochrane Library

The Cochrane Library contains high-quality, independent evidence to inform healthcare decision-making. It includes reliable evidence from Cochrane and other systematic reviews, clinical trials, and more. Cochrane reviews bring you the combined results of the world's best medical research studies, and are recognised as the gold standard in evidence-based health care.

More About The Cochrane Library

[What are Systematic Reviews & Protocols?](#) | [Product Descriptions](#) | [About the CD-ROM](#)

Help! New Users Start Here

As a new user we recommend you use the resources to help you navigate through the site and get the most out of The Cochrane Library.

For Clinicians

As a clinician you are under constant pressure to have high-quality, up-to-date evidence at your fingertips. [More](#)

For Researchers

The internet has given us instant access to a vast amount of research, but the large volume of information is a problem in itself. [More](#)

For Patients

Healthcare consumers and patients need high-quality evidence about the effectiveness of treatments. [More](#)

What's New in Issue 1, 2007?

104 new reviews, 46 updated reviews, 115 new protocols and 7 updated protocols, including:

[Interventions for improving older patients' involvement in primary care episodes](#)

[Family-centred care for children in hospital](#)

[School feeding for improving the physical and psychosocial health of disadvantaged elementary school children](#)

[Central action beta-blockers versus placebo for neuroleptic-induced acute akathisia](#)

[Beta-blockers for hypertension](#)

Access to The Cochrane Library

The Cochrane Library is available online through Wiley InterScience.

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NOW AVAILABLE
Evidence-Based



WHO makes the news

SUN NEWS World

Mon, May 7, 2007

World Health Organization slammed by medical journal

The Lancet finds WHO neglects evidence in making health guidelines

By AP

Email | Print | Write | Size: A A A

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LONDON — When developing "evidence-based" guidelines, the World Health Organization routinely forgets one key ingredient: evidence. That's the verdict from a study published in The Lancet online Tuesday.

The medical journal's criticism of WHO could shock many in the global health community, as one of WHO's main jobs is to produce guidelines on everything from fighting the spread of bird flu and malaria control to enacting anti-tobacco legislation.

"This is a pretty seismic event," Lancet editor Dr. Richard Horton, who was not involved in the research for the article. "It undermines the very purpose of WHO."



Lancet May 9th 2007

Use of evidence in WHO recommendations (Oxman et al.)

- Findings : Systematic reviews and concise summaries of findings are rarely used for developing recommendations.
- Panel 2: Comments by directors
- *“I would have liked to have had more evidence to base recommendations on. **We should have conducted a literature search.**”*



WHO Guidelines for Guidelines

- On January 11, 2000, the HQ cabinet recommended that all WHO guidelines should be **evidence-based**. An EIP-led intercluster initiative developed this document as the recommended approach to development of WHO guidelines. At the same time, a self assessment checklist was also produced to ensure a consistent level of quality in the guidelines. Cluster note 2002/39, dated December 3, 2002, endorsed the recommended process and at the same time, mandated HTP to develop a database of guidelines which met all the criteria in the self-assessment checklist.

WHO Guidelines Review Committee

WORLD HEALTH ORGANIZATION

Information Note 16/2007 (The French version will follow)

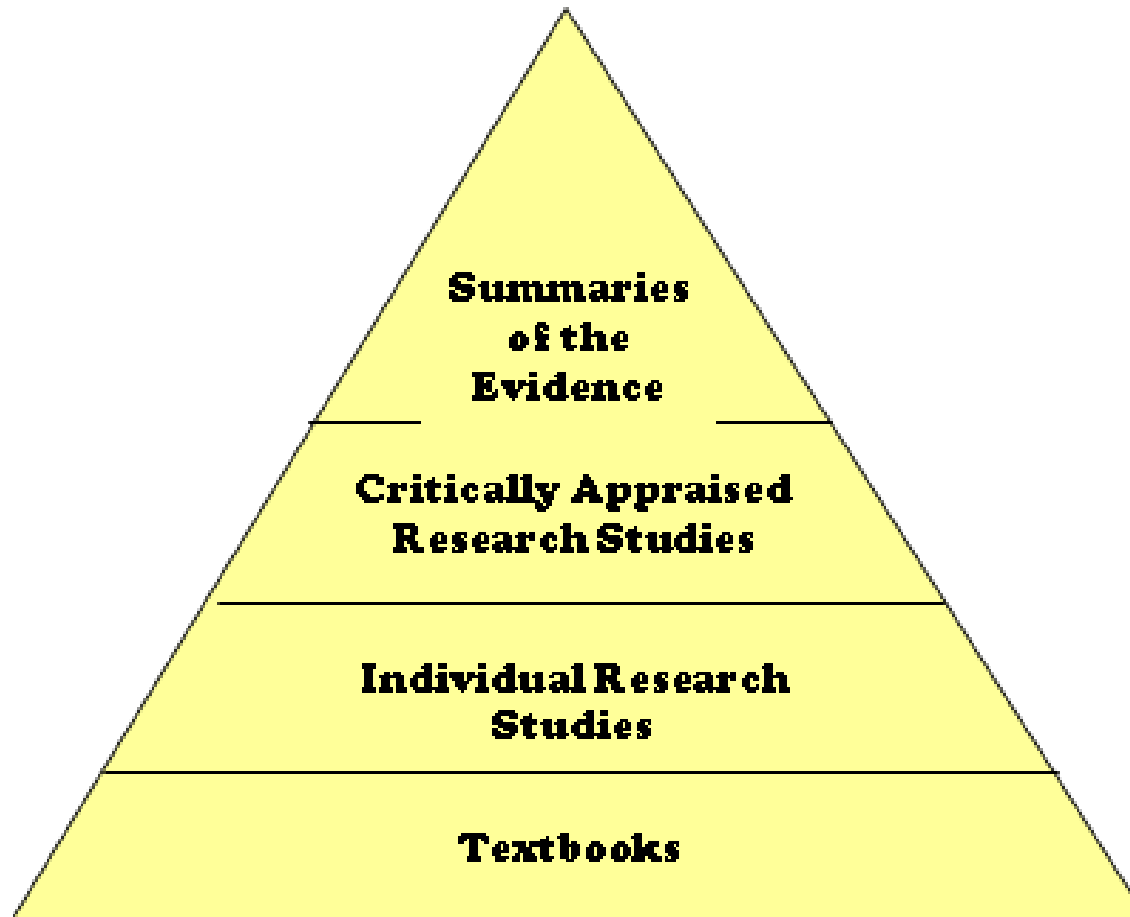
Subject : Establishment of a WHO Guidelines Review Committee

Distribution: All Staff

Date : 09 May 2007

In response to concerns about the quality of WHO guidelines, and following up on recommendations by The Advisory Committee on Health Research (ACHR) and resolution EB120.R15 of the 120th Session of the Executive Board, this note announces the establishment of a WHO Guidelines Review Committee (GRC). The GRC will develop and implement standards and procedures for guideline development that ensure that **WHO guidelines are consistent with internationally accepted best practice, including appropriate use of evidence.**

Level of Evidence

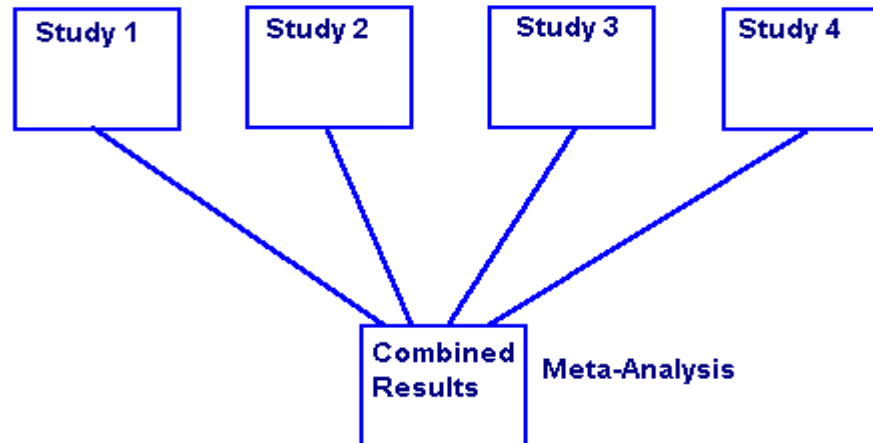


What are the levels of Evidence?

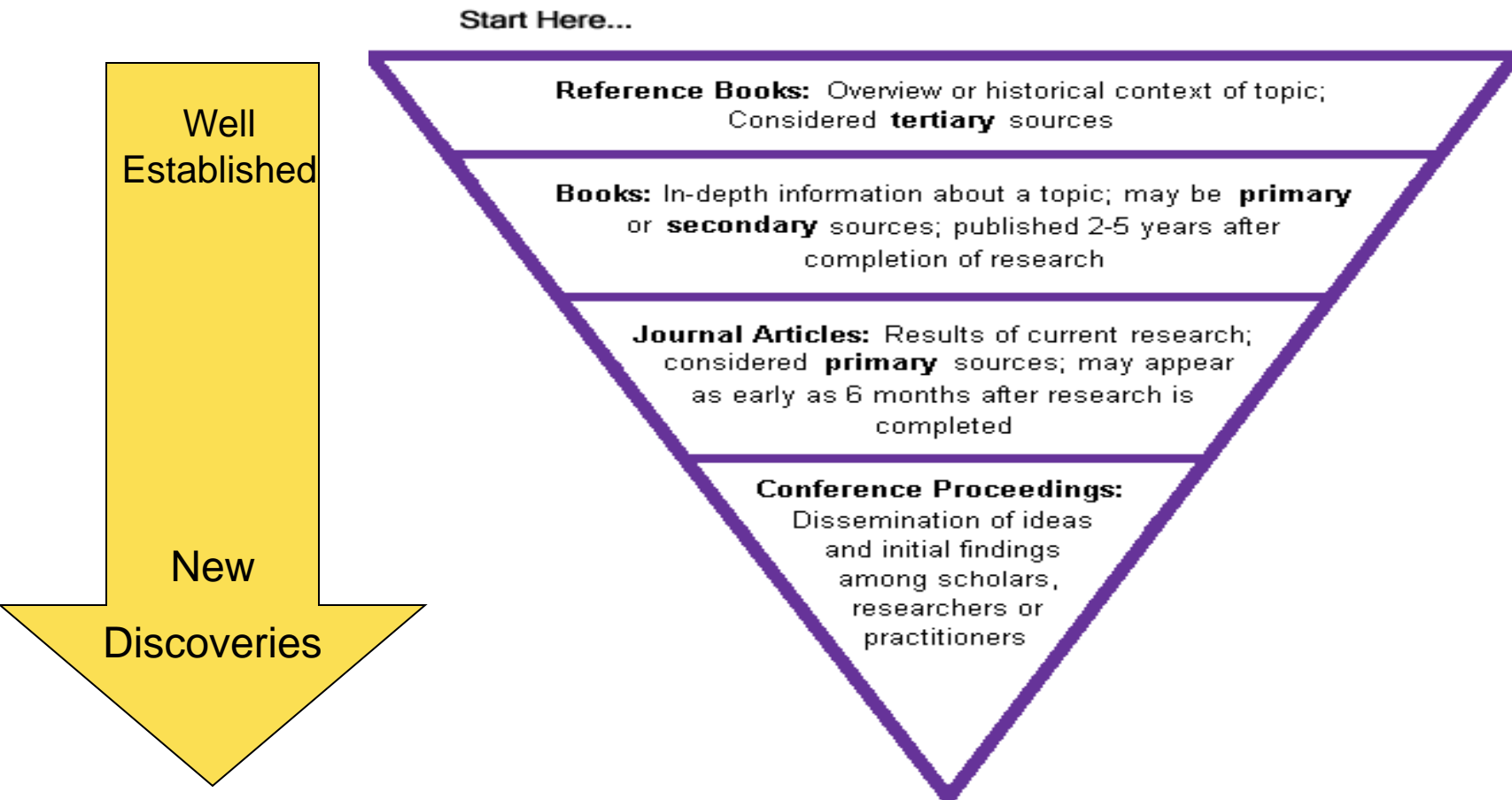
- **I–1** Systematic review of several double-blind randomised control trials.
- **I–2** One or more large double-blind randomised control trials.
- **II–1** One or more well-conducted cohort studies.
- **II–2** One or more well-conducted case-control studies.
- **II–3** A dramatic uncontrolled experiment.
- **III** Expert committee sitting in review; peer leader opinion.
- **IV** Personal experience.



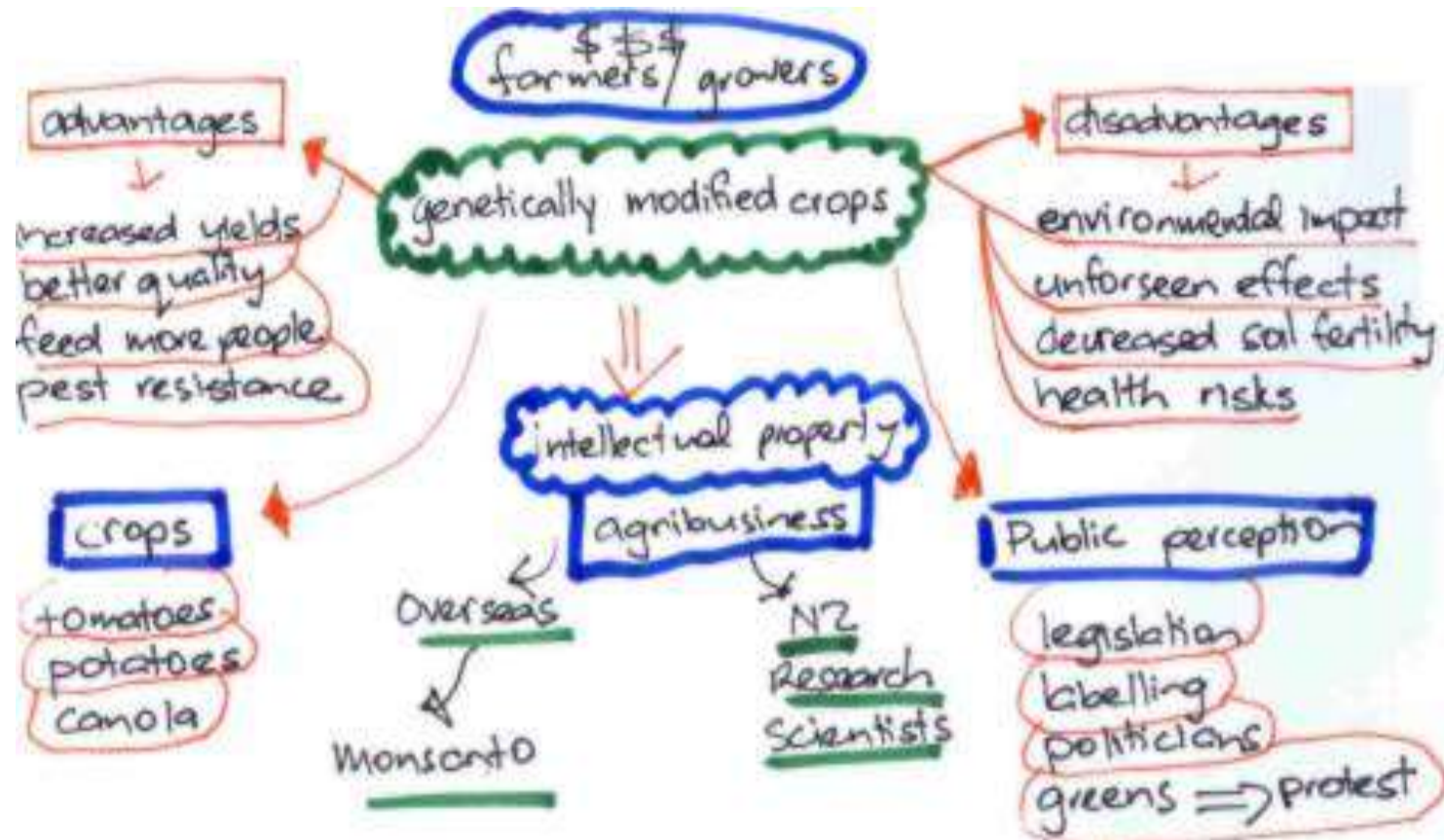
Mainstream Literature **Non-English Literature** **Commercial studies** **Grey Literature**



Time Factor



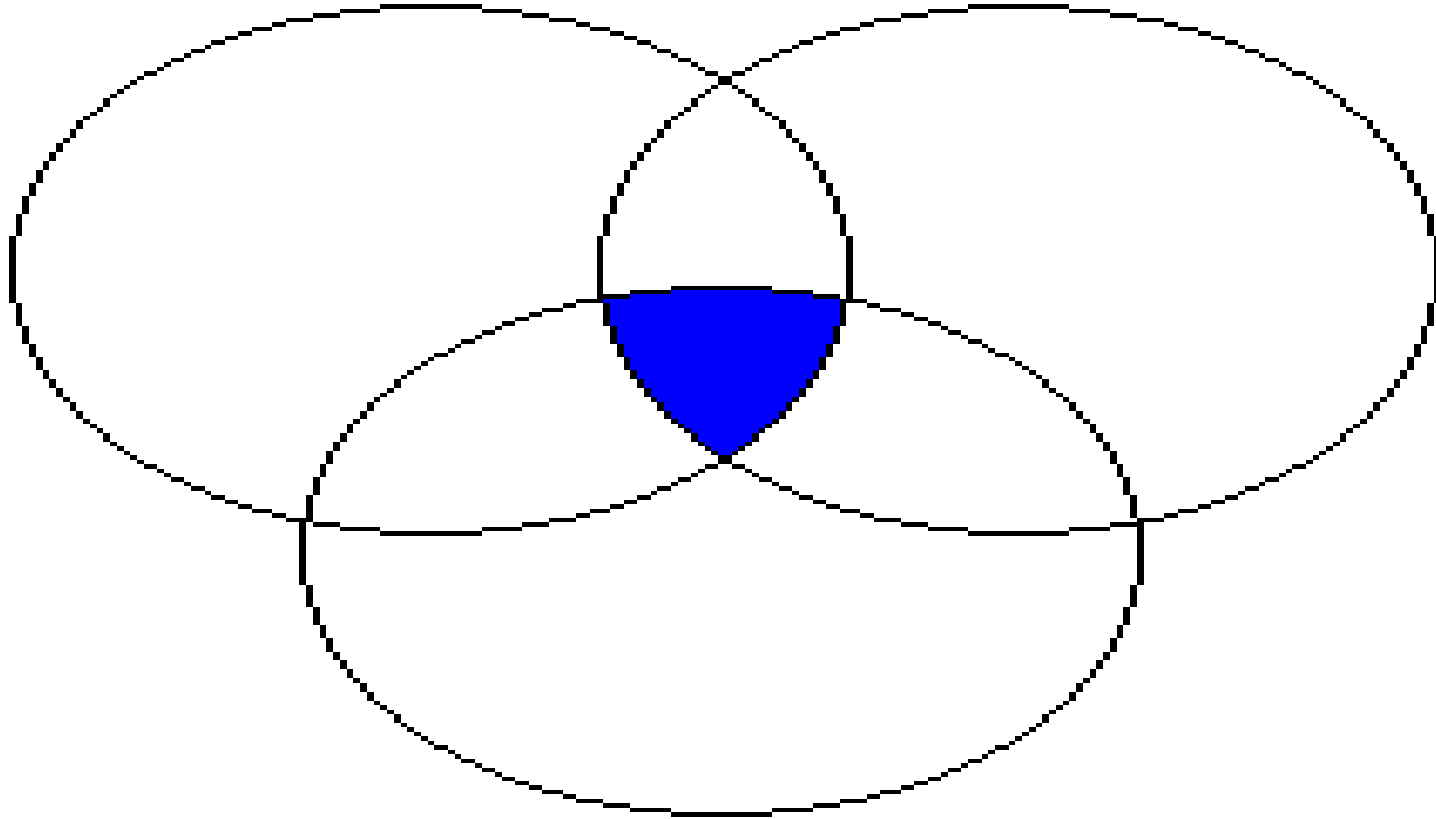
Clarity in the Question



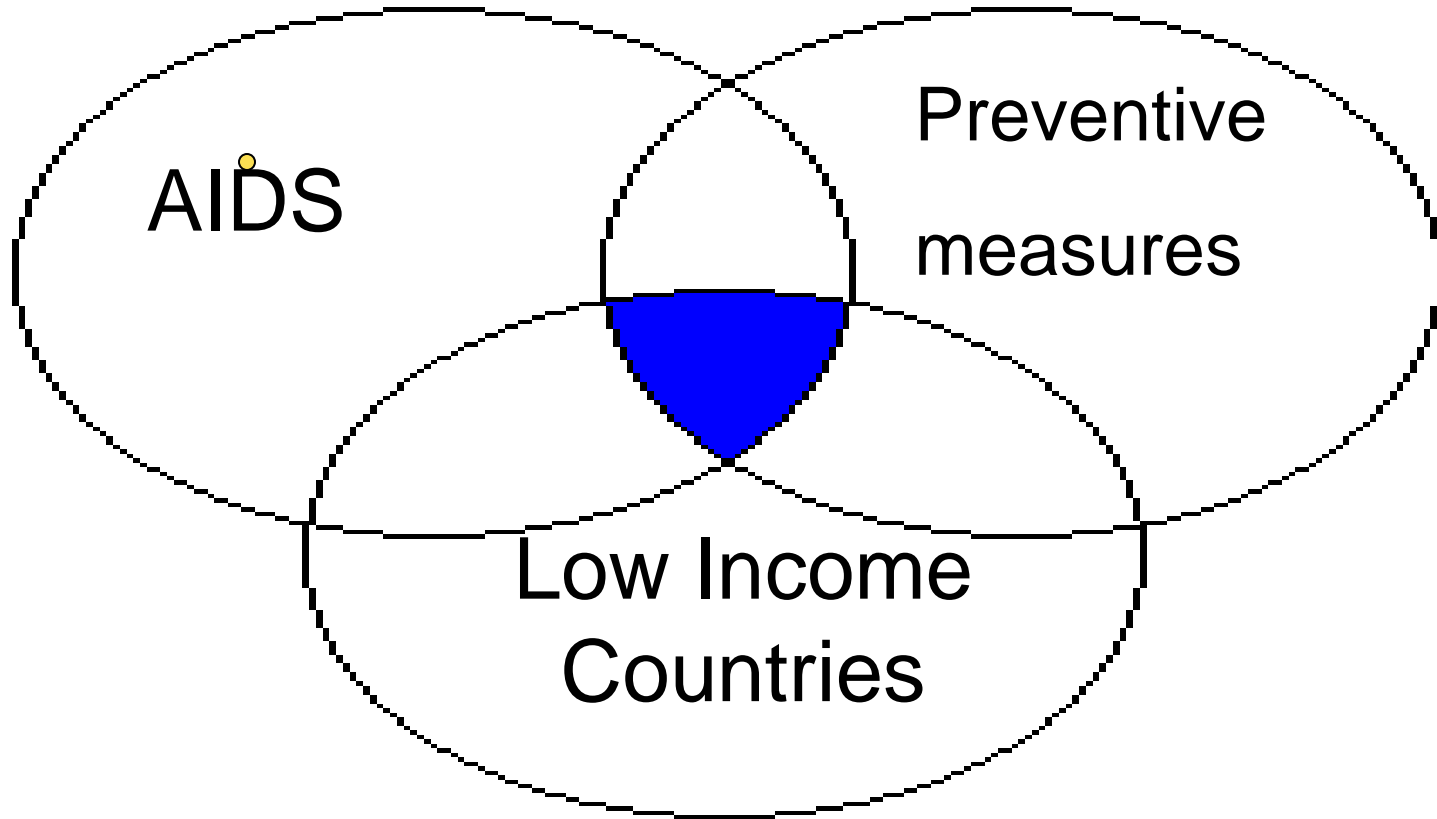
The Question must be Clear

- **The researcher must have the question clearly defined so that the researcher can explain this to the searcher**
- **The Searcher needs to translate the question into a systematic search method**
- **There is always a negotiation between the researcher and the searcher.**

Circle Concepts



Boolean



Cochrane Handbook for Systematic Reviews of Interventions

<http://www.cochrane.org/resources/handbook/>

www.cochrane.org >

The Cochrane Collaboration

The reliable source of evidence in health care

Latest: [WHO online survey: Reporting the findings of clinical tri](#)

Cochrane Handbook for Systematic Reviews of Interventions

The *Cochrane Handbook for Systematic Reviews of Interventions* is the official document that describes in detail the process of preparing and maintaining Cochrane systematic reviews on the effects of healthcare interventions. The current version of the Handbook is 5.0.0 (available in full in browseable format only). A Glossary is available to accompany the Handbook. The current version of the Glossary is 4.2.5.

A short summary of some of the main changes in Handbook version 5 is available as a PDF: [What's New?](#)

See Section 2 Chapter 6

First Step Check Cochrane Library



The Cochrane Library

Evidence for healthcare decision-making

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SEARCH

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[Review]
Antiretrovirals for reducing the risk of mother-to-child transmission of HIV infection

[PDF \(Size 771 K\)](#)

- [Abstract](#)
- [Plain language summary](#)
- [Background](#)
- [Objectives](#)
- [Criteria for considering studies for this review](#)
- [Search methods for identification of studies](#)
- [Methods of the review](#)
- [Description of studies](#)
- [Methodological quality](#)

[Review]
Antiretrovirals for reducing the risk of mother-to-child transmission infection

J Volmink, NL Siegfried, L van der Merwe, P Brocklehurst

Cochrane Database of Systematic Reviews 2008 Issue 4 (Status: *Unchanged*)
Copyright © 2008 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.
DOI: 10.1002/14651858.CD003510.pub2 This version first published online: 24 January 2007 in Issue 1, 2007

This record should be cited as: Volmink J, Siegfried NL, van der Merwe L, Brocklehurst P. Antiretrovirals for reducing the risk of mother-to-child transmission of HIV infection. *Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD003510. DOI: 10.1002/14651858.CD003510.pub2.

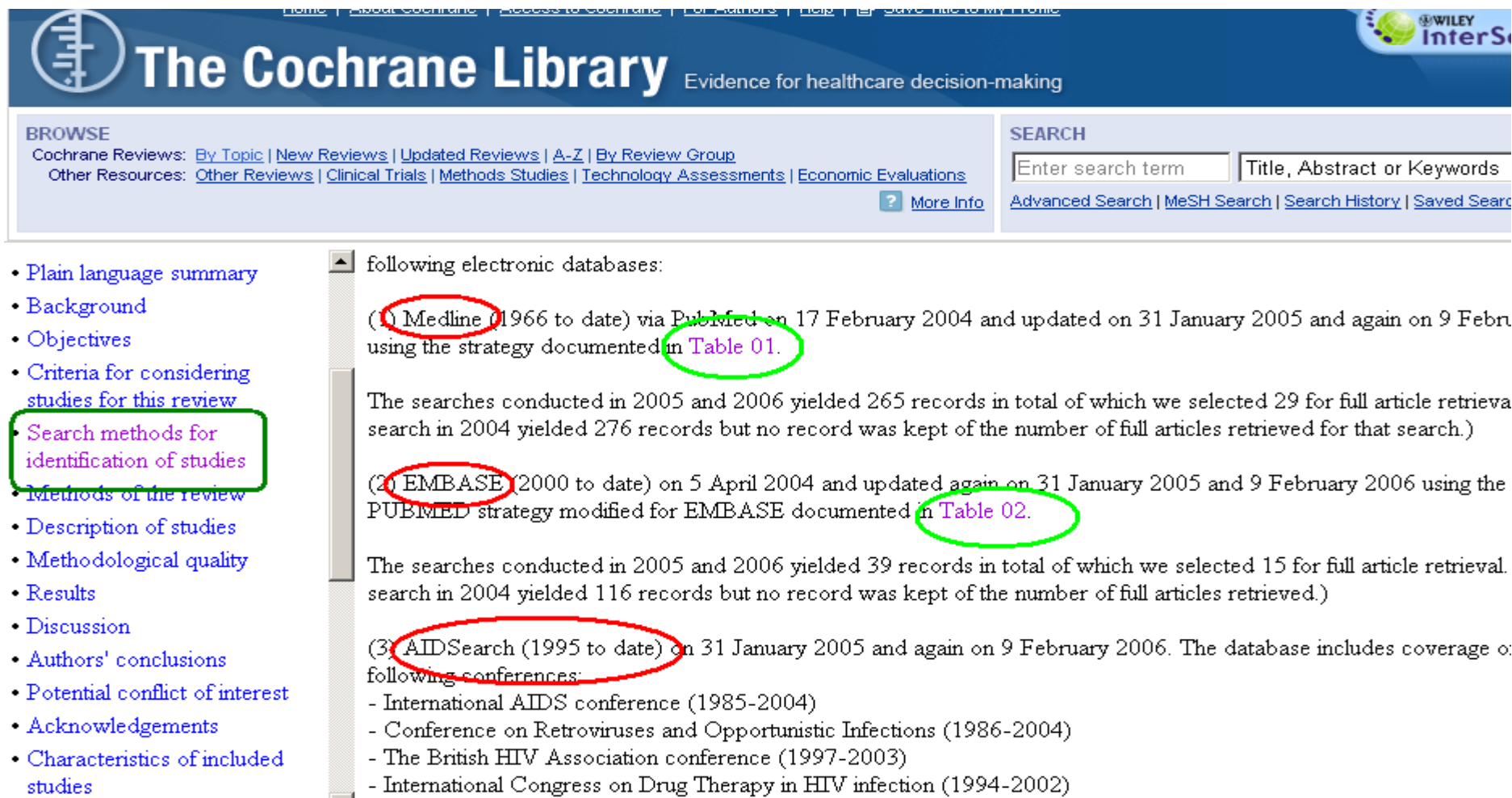
Abstract

Background

Antiretroviral drugs (ARV) reduce viral replication and can reduce mother-to-child transmission of HIV either by reducing viral load in pregnant women or through post-exposure prophylaxis in their newborns. In rich countries, highly active antiretroviral therapy (HAART) has reduced the vertical transmission rates to around 1-2%, but HAART is not



Determine Resources to Search



The screenshot shows the Cochrane Library website interface. At the top, there is a navigation bar with links for Home, About Cochrane, Access to Cochrane, For Authors, Help, and Save this to my Profile. The main header features the Cochrane Library logo and the tagline "Evidence for healthcare decision-making". Below the header, there are two main sections: "BROWSE" and "SEARCH".

The "BROWSE" section includes links for Cochrane Reviews (By Topic, New Reviews, Updated Reviews, A-Z, By Review Group) and Other Resources (Other Reviews, Clinical Trials, Methods Studies, Technology Assessments, Economic Evaluations). A "More Info" link is also present.

The "SEARCH" section has a search input field with the placeholder "Enter search term" and a dropdown menu for "Title, Abstract or Keywords". Below the search field are links for "Advanced Search", "MeSH Search", "Search History", and "Saved Searches".

The main content area displays a list of search methods for identification of studies. The list includes:

- Plain language summary
- Background
- Objectives
- Criteria for considering studies for this review
- Search methods for identification of studies
- Methods of the review
- Description of studies
- Methodological quality
- Results
- Discussion
- Authors' conclusions
- Potential conflict of interest
- Acknowledgements
- Characteristics of included studies

The text in the main content area describes the search process for electronic databases:

following electronic databases:

(1) Medline (1966 to date) via PubMed on 17 February 2004 and updated on 31 January 2005 and again on 9 February 2006 using the strategy documented in Table 01.

The searches conducted in 2005 and 2006 yielded 265 records in total of which we selected 29 for full article retrieval (search in 2004 yielded 276 records but no record was kept of the number of full articles retrieved for that search.)

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(3) AIDSearch (1995 to date) on 31 January 2005 and again on 9 February 2006. The database includes coverage of the following conferences:

- International AIDS conference (1985-2004)
- Conference on Retroviruses and Opportunistic Infections (1986-2004)
- The British HIV Association conference (1997-2003)
- International Congress on Drug Therapy in HIV infection (1994-2002)

Use Cochrane for Search Strategy

Table 01. Search strategy for MEDLINE

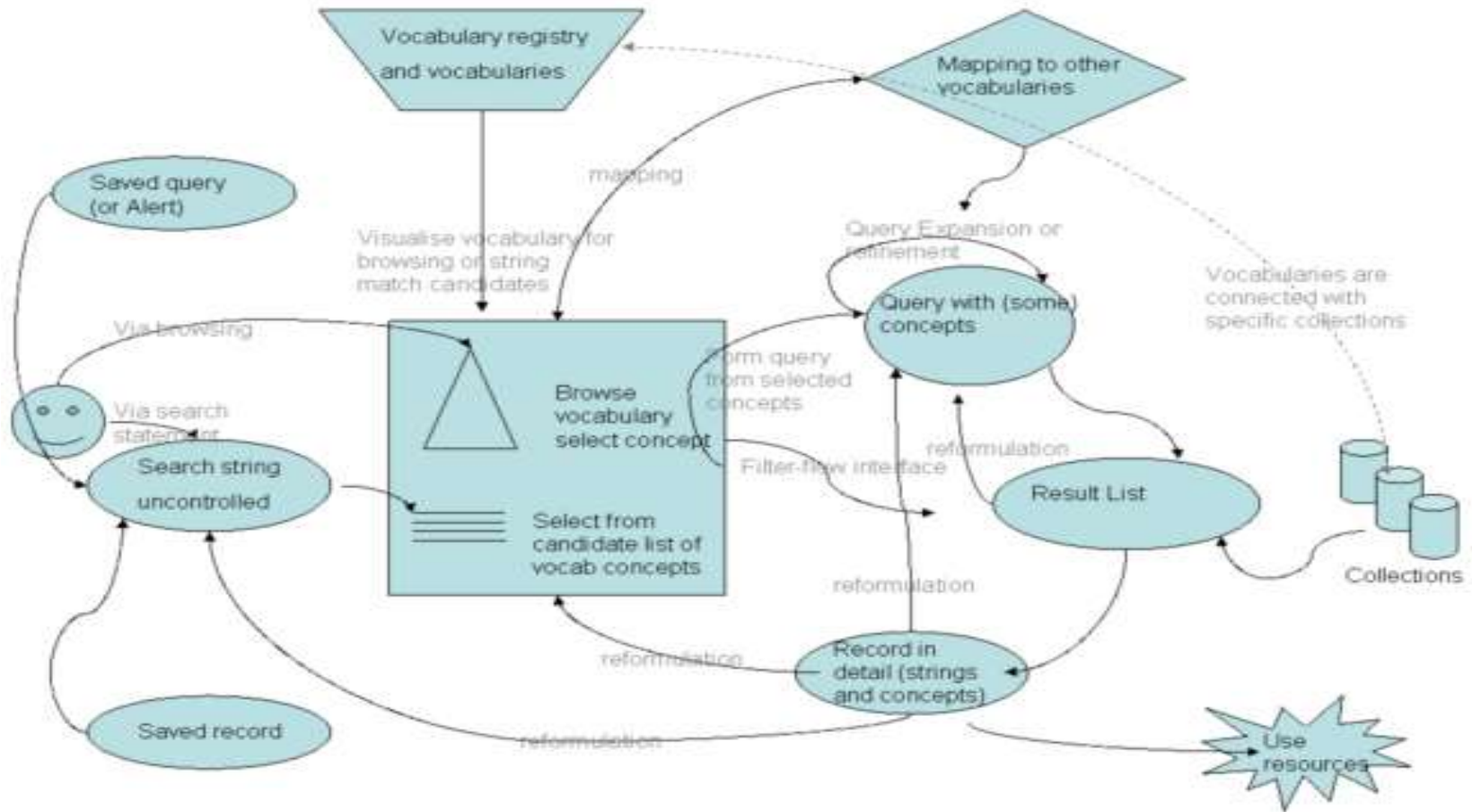
Number Search terms

- #1 HIV Infections[MeSH] OR HIV[MeSH] OR hiv[tw] OR hiv-1*[tw] OR hiv-2*[tw] OR hiv1[tw] OR hiv2[tw] OR hiv infect*[tw] OR human immunodeficiency virus[tw] OR human immunodeficiency virus[tw] OR human immuno-deficiency virus[tw] OR human immune-deficiency virus[tw] OR ((human immun*) AND (deficiency virus[tw])) OR acquired immunodeficiency syndrome[tw] OR acquired immunodeficiency syndrome[tw] OR acquired immuno-deficiency syndrome[tw] OR acquired immune-deficiency syndrome [tw] OR ((acquired immun*) AND (deficiency syndrome[tw]))
-
- #2 Antiretroviral Therapy, Highly Active[MeSH] OR Anti-Retroviral Agents[MeSH] OR Antiviral Agents[MeSH:NoExp] OR ((anti) AND (hiv[tw])) OR antiretroviral*[tw] OR ((anti) AND (retroviral*[tw])) OR HAART[tw] OR ((anti) AND (acquired immunodeficiency[tw])) OR ((anti) AND (acquired immunodeficiency[tw])) OR ((anti) AND (acquired immuno-deficiency[tw])) OR ((anti) AND (acquired immune-deficiency [tw])) OR ((anti) AND (acquired immun*) AND (deficiency[tw])) OR NEVIRAPINE OR
-

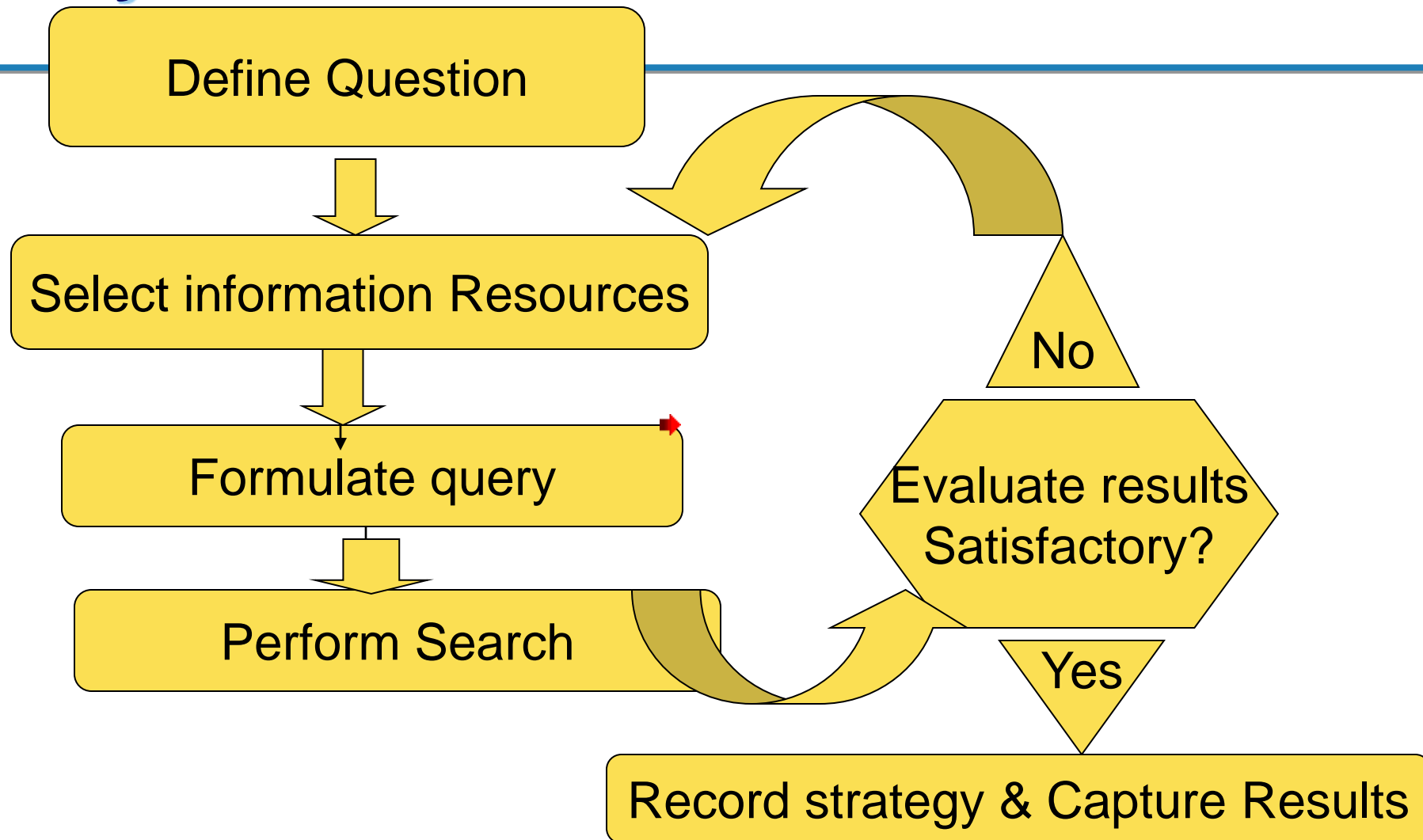
Fishing in the Right place



How the Beginner sees the Search Process



Systematic Searcher Point of View



Where does one begin?

- **Determine which information resources would best respond to the information you are seeking.**
- **What is well established about your research?**
- **What is new and breakthrough about your research?**
- **Different resources for different types of questions**



Major steps to identifying research

1. Electronic databases
2. Print indexes
3. Hand searching
4. Checking reference lists
5. Identifying unpublished studies
6. Personal communication



Systematic Searching

Library Expertise

- Facilitates access to fee charging databases
- Individual search strategies for each database and each interface
- Multilingual searching
- Determine the most effective search strategy
- Expertise in obtaining "grey literature & obscure documents
- Time efficiency due to searching on a regular basis
- Understanding "glitches" in database searching
- Manipulation of data for import/export in bibliographic management software
- Overlap and duplication of references.



Fishing for a few good articles

Fishing Trip - How to find studies?

- Very quick search on one electronic database (PubMed) and find a couple of relevant articles.



- Try to find every study that's ever been done addressing your review's question.

Spear fishing Technique

- Searching for the easy ones
- 1) Key word searching in PubMed using the most relevant keywords
- 2 Using references from a review article on the subject.
- 3) Subject expert provides a list of references.

Spear Fishing Searching

Problems:

— Few studies:

- *Publication bias*: studies with dramatic results are much easier to find
- Less information
- Limited precision
- Restricted conclusion

Trawling the Sea – Finding all Studies



Trawling the Sea – Finding Every Possible Study

● Problems:

– Finding every study

- Not easy and might not be possible
- Many studies are never published
- Published, but not indexed
- Too much effort is needed

Search should be :

- Be sensitive
 - look in a number of different places - not single
- Minimize bias
 - Think about finding studies that aren't in the major sources like PubMed/MEDLINE.
- Be efficient
 - start looking in the place you expect to have the highest yield.

Where to search?

- **Studies have shown that only 30 - 80% of all known published RCTs were identifiable using MEDLINE (depending on the area or specific question)...[Dickersin 1994](#)**
- **According to Ulrich's Periodical Directory, there are over 20,000 active health / medical journals.**
- **So MEDLINE, is generally not considered adequate for a systematic review.**



PubMed/ Medline

<http://pubmed.gov>

- By US National Library of Medicine
- **Type of Database:** Bibliographic
- Over 18,000,000 citations of both clinical and preclinical studies.
- Complementary database known as **PreMEDLINE** includes citations and abstracts for studies that have been published recently but not yet indexed.
- **Subject Coverage:** All Specialties of Medicine
- 60% of References contain Abstracts



EMBASE (Classic)

- Type of Database: Bibliographic
- Numbers of Journals: 3500
- Bias: European in focus
- Thesaurus: Uses own thesaurus
- Subject Coverage: Strong on Pharmaceutical and Clinical Medicine
- Materials Indexed: Letters, Editorials, Research Articles from 1974 or 1981 onwards (depending on method of access)
- Overlap with MEDLINE estimated at between 25 and 40%. The **EMBASE version at <http://www.embase.com> contains all citations from MEDLINE and EMBASE (classic) combined.**
- 75% of References contain Abstracts



Other databases

- Besides Medline and EMBASE
- Some other bibliographic and full text databases that are available
- Needs a librarian or those familiar with the searches needed for systematic reviews



Home
About WHO
Countries
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Publications
Research tools
WHO sites
Library and Information Networks for Knowledge
Access and services
Collections
Databases

Databases

WHOLIS

WHOLIS is the World Health Organization library database available on the web. WHOLIS indexes all WHO publications from 1948 onwards and articles from WHO-produced journals and technical documents from 1985 to the present. An on-site card catalogue provides access to the pre-1986 technical documents. It contains bibliographic information with subject headings and, for some records, abstracts. For some records, full text links are available. An online tutorial **1** and guidance in using WHOLIS is available.

- :: [Access WHOLIS](#)
- :: [WHOLIS online tutorial](#)
- :: [More instruction information](#)

WHO Regional Databases

Regional health and medical database **3** is compiled to complement the internationally known [MEDLINE](#) technical indexes such as MEDLINE from the [US National Library of Medicine](#). Although most of the significant medical periodicals published in developed countries are indexed in the MEDLINE database and similar tools, there is still a considerable amount of important and valuable medical and health documentation from countries outside the major industrialized areas which is not included. This material therefore receives less global visibility inspite of its often higher relevance for other developing countries.

The Regional medical indexes, published by or under the auspices of WHO Regional Offices give access to bibliographical information about the health material published locally. They thus add a further dimension to the retrieval of information from developed country-oriented databases.

- :: [Africa](#)
- :: [Eastern Mediterranean](#)
- :: [Latin America and Caribbean](#)
- :: [South-East Asia](#)



Developing Country Health Databases

<http://www.who.int/library/databases/en/>

!)

- **Africa**

<http://indexmedicus.afro.who.int/>

- **Latin America and the Caribbean**

<http://bases.bvs.br/>

- **South-East Asia**

<http://www.hellis.org>

- **Eastern Mediterranean**

<http://www.emro.who.int/HIS/VHSL/>

- **Western Pacific**

<http://wprim.wpro.who.int/iah/I/index.htm>



Selecting a Research Tool

Databases Versus Online Catalogues

- Scholarly "bibliographic" databases are the best tools for identifying journal articles.
- Scholarly databases can also be used to identify: Chapters in books, Books, Conference papers or Dissertations
- Remember that identifying and obtaining materials are often two different processes, and not everything found in the databases will be a "full text" document. In fact, don't be surprised if you see only abstracts for the most part.
- Online library catalogs can also be used to identify journals (but not the articles), books (but not the chapters), and dissertations. Library catalogues usually only tell you only whether a particular library owns the item, where in the library it is located, and whether it is available for loan.
- Note the above is changing for example WHOLIS is also full text.

Bibliographic Database

Display Citation Show: 20 Sort Send to Text

1: N Engl J Med. 2004 Mar 4;350(10):966-8.

Full text article at
content.nejm.org

Improving online access to medical information for low-income countries.

Aronson B.

HINARI Program, World Health Organization, Geneva.

MeSH Terms:

- Computer User Training/economics
- Developing Countries*
- Health Services Accessibility
- Income
- Information Services
- International Cooperation
- Internet*
- Publishing/economics*

PMID: 14999107 [PubMed - indexed for MEDLINE]



OPAC – Online Public Library Catalogue



World Health Organization

Library & Information Networks
For Knowledge Database (WHOLIS)

[Search/Home](#) [Quick Search](#) [Other Language](#) [Full Text Links](#) [Selected Topics](#) [Online book shop](#) [Online journal list for V](#)
[Library Info](#) [User Services](#)
[Go Back](#) [Help](#) [New Search](#) [Previous](#) [Next](#) [Change Display](#) [Kept](#) [Logout](#)

record 1 of 1 for search **periodical title "new england Journal of medicine"**

Keep

Find more items on these topics
Items on the same shelf

search for items in
World Health Organization
website

Item Information

Catalog Record

New England Journal of Medicine

ISSN: 0028-4793

Title: [New England Journal of Medicine.](#)

Abbreviated title: N Engl J Med

Publication info: Boston, Mass. : Massachusetts Medical Society.

Library holdings: 1947- ,no.236- .

Subject: [Medicine - periodicals.](#)

Latest issues: HQ--VOL 356 NO 8 FEB 22, 2007;VOL 356 NO 7 FEB 15, 2007;VOL 356 NO 6 FEB 8, 2007;



OPACs – access to Grey Literature



World Health Organization

Library & Information Net
For Knowledge Database

[Search/Home](#) [Quick Search](#) [Other Language](#) [Full Text Links](#) [Selected Topics](#) [Online book shop](#) [Library Info](#) [User Services](#)

[Go Back](#) [Help](#) [Limit Search](#) [New Search](#) [Previous](#) [Next](#) [X-Refs](#) [Kept](#) [Logout](#)

Search Results

words or phrase "aids and prevention and who" search found 1370 titles.
Pages << 1 2 3 4 ...10 ...20 ...30 ...40 ...50 ...60 ...69 >>

#1 **WC 503.4?**
[Details](#) **AIDS outlook 2009: World AIDS Day 2008 (in press)**
UNAIDS.
[Keep](#) No copies available in any library.

#2 **Please see full Catalog record**
[Details](#) **Scale up of HIV-related prevention, diagnosis, care and treatment for infants and children [electronic resource] : a programming framework (in press)**
World Health Organization.
[Keep](#) 1 copy available at HQ in READING-RM



Creating a search strategy with a librarian



Use Cochrane for Search Methodology



The Cochrane Library Evidence for healthcare decision-making

WILEY InterScience

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BROWSE
Cochrane Reviews: [By Topic](#) | [New Reviews](#) | [Updated Reviews](#) | [A-Z](#) | [By Review Group](#)
Other Resources: [Other Reviews](#) | [Clinical Trials](#) | [Methods Studies](#) | [Technology Assessments](#) | [Economic Evaluations](#) [? More Info](#)

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[Advanced Search](#) | [MeSH Search](#) | [Search History](#) | [Saved Searches](#)

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- Conference on Retroviruses and Opportunistic Infections (1986-2004)
- The British HIV Association conference (1997-2003)
- International Congress on Drug Therapy in HIV infection (1994-2002)

Search Strategy

- Before launching into complex searching, do a few test runs or a little fishing trip.
- This will help you to identify databases and also key terms.



Developing a search strategy

- Balance between **comprehensiveness** and **precision** when developing a search strategy is necessary.
- Increasing the comprehensiveness of a search entails reducing its precision and retrieving more non-relevant articles.



Finding Pregnancy related terms

1: [WMJ](#). 2004;103(5):61-6.

Pregnancy-associated deaths and pregnancy-related deaths in Wisconsin, 1998-2001.

[Mascola MA](#), [Schellpfeffer MA](#), [Kruse TK](#), [Conway AE](#), [Kvale KM](#), [Katcher ML](#).

Bureau of Community Health Promotion, Division of Public Health, Department of Health and Family Service, Madison, WI 53701-2659, USA.

BACKGROUND: Although the risk of dying during **childbirth** or from complications afterward has been greatly reduced during the past 100 years, the current rate of approximately 1 death in 10,000 **live births** is still too high. The goal of the US Department of Health and Human Services is to reduce this rate by more than half by the year 2010. OBJECTIVE: To present Wisconsin data regarding **pregnancy-associated deaths** and **pregnancy-related deaths**. METHODS: Cases in which a woman had died during pregnancy or within 1 year of the end of her pregnancy were identified, and case-specific data were collected. The Wisconsin **Maternal Mortality** Review Team then conducted systematic reviews of the information, summarized issues related to maternal mortality, considered the relationship to pregnancy and factors of avoidability, and made recommendations to improve **maternal health** and survival. Finally, pregnancy-associated and pregnancy-related mortality ratios were calculated. RESULTS: From 1998 through 2001, 23 Wisconsin women died as a result of their pregnancy or from complications up to a year later. This gives a Wisconsin pregnancy-related mortality ratio of 8.4 per 100,000 live births. This ratio was higher in African American women and in women who smoked. The primary cause of death was embolic disease. Almost half of the pregnancy-related deaths (48%) occurred during the **postpartum period** and nearly one-quarter (22%) were avoidable. CONCLUSIONS: The disparity in pregnancy-related mortality ratios among ethnic groups and the finding of avoidable deaths are areas that should be targeted by health care providers and public health workers. Six areas on which to focus include the following: addressing racial disparities, assuring the performance of autopsies, lifestyle changes related to obesity and smoking, and management of embolic and cardiovascular disease, as well as **postpartum hemorrhage**.

Finding all the terms to describe your search

1: [Int J Behav Nutr Phys Act](#). 2006 Nov 26;3:42.

Specific food intake, fat and fiber intake, and behavioral correlates of BMI among overweight and obese members of a managed care organization.

[Linde JA](#), [Utter J](#), [Jeffery RW](#), [Sherwood NE](#), [Pronk NP](#), [Boyle RG](#).

Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis, MN, USA. linde@epi.umn.edu.

ABSTRACT: BACKGROUND: The study examined correlates of body mass index (BMI) in overweight and obese members of a managed care organization seeking treatment for obesity. It assessed intake of specific foods, dietary fat or fiber, and behaviors attempted to control weight. METHODS: Participants were 508 men and 1293 women who were > 18 years and had a self-reported BMI > 27.0. This paper reports analyses of baseline and 24-month follow-up data from a randomized weight-loss trial. Cross-sectional and prospective relationships between BMI and behaviors were examined with regression analyses controlling for age and education. RESULTS: At baseline, hamburger and beef consumption were associated with higher BMI for men; for women, hamburger, fried chicken, hot dog, bacon or sausage, egg, French fry, and overall fat consumption were associated with higher BMI, while eating high fiber cereal, fruit, and overall fiber intake were associated with lower BMI. Virtually all forms of weight control behavior were reported more often in heavier people. Subscribing to exercise magazines, however, was associated with lower BMI. Decreased fat intake and increased fruit/vegetable/fiber intake over the course of the study were associated with reductions in BMI at 24 months. CONCLUSION: The same behaviors that differentiate individuals with different body weight in the general population also differentiate between individuals of different body weights at the high end of the weight distribution. Educational efforts aimed at preventing weight gain and reducing obesity might benefit from focusing on specific foods known to be associated empirically with body weight and weight change over time.

PMID: 17125525 [PubMed - in process]

Using only Title Selection



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1: [Science](#). 2009 Jan 16;323(5912):337-8.



Comment on:

[Science](#). 2008 Sep 19;321(5896):1678-81.

Fishing for more effective incentives.

[Smith T](#), [Gibbs M](#), [Smith D](#).

PMID: 19150827 [PubMed - indexed for MEDLINE]

Related Articles

- ▶ Can catch shares prevent fisheries collapse? [Science. 20]
- ▶ Diverse fisheries require diverse solutions. [Science. 20]
- ▶ Ecology. Privatization prevents collapse of fish stocks, global analysis shows. [Science. 20]
- ▶ **Review** Current problems in the management of marine fisheries. [Science. 20]



1: [Science](#). 2009 Jan 16;323(5912):337-8.



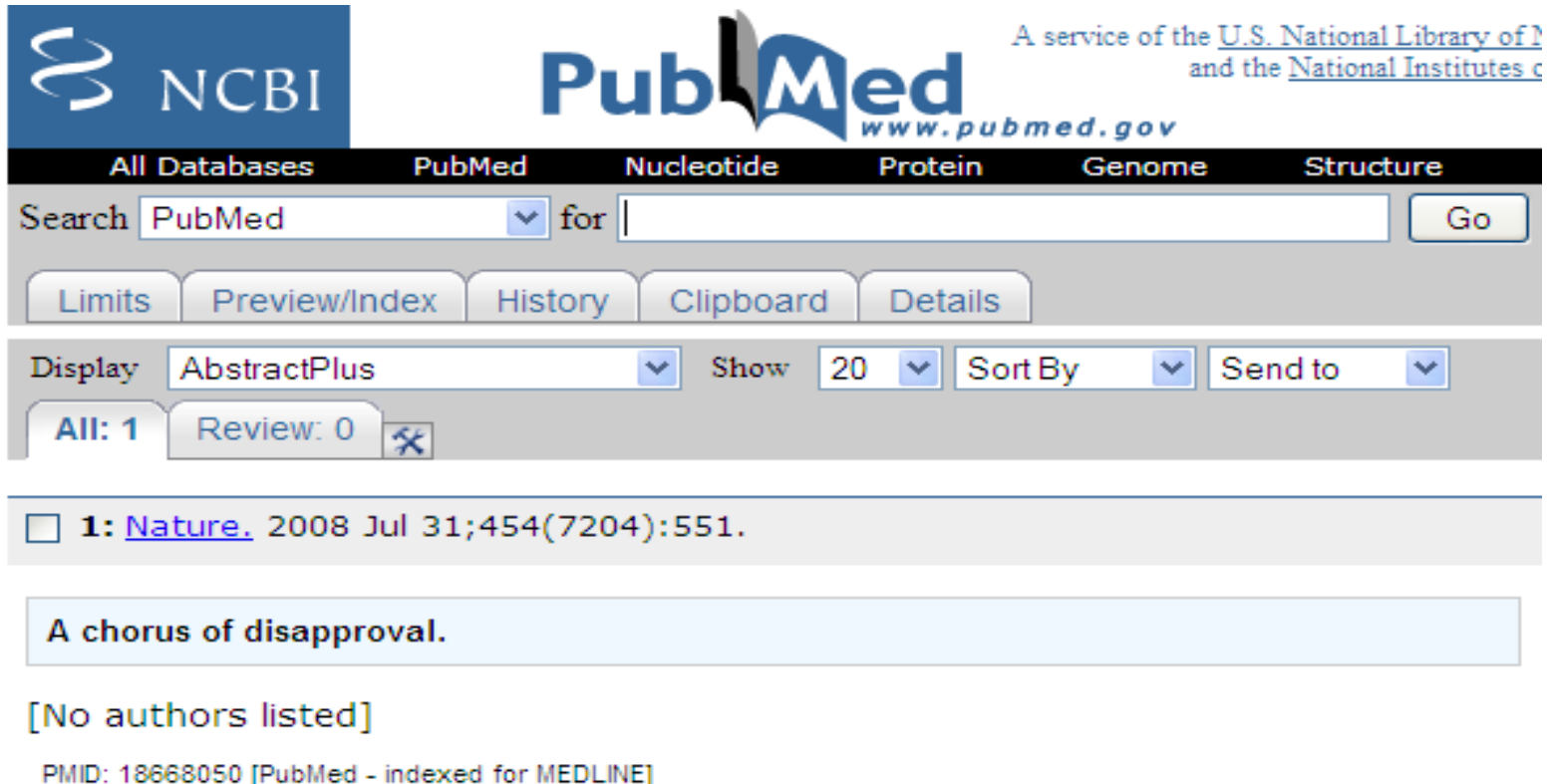
Fishing for more effective incentives.

[Smith T](#), [Gibbs M](#), [Smith D](#).

MeSH Terms:

- [Animals](#)
- [Ecosystem](#)
- [Fisheries*/economics](#)
- [Fisheries*/methods](#)
- [Fishes*](#)
- [Humans](#)
- [Motivation*](#)

No Abstract! What is this article about?



The screenshot shows the NCBI PubMed interface. At the top left is the NCBI logo. To its right is the PubMed logo with the URL www.pubmed.gov and the text "A service of the U.S. National Library of Medicine and the National Institutes of Health". Below the logos is a navigation bar with tabs for "All Databases", "PubMed", "Nucleotide", "Protein", "Genome", and "Structure". The "PubMed" tab is selected. Below the navigation bar is a search bar with "PubMed" selected in a dropdown menu, followed by a "for" label and an empty search input field, and a "Go" button. Below the search bar are buttons for "Limits", "Preview/Index", "History", "Clipboard", and "Details". Below these buttons is a display settings section with "Display" set to "AbstractPlus", "Show" set to "20", "Sort By" set to a dropdown, and "Send to" set to a dropdown. Below the display settings are buttons for "All: 1" and "Review: 0" with a trash icon. Below the buttons is a list of search results. The first result is a checkbox followed by the text "1: [Nature](#). 2008 Jul 31;454(7204):551." Below the search results is a light blue box containing the text "A chorus of disapproval." Below the box is the text "[No authors listed]" and "PMID: 18668050 [PubMed - indexed for MEDLINE]".

NCBI

PubMed
www.pubmed.gov
A service of the U.S. National Library of Medicine and the National Institutes of Health

All Databases PubMed Nucleotide Protein Genome Structure

Search PubMed for [] Go

Limits Preview/Index History Clipboard Details

Display AbstractPlus Show 20 Sort By Send to

All: 1 Review: 0

1: [Nature](#). 2008 Jul 31;454(7204):551.

A chorus of disapproval.

[No authors listed]

PMID: 18668050 [PubMed - indexed for MEDLINE]

How to maximize your selection

The screenshot shows the PubMed website interface. At the top, there is the NCBI logo and the PubMed logo with the URL www.pubmed.gov. Below this, there are navigation tabs for All Databases, PubMed, Nucleotide, Protein, Genome, Structure, OMIM, and PMC. A search bar is visible with the text 'PubMed' and 'for' followed by a search box and 'Go' and 'Clear' buttons. Below the search bar, there are buttons for Limits, Preview/Index, History, Clipboard, and Details. A dropdown menu is open, showing 'Citation' selected. To the right of the dropdown, there are fields for 'Show' (set to 20) and 'Sort by'. A red box highlights the 'Citation' dropdown and the 'Show' field, with a red arrow pointing to a red box containing the text 'Citation = MeSH are visible'. Below the dropdown, there are checkboxes for 'All: MEDLINE', 'XML', 'UI List', 'LinkOut', 'ASN.1', 'Is it som', 'Related Articles', 'Cited Articles', 'Cited in Books', 'CancerChrom Links', and 'Domain Links'. The main content area shows '[No authors listed]' and 'MeSH Terms:'. A list of MeSH terms is displayed, with several terms highlighted in yellow boxes: 'Acquired Immunodeficiency Syndrome/economics*', 'Acquired Immunodeficiency Syndrome/prevention & control*', 'Anti-HIV Agents/economics*', 'Anti-HIV Agents/therapeutic use*', and 'World Health*'. A red box highlights the text '* = Major Focus or Main Idea' with a red arrow pointing to the highlighted terms. The bottom of the page features the WHO logo and the text 'World Health Organization'.

- 2. <http://www.cochrane.org/reviews/en/ab004403.html>
- <http://www.cochrane.org/reviews/en/ab001288.html>
- http://mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD001387/pdf_fs.html
- 3. http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WJT-4P77G0Y-1&_user=3824252&_rdoc=1&_fmt=&_orig=search&_sort=d&_view=c&_acct=C000055308&_version=1&_urlVersion=0&_userid=3824252&md5=0fec16ddee19811e77f8899cd0e740fb
- <http://ajrccm.atsjournals.org/cgi/reprint/164/9/1618>
- http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WWS-4PKG5TR-1&_user=3824252&_rdoc=1&_fmt=&_orig=search&_sort=d&_view=c&_acct=C000055308&_version=1&_urlVersion=0&_userid=3824252&md5=b8235375a6b1e9040e4d725fad399d84
- <http://www.chestjournal.org/cgi/reprint/117/5/1345>
- <http://www3.interscience.wiley.com/cgi-bin/fulltext/118624839/PDFSTART>



Was that tuna or tuner?



Where words have double meanings

- ❑ 1: [Eat Behav.](#) 2007 Jan;8(1):73-82. Epub 2006 Feb 21.

The method of **delivery** of nutrition and physical activity information may play a role in eliciting behavior changes in adolescents.

[Casazza K](#), [Ciccazzo M](#).

Florida International University, College of Health and Urban Affairs, Department of Dietetics and Nutrition, HLS 450, University Park, Miami, Florida 33199, USA. krista1313@msn.com

OBJECTIVES: Motivating adolescents to adopt proper nutrition and physical activity behaviors is important in this nation's fight to prevent obesity and chronic diseases. This study was conducted to determine which health education **delivery** method would elicit a greater behavior change. METHOD: The intervention was conducted in three schools (control, computer-based, and traditional education). RESULTS: Students who received the computer-based intervention showed increased knowledge ($p < 0.001$), physical activity ($p = 0.001$), self-efficacy ($p < 0.001$), and social support ($p < 0.001$), and decreased meals skipped ($p < 0.001$). CONCLUSION: The computer-based group showed more positive behavior changes. However, future programs may be enhanced by including group discussion and individual feedback.

Text word searching problem

You search on "developing countries."
and find the following article. Looks
interesting?

**Community hospitals--the place of local service
provision in a modernising NHS: an integrative
thematic literature review.**

Reading the article abstract you find:

"We included papers of any study design focussing
on hospitals in which care was led principally by
general practitioners or nurses. **Papers from
developing countries were excluded. .**"

PubMed/MeSH (Medical Subject Headings)

Why is MeSH important to my searching.

Group activity – MeSH vs Free Text



-
- Using MeSH in PubMed
 - The MeSH database
 - Major Topic Headings and Explode
 - Using MeSH terms
 - Geographic regions



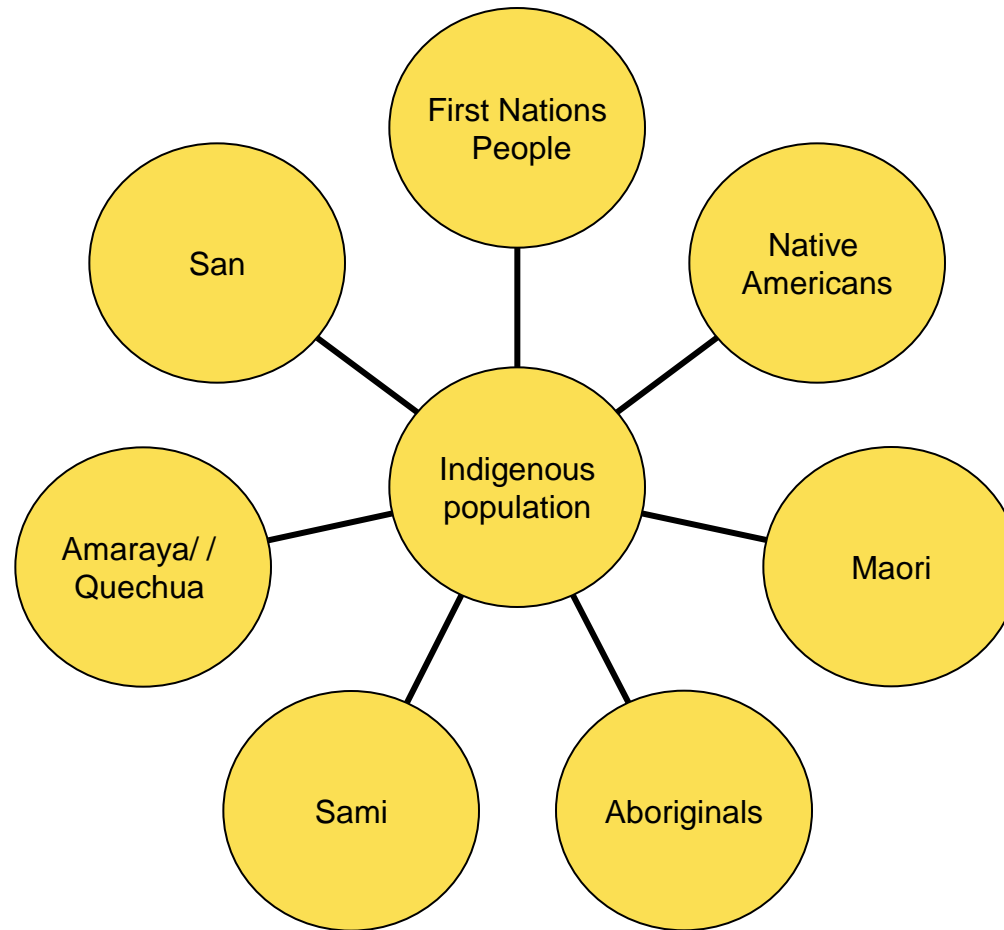
Why/What MeSH

- **What is MeSH?**
- MeSH is the acronym for "**Medical Subject Headings**." MeSH is the authority list of the vocabulary terms used for subject analysis of biomedical literature at NLM. MeSH vocabulary is used for indexing journal articles for **MEDLINE** and is also used for cataloging books and audiovisuals.
- The MeSH controlled vocabulary is a distinctive feature of MEDLINE. It imposes uniformity and consistency to the indexing of biomedical literature. MeSH terms are arranged in a hierarchical categorized manner called MeSH Tree Structures and are updated annually.

Definitions are not always clear.

- *Indigenous is one powerful word. In many ways, the definition within the Facebook group introduction is sufficient: "**indigenous people know who they are**".*
 - Loreine Roy. Indigenous matters in Library and Information Science: An evolving Ecology. Focus on International Library and Information Work 40 (2) 2009 p.46

Terminology changes across borders



Terminology changes over time

286: [HARRIS A. LANE MA.](#)



Psychiatric patients and the Disabled Persons (employment) Act.
Br Med J. 1949 Jun 4;1(4613):982. No abstract available.
PMID: 18144306 [PubMed - OLDMEDLINE]

72: [SUSZYNSKA.](#)



[Rehabilitation of cripple child.]
Pediatr Pol. 1951 Jul;26(7):806-9. Undetermined Language. No abstract available.
PMID: 14882861 [PubMed - indexed for MEDLINE]

219: [Blatt B.](#)



Public policy and the education of children with special needs.
Except Child. 1972 Mar;38(7):537-45. No abstract available.
PMID: 4258637 [PubMed - indexed for MEDLINE]

17: [Griffin VM.](#)



Medical rehabilitation: challenges in managing health information of the specially challenged.
J AHIMA. 1993 Oct;64(10):64-5; quiz 66-7. No abstract available.
PMID: 10128918 [PubMed - indexed for MEDLINE]

1: [Henderson J.](#)



Humanity by design. Industrial designer Patricia Moore's products focus on the rehabilitation needs of elders and of the "differently-abled".
Interiors. 1994 Aug;153(8):58-9. No abstract available.
PMID: 10172110 [PubMed - indexed for MEDLINE]

3: [Nikaitani J.](#)



Raising children with special needs.
Arch Pediatr Adolesc Med. 2008 May;162(5):401-2. No abstract available.
PMID: 18458184 [PubMed - indexed for MEDLINE]

Rela



Terminology is politically charged

- Third World ↔ First World
- Developing Countries ↔ Developed Countries
- Majority Countries ↔ Minority Countries
- South ↔ North
- Everyone Else ↔ Western World



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Limits Preview/Index History Clipboard Details

- To get started, enter one or more search terms.
- Search terms may be [topics](#), [authors](#) or [journals](#).



Set up an automated PubMed update in less than 5 minutes.

- (1) Get a [My NCBI account](#).
- (2) Save your search.
- (3) Your PubMed updates can be e-mailed directly to you.

Read the [My NCBI Help](#) manual for more information on setting up updates for other databases, setting up alerts, and more.

PubMed is a service of the U.S. National Library of Medicine. It contains over 16 million citations from MEDLINE and other journals back to the 1950s. PubMed also provides links to other related resources.

Welcome to the PubMed Homepage. Part 3 of the tutorial will look at MeSH or Medical Subject Headings. To access the MeSH Database, click on the link on the left-hand side of the PubMed home page.

- About Entrez
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 - New/Noteworthy
 - E-Utilities
- PubMed Services
 - Journals Database
 - MeSH Database
 - Single Citation Matcher
 - Batch Citation Matcher
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 - Batch Citation Matcher
 - Clinical Queries
 - LinkOut
 - Cubby
- Related Resources
 - Order Documents
 - NLM Gateway
 - TOXNET
 - Consumer Health
 - Clinical Alerts
 - ClinicalTrials.gov

[MeSH](#) is NLM's controlled vocabulary used for indexing articles for MEDLINE/PubMed. MeSH terminology provides a consistent way to retrieve information that may use different terminology for the same concepts.

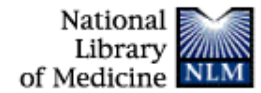
- Use the MeSH database to find MeSH Terms and build a search strategy.

MeSH database tutorials:

- Searching with the MeSH Database Animated Tutorial!
- Combining MeSH Terms Animated Tutorial!
- Applying Sub... Animated

MeSH is the controlled vocabulary for indexing articles for MEDLINE. MeSH Terms are assigned as Keywords to each record that is "Indexed for MEDLINE".

NB. Articles in PubMed that are not on MEDLINE have no MeSH Terms assigned to their records



Entrez PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search MeSH for [] Go Clear

Limits Preview/Index History Clipboard Details

Display Full Show: 20 Send to Search Box with AND

- If making selections (e.g., Subheadings, etc.), use the [Send to Search Box](#) feature to see PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the MeSH Term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

1: Developing Countries [Links](#)
Countries in the process of change directed toward economic growth, that is, an increase in production, per capita consumption, and income. The process of economic growth involves better utilization of natural and human resources, which results in a change in the social, political, and economic structures.
Year introduced: 1971

Subheadings:

classification economics history statistics and numerical data

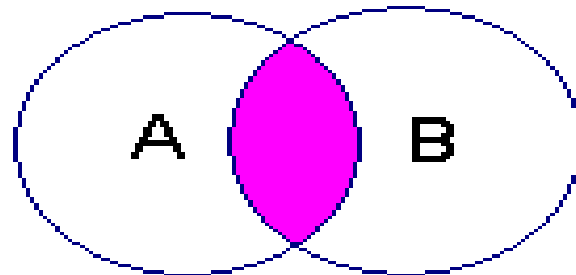
- Restrict Search to Major Topic headings of this term
- Do Not Explode this term (i.e., do not include subheadings)

Entry Terms:

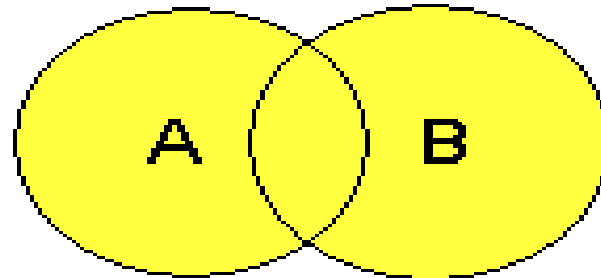
- Countries, Developing
- Country, Developing
- Developing Country

The *Developing Countries* MeSH term was introduced in 1971 and is defined by the NLM, and not by the UNDP or World Bank.

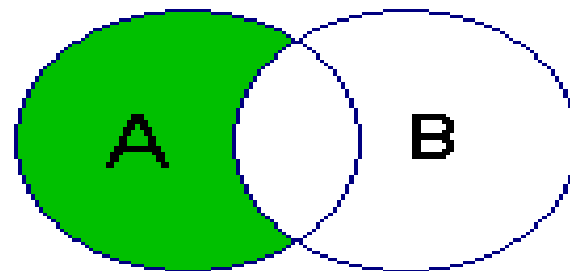
Boolean Search



AND

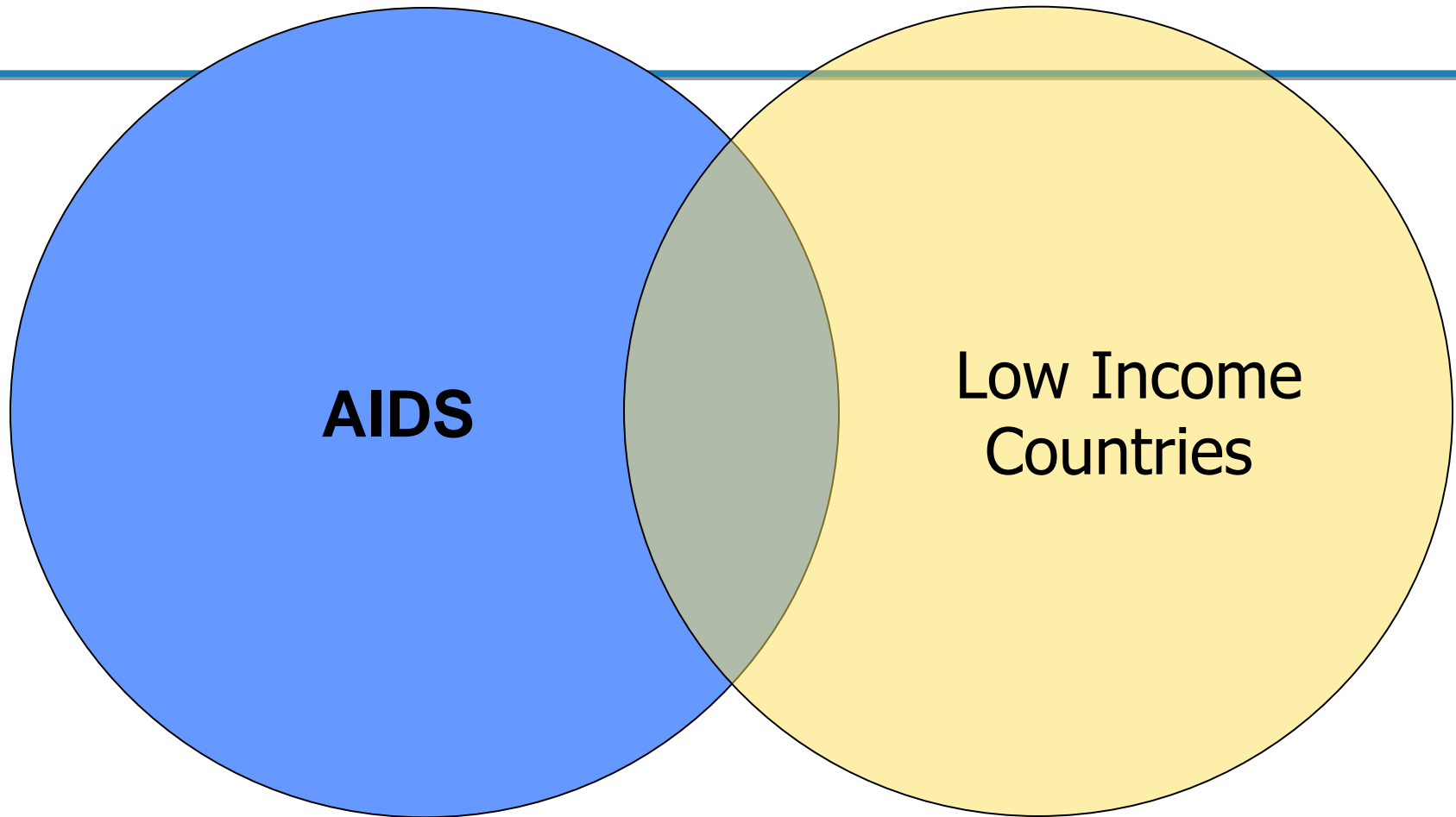


OR



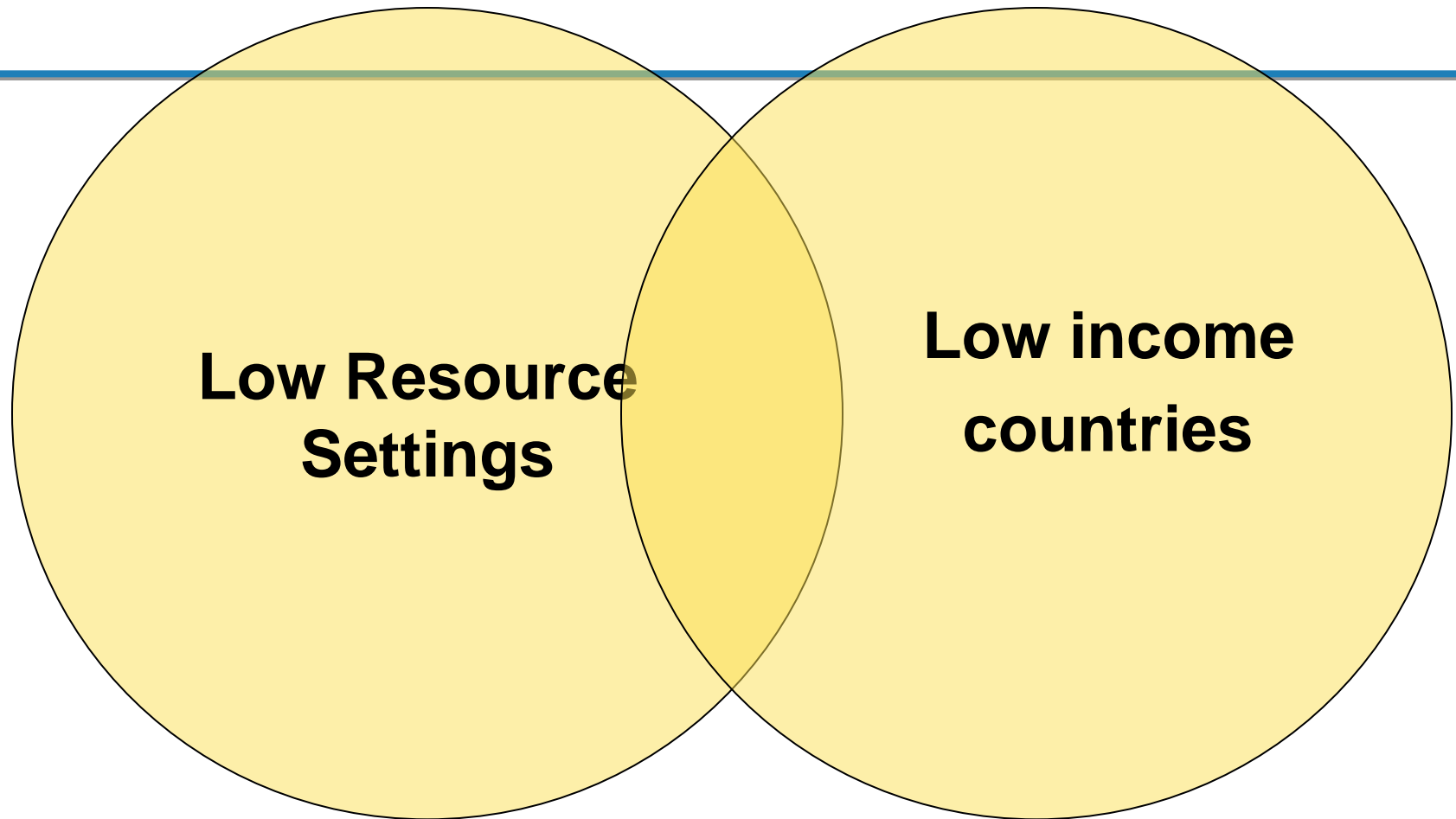
NOT

AND – Both concepts present



AND= Finds results that contain both keywords.

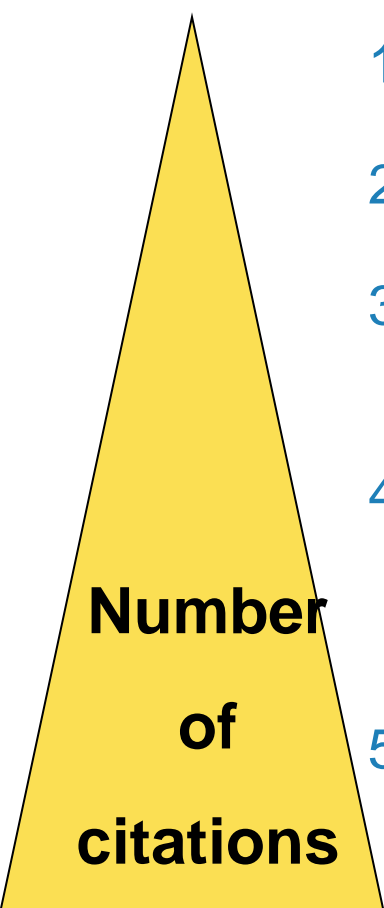
OR – Similar concepts EITHER/OR



OR = Finds results that contain either keyword

Recall – Number of articles found

Search 1 very few articles



**Number
of
citations**

1. "HIV Infections/prevention and control" [Major]
2. "HIV infections/prevention and control" [MeSH]
3. HIV infections [MeSH] AND "prevention and control "[Subheading]
4. (HIV infection* OR HIV infections [MeSH]) AND (prevention OR control OR "prevention and control "[Subheading])
5. (AIDS OR HIV OR HIV infections [MeSH]) AND ((Prevent* AND control*) or ("prevention and control "[Subheading]))

Precision – Articles found that are relevant to the study question.

Relevance to the question

1. "HIV Infections/prevention and control"[Majr]
2. "HIV infections/prevention and control" [MeSH]
3. HIV infections [MeSH] AND "prevention and control "[Subheading]
4. (HIV infection* OR HIV infections [MeSH]) AND (prevention OR control OR "prevention and control "[Subheading])
5. (AIDS OR HIV OR HIV infections [MeSH]) AND ((Prevent* AND control*) or ("prevention and control "[Subheading]))



The balance

Too much (not relevant to the study question)

Too little(missing important studies to the study question)

- In **Precision**, relevant articles but what do we miss

19: [Malyuta R, Newell ML, Ostergren M, Thorne C, Zhilka N.](#)



Prevention of mother-to-child transmission of HIV infection: Ukraine experience to date.
Eur J Public Health. 2006 Apr;16(2):123-7. Epub 2006 Feb 13.
PMID: 16476684 [PubMed - indexed for MEDLINE]

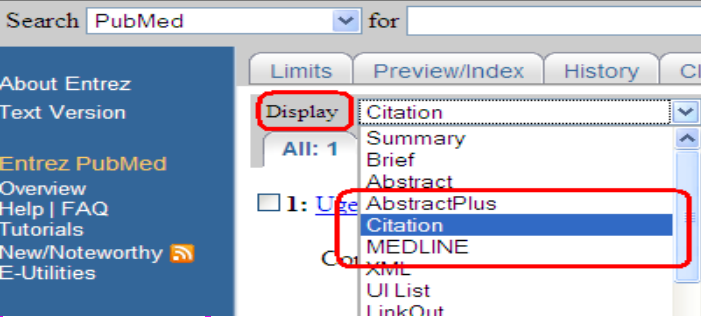
- In **Recall**, what do we get that is NOT relevant

18: [Lange DE, Mutschelknauss R.](#)



[Aids for prevention of periodontal diseases]
Quintessenz. 1974 Nov;25(11):95-102. German. No abstract available.
PMID: 4533812 [PubMed - indexed for MEDLINE]





Spear Fishing

1: [Ugeskr Laeger](#). 2008 Jun 23;170(26-32):2359; author reply 2360.

Comment on:

- [Ugeskr Laeger](#). 2008 Mar 17;170(12):1056.

[Male circumcision--an evidence-based preventive measure]

[Article in Danish]

[Lohse N](#), [Weiss H](#), [Hankins C](#).

Publication Types:

- [Comment](#)
- [Letter](#)

MeSH Terms:

- [Acquired Immunodeficiency Syndrome/prevention & control](#)
- [Africa South of the Sahara](#)
- [Circumcision, Male*](#)
- [Communicable Disease Control](#)
- [Developing Countries](#)
- [Evidence-Based Medicine](#)
- [HIV Infections/prevention & control*](#)
- [Humans](#)
- [Male](#)
- [World Health](#)

4

1. Perform a keyword search on your topic (example: AIDS and Low Income Countries).
2. Find a relevant result
3. Change the **Display** pull-down in the gray area above the item to **Citation**.
4. Click on a relevant term from **MeSH Terms** list to search on it.



Where's the MeSH Database?

Two Options

NCBI PubMed National Library of Medicine

All Databases PubMed Nucleotide Protein Genome

Search PubMed for Go

About Entrez
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E-Utilities
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Journals Database
MeSH Database

Drop Down Menu and select MeSH
Click on the MeSH Database in the Menu

Searching HIV finds 201 possible MeSH

The screenshot shows the MeSH (Medical Subject Headings) database search interface. The search bar contains the text "MeSH" and "for hiv", with "hiv" circled in red. Below the search bar, there are buttons for "Limits", "Preview/Index", "History", "Clipboard", and "Details". The search results section shows "Suggestions: [Hiv](#), [Hib](#), [Hip](#), [Hives](#), [Hivid](#), [Hida](#), [Hivig](#), [Hipp](#), [Hitc](#), [Hüa](#), [More...](#)". The "Display" dropdown is set to "Summary", "Show" is set to "20", and "Send to" is set to a dropdown menu. Below this, it says "All: 201" with a small icon, and "Items 1 - 20 of 201" with "1 - 20 of 201" circled in red. The page number is "Page 1". The first result is "1: [HIV Seropositivity](#)" with a description: "Development of neutralizing antibodies in individuals who have been exposed to the human immunodeficiency virus (HIV/H III/LAV). Year introduced: 1988". The second result is "2: [HIV](#)" with a description: "Human immunodeficiency virus. A non-taxonomic and historical term referring to any of two species, specifically HIV-1 and 2. Prior to 1986, this was called human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) 1986-1990, it was an official species called HIV. Since 1991, HIV was no longer considered an official species name; the species were designated HIV-1 and HIV-2. Year introduced: 1988".

NCBI MeSH and the National Institutes of Health

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Search MeSH for hiv Go Clear Save Search

Limits Preview/Index History Clipboard Details

Suggestions: [Hiv](#), [Hib](#), [Hip](#), [Hives](#), [Hivid](#), [Hida](#), [Hivig](#), [Hipp](#), [Hitc](#), [Hüa](#), [More...](#)

Display Summary Show 20 Send to

All: 201

Items 1 - 20 of 201 Page 1

1: [HIV Seropositivity](#)
Development of neutralizing antibodies in individuals who have been exposed to the human immunodeficiency virus (HIV/H III/LAV).
Year introduced: 1988

2: [HIV](#)
Human immunodeficiency virus. A non-taxonomic and historical term referring to any of two species, specifically HIV-1 and 2. Prior to 1986, this was called human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) 1986-1990, it was an official species called HIV. Since 1991, HIV was no longer considered an official species name; the species were designated HIV-1 and HIV-2.
Year introduced: 1988

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Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI

Which MeSH to Select?

- Go to the **MeSH Database**
- Type a term in the search box
- Click **[Go]** or hit **ENTER** on your keyboard



HIV Infections

Links

Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, thru AIDS-related complex (ARC), to acquired immunodeficiency syndrome (AIDS).

Year introduced: 1990

- Click on the hyperlinked term.

Then... →



Attach subheadings to your MeSH term

1: HIV Infections

Links

Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, thru AIDS-related complex (ARC), to acquired immunodeficiency syndrome (AIDS).

Year introduced: 1990

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules for allowable combinations.

blood cerebrospinal fluid chemically induced classification complications congenital diagnosis diet therapy drug therapy economics embryology enzymology epidemiology ethnology etiology genetics history immunology metabolism microbiology mortality nursing parasitology pathology physiopathology prevention and control psychology radiography radionuclide imaging radiotherapy rehabilitation surgery therapy transmission ultrasonography urine veterinary virology

Click in the checkboxes in front of subheadings for aspects of the topic you're interested in. Add many--or none!

The hyperlink [Subheadings](#) shows definitions of these terms

MeSH term
+ Subheading

Specific!

Each subheading attaches directly to its subject term.

It's as if you were searching the phrase "prevention and control of HIV infections."

Results from searching the term/subheading *HiV Infections/prevention and control* should be more relevant than if you had combined the separate terms *HIV AND Prevention and control*.



A record in Citation Display format will have **asterisks** to show which topics are of **major** importance in the article.

MeSH terms without asterisks represent topics covered in the article but not its main focus.

□ 1: [AIDS](#). 2008 Sep 12;22(14):1841-50.

Male circumcision for HIV prevention in sub-Saharan Africa: who, what and when?

[White RG](#), [Glynn JR](#), [Orroth KK](#), [Freeman EE](#), [Bakker R](#), [Weiss HA](#), [Kumaranayake L](#), [Habbema JD, RJ](#).

London School of Hygiene and Tropical Medicine, London, UK. richard.white@lshtm.ac.uk

MeSH Terms:

- [Adult](#)
- [Africa South of the Sahara](#)
- [Age Factors](#)
- [Circumcision, Male/economics](#)
- [Circumcision, Male/utilization*](#)
- [Cost-Benefit Analysis](#)
- [Counseling](#)
- [Developing Countries*](#)
- [Disease Transmission, Horizontal/prevention & control](#)
- [HIV Infections/economics](#)
- [HIV Infections/prevention & control*](#)
- [HIV-1*](#)
- [Health Care Costs](#)
- [Humans](#)
- [Male](#)
- [Sexual Behavior](#)

Those highlighted in **Green** (economics concept) are minor.

To limit results to articles in which your concept is a central idea or major focus:

*

1. Go to **MeSH Database**
2. Type in your term. Click **GO**/hit **ENTER**.
3. Click on the *most appropriate* MeSH term.
4. Click in the "**Restrict to Major Topic headings**" checkbox directly beneath the subheadings list, as shown below.

1 HIV Infections

Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, complex (ARC), to acquired immunodeficiency syndrome (AIDS).

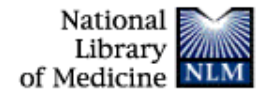
Year introduced: 1990

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect allowable combinations.

blood cerebrospinal fluid chemically induced classification complications congenital diagnosis drug therapy economics embryology enzymology epidemiology ethnology etiology genetics immunology metabolism microbiology mortality nursing parasitology pathology physiopathology and control psychology radiography radionuclide imaging radiotherapy rehabilitation surgery ultrasonography urine veterinary virology

Restrict Search to Major Topic headings only.

Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).



Entrez PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search MeSH for DEVELOPING COUNTRIES Go Clear

Limits Preview/Index History Clipboard Details

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 - Journals Database
 - MeSH Database
 - Single Citation Matcher
 - Batch Citation Matcher
 - Clinical Queries
 - LinkOut
 - Cubby
- Related Resources
 - Order Documents
 - NLM Gateway
 - TOXNET
 - Consumer Health
 - Clinical Alerts
 - ClinicalTrials.gov

[MeSH](#) is NLM's controlled vocabulary used for indexing articles for MEDLINE/PubMed. MeSH terminology provides a consistent way to retrieve information that may use different terminology for the same concepts.

- Use the MeSH database to find MeSH Terms and build a search strategy.

MeSH database tutorials:

- Searching with the MeSH Database Animated Tutorial!
- Combining MeSH Terms Animated Tutorial!
- Applying Subheadings and other features of the MeSH Database Animated Tutorial!

There is a MeSH term for *Developing Countries*.

1



2

1. Type in term
2. Click **[Go]** or hit **ENTER** on keyboard
3. Scan list for best term. Click on **Links** at its right.

3

- If making selections (e.g., Subheadings, etc.), use the [Send to Search Box](#) feature to see PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the MeSH Term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

1: Developing Countries

Countries in the process of change directed toward economic growth, that is, income. The process of economic growth involves better utilization of natural and social, political, and economic structures.

Year introduced: 1971

The *Developing Countries* MeSH term was introduced in 1971 and is defined by the NLM, and not by the UNDP or World Bank.

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules for allowable combinations



A service of the National Library of Medicine and the National Institutes of Health

My NCBI [Sign In] [Register]

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search PubMed for "Developing Countries"[Mesh] Go Clear Save Search

Limits Preview/Index History Clipboard* Details

Display Summary Show 20 Sort by Send to

All: 47671 Free full text: 3237 HINARI: 7542

- About Entrez
- Text Version
- Entrez PubMed
 - Overview
 - Help | FAQ
 - Tutorials
 - New/Noteworthy
 - E-Utilities
- PubMed Services
 - Journals Database
 - MeSH Database
 - Single Citation Matcher
 - Batch Citation Matcher
 - Clinical Queries
 - Special Queries
 - LinkOut
 - My NCBI

Items 1 - 20 of 47671

- 1: [Zarocostas J.](#)
Poor countries lose 15
BMJ. 2007 Jul 21;335(7611):119. No abstract available.
PMID: 17641331 [PubMed - indexed for MEDLINE]
- 2: [Maulik PK, Darmstadt GL.](#) Related Articles, Links
Childhood disability in low- and middle-income countries: overview of screening, prevention, services, legislation, and epidemiology.
Pediatrics. 2007 Jul;120 Suppl 1:S1-55. Review.
PMID: 17603094 [PubMed - indexed for MEDLINE]
- 3: [Wakabi W.](#) Related Articles, Links
Global health agencies agree to HIV/AIDS partnership.
Lancet. 2007 Jul 7;370(9581):15-6. No abstract available.
PMID: 17632852 [PubMed - indexed for MEDLINE]

The results of the *Developing Countries[Mesh]* search is 47671 articles (07 2007).



1. Type in term
2. Click **[Go]** or hit **ENTER** on keyboard
3. Scan list for best term. Click on **Links** at its right.

- If making selections (e.g., Subheadings, etc.), use the [Send to Search Box](#) feature to see PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the MeSH Term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

3

1: Developing Countries

Countries in the process of change directed toward economic growth, that is, income. The process of economic growth involves better utilization of natural and social, political, and economic structures.

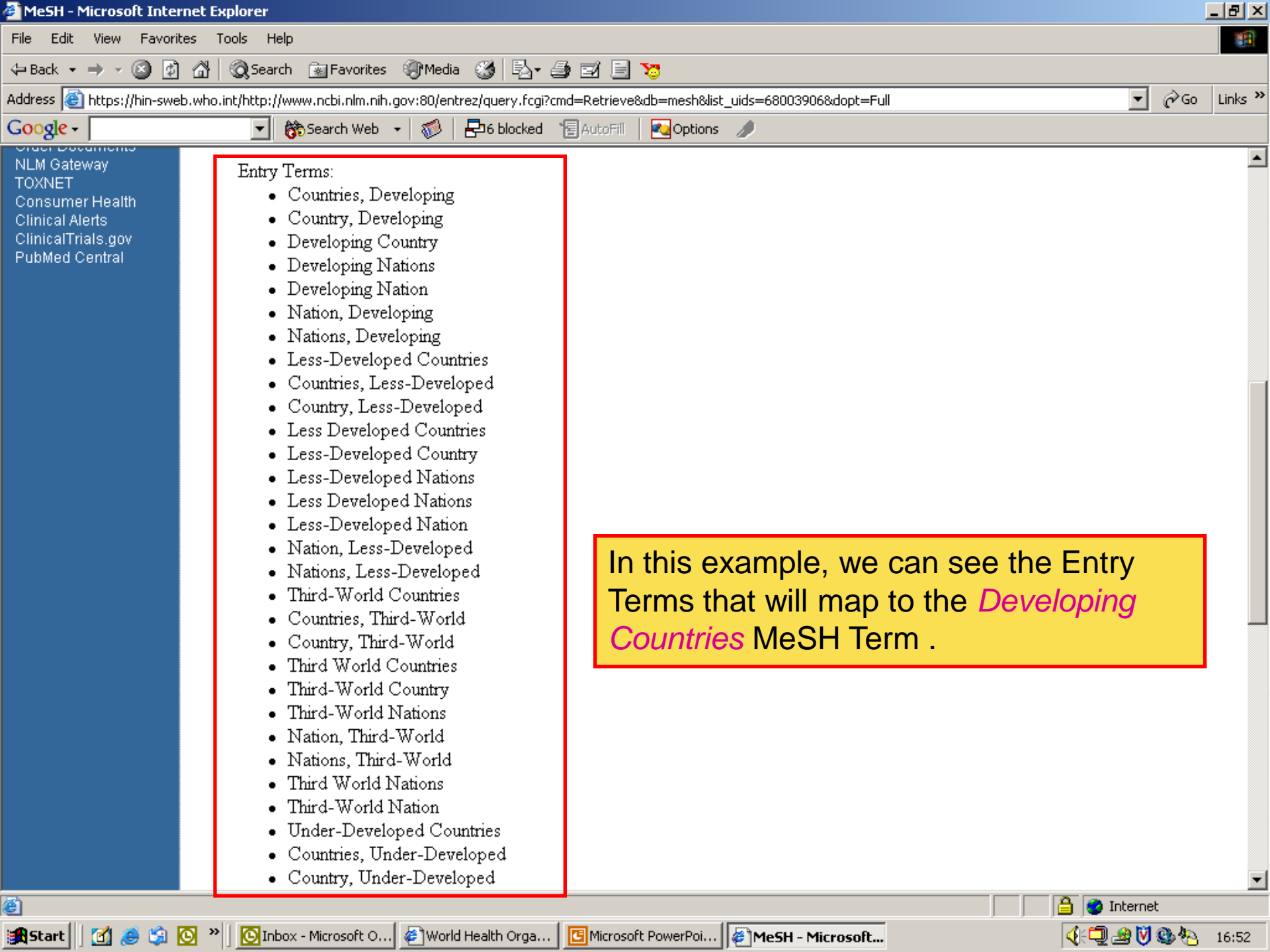
Year introduced: 1971

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules for allowable combinations

The *Developing Countries* MeSH term was introduced in 1971 and is defined by the NLM, and not by the UNDP or World Bank.

NLM MeSH Browser





Entry Terms:

- Countries, Developing
- Country, Developing
- Developing Country
- Developing Nations
- Developing Nation
- Nation, Developing
- Nations, Developing
- Less-Developed Countries
- Countries, Less-Developed
- Country, Less-Developed
- Less Developed Countries
- Less-Developed Country
- Less-Developed Nations
- Less Developed Nations
- Less-Developed Nation
- Nation, Less-Developed
- Nations, Less-Developed
- Third-World Countries
- Countries, Third-World
- Country, Third-World
- Third World Countries
- Third-World Country
- Third-World Nations
- Nation, Third-World
- Nations, Third-World
- Third World Nations
- Third-World Nation
- Under-Developed Countries
- Countries, Under-Developed
- Country, Under-Developed

In this example, we can see the Entry Terms that will map to the *Developing Countries* MeSH Term .

To Explode or not Explode ?

Search MeSH for [Go] [Clear]

Limits Preview/Index History Clipboard Details

"Developing Countries"[Mesh] OR "Africa"[Mesh] **NoExp** **3**

Search PubMed [Clear]

Display Full Show 20 Send to **2**

- If making selections (e.g., Subheadings, etc.), use the [Send to](#) PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the selected term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

1: Africa

[Subheadings](#): This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules : allowable combinations.

epidemiology ethnology

Restrict Search to Major Topic headings only.

Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

1

2

3

Send to menu options: Send to, Text, File, Printer, Clipboard, Search Box with AND, **Search Box with OR**, Search Box with NOT

1: Africa

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules combinations.

epidemiology ethnology

Restrict Search to Major Topic headings only.

Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

All MeSH Categories

Geographical Locations Category

Geographic Locations

Africa

Africa, Northern

Algeria

Egypt

Libya

Morocco

Tunisia

Africa South of the Sahara

Africa, Central +

Africa, Eastern +

Africa, Southern +

Africa, Western +

To Explode or Not to Explode?

PubMed **automatically** explodes MeSH terms.

To “unexplode” ¹, click in the checkbox immediately beneath the checkbox for Major MeSH.

¹ search only for articles on the **general** topic or those that discuss **multiple specific** topics

Exploding means searching for both a term and all more specific terms under it in the MeSH “tree” of terms.

Africa (as a continent) [MeSH:NOEXP]

Africa and every country [MeSH]

The screenshot shows the MeSH search interface. At the top, there are logos for NCBI and MeSH, and text indicating it is a service of the National Library of Medicine and the National Institutes of Health. Below the logos is a navigation bar with tabs for 'All Databases', 'PubMed', 'Nucleotide', 'Protein', 'Genome', and 'Structure'. The 'PubMed' tab is selected. A search bar contains the text 'Search MeSH for' followed by a text input field and 'Go' and 'Clear' buttons. Below the search bar is a menu with options: 'Limits', 'Preview/Index', 'History', 'Clipboard', and 'Details'. The main search area contains the query: "Developing countries" [Mesh] OR "Africa" [Mesh:NoExp]. The term "[Mesh:NoExp]" is circled in red. Below the search area are buttons for 'Search PubMed' and 'Clear'. At the bottom of the search area, there are dropdown menus for 'Display' (set to 'Full'), 'Show' (set to '20'), and 'Send to'.

1: Africa

[Subheadings](#): This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules allowable combinations.

epidemiology ethnology

Restrict Search to Major Topic headings only.

Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

Articles that address the issues of preventive measures of AIDS in low income countries?

Concept 1

Use OR to combine alternative terms and synonyms

AIDS

AND

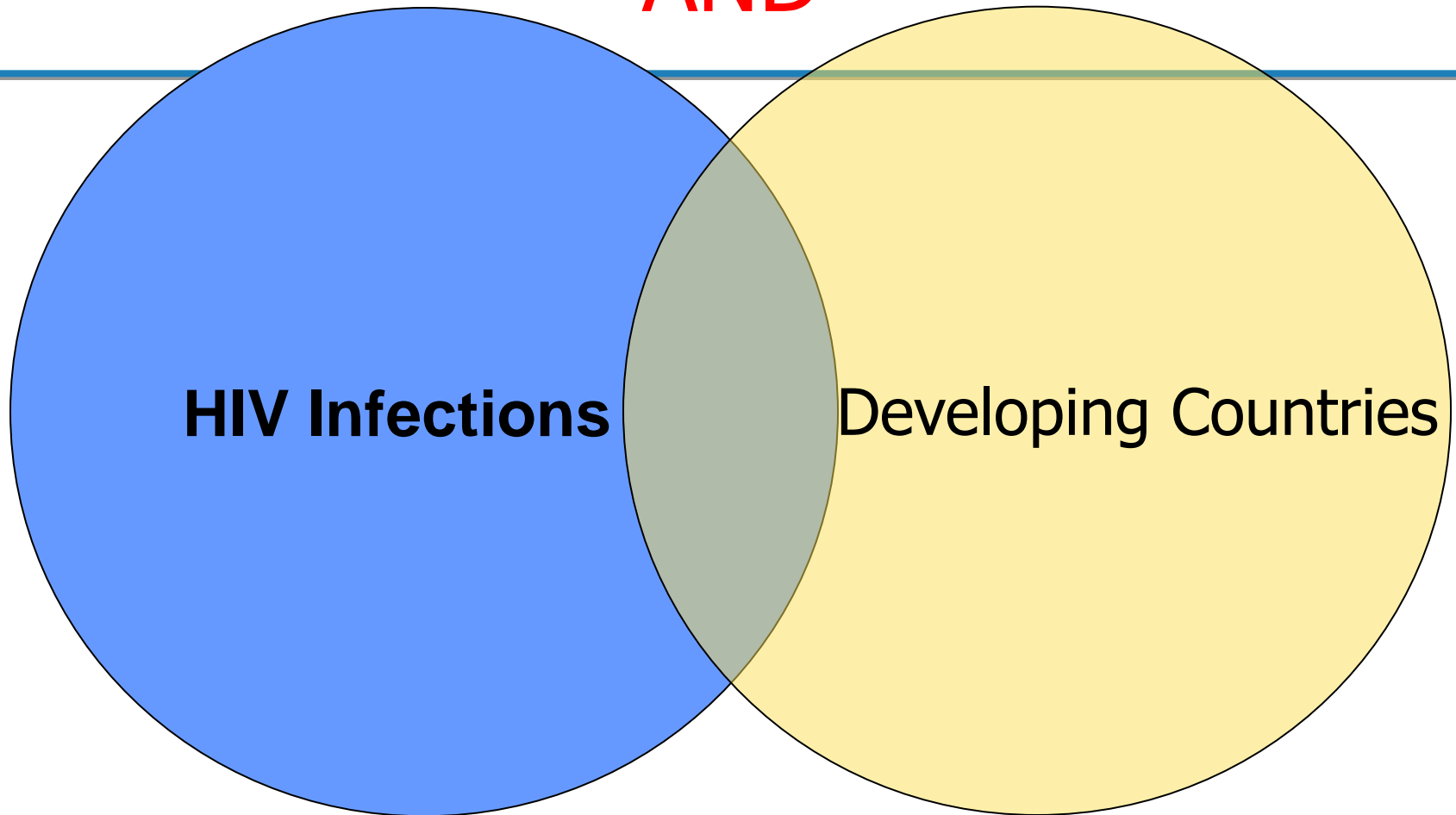
Concept 2

Use OR to combine alternative terms and synonyms

Low Income Countries

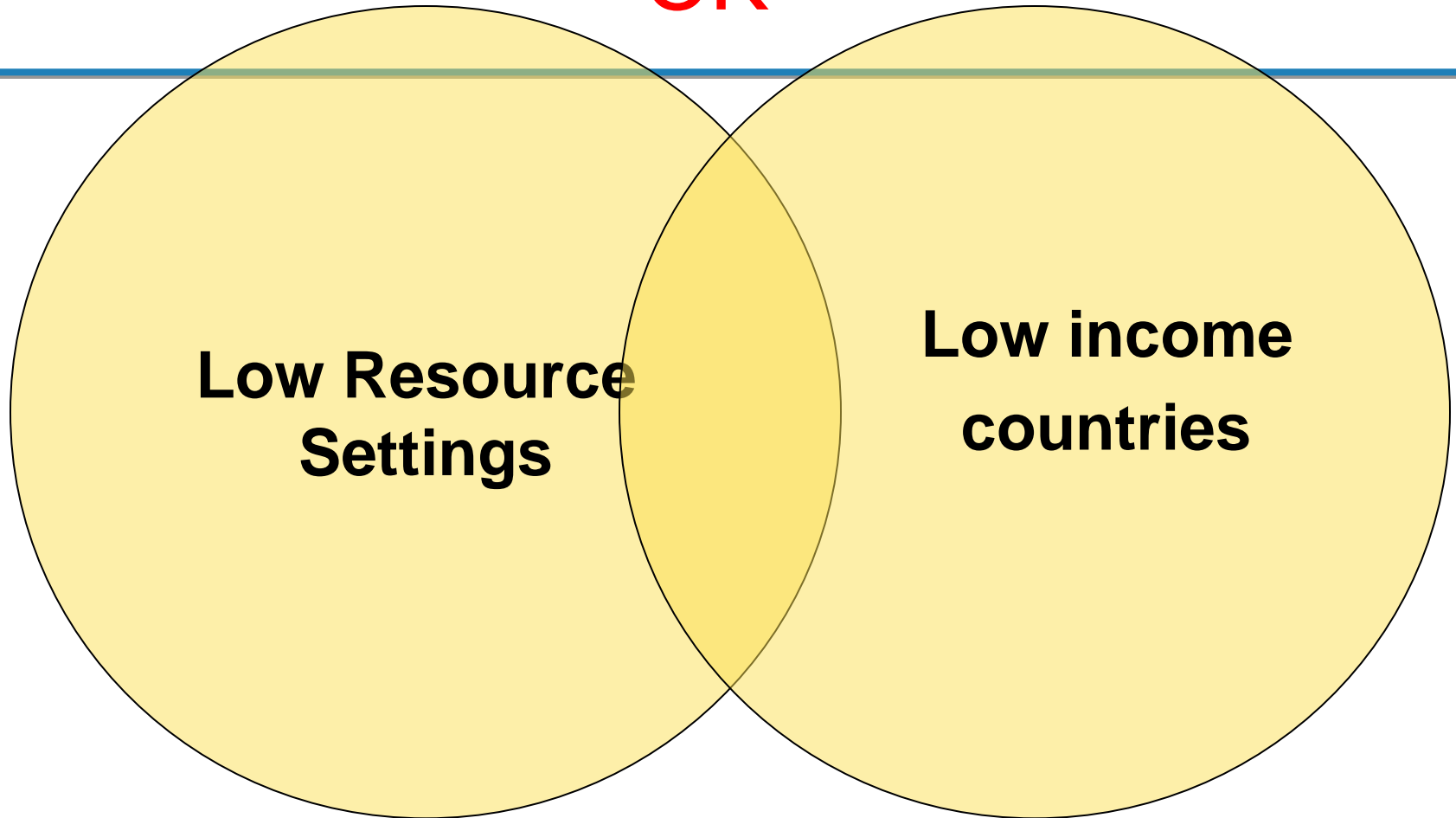


AND



AND= Finds results that contain both keywords.

OR



OR = Finds results that contain either keyword

Articles that address the issues of prevention of AIDS in developing countries??

Concept 1

Use OR to combine alternative terms and synonyms

“HIV infections” [MeSH]

OR

“HIV infection*”

OR

“AIDS”

AND

Concept 2

Use OR to combine alternative terms and synonyms

“Developing countries”[MeSH]

OR

“Africa ”[MeSH:NOExp]

OR

“low income countries”

Truncation

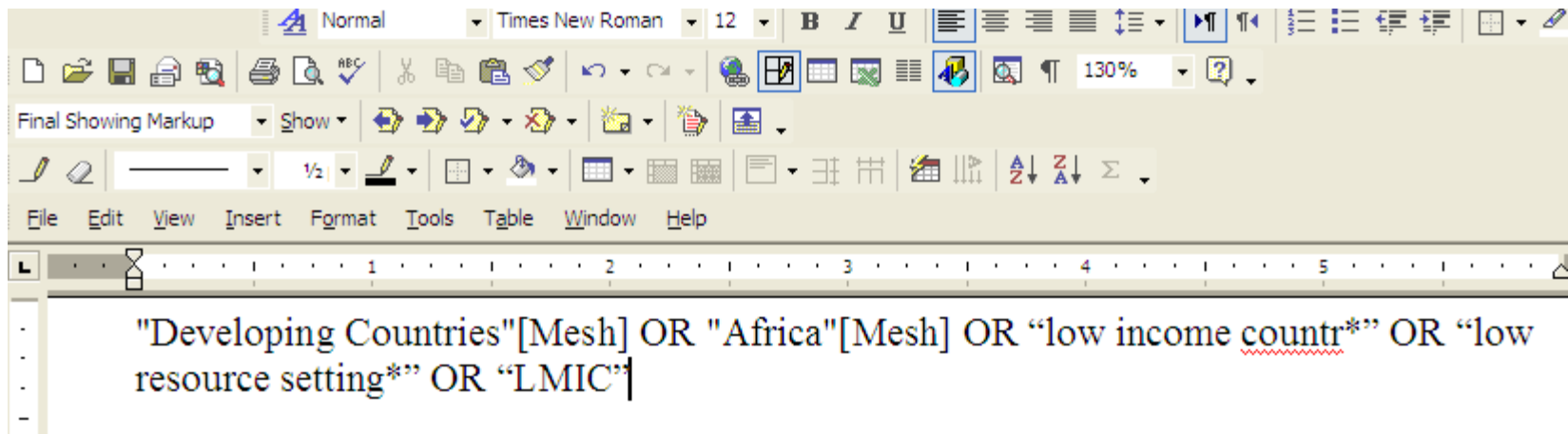
- You can use truncation with key words (not with MeSH)
- So to find "HIV infections" or "HIV infection" , type
 - **"HIV infection*"** which will find both! Or **"HIV infect*"**
 - **But be careful.... Preven* =**

All Fields Preview Index

Click to add a term to the query box

preven (30)	<input type="button" value="Up"/>
preven d (5)	
preven dw (3)	
preven ted (1)	
preven, david (1)	
preven6cni (1)	
prevena (1)	
prevenaao (1)	
prevenant (2)	
prevenante (1)	<input type="button" value="Down"/>

Use WORD to build strategy



Type in the keywords you would like to include, put phrases in “quotation marks” and truncate where appropriate.

Checking the DETAILS tab

- "Developing Countries"[Mesh] OR "Africa"[Mesh] OR "low income countries" OR "low income country" OR "low resource setting*" OR "LMIC" ([in PubMed](#))
- "HIV Infections"[Mesh] OR "HIV infection*" OR "Acquired immunodeficiency*" OR AIDS ([in PubMed](#))
- "HIV Infections"[Mesh] OR "HIV infection*" OR "Acquired immunodeficiency*" ([in PubMed](#))

Problem with truncating : “low income countr*”

Limits Preview/Index History Clipboard **Details**

New Try the new Advanced Search
Incorporating Limits, History, Preview/Index, Details, and Citation Search

Query Translation:

```
"Developing Countries"[Mesh] OR "Africa"[Mesh] OR (low[All  
Fields] AND ("income"[MeSH Terms] OR "income"[All Fields])  
AND countr[All Fields]) OR "low resource setting*" [All  
Fields] OR "LMIC"[All Fields]
```

Search URL

Result:
[170295](#)

Quoted phrase not found:
"low income countr*"

Is “aids”[ALL Fields] retrieving too many irrelevant citations?

Query Translation:

```
"HIV Infections"[Mesh] OR "HIV infection*" [All Fields] OR  
Acquired [All Fields] OR ("acquired immunodeficiency  
syndrome"[MeSH Terms] OR ("acquired"[All Fields]  
AND "immunodeficiency"[All Fields] AND "syndrome"[All  
Fields]) OR "acquired immunodeficiency syndrome"[All  
Fields] OR "aids"[All Fields])
```

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search PubMed for (#3) AND (#5) Preview Go Clear [Advanced Search](#)

Limits Preview/Index **History** Clipboard Details

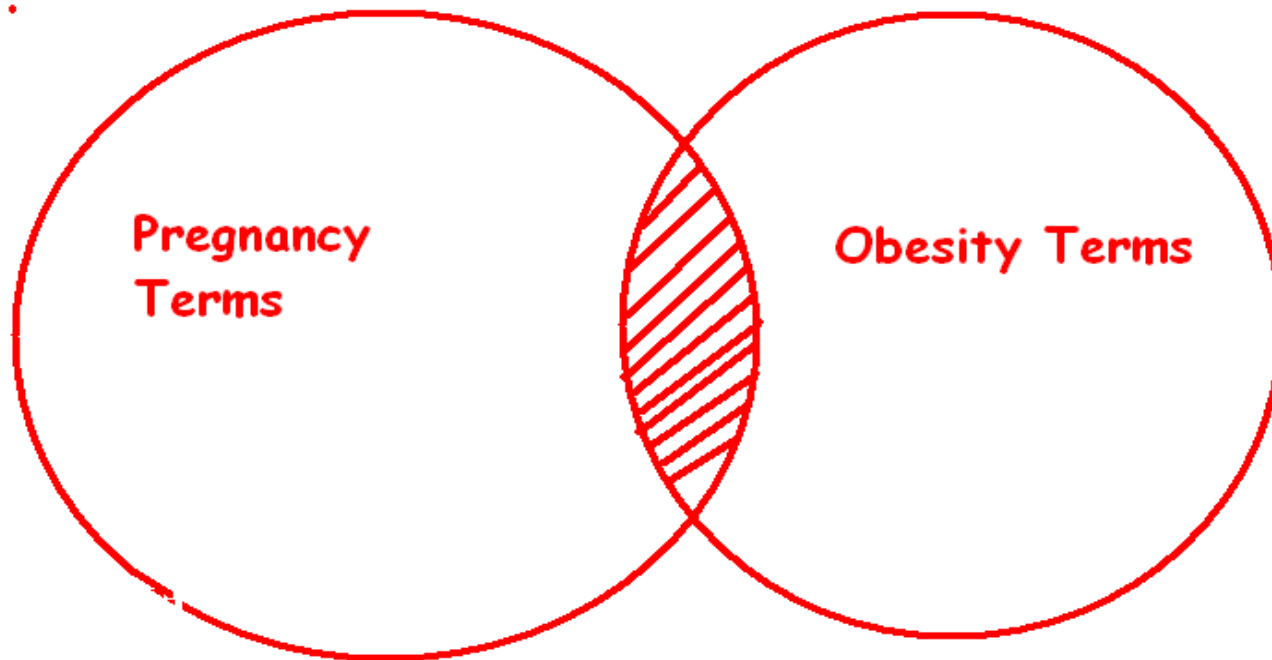
New Try the new **Advanced Search**
Incorporating Limits, History, Preview/Index, Details, and Citation Search

- Search History will be lost after eight hours of inactivity.
- Search numbers may not be continuous; all searches are represented.
- To save search indefinitely, click query # and select Save in My NCBI.
- To combine searches use #search, e.g., #2 AND #3 or click query # for more options.

Search	Most Recent Queries
#5	Search "HIV Infections"[Mesh] OR "HIV infection*" OR "Acquired immunodeficiency*"
#4	Search "HIV Infections"[Mesh] OR "HIV infection*" OR "Acquired immunodeficiency*" OR AIDS
#3	Search "Developing Countries"[Mesh] OR "Africa"[Mesh] OR "low income countries" OR "low income country" OR "low resource setting*" OR "LMIC"



The basic search



Finding Pregnancy related terms

1: [WMJ](#). 2004;103(5):61-6.

Pregnancy-associated deaths and pregnancy-related deaths in Wisconsin, 1998-2001.

[Mascola MA](#), [Schellpfeffer MA](#), [Kruse TK](#), [Conway AE](#), [Kvale KM](#), [Katcher ML](#).

Bureau of Community Health Promotion, Division of Public Health, Department of Health and Family Service, Madison, WI 53701-2659, USA.

BACKGROUND: Although the risk of dying during **childbirth** or from complications afterward has been greatly reduced during the past 100 years, the current rate of approximately 1 death in 10,000 **live births** is still too high. The goal of the US Department of Health and Human Services is to reduce this rate by more than half by the year 2010. OBJECTIVE: To present Wisconsin data regarding **pregnancy-associated deaths** and **pregnancy-related deaths**. METHODS: Cases in which a woman had died during pregnancy or within 1 year of the end of her pregnancy were identified, and case-specific data were collected. The Wisconsin **Maternal Mortality** Review Team then conducted systematic reviews of the information, summarized issues related to maternal mortality, considered the relationship to pregnancy and factors of avoidability, and made recommendations to improve **maternal health** and survival. Finally, pregnancy-associated and pregnancy-related mortality ratios were calculated. RESULTS: From 1998 through 2001, 23 Wisconsin women died as a result of their pregnancy or from complications up to a year later. This gives a Wisconsin pregnancy-related mortality ratio of 8.4 per 100,000 live births. This ratio was higher in African American women and in women who smoked. The primary cause of death was embolic disease. Almost half of the pregnancy-related deaths (48%) occurred during the **postpartum period** and nearly one-quarter (22%) were avoidable. CONCLUSIONS: The disparity in pregnancy-related mortality ratios among ethnic groups and the finding of avoidable deaths are areas that should be targeted by health care providers and public health workers. Six areas on which to focus include the following: addressing racial disparities, assuring the performance of autopsies, lifestyle changes related to obesity and smoking, and management of embolic and cardiovascular disease, as well as **postpartum hemorrhage**.

Finding all the terms to describe your search

1: [Int J Behav Nutr Phys Act](#). 2006 Nov 26;3:42.

Specific food intake, fat and fiber intake, and behavioral correlates of BMI among overweight and obese members of a managed care organization.

[Linde JA](#), [Utter J](#), [Jeffery RW](#), [Sherwood NE](#), [Pronk NP](#), [Boyle RG](#).

Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis, MN, USA. linde@epi.umn.edu.

ABSTRACT: BACKGROUND: The study examined correlates of body mass index (BMI) in overweight and obese members of a managed care organization seeking treatment for obesity. It assessed intake of specific foods, dietary fat or fiber, and behaviors attempted to control weight. METHODS: Participants were 508 men and 1293 women who were > 18 years and had a self-reported BMI > 27.0. This paper reports analyses of baseline and 24-month follow-up data from a randomized weight-loss trial. Cross-sectional and prospective relationships between BMI and behaviors were examined with regression analyses controlling for age and education. RESULTS: At baseline, hamburger and beef consumption were associated with higher BMI for men; for women, hamburger, fried chicken, hot dog, bacon or sausage, egg, French fry, and overall fat consumption were associated with higher BMI, while eating high fiber cereal, fruit, and overall fiber intake were associated with lower BMI. Virtually all forms of weight control behavior were reported more often in heavier people. Subscribing to exercise magazines, however, was associated with lower BMI. Decreased fat intake and increased fruit/vegetable/fiber intake over the course of the study were associated with reductions in BMI at 24 months. CONCLUSION: The same behaviors that differentiate individuals with different body weight in the general population also differentiate between individuals of different body weights at the high end of the weight distribution. Educational efforts aimed at preventing weight gain and reducing obesity might benefit from focusing on specific foods known to be associated empirically with body weight and weight change over time.

PMID: 17125525 [PubMed - in process]

No Abstract ?

Display **Citation** Show 20 Sort by Send to

All: 1

Review: 0

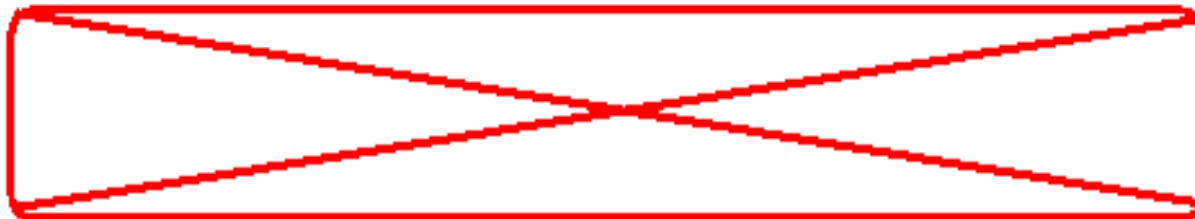


1: [Harv Health Lett.](#) 2005 Mar;30(5):4.

Is it okay to be fat if you're fit? Research suggests that physical activity may cancel out some of the bad effects of being overweight or obese.

[No authors listed]

PMID: 16526111 [PubMed - indexed for MEDLINE]



How to maximize your selection

The screenshot shows the PubMed website interface. At the top, there is the NCBI logo and the PubMed logo with the URL www.pubmed.gov. Below the logo, there are navigation tabs for 'All Databases', 'PubMed', 'Nucleotide', 'Protein', 'Genome', 'Structure', 'OMIM', 'PMC', and 'Jou'. A search bar is present with the text 'PubMed' and buttons for 'Go' and 'Clear'. Below the search bar, there are tabs for 'Limits', 'Preview/Index', 'History', 'Clipboard', and 'Details'. The 'Display' dropdown menu is open, showing options like 'Citation', 'MEDLINE', 'XML', 'UI List', 'LinkOut', 'ASN.1', 'Related Articles', 'Cited Articles', 'Cited in Books', 'CancerChrom Links', and 'Domain Links'. A red box highlights the 'Citation' option. Below the 'Display' menu, there is a section for 'MeSH Terms' with a list of terms: 'Body Composition', 'Exercise/physiology', 'Female', 'Follow-Up Studies', 'Humans', 'Male', 'Obesity/complications*', 'Obesity/mortality', 'Overweight/physiology', and 'Physical Fitness/physiology*'. Red circles highlight the asterisks on 'Obesity/complications*' and 'Physical Fitness/physiology*'. A red box with the text '* = Major Focus or Main Idea' points to these asterisks. Another red box with the text 'Citation = MeSH are visible' points to the 'Citation' option in the display menu. The background shows a search result for PMID: 16526111 with the text '[No authors listed]' and a list of MeSH terms.

Citation = MeSH are visible

* = Major Focus or Main Idea

Where words have double meanings

- ❑ 1: [Eat Behav.](#) 2007 Jan;8(1):73-82. Epub 2006 Feb 21.

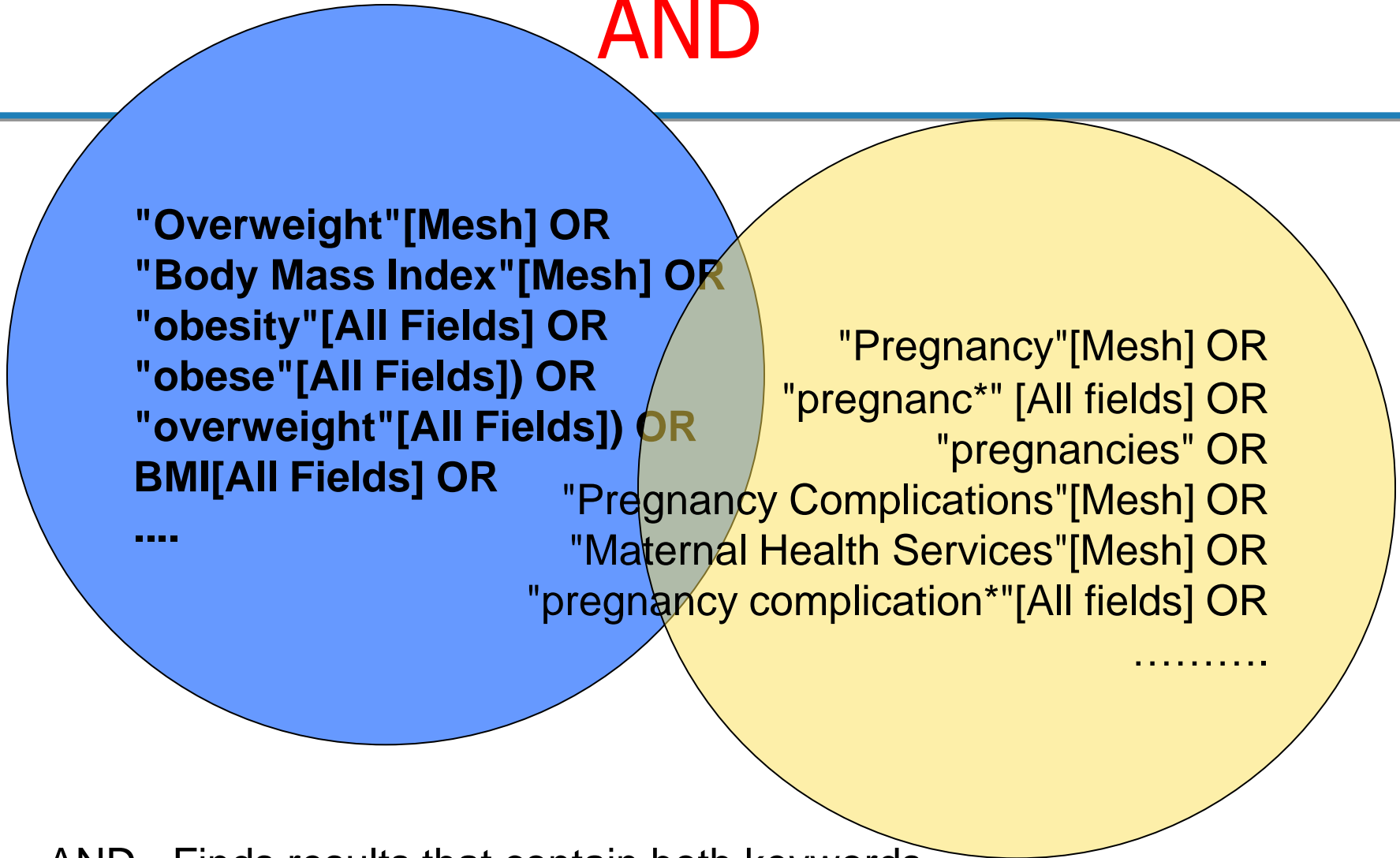
The method of **delivery** of nutrition and physical activity information may play a role in eliciting behavior changes in adolescents.

[Casazza K](#), [Ciccazzo M](#).

Florida International University, College of Health and Urban Affairs, Department of Dietetics and Nutrition, HLS 450, University Park, Miami, Florida 33199, USA. krista1313@msn.com

OBJECTIVES: Motivating adolescents to adopt proper nutrition and physical activity behaviors is important in this nation's fight to prevent obesity and chronic diseases. This study was conducted to determine which health education **delivery** method would elicit a greater behavior change. METHOD: The intervention was conducted in three schools (control, computer-based, and traditional education). RESULTS: Students who received the computer-based intervention showed increased knowledge ($p < 0.001$), physical activity ($p = 0.001$), self-efficacy ($p < 0.001$), and social support ($p < 0.001$), and decreased meals skipped ($p < 0.001$). CONCLUSION: The computer-based group showed more positive behavior changes. However, future programs may be enhanced by including group discussion and individual feedback.

AND



AND= Finds results that contain both keywords.

How to Create a TEST set

NCBI PubMed A service of the U.S. National Library of Medicine and the National Institutes of Health
www.pubmed.gov

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals B

Search PubMed for [] Go Clear

Limits Preview/Index History Clipboard* Details

Display MEDLINE Show 20 Sort By Send to

All: 1 Review: 0

1: [Betrán AP et al.](#) Rates of caesarean section. a...[PMID: 17302638]

PMID- 17302638
OWN -.nlm
STAT- MEDLINE
DA - 20070216
DCOM- 20070723
PUBM- Print
IS - 0269-5022 (Print)
VI - 21
IP - 2
DP - 2007 Mar
TI - Rates of caesarean section: analysis of global, regional and national estimates.
PG - 98-113
AB - Rates of caesarean section are of concern in both developed and developing countries. We set out to estimate the proportion of births by caesarean

Change Display to MEDLINE

17302638 [PMID] OR

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search PubMed for 18029003 [PMID] OR 17938079 [PMID] OR 1707454 Go Clear Save Search

Limits Preview/Index History Clipboard* Details

Display Summary Show 20 Sort By Send to

All: 3 Review: 1

Items 1 - 3 of 3

1: [AbouZahr C, Cleland J, Coullare \(MoVE\) writing group, Anderson Figueroa XC, George CK, Golligly L, Golemboski S, Grollman A, Hain J, Harding G, Hill H, Howell M, Jansen R, Jia P, Jiang Y, Laurenti R, Li X, Liewesley D, Lopez AD, Fat DM, Merialdi M, Mikkelsen L, Nien JK, Rao C, Rao K, Sankoh O, Shibuya Yang G, Zhang S.](#)

Create Search String by 12345 [PMID] OR 123457 [PMID] OR etc

Save the Search String in My NCBI

The way forward
Lancet. 2007 Nov 2; [PMID: 18029003 [PubMed - indexed for MEDLINE]]

2: [Bacci A, Lewis G, Baltag V, Betrán AP.](#)
The introduction of confidential enquiries into maternal deaths and near-miss case reviews in the WHO
Reprod Health Matters. 2007 Nov;15(30):145-52.
[PMID: 17938079 [PubMed - indexed for MEDLINE]]

My NCBI

Testing the Search Strategy

Do the results measure up?



Test your Search Strategy

- Create the search strategy
- Run in the database such as PubMed
- Check to see if all previous identified studies / articles that are relevant to your question have been found using your search strategy.
- If any articles/studies are not found, examine the studies missed by the search strategy to see what MeSH, keywords or other terms could be used.

How to Test

- Identified article – Jensen (2005) Diabetes Care. **Gestational weight gain and pregnancy outcomes in 481 obese glucose-tolerant women.**
- Search strategy Obesity AND Pregnancy in PubMed
- Jensen (2005) article not found
- (Identified articles) NOT (Search strategy articles) = 0 Good Search
- (Identified articles) NOT (Search strategy articles) = <0 Not Good Search

1: [Diabetes Care](#). 2005 Sep;28(9):2118-22.



Gestational weight gain and pregnancy outcomes in 481 obese glucose-tolerant women

[Jensen DM](#), [Ovesen P](#), [Beck-Nielsen H](#), [Molsted-Pedersen](#)

MeSH Terms:

- [Adult](#)
- [Appetite](#)
- [Birth Weight](#)
- [Blood Glucose/metabolism*](#)
- [Body Mass Index](#)
- [Female](#)
- [Food Preferences](#)
- [Glucose Tolerance Test](#)
- [Humans](#)
- [Infant, Newborn](#)
- [Pregnancy/blood*](#)
- [Reference Values](#)
- [Smoking](#)
- [Weight Gain*](#)

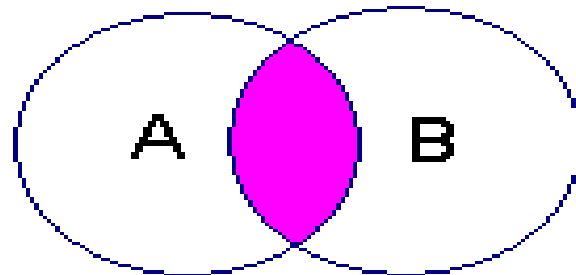
Need to add terms
such as
Weight Gain

Pregnancy term found,
but obese in this case
has used the MeSH
term "Weight Gain"

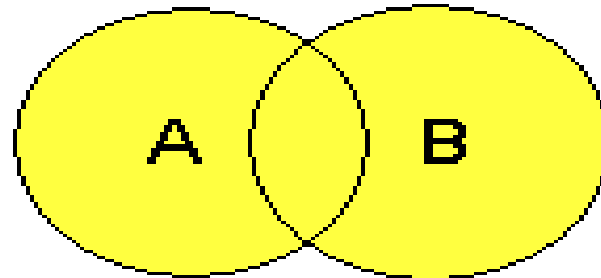
Finding other MeSH using **[Title] NOT [MeSH]** option

- Step 1
 - Pregnancy [title] AND Obesity [title]
- Step 2
 - Pregnancy [MeSH] AND Obesity [MeSH]
- Step 3
 - Step 1 NOT Step 2

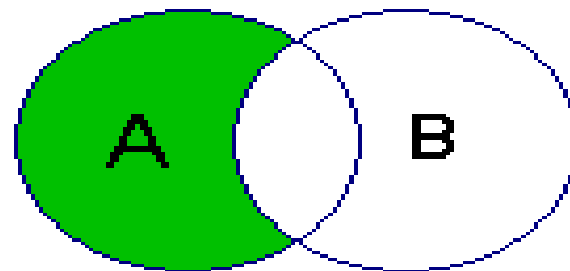
Boolean Search



AND



OR



NOT

View the MeSH terms to see if relevant

1: [South Med J](#). 1989 Oct;82(10):1319-20.

Wolters Kluwer | Lippincott
Williams & Wilkins

Medical care and pregnancy outcome after gastric bypass surgery for obesity.

[Rand CS](#), [Macgregor AM](#).

Publication Types:

- [Letter](#)

MeSH Terms:

- [Communication](#)
- [Female](#)
- [Gastric Bypass*](#)
- [Humans](#)
- [Infant, Low](#)
- [Infant, Newborn](#)
- [Obstetrics*](#)
- [Pregnancy](#)
- [Pregnancy Outcome*](#)
- [Smoking/adverse effects](#)

Links

- ▶ PubMed
- ▶ MeSH
- ▶ Add to Search

MeSH for "Gastric Bypass" [Save Search](#)

Limits Preview/Index History Clipboard Details

Suggestions: [Gastric bypass](#), [Bypass, gastric](#), [Gastroileal bypass](#), [Judicial bypass](#), [Gastric bubble](#), [Gastric balloon](#), [Gastric acids](#), [Gastric cancer](#), [More...](#)

Display Summary Show 20 Send to

All: 3

Items 1 - 3 of 3

1: [Gastric Bypass](#)

Surgical procedure in which the STOMACH is transected high on the body. The resulting small portions of the SMALL INTESTINE are reconnected by an end-to-side SURGICAL ANASTOMOSIS, depending on the number of bypasses. This procedure is used frequently in the treatment of MORBID OBESITY. **STOMACH**; food intake; and food absorption.

**Obesity [MeSH] OR
Overweight [MeSH]
Overweight [All Fields]
Body Mass Index
BMI [All Fields]
Obese [All Fields]
And other terms.....**

**Pregnancy [MeSH] OR
Maternal Health Services
[MeSH] OR
Childbirth [All Fields] OR
Postpartum period [MeSH]
Childbirth [All Fields] OR
Pregnan* [All Fields]
and other terms.....**

Filters

Saving elements of your search for reuse.

#1: Developing Countries[mh]

#2: Medically Underserved Area[mh]

#3: Africa[mh:noexp] or "Africa South of the Sahara"[mh:noexp] or Asia[mh:noexp] or South America[mh:noexp] or Central America[mh:noexp]

#4: Africa[tiab] or Asia[tiab] or South America[tiab] or Latin America[tiab] or Central America[tiab]

#5: American Samoa[tw] or Argentina[tw] or Belize[tw] or Botswana[tw] or Brazil[tw] or Bulgaria[tw] or Chile[tw] or Comoros[tw] or Costa Rica[tw] or Croatia[tw] or Dominica[tw] or Equatorial Guinea[tw] or Gabon[tw] or Grenada[tw] or Hungary[tw] or Kazakhstan[tw] or Latvia[tw] or Lebanon[tw] or Libya[tw] or Libia[tw] or Libyan[tw] or Lithuania[tw] or Malaysia[tw] or Mauritius[tw] or Mexico[tw] or Micronesia[tw] or Montenegro[tw] or Oman[tw] or Palau[tw] or Panama[tw] or Poland[tw] or Romania[tw] or Russia[tw] or Seychelles[tw] or Slovakia[tw] or South Africa[tw] or "Saint Kitts and Nevis"[tw] or Saint Lucia[tw] or "Saint Vincent and the Grenadines"[tw] or Turkey[tw] or Uruguay[tw] or Venezuela[tw] or Yugoslavia[tw] or Mayotte[tw] or Northern Mariana Islands[tw] or Russian Federation[tw] or Samoa[tw] or Serbia[tw] or Slovak Republic[tw] or "St Kitts and Nevis"[tw] or St Lucia[tw] or "St Vincent and the Grenadines"[tw]

[Line #5: Upper Middle Income Countries]

#6: Albania[tw] or Algeria[tw] or Angola[tw] or Armenia[tw] or Azerbaijan[tw] or Belarus[tw] or Bhutan[tw] or Bolivia[tw] or "Bosnia and Herzegovina"[tw] or Bosnia[tw] or Cameroon[tw] or China[tw] or Colombia[tw] or Congo[tw] or Cuba[tw] or Djibouti[tw] or Dominican Republic[tw] or Ecuador[tw] or Egypt[tw] or El Salvador[tw] or Fiji[tw] or "Georgia (Republic)" [tw] or Guam[tw] or Guatemala[tw] or Guyana[tw] or Honduras[tw] or Indian Ocean Islands[tw] or Indonesia[tw] or Iran[tw] or Iraq[tw] or Jamaica[tw] or Jordan[tw] or Lesotho[tw] or "Macedonia (Republic)" [tw] or Marshall Islands[tw] or Micronesia[tw] or Middle East[tw] or Moldova[tw] or Morocco[tw] or Namibia[tw] or Nicaragua[tw] or Paraguay[tw] or Peru[tw] or Philippines[tw] or Samoa[tw] or Sri Lanka[tw] or Suriname[tw] or Swaziland[tw] or Syria[tw] or Thailand[tw] or Tonga[tw] or Tunisia[tw] or Turkmenistan[tw] or Ukraine[tw] or Vanuatu[tw] or Cape Verde[tw] or Gaza[tw] or Georgia[tw] or Kiribati[tw] or Macedonia[tw] or Maldives[tw] or Palestine[tw] or Syrian Arab Republic[tw] or West Bank[tw]

[Line #6: Low Middle Income Countries]

#7: Afghanistan[tw] or Bangladesh[tw] or Benin[tw] or Burkina Faso[tw] or Burundi[tw] or Cambodia[tw] or Central African Republic[tw] or Chad[tw] or Comoros[tw] or "Democratic Republic of the Congo"[tw] or Cote d'Ivoire[tw] or Eritrea[tw] or Ethiopia[tw] or Gambia[tw] or Ghana[tw] or Guinea[tw] or Guinea-Bissau[tw] or Haiti[tw] or India[tw] or Kenya[tw] or Korea[tw] or Kyrgyzstan[tw] or Laos[tw] or Liberia[tw] or Madagascar[tw] or Malawi[tw] or Mali[tw] or Mauritania[tw] or Melanesia[tw] or Mongolia[tw] or Mozambique[tw] or Myanmar[tw] or Nepal[tw] or Niger[tw] or Nigeria[tw] or Pakistan[tw] or Papua New Guinea[tw] or Rwanda[tw] or Senegal[tw] or Sierra Leone[tw] or Somalia[tw] or Sudan[tw] or Tajikistan[tw] or Tanzania[tw] or East Timor[tw] or Togo[tw] or Uganda[tw] or Uzbekistan[tw] or Vietnam[tw] or Yemen[tw] or Zambia[tw] or Zimbabwe[tw] or Burma[tw] or Congo[tw] or Kyrgyz[tw] or Lao[tw] or North Korea[tw] or Solomon Islands[tw] or Sao Tome[tw] or Timor[tw] or Viet Nam[tw]

[Line #7: Low Income Countries]

#8: rural communit*[tiab] or rural area*[tiab] or rural region*[tiab] or rural province*[tiab] or rural district*[tiab] or remote communit*[tiab] or remote area*[tiab] or remote region*[tiab] or remote province*[tiab] or remote district*[tiab] or nonmetropolitan communit*[tiab] or nonmetropolitan area*[tiab] or nonmetropolitan region*[tiab] or nonmetropolitan province*[tiab] or nonmetropolitan district*[tiab] or underserved communit*[tiab] or underserved country[tiab] or underserved countries[tiab] or underserved area*[tiab] or underserved region*[tiab] or underserved province*[tiab] or underserved district*[tiab] or under served communit*[tiab] or under served country[tiab] or under served countries[tiab] or under served area*[tiab] or under served region*[tiab] or under served province*[tiab] or under served district*[tiab] or deprived[tiab] and communit*[tiab] or deprived[tiab] and country[tiab] or deprived[tiab] and countries[tiab] or deprived[tiab] and area*[tiab] or deprived[tiab] and region*[tiab] or deprived[tiab] and province*[tiab] or deprived[tiab] and district*[tiab] or shortage communit*[tiab] or shortage area*[tiab] or shortage region*[tiab] or shortage province*[tiab] or shortage district*[tiab]

#9: developing communit*[tiab] or developing country[tiab] or developing countries[tiab] or developing district*[tiab] or developing state*[tiab] or developing province*[tiab] or developing jurisdiction*[tiab] or developing nation*[tiab] or developing region*[tiab] or developing area*[tiab] or developing territory*[tiab] or less* developed communit*[tiab] or less* developed country[tiab] or less* developed countries[tiab] or less* developed district*[tiab] or less* developed state*[tiab] or less* developed province*[tiab] or less* developed jurisdiction*[tiab] or less* developed nation*[tiab] or less* developed region*[tiab] or less* developed area*[tiab] or less* developed territory*[tiab] or third world[tiab] or under developed communit*[tiab] or under developed country[tiab] or under developed countries[tiab] or under developed district*[tiab] or under developed state*[tiab] or under developed province*[tiab] or under developed jurisdiction*[tiab] or under developed nation*[tiab] or under developed region*[tiab] or under developed area*[tiab] or under developed territory*[tiab] or poor* communit*[tiab] or poor* country[tiab] or poor* countries[tiab] or poor* district*[tiab] or poor* state*[tiab] or poor* province*[tiab] or poor* jurisdiction*[tiab] or poor* nation*[tiab] or poor* region*[tiab] or poor* area*[tiab] or poor* territory*[tiab]

#10: middle income communit*[tiab] or middle income country[tiab] or middle income countries[tiab] or middle income district*[tiab] or middle income state*[tiab] or middle income province*[tiab] or middle income jurisdiction*[tiab] or middle income nation*[tiab] or middle income region*[tiab] or middle income area*[tiab] or middle income territory*[tiab] or low income

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Use this form to identify/clarify the key concepts and the scope of your research topic.
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1. Your Research Topic

--

2. Consider how the following four categories apply to your research topic

Patient/Population and/or Problem	Intervention	Comparison/Control <i>(if applicable)</i>	Outcomes (or Effects)
Alternative Words			



Different Databases

Different Search Strategies



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1: [AIDS Educ Prev](#). 2007 Apr;19(2):160-72.

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Social and behavioral determinants of consistent condom use among female commercial sex workers in Ghana.

[Adu-Oppong A](#), [Grimes RM](#), [Ross MW](#), [Risser J](#), [Kessie G](#).

Georgia Southern University, Jiann-Ping Hsu College of Public Health in Statesboro, GA 30460-8015, USA.
aaduoppong@georgiasouthern.edu

This study investigated the social and behavioral predictors of consistent condom use among female commercial sex workers (FCSWs) in Ghana. Four hundred fifty street commercial sex workers were interviewed in Accra, Kumasi and Techiman. The level of condom education was very low (14%); however consistent condom use (all the time) with clients was relatively high (49.6%). Two hundred seventy-seven of the participants did not use condoms all the time.

MeSH Terms:

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PMID: 17411418 [PubMed - indexed for MEDLINE]



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Title: Social and behavioral determinants of consistent condom use among female commercial sex workers in Ghana.

Author: Adu-Oppong A; Grimes RM; Ross MW; Risser J; Kessie G

Source: AIDS Education and Prevention. 2007 Apr;19(2):160-172.

Abstract: This study investigated the social and behavioral predictors of consistent condom use among female commercial sex workers in Ghana. Four hundred fifty street commercial sex workers were interviewed in Accra, Kumasi and Techiman. The level of condom use was very low (14%); however consistent condom use (all the time) with clients was relatively high (49.6%). Two-hundred seventy-seven of participants did not use condoms all the time. (author's)

Language: English

Keywords:

[GHANA](#) | [SUMMARY REPORT](#) | [INTERVIEWS](#) | [SEX WORKERS](#) | [CONDOM USE](#) | [EDUCATIONAL STATUS](#) | [BEHAVIOR](#) | [RELIGIOUS FACTORS](#) | [Developing Countries](#) | [Africa, Western](#) | [Africa, Sub-Saharan](#) | [Africa](#) | [Data Collection](#) | [Research Methodology](#) | [Behavior](#) | [Risk Reduction Behavior](#) | [Socioeconomic Status](#) | [Socioeconomic Factors](#) | [Economic Factors](#) | [Sociocultural Factors](#) | [Population Characteristics](#) | [Demographic Factors](#) | [Population](#)

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Social and behavioral determinants of consistent condom use among female workers in Ghana

Adu-Oppong A., Grimes R.M., Ross M.W., Risser J. and Kessie G.

AIDS Education and Prevention 2007 **19:2 (160-172)**

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This study investigated the social and behavioral predictors of consistent condom use among female workers (FCSWs) in Ghana. Four hundred fifty street commercial sex workers were interviewed in Accra. The level of condom education was very low (14%); however consistent condom use (all clients) was relatively high (49.6%). Two hundred seventy-seven of the participants did not use condoms. 2007 The Guilford Press.

Associated Links

Other works by authors of this record

[Adu-Oppong A.](#), [Grimes R.M.](#), [Ross M.W.](#), [Risser J.](#), [Kessie G.](#)

EMTREE drug index terms

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Author(s): [Adu-Oppong A](#) (Adu-Oppong, Ahmed), [Grimes RM](#) (Grimes, Richard M.), [Ross MW](#) (Ross, Michael W.), [Risser J](#) (Risser, Jan), [Kessie G](#) (Kessie, Gladstone)

Source: AIDS EDUCATION AND PREVENTION **Volume:** 19 **Issue:** 2 **Pages:** 160-172 **Published:** 2007

Times Cited: 0 **References:** 31

Abstract: This study investigated the social and behavioral predictors of consistent condom use among female commercial sex workers (FCSWs) in Ghana. Four hundred fifty street commercial sex workers were interviewed in Accra, Kumasi and Techiman. The level of condom education was very low (14%); however consistent condom use (all the time) with clients was relatively high (49.6%). Two hundred seventy-seven of the participants did not use condoms all the time.

Document Type: Article

Language: English

KeyWords Plus: HIV-INFECTION; PREGNANT-WOMEN; **LATEX CONDOM;** RISK; PREVALENCE; TRANSMISSION; PREDICTORS; TANZANIA; DECLINE; SPREAD

Addresses: Adu-Oppong, A (reprint author), Georgia So Univ, Jiann Ping Hsu Coll Publ Hlth, POB 8015, Statesboro, GA 30460 USA

Georgia So Univ, Jiann Ping Hsu Coll Publ Hlth, Statesboro, GA 30460 USA

Univ Texas, Hlth Sci Ctr, Sch Publ Hlth, Houston, TX USA

Minist Healthy, Holy Family Hosp, Brong Ahafo, Ghana

E-mail Addresses: [aaduooppong@georgiasouthern.edu](mailto:aaduoppong@georgiasouthern.edu)

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Social and behavioral determinants of consistent condom use among female commercial sex workers

Adu-Oppong, A. Grimes, R. M. Ross, M. W. Risser, J. Kessie, G.

✉ aaduoppong@georgiasouthern.edu;

Giann-Ping Hsu College of Public Health, Georgia Southern University, P.O. Box 8015, Statesboro, GA 30460-8015, USA.

CABICODE

- UU485 - Social Psychology and Social Anthropology, (New March 2000)
- UU500 - Women
- VV065 - Human Sexual and Reproductive Health, (New March 2000)
- VV210 - Prion, Viral, Bacterial and Fungal Pathogens of Humans, (New March 2000)

Descriptor

- Attitudes
- Disease prevention
- HIV infections
- Prostitutes
- Safer sex
- Women
- Condoms
- Education
- Human diseases
- Risk behaviour
- Sexual behaviour



Know your Database Syntax



Syntax of Searching

All Medline different Interfaces

- **PubMed – Medline**

- Ghana AND Condom AND utilization

- **OVID – Medline**

- exp ghana/ and condom/ut

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- Ghana condom

The last few remaining sources

Unpublished, Grey Literature & Hand searching



Electronic Databases are not the only way to identify studies

1. Electronic databases
2. Checking reference lists
3. Print indexes
4. Hand searching
5. Identifying unpublished studies
6. Personal communication



Cutting to the Bone

Checking References Lists



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Full Record

Record 10 of 363 SUMMARY

Title: The real contribution of the major risk factors to the coronary epidemics - Time to end the "only-50%" myth

Author(s): Magnus P, Beaglehole R, Rodgers A, Bennett S

Source: ARCHIVES OF INTERNAL MEDICINE 161 (22): 2657-2660 DEC 10 2001

Document Type: Editorial Material

Language: English

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KeyWords Plus: SERUM-CHOLESTEROL CONCENTRATION; ISCHEMIC-HEART-DISEASE; MONICA PROJECT POPULATIONS; CARDIOVASCULAR-DISEASE; EVENT RATES; TRENDS; MORTALITY; PREVENTION; AUSTRALIA; DECLINE

Addresses: Magnus P (reprint author), Australian Inst Hlth & Welfare, POB 570, Canberra, ACT 2601 Australia
Australian Inst Hlth & Welfare, Canberra, ACT 2601 Australia

Publisher: AMER MEDICAL ASSOC, 515 N STATE ST, CHICAGO, IL 60610 USA

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- **Definition:**
- **Hand searching involves a manual page-by-page examination of the entire contents of a journal issue to identify all eligible reports of trials.**

Need for handsearching

1. Not all trial reports are included on electronic bibliographic databases

For example: Conference proceedings are important to handsearch because individual conference. These abstracts are not included on MEDLINE and are not usually included in other databases.

2. Even when they are included, they may not be indexed with terms that allow them to be easily identified as trials

Why the need for hand searching

- Journals not indexed in databases or in print indexes
- Journals are not well indexed
 - Studies have shown that RCTs are not always properly indexed as RCTs, obvious concepts are missed in the indexing, lack of abstracts and title may not reflect clearly the topic of the article
- Journals ceased to be indexed or various other reasons
- Time delays in indexing of journals.

Find the date of entry into PubMed

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MH - Urban Health/*statistics & numerical data/trends
MH - Uterine Hemorrhage/etiolog

EDAT- 2003/12/09 05:00

MHDAT- 2003/12/20 05:00

PST - ppublish

SO - Arch Inst Pasteur Tunis. 2001;78(1-4):49-58.

Entry date in PubMed
Publication Date



Identifying unpublished studies

What Is Grey Literature?

Literature that is not widely published

- Dissertations
- Theses
- Government reports
- Ongoing studies
- etc...

Clinical Trial sites

- WHO International Clinical Trials Registry
 - <http://www.who.int/trialsearch/>
- TrialsCentral
 - www.trialscentral.org
- Current Controlled Trials
 - www.controlled-trials.com
- clinicaltrials.gov (by NLM)
 - www.clinicaltrials.gov

WHO International Clinical Trials Registry



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Welcome

- The Search Portal is a web site that enables users to search a central database that contains the trial registration data sets provided by Primary Registers.
- When a user finds a trial on the Search Portal that they are interested in, they can learn more about the trial by clicking on a link that will take them to the relevant record in the source register.
- New users are advised to read the Search Tips before commencing their search.
- The Search Portal is not a clinical trials register.
- No attempt is made to identify and tag trials that may have been registered on more than one register.

Data Sources

- Australian New Zealand Clinical Trials Registry, last data file imported on **8 April 2008**
- ClinicalTrials.gov, last data file imported on **8 April 2008**
- ISRCTN, last data file imported on **8 April 2008**

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clinicaltrials.gov

- By NLM
- Provides regularly updated information about federally and privately supported clinical research in human volunteers.
- *ClinicalTrials.gov* gives you information about a trial's purpose, who may participate, locations, and phone numbers for more details

www.clinicaltrials.gov



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Example: heart attack, Los Angeles

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[Browse by Sponsor](#) - studies listed by funding organization

Resource Information

[Understanding Clinical Trials](#) - information explaining and describing clinical trials

[What's New](#) - studies in the news

[MEDLINEplus](#) - authoritative consumer health information

[Genetics Home Reference](#) - consumer information about genes and genetic conditions

[NIH Health Information](#) - research supported by the National Institutes of Health

Grey Literature



OpenSIGLE

System for Information on Grey Literature in Europe

<http://opensigle.inist.fr/>

- OpenSIGLE combines the resources of major European information and document supply centres who joined in an association known as EAGLE : European Association for Grey Literature Exploitation.
- Each centre was responsible for collecting grey literature produced in its own country and for providing details of it

Grey Literature

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DRIVER is a multi-phase effort whose vision and primary objective is to establish a cohesive, pan-European infrastructure of Digital Repositories, offering sophisticated functionality services to both researchers and the general public. It sets out to build an advanced infrastructure for the future knowledge of the European Research Area. Aimed to be complementary to GEANT2, the successful infrastructure for computing resources, data storage and data transport, DRIVER will deliver content resources, i.e. any form of scientific output, including scientific/technical reports, working papers, pre-prints, articles and original research data. The vision is to establish the successful interoperability of both data network and knowledge repositories as integral parts of the E-infrastructure for research and education in Europe.

With the end of the first stage of DRIVER in November 2007, a testbed system was delivered which produced a service portal with Open Access content from over 70 repositories while it focussed on the infrastructure aspect, i.e., open, client-defined interfaces to the content network, which allow any qualified service-provider to build services on top of it.

The present stage of the project, **DRIVER-II**, aims to introduce key innovations compared to the original DRIVER project while building on its results. The main novelties envisioned are:



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Identifying studies using Internet Search Engines



Strategic Searching of the Internet

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 - Key researchers / authors with a few select terms.
 - Search titles of journal articles in quotation marks
 - Search key stakeholders names with a few select terms
 - Search in-depth the websites of the key stakeholders
 - ** Do not rely only on the web site search engine.
 - Use the equivalent to WHO's Health Topics, Look for publications database such as WHOLIS

Tracking on the Internet

Taking Article Titles into a Search Engine


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... 15890076 10.1186/1475-2891-4-17 **Maternal obesity in pregnancy: Is it time for meaningful research to inform preventive and management strategies? ...**

[www.biomedcentral.com/content/download/xml/1471-2393-7-9.xml](#) - 160k -

[Cached](#) - [Similar pages](#)



- What is covered? How do we know what is covered?
- At present, limited subset of scholarly literature.
- It is large, but it's only a small fraction of what's available.
- What journals and databases are covered? How far back? Can not browse journals
- Beta version – growing and has a great potential
- See examples in next few slides
- Mixture of Humanities and Social Sciences covered but mainly science and technology

Some conclusions about Google Scholar

- Google Scholar is a Beta version
- Improvement and better features are expected
- Quick and easy to search
- Useful research tool
- Depending on your information need, select your resource
- Valuable supplement but certainly not a substitute
- More important than ever that researchers know how to search effectively and think critically

Let's go fishing..

- Please provide feedback on this course to
- allent@who.int
- Please say what you found useful, not useful, what was clear or not clear and any other suggestions.
- Thanks

Identifying unpublished studies

- **Sources :**

- Colleagues
- Web sites
- Informal channels of communication
- Formal letters
 - sending a list of relevant articles asking if they know of any additional studies (published or unpublished) that might be relevant
 - send the same letter to other experts or others with an interest in the area

Personal communication

- ❖ To know of studies you haven't yet found:
 - Reviewers send a list of the studies they have found to the authors of those studies, asking if they are aware of any other relevant studies.
 - Or write to the manufacturers of relevant drugs or devices and ask if they are aware of any other studies.

Documenting the Search Process



An example from a Journal Article

- <http://www.biomedcentral.com/content/pdf/1472-6963-10-65.pdf>



RESEARCH ARTICLE

The breadth of primary care literature reviewed

Dionne S Kringos^{1*}, Wienke

Abstract

Background: Even though primary care is a key component of health care delivery, to date no effort has been made to assess the evidence base for this area of research.

Methods: A systematic review of the literature reporting original research on primary care was conducted in MEDLINE, Embase, Cochrane Library, CINAHL, King's Fund Database, IDEAS Database, and EconLit.

Results: Eighty-five studies were included in the review. The structure of a primary care system is multidimensional, including: 1. workforce development; 2. integration of care; 3. workforce development; 4. coordination of care; 5. continuity of care; 6. coordination of care; 7. quality of care; 8. quality of care; 9. quality of care; 10. quality of care. The search strategy included a combination of text words and Medical Subject Headings (MeSH) terms relating to these dimensions.

Methods

Search strategy

The following electronic databases were searched between April and July 2008: MEDLINE, Embase, Cochrane Library, CINAHL, King's Fund Database, IDEAS Database, and EconLit. For practical reasons such as time and financial constraints, the search was limited to publications published between January 2003 and July 2008.

population.

Primary care contributes through its dimensions to overall health system performance and health.

Additional file 1: Search strategy. The strategy used in the MEDLINE search, which was adapted for use in the other databases. Click here for file
[http://www.biomedcentral.com/content/supplementary/1472-6963-10-65-S1.DOC]

Additional file 2: Characteristics of included studies. A description of the characteristics of the 85 included studies, including setting, sample size, study description, study focus, and primary care dimension(s).

This search strategy was an efficient method to cover the extensive primary care literature area. An additional advantage of this method was that it let to an overview of key primary care study results that went beyond the 5 year time restriction. Stage 2 was an open search (due to a lack of reviews) on (primary) health system performance measurement and accountability. The search strategy included a combination of text words and Medical Subject Headings (MeSH) terms relating to these

Health Services Research

Open Access

Article

en^{1,3}

Primary care is a key component of health care delivery, to date no effort has been made to assess the evidence base for this area of research.

English language journals in 2008 were searched in EconLit. The complexity of primary care system. The conditions; and access; 5. continuity of care system includes considerable evidence on health system performance and



Reporting of Search Strategy based on

Meta-analysis of observational studies in epidemiology: a proposal for reporting
<http://jama.ama-assn.org/cgi/reprint/283/15/2008>

- Qualifications of searchers
- Search strategy
- Effort to include all available studies
- Search Software
- Use of Hand Searching
- List of Citations found
- Method of addressing non-English studies
- Handling of unpublished literature
- Description of any contact with authors.



Keeping track of the References



Keeping track of identified studies

- You may find several reports of the same study
- You may find the same report of a study in several databases.



Keeping track of identified studies

- So we need:
 - Some way of **keeping track of the references** we've looked at.
 - Some way of **grouping together all the reports** of a single study.
 - Also we might like to **keep a record of where you found each study**, so that you can report how useful different sources were.

Keeping track of identified studies

- Some people use reference management software to do all this
 - Reference Manager
 - EndNote EndNoteWeb (<http://www.myendnoteweb.com>)
 - ProCite
 - Others are also available (Open Source) See the site BIBLIOPHILE <http://bibliophile.sourceforge.net/projects.php>
 - One example is
 - WIKINDEX – <http://wikindx.sourceforge.net/index2.html>
 - See following for overview
 - http://en.wikipedia.org/wiki/Comparison_of_reference_management_software

EndNote Web

- A web-based tool that provides users with online storage for their references and the ability to format bibliographies in their word processor
- Compliments use of PC based Reference Manager, EndNote or Procite
- Access based on our subscription to Web of Knowledge



Import for PubMed

NCBI PubMed *A service of the National Library of Medicine and the National Institutes of Health* www.pubmed.gov

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journ

Search PubMed for gutnick Go Clear

Limits Preview/Index History Clipboard Details

Display MEDLINE Show 20 Sort by File

All: 3 Review: 1

Items 1 of 3

1: [berg M.](#) Microbial adhesion to hydroca...

PMID- 16923066
OWN - NLM
STAT- MEDLINE
DA - 20060822
DCOM- 20061212
PUBM- Print
IS - 0378-1097 (Print)
VI - 262
IP - 2
DP - 2006 Sep

File Download

Do you want to open or save this file?

Name: pubmed-result.txt
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Open Save Cancel

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. [What's the risk?](#)



Sign-Up Registration

- <http://www.myendnoteweb.com>
 - Quick Links – Login
 - New to EndNote Web? [Sign Up](#) for an account
- <http://www.myendnoteweb.com/EndNoteWeb/1.1/release/EndNoteWeb.html?func=showRegister&>

- Import references from hundreds of online bibliographic databases and organize a library of references in many languages

The screenshot displays the ISI Web of Knowledge EndNote Web interface. At the top, the logo "ISI Web of KnowledgeSM" is visible in a green header, followed by the "EndNote Web" logo and a "Quick Search:" input field. On the left, the "My Library:" section contains a dropdown menu with "Select..." and a list of options: "New Reference", "Online Search", "Format Paper Bibliography", "Import", "Export", and "Options". The "Import" option is highlighted with a red circle and labeled with a red "1". Below this are "Output Styles", "Import Filters", and "Connection Files", followed by a "HELP" section and a "Total References:" count of "13". The main "Online Search:" area includes a text box with the instruction: "Use EndNote Web's Online Search feature to connect down list and click the 'Connect' button." Below this is a list of databases: "PubMed (NLM)", "Purdue U", "Purdue U-Calumet", "Purdue U-North Central", "Queen Margaret U Coll", "Queen Mary U of London", "Queens U", "Queensland U of Technology", "Quinsigamond CC", "Radford U", and "Rainy River CC". The "PubMed (NLM)" entry is highlighted with a blue selection bar and a red circle labeled with a red "2". A "Connect" button is positioned to the right of the list.

Checklist



Thames Valley Health Libraries Network

The Literature Search Process: Protocols for Researchers

Developed by the Thames Valley Literature Search Standards Group*
on behalf of the Thames Valley Health Libraries Network

Version: 1.0

Issue date: July 2005

Review date: July 2006

Introduction

This document has been developed by health librarians in close partnership with the Thames Valley Research & Development Network. Its aim is to support healthcare researchers in carrying out effective literature searches according to an agreed set of recommendations. This will help ensure that research is not duplicated and that literature searches retrieve the best available evidence.

This document provides guidance for the following key steps:

- planning a literature search
- identifying key sources of information
- guidance in carrying out an effective literature search
- documenting the search process

Structured guidance and a checklist scheme are provided for each section so that researchers can quickly



Plot our your search strategy

Search Planning Form

Use this form to identify/clarify the key concepts and the scope of your research topic.
For each section, refer to the guidance notes on the following page for further explanation.

Name: _____

Date search started: _____

Date search completed: _____

1. Your Research Topic

--

2. Consider how the following four categories apply to your research topic

Patient/Population and/or Problem	Intervention	Comparison/Control <i>(if applicable)</i>	Outcomes (or Effects)
Alternative Words			



Keep track of where you have searched

Guidance notes	LEVEL 1: CORE RESOURCES	Searched	N/A	Unavail- able
<p>The resource checklist is divided into 3 levels: core, recommended and additional. Alongside each resource, tick the appropriate column: searched, not applicable (N/A) or unavailable.</p> <p>Level 1 – core resources</p> <p>Effective searches across these sources will help ensure that your literature search covers a significant proportion of published research.</p> <p>Consider how retrospective the search needs to be, e.g. from the time when a drug was introduced; also consider whether the coverage of your source is sufficiently retrospective and/or up-to-date.</p> <p>These resources should be searched as a minimum requirement unless they are not appropriate to your research topic. If there are time constraints, section a) minimum core resources should be given priority.</p> <p>How far you proceed beyond Level 1 will depend on:</p> <ul style="list-style-type: none">• The subject of your research• The type of studies you need to locate (e.g. RCTs)• The time available• Availability of sources• How essential it is to ensure your research is not duplicating research elsewhere <p>* Resources marked with a * are not available through the NHS core content collection or freely available on the Internet but may be accessible through a University Library or by payment of a fee.</p> <p>See next page for continued guidance notes.</p>	a) Minimum core resources:			
	• Cochrane Library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Centre for Reviews and Dissemination (CRD) website for latest updates to CRD databases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• MEDLINE & PREMEDLINE OR PubMed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• EMBASE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Subject specialist databases appropriate to research topic, (contact your librarian with advice on identifying others) e.g.			
	a) Allied & Complementary Medicine (AMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Applied Social Sciences Index & Abstracts (ASSIA)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) British Nursing Index (BNI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) CareData	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Cumulative Index to Nursing & Allied Health Literature (CINAHL)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) DH-DATA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g) King's Fund	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h) PsycINFO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	i) BIOSIS*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Campbell Collaboration's Social, Psychological, Educational & Criminological Trials Register (C2-SPECTR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k) ChildData *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l) Education Resources Information Center (ERIC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• National Research Register & Research Findings electronic Register (ReFeR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• metaRegister of Controlled Trials (mRCT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• National Library of Medicine ClinicalTrials.gov	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Guidelines sites e.g. National Institute for Health and Clinical Excellence (NICE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Websites of relevant associations, societies, centres of excellence, royal colleges & government bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



Stavudine, lamivudine and nevirapine combination therapy for treatment of HIV infection and AIDS in adults

- The regimen of nevirapine, stavudine and lamivudine is widely used as first-line therapy, and is recommended as such by the World Health Organization for so-called low-resource countries (in other words, for poor countries).
- **Objectives**
- To examine the efficacy of the stavudine, lamivudine and nevirapine regimen for the treatment of HIV infection and AIDS in adults.

How Can we Improve on this Strategy?

Searching Medline and Using PubMed Interface

Step 1

"stavudine" OR "lamivudine" OR "nevirapine"

Step 2

"hiv" OR "hiv infect" OR "hiv-1" OR "hiv-2" OR
"Acquired immunodeficiency syndrome"

Combine Step 1 and 2

As found in Cochrane Review

- #1 STAVUDINE
- #2 LAMIVUDINE
- #3 NEVIRAPINE
- #4 #1 OR #2 OR #3
- #5 HIV
- #6 HIV INFECTION*
- #7 HIV-1
- #8 HIV-2
- #9 ACQUIRED IMMUNODEFICIENCY SYNDROME
- #10 #5 OR #6 OR #7 OR #8 OR #9
- #11 #10 AND #4

Homework Assignment Day 4

- Try searching for any relevant articles in the Regional databases.
- Be creative..... where else could you find studies.(Think about <http://books.google.com> <http://diseases.who.int> and others on the following list.



Let's go fishing .. this weekend?

- Please provide feedback on this course to
- allent@who.int
- Please say what you found useful, not useful, what was clear or not clear and any other suggestions.

- Thanks