E.R.C. Library presents: Research Strategies

- Keywords/Subject Terms
- Boolean Operators
- PICO
- Levels of Evidence
- Search Engines
- Advanced Web Searching Methods
- Evaluating Scholarly Information
- Searching for Nurse Authors

Creating a Search Strategy Keywords vs. Index/Subject Terms

- Keywords
  - Help to broaden your results.
  - They will be searched for in journal titles, author names, article titles, and article abstracts.

Searching: **CINAHL Complete,** Show all | Choose Databases

Enter any words to find books, journals and more | ⊠ | **Search** | ?

Search Options ▸   Basic Search   Advanced Search   Search History

Index/Subject Terms

- Index/Subject terms
  - Help to focus your search appropriately, looking for items that have had a specific term applied by an indexer.

CINAHL Headings View Tutorials

Results For: aids

Check box to view subheadings. | Click linked term for tree view.

AIDS **Use:** Acquired Immunodeficiency Syndrome

☐ Acquired Immunodeficiency Syndrome
☐ AIDS-Related Opportunistic Infections
☐ AIDS Serodiagnosis
☐ AIDS Patients
☐ Communication Aids for Disabled
☐ Anti-HIV Agents
☐ Attitude to AIDS
☐ AIDS Dementia Complex
☐ Incontinence Aids
☐ Ambulation Aids
☐ HIV-AIDS Nursing
☐ Association of Nurses in AIDS Care
☐ AIDS Vaccines
☐ Lymphoma, AIDS-Related
☐ AIDS-Associated Nephropathy
☐ aids (Search as Keyword) ?

◀ Prev | **More** ▶ | Browse Additional Terms

New Search   **Publications**   **CINAHL Headings**   **Evidence-Based Care Sheets**   **More** ▾

Database: CINAHL Complete ?

EBSCOhost

Why use a subject heading when keyword searching works just fine?

A subject heading search helps when the keyword selected has many meanings.

e.g. I need information on AIDS, the disease.

Because a computer simply reads a string of letters, and not the meaning of the actual word, the search will often pick up results that are not relevant to the topic.

For example, if a search is run using the word *aids*, the computer will pick up *handicapped aids, visual aids, diabetes aids*, etc.—but you meant AIDS, the disease.

However, if a researcher looks up the word *aids* in CINAHL Headings, it will direct them to a number of choices with the word *aids* in them, one of them being the heading,

acquired immunodeficiency syndrome.

Subject headings are controlled vocabulary created by organizations to give consistency to the way that literature is described.

Tree View and Subheadings

Tree View For: Acquired Immunodeficiency Syndrome

◄ **Back to Term List**

⌐ Check box to view subheadings.   Click linked term for tree term view.

- Virus Diseases
  - RNA Virus Infections
    - Retrovirus Infections
      - HIV Infections
        - ☑ Acquired Immunodeficiency Syndrome
          - AIDS-Associated Nephropathy
          - AIDS Dementia Complex
          - AIDS-Related Complex
          - AIDS-Related Opportunistic Infections
          - HIV Enteropathy
          - HIV Seropositivity
          - HIV Wasting Syndrome

- Virus Diseases
  - Sexually Transmitted Diseases, Viral
    - HIV Infections
      - ☑ Acquired Immunodeficiency Syndrome
        - AIDS-Associated Nephropathy
        - AIDS Dementia Complex
        - AIDS-Related Complex
        - HIV Seropositivity
        - HIV Wasting Syndrome

  - Sexually Transmitted Diseases
    - Sexually Transmitted Diseases, Viral

Scope Note: An acquired defect of cellular immunity associated with infection by the human immunodeficiency virus (HIV) and increased susceptibility to opportunistic infections and malignant neoplasms. Clinical manifestations include emaciation and dementia. Do not use /education; prefer precoordinated heading HIV EDUCATION. For nursing care by the specialty use /nursing plus HIV-AIDS NURSING. For nursing care by other specialties (i.e., emergency nursing, critical care nursing) use /nursing and coordinate with that nursing specialty. For /transmission consider HUMAN IMMUNODEFICIENCY VIRUS/transmission.

Explode (+)   Major Concept   Scope   ?

Subheadings for: Acquired Immunodeficiency Syndrome

☑ **Include All Subheadings**
Or select one or more subheadings to restrict your search

- ☐ Blood/BL
- ☐ Cerebrospinal Fluid/CF
- ☐ Chemically Induced/CI
- ☐ Classification/C
- ☐ Complications/CO
- ☐ Diagnosis/DI

Subheading: Classification

Scope Note: Used for taxonomic or other systematic or hierarchical classification systems.

[Close Window]

Acquired Immunodeficiency Syndrome falls under HIV infections under *two* types of Virus Diseases, Retrovirus Infections and Sexually Transmitted Diseases

Clicking this icon will define terms and provide you with additional information

Build on your terms

Search Database

Search Term	Explode (+)	Major Concept	
AIDS Patients	☐	☐	X
Acquired Immunodeficiency Syndrome /EI/LJ	☐	☑	X

Combine selections with:
○ AND ● OR

CINAHL Subject Headings are arranged in a hierarchy. The "**explode**" feature lets you select the term, plus any terms indented underneath it.

When you select **Major Concept** for a term, you create a search query that finds only records for which the subject heading is a major point of the article. Searches are limited with specific qualifiers (subheadings) to improve the precision of the search, and limited to major subject headings indicate the main concept of an article.

Click **Browse Additional Terms** to add more headings to your search

☐ Childhood Neoplasms	☐	☐	💬
☐ Colonic Neoplasms	☐	☐	
☐ Colorectal Neoplasms	☐	☐	💬
☐ neoplasms (Search as Keyword) ❓			

◀ Prev   More ▶   Browse Additional Terms

☐ Ethnology/EH
☐ Etiology/ET
☐ Familial And Genetic/FG
☐ History/HI
☐ Immunology/IM
☐ Legislation And Jurisprudence/LJ
☐ Metabolism/ME
☐ Microbiology/MI
☐ Mortality/MO

Combining Search Terms Using Boolean Operators

OR ➤
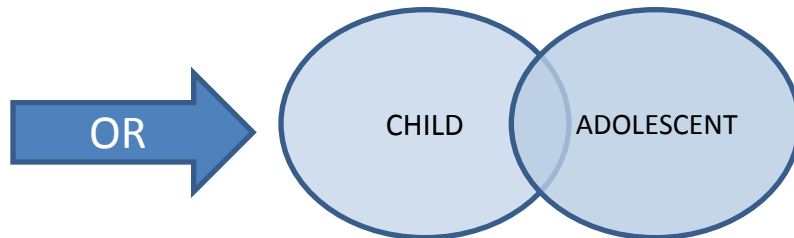
CHILD   ADOLESCENT

OR: Retrieves records containing *either* the word "child" *or* the word "adolescent."
OR between terms makes the search broader
Examples: doctors OR physicians
                          Injuries OR accidents

AND ➤
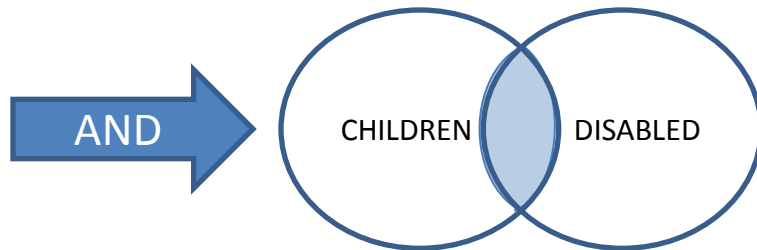
CHILDREN   DISABLED

AND: Retrieves records containing *both* the words "children" and "disabled."
AND between terms makes the search narrower
Examples: Vitamin C AND Cancer
                          doctors AND managed care

NOT ➤
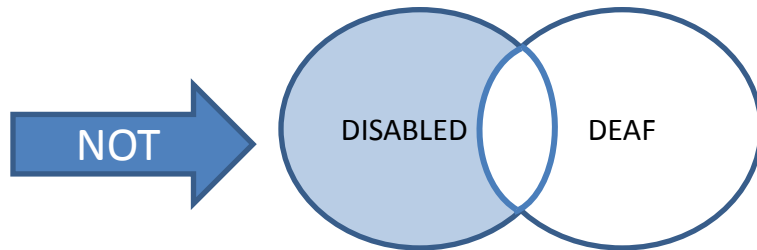
DISABLED   DEAF

NOT: Retrieves records containing the word "disabled" but *not* the word "deaf."
NOT can exclude certain terms but is used rarely

Formulating Queries

PICO
TYPES OF QUESTIONS
LEVELS OF EVIDENCE

Quantitative Questions: The PICO Model

Clinical and nursing practice questions can be broken down into the PICO(T) format, which breaks a question apart into searchable parts:

P	**P**atient, **P**opulation, or **P**roblem	How would I describe a group of patients similar to mine?
I	Intervention, Prognostic Factor, or Exposure	Which main intervention, prognostic factor, or exposure am I considering?
C	**C**omparison or Intervention (if appropriate)	What is the main alternative to compare with the intervention?
O	**O**utcome you would like to measure or achieve	What can I hope to accomplish, measure, improve, or affect?
	What **T**ype of question are you asking?	Diagnosis, Etiology/Harm, Therapy, Prognosis, Prevention
	Type of **S**tudy you want to find	What would be the best study design/methodology?

Defining the Question Type

- Different types of clinical questions are best answered by different types of research studies.
- Understanding what types of studies are best suited for your question can improve your search for information to answer your question.
- All types of clinical questions can be answered by systematic reviews or meta-analyses, when available.
- When these filtered resources are not available, look for unfiltered resources (individual studies), focusing on the study types appropriate to your question.
- The table below suggests study designs best suited to answer each type of clinical question.

Defining the Question Type

Type of Question	Def.	Study	PICO Template	PICO example
Therapy	Deciding if a treatment's pros outweigh the cons.	Systematic Review/Meta-analysis → RCT → Case Control → Case Series	"In _P_ do/does _I_ result in _O_ when compared with _C_ over _T_?"	In Healthy Full-term newborns who are undergoing a painful procedure , does sucrose combined with radiant warmth result in lessened pain during a painful procedure when compared with using only sucrose?
Diagnoses	How to evaluate and analyze diagnostic tests.	Cross-Sectional → Prospective, Blind comparison to Gold Standard	Is/are _I_ performed on _P_ more effective than _C_ over _T_ in _O_ ?	"Are self-reporting interviews and parent reports performed on children aged 5-10 more effective than parent reports alone over a four-week consultation process in diagnosing depression?"
Etiology	How to determine a cause for disease.	Systematic Review/Meta-analysis → RCT → Cohort Study → Case Control → Case Report	Are _P_ with _I_ over _T_ more likely to _O_ when compared with _C_ ?	In early chilhood, does Hand dishwashing result in fewer or More Allergic Disease developments when compared with Machine Dishwashing in Children aged 7-8 years?
Prognosis	How to estimate and anticipate a patient's likely course of disease or treatment, excluding intervention factors named in PICO.	Cohort Study → Case Control → Case Series	Do/does _I_ performed on _P_ lead to _O_ over _T_ compared with _C_?	does location of suture fusion in school aged children with single- suture-craniosynostosis lead to developmental delays when compared with unaffected children or children with different suture locations?
Prevention	How to anticipate and correct barries to a patient's health.	RCT → Cohort Study → Case Control	In _P_, do/does _I_ result in _O_ when compared with _C_ over _T_?	"In emergency room visitors, do hand sanitizing stations result in fewer in-hospital infections when compared with no hand sanitizing stations over a year-long pilot period?"

Level of evidence (LOE)	Description
Level I	Evidence from a systematic review or meta-analysis of all relevant RCTs (randomized controlled trial) or evidence-based clinical practice guidelines based on systematic reviews of RCTs or three or more RCTs of good quality that have similar results.
Level II	Evidence obtained from at least one well-designed RCT (e.g. large multi-site RCT).
Level III	Evidence obtained from well-designed controlled trials without randomization (i.e. quasi-experimental).
Level IV	Evidence from well-designed case-control or cohort studies.
Level V	Evidence from systematic reviews of descriptive and qualitative studies (meta-synthesis).
Level VI	Evidence from a single descriptive or qualitative study.
Level VII	Evidence from the opinion of authorities and/or reports of expert committees.
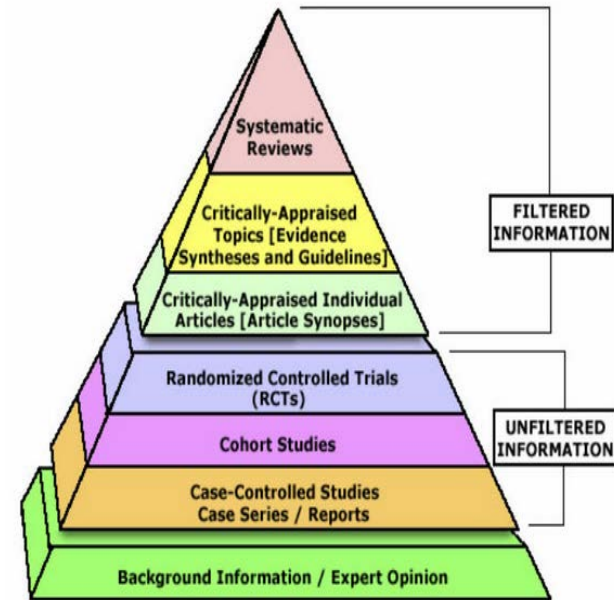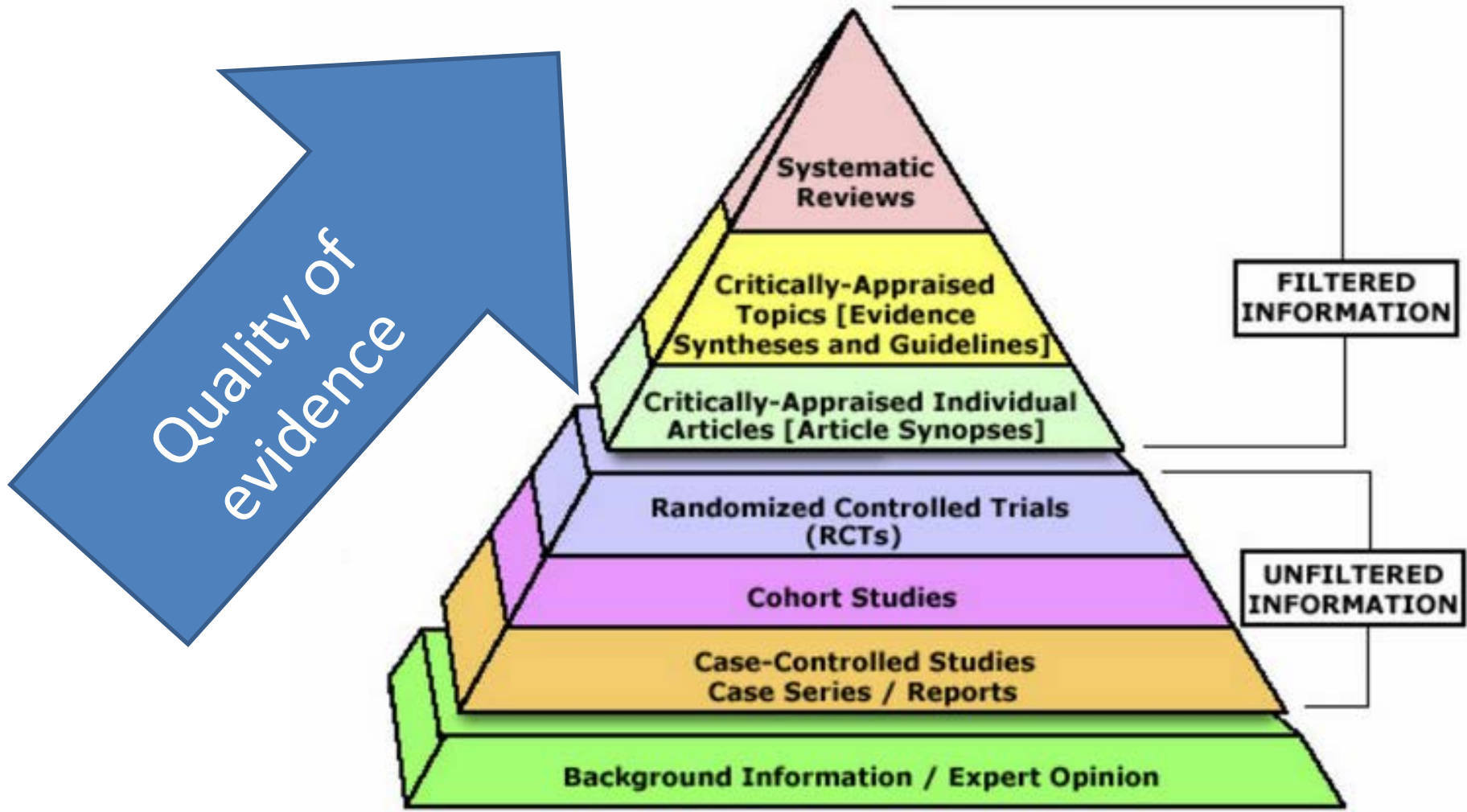
Systematic Reviews

Critically-Appraised Topics [Evidence Syntheses and Guidelines]

Critically-Appraised Individual Articles [Article Synopses]

Randomized Controlled Trials (RCTs)

Cohort Studies

Case-Controlled Studies Case Series / Reports

Background Information / Expert Opinion

FILTERED INFORMATION

UNFILTERED INFORMATION

Resources

SEARCH ENGINES
ADVANCED SEARCHING
EVALUATING RESOURCES

Search Engines

- Search engines are large databases of web page files.

- When you use a search engine (such as Google, Yahoo, Ask, Bing) you are asking it to scan its index of sites and match your keyword(s) and phrase(s) with those in the texts of documents within its database

Meta search engines

- A search engine that queries other search engines and then combines the results that are received from all. In effect, the user is not using just one search engine but a combination of many search engines at once to optimize Web searching.

Advanced Google Searching

- Due to the sheer number of words indexed by search engines you may get many responses to simple search requests

- Try using the "Advanced Search" feature found in the lower right corner of Google under Settings

Search settings

Advanced search

History

Search Help

Send feedback

Privacy   Terms   Settings

Find pages with...		To do this in the search box
all these words:		Type the important words: `tricolor rat terrier`
this exact word or phrase:		Put exact words in quotes: `"rat terrier"`
any of these words:		Type OR between all the words you want: `miniature OR standard`
none of these words:		Put a minus sign just before words you don't want: `-rodent, -"Jack Russell"`
numbers ranging from:	to	Put 2 periods between the numbers and add a unit of measure: `10..35 lb, $300..$500, 2010..2011`

File Type Searching

Microsoft PowerPoint (.ppt)
Microsoft Word documents (.doc)
Microsoft Excel file (.xls)
Portable Document Format (.pdf)
JPEG image (.jpg)

Scenario: You would like to review APA formatting for an upcoming paper that is due. You type:
APA format filetype: .ppt
Success: You have several PowerPoint presentations to pick from.

Site or Domain Searching

Then narrow your results by...

language:	any language ▾	Find pages in the language you select.
region:	any region ▾	Find pages published in a particular region.
last update:	anytime ▾	Find pages updated within the time you specify.
site or domain:		Search one site (like wikipedia.org) or limit your results to a domain like .edu, .org or .gov
terms appearing:	anywhere in the page ▾	Search for terms in the whole page, page title, or web address, or links to the page you're looking for.
SafeSearch:	Show most relevant results ▾	Tell SafeSearch whether to filter sexually explicit content.
file type:	any format ▾	Find pages in the format you prefer.
usage rights:	not filtered by license ▾	Find pages you are free to use yourself.

Advanced Search

This search tells Google to limit your search to a particular site or domain. For instance, if you limit to site:berkeley.edu you would only search the UCBerkeley site. Similarly site:gov would search only sites ending in .gov and site:edu would search only sites ending in .edu

YOU are the filter
Ask yourself: THE FOUR W's

- <u>W</u>ho runs this site?
  - Institution, Professional Association or Organization, For-Profit Company, Government (check the file extension: .EDU, .GOV, .ORG, .COM)
  - How is the site paid for: Individual, Organization, by Advertisements
  - Check for an "About Us" or "bio" section and way to contact the webmaster, provide feedback or ask questions about the site content.

- <u>W</u>hat is the purpose of this site?
  - Who is the site's intended audience: patients, physicians, health professionals, consumers
  - Is the site set up for: education, sales, support, research

YOU are the filter
Ask yourself: THE FOUR W's

- Where does the information on the site come from?

  – Is there an editorial board, and if so, what are their qualifications

  – Are there citations for information and research presented as fact? if so, track down the

  original documents using PubMed Single Citation Matcher

  – What is the methodology used for any data/research materials presented?

- When was the site last updated?

  – Does the page itself show when it was last updated?

  – How current is the information/research cited?

AND FINALLY…
Does the information provided match information you have already found in familiar, reputable resources?

Evaluating Scholarly Information

- Same standards apply as with websites
- Peer reviewed?
- Is it a scholarly article or letter to the editor/comment/column?
- Is it a randomized controlled trial or a review?
- Is it a well-known journal? Publisher? Author? Affiliation?
- How many times cited?

Peer Review

What Is Peer Review?

In academic publishing, the goal of **peer review** is to **assess the quality** of articles submitted for publication in a scholarly journal. Before an article is deemed appropriate to be published in a peer-reviewed journal, it must undergo the following process:

- The author of the article must submit it to the journal editor who forwards the article to experts in the field. Because the reviewers specialize in the same scholarly area as the author, they are considered the author's peers (hence "peer review").

- These impartial reviewers are charged with carefully evaluating the quality of the submitted manuscript.

- The peer reviewers check the manuscript for accuracy and assess the validity of the research methodology and procedures.

- If appropriate, they suggest revisions. If they find the article lacking in scholarly validity and rigor, they reject it.

Because a peer-reviewed journal will not publish articles that fail to meet the standards established for a given discipline, peer-reviewed articles that are accepted for publication exemplify the best research practices in a field.

How Do I Find Peer-Reviewed Articles?

The easiest and fastest way to find peer-reviewed articles is to **search the online library databases**, many of which include peer-reviewed journals. To make sure your results come from peer-reviewed (also called "scholarly" or "academic") journals, do the following:

Read the database description to determine if it features peer-reviewed articles.

When you search for articles, choose the Advanced Search option. On the search screen, look for **a check-box that allows you to limit your results to peer-reviewed** only.

If you didn't check off the "peer-reviewed articles only" box, **try to see if your results can organized by source**. For example, the database Criminal Justice Abstracts will let you choose the tab "Peer-Reviewed Journals."

Searching for Nurse Authors

EBSCO*host*

Searching: **CINAHL Complete,** Show all | Choose Databases

Enter any words to find books, journals and more ☒   **Search** ?

Search Options ▸   Basic Search   Advanced Search   Search History

Special limiters for CINAHL Complete

Abstract Available
☐

English Language
☐

Research Article
☐

Exclude Pre-CINAHL
☐

Search Only Pre-CINAHL
☐

Exclude MEDLINE records
☐

CE Module
☐

Evidence-Based Practice
☐

Meta-Synthesis
☐

Clinical Queries

All
Therapy - High Sensitivity
Therapy - High Specificity
Therapy - Best Balance

Human
☐

First Author is Nurse
☐

Any Author is Nurse
☐

Randomized Controlled Trials
☐

Questions

Please feel free to stop by the library, Educational Resources Building 110, if you would like assistance using our database platforms.

You may wish to email librarian, Marisa Tolosa at MTolosa2@dhs.lacounty.gov, with reference questions.

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Open Monday to Thursday 0700-1800
Friday 0730-1400 (Closed 1200-1300)

Hours may be subject to change.
Closed weekends and holidays.