

NORTHWEST PERIOPERATIVE CONSORTIUM

**EVIDENCE BASED NURSING PRACTICE MODULE AND  
NWPC INTERN PROJECT**

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# CLASS MODULE CONTENT

- Identify elements of Evidence Based Nursing Practice
- Introduction to [HEAL-WA.org](http://HEAL-WA.org)

## Break

- Describe the process of developing a PICOT question
- Discuss the application of a PICOT question in the perioperative work environment
- Describe the requirements of the “PICOT Project Presentation” \*

\*Presentation to peers, faculty and invited guests at Graduation

# WHAT IN THE HECK IS “EVIDENCE BASED PRACTICE”?



Are we consistently using the BEST evidence available to care for our patients every day in the perioperative setting ?

# DEFINITIONS: EVIDENCE-BASED MEDICINE

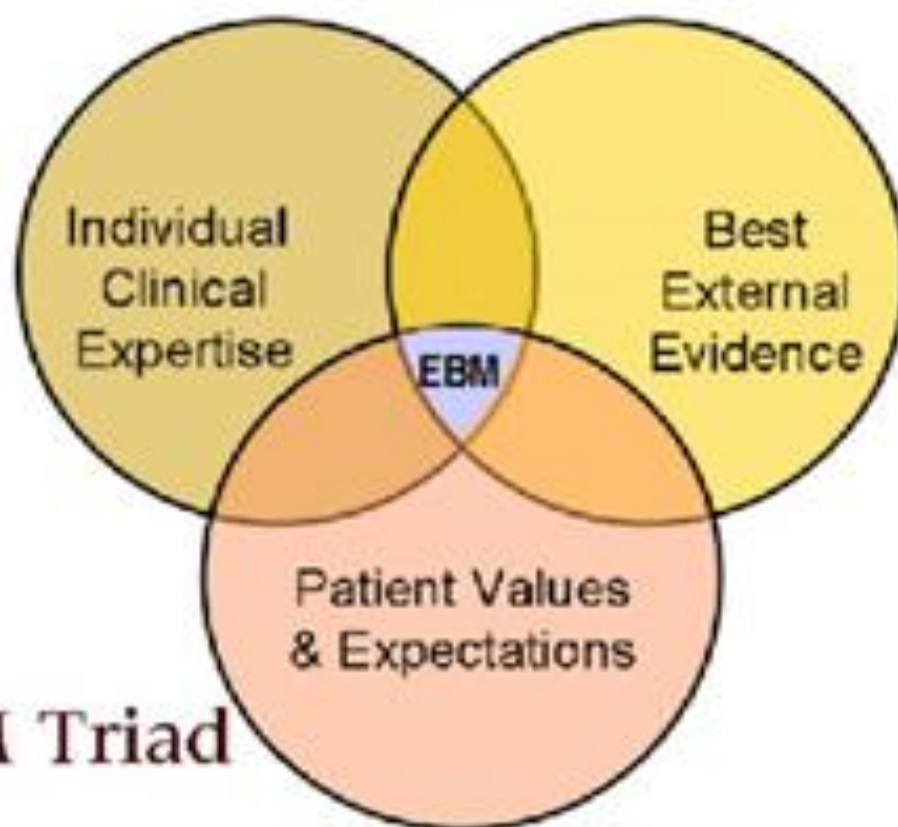
Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.

The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

## It is not a Research Study

Sackett DL et al. *Evidence based medicine: what it is and what it isn't*. BMJ 1996 Jan 13; 312 (7023): 71-2.

# Evidence-Based Practice



The EBM Triad

**AS REGISTERED NURSES WE ARE**

**Expected to help advance our  
profession through contributions  
in nursing knowledge**

Policies, Protocols, Recommended Practices, Nursing Researchers,  
Every day clinical practice



# PUTTING EVIDENCE INTO PRACTICE AGAINST SACRED COWS

“Sacred Cows” are practices that are followed, but don’t have scientific evidence to back them up

- Once common place, they are now outdated
- Often they have been performed for so long by so many, they are not questioned

What keeps these sacred cow traditions alive?

- A stubborn loyalty to long standing tradition
- Resistance to change in the clinical environment
  - Medical profession sometimes takes about 5yrs to change
- Best practices based on evidence have not been established



# SOME OF OUR PAST OR SACRED COWS

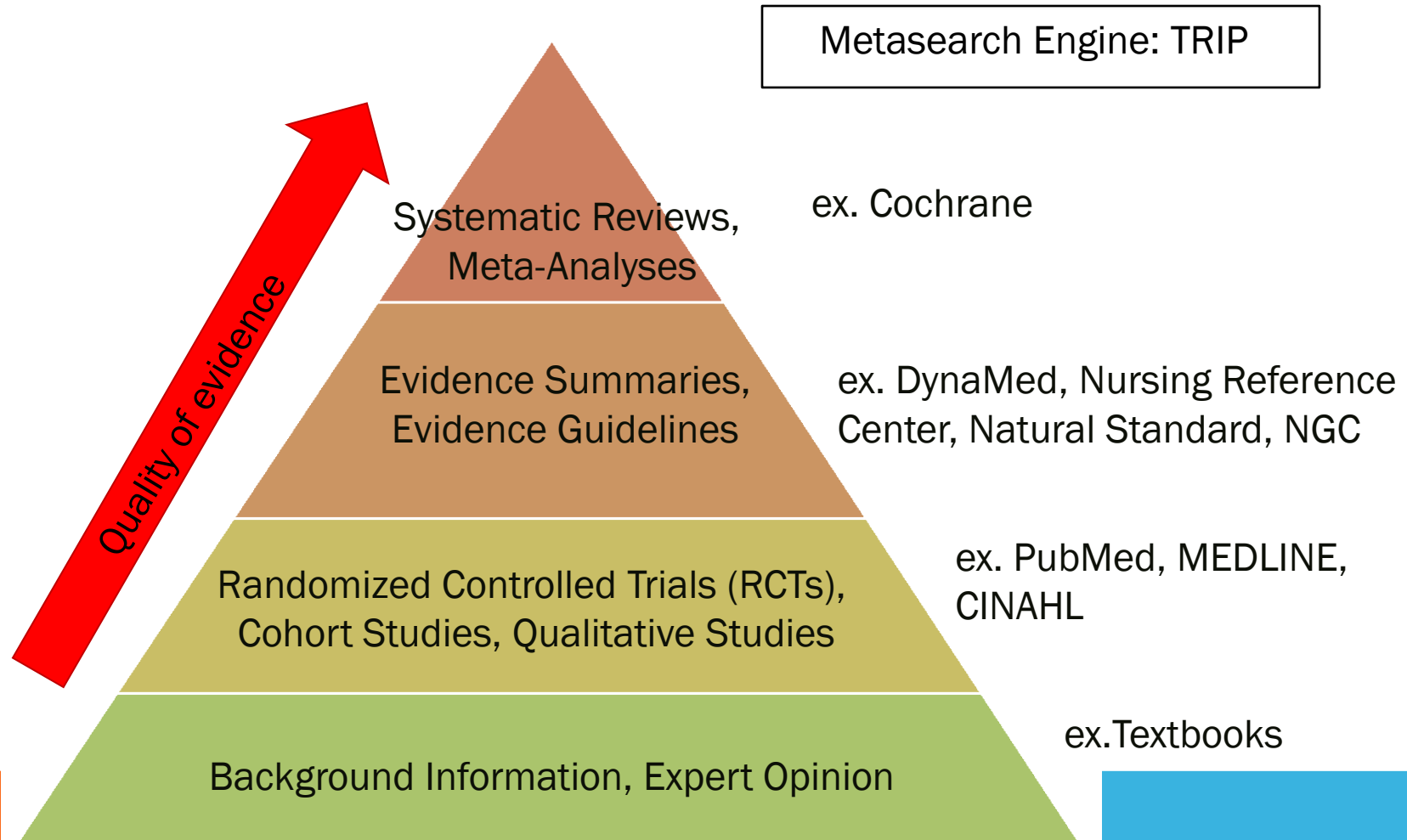
Do not have supportive “Evidence”

- Shaving hair at surgical site with a razor
- Wearing a white cover jacket over scrubs
- Wearing shoe covers to prevent infection
- All patients are NPO 8hrs prior to surgery
- Gowning/gloving from the back table





# EVIDENCE PYRAMID



# LEVELS OF EVIDENCE

<b>Level A</b> (strongest)	<b>Meta- Analysis, Systematic Reviews</b> <b>Example: Cochrane</b>
<b>Level B</b>	<b>Evidence Summaries, Evidence Guidelines</b> <b>Examples: AORN Standards and Recommended Practices, DynaMed, Nursing Reference Center, Natural Standard, NGC</b>
<b>Level C</b>	<b>Research Articles, Randomized Control Trials, Cohort Studies, Qualitative Studies</b> <b>Examples Medline, CINAHL</b>
<b>Level D</b> (weakest)	<b>Background Information, Expert Opinion</b> <b>Example: Textbook</b>

TOOLKITS

DATABASES

EBOOKS

EJOURNALS

REFERENCE

HELP

ABOUT

## news

Do you have opinions about medical cannabis?

Mar 07, 2014

LPNs Now Eligible

Feb 04, 2014

MDConsult cancellation

Dec 03, 2013

Six new professions added to HEALWA eligibility

Jul 15, 2013

VisualDx Mobile - New Download Instructions

Apr 08, 2013

## search

Go

### Diagnosis & Therapy ▾

DynaMed, VisualDx

### Guidelines & Evidence ▾

Cochrane

### Search for Articles ▾

PubMed, MEDLINE, CINAHL

### Drugs, Labs, Diagnostic Tests ▾

LexiComp

### Complementary & Alternative Medicine ▾

Natural Standard

### Prevention, Screening, Immunizations ▾

### Patient Care Management ▾

Nursing Reference Center

### Multicultural Information ▾

EthnoMed, RHIN

### Information for Patients ▾

MedlinePlus,  
Patient Ed Reference Center

### Contact HEAL-WA ▾

## access



Logged in

### Getting Started

Certain resources in HEAL-WA (indicated by a lock icon) require a HEAL-WA access code (UW NetID) and password for access.

Once you have set up your HEAL-WA access code and password, LOG IN to HEAL-WA by clicking on the "Log In" button at the top of this column.

LOG OUT from HEAL-WA by simply closing your browser.

[Set up your HEAL-WA access](#) - to set up a HEAL-WA access code and password, see the instructions on the [Getting Started](#) page.

## news

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Dec 03, 2013

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Jul 15, 2013

VisualDx Mobile - New Download Instructions

Apr 08, 2013

[More news...](#)

### UpToDate

To access UpToDate, you need an individual subscription. [Get a free trial or log in.](#)



Heal-WA



You like this.

## Registered Nurse

### Nursing Resources ▾

#### Nursing Reference Center

Nursing Reference Center includes information about conditions and diseases, patient education resources, drug information, continuing education, lab & diagnosis detail, best practice guidelines, and more.

#### CINAHL Complete (Nursing Literature)

CINAHL Complete is the world's most comprehensive source of full-text for nursing & allied health journals, providing full text for more than 1,300 journals indexed in CINAHL. This authoritative file contains full text for many of the most used journals in the CINAHL index.

#### MEDLINE® Complete with Full Text

MEDLINE Complete is the largest companion to the MEDLINE index and contains full text for thousands of journals included in the index. This collection also provides full text for many of the most used medical journals.

### Calculators & Tools ▾

### Patient Education ▾

### Drugs, Labs & Diagnostic Tests ▾

### Complementary & Alternative Medicine ▾

### Multicultural Information ▾

## access



Logged in

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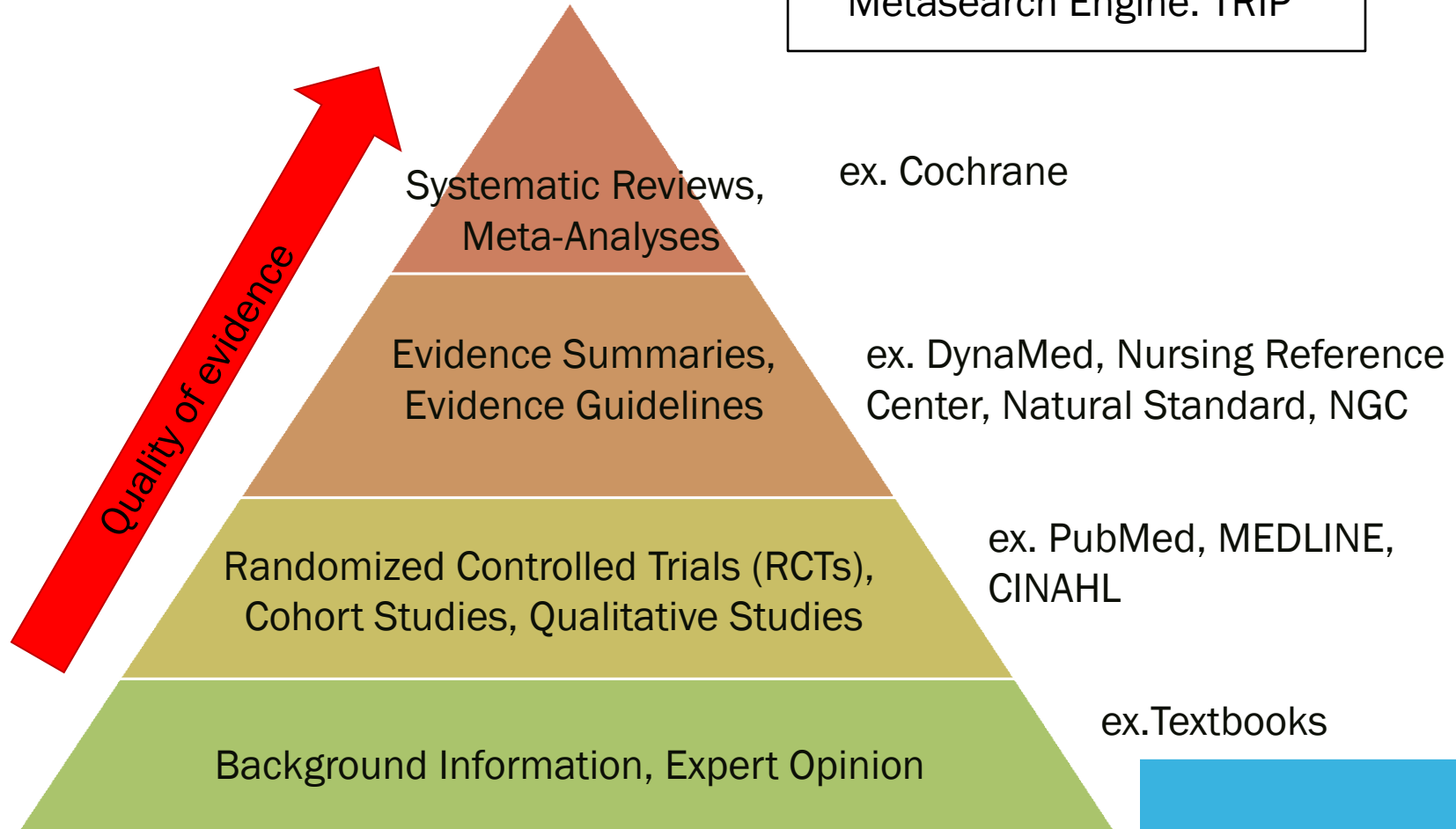
[Set up your HEAL-WA access](#) - to set up a HEAL-WA access code and password, see the instructions on the [Getting Started](#) page.

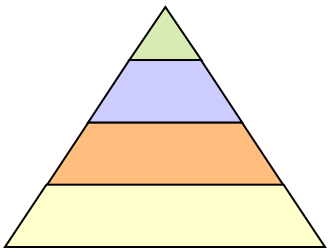
PLEASE NOTE that once you have set up your access code, it can take up to a day for your access code to be recognized so you can log in to HEAL-WA.

[FORGOT YOUR PASSWORD? Click here for instructions](#), or call the Service Center at 206-221-5000.

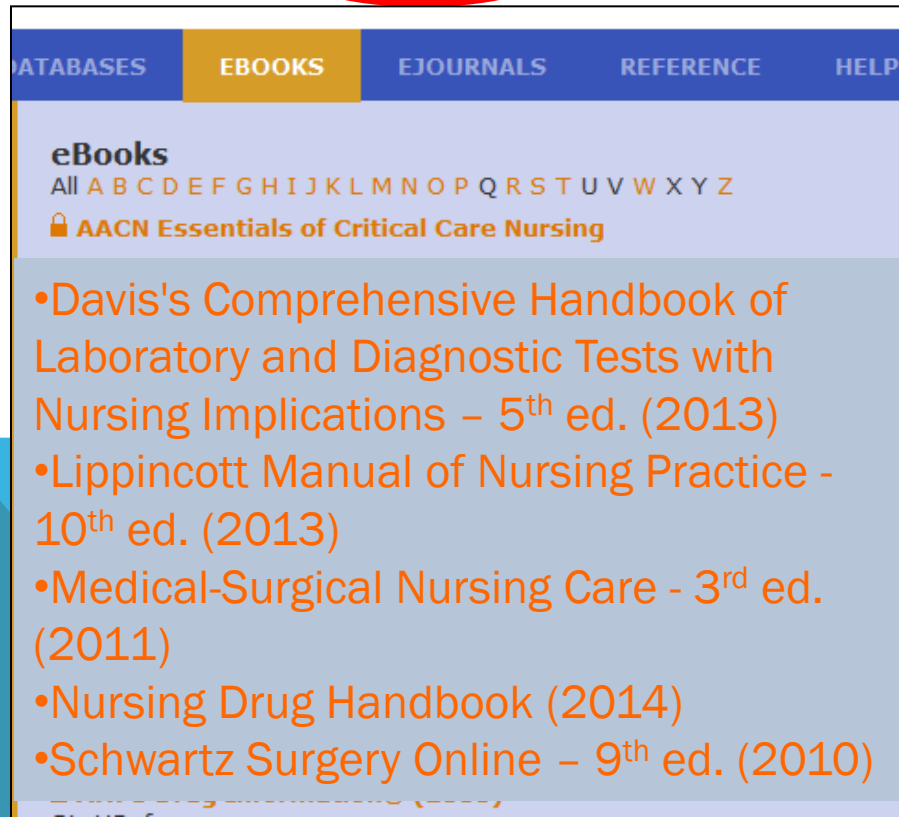
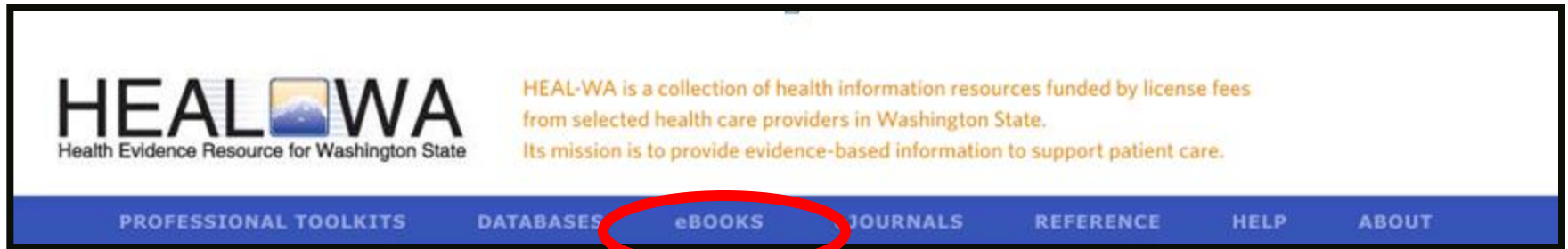
# EVIDENCE PYRAMID USING HEAL-WA RESOURCES

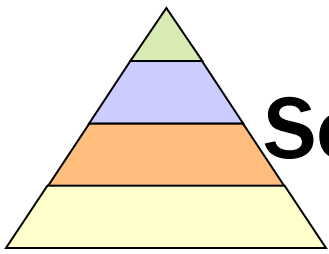
Metasearch Engine: TRIP





# EBOOKS/TEXTBOOKS





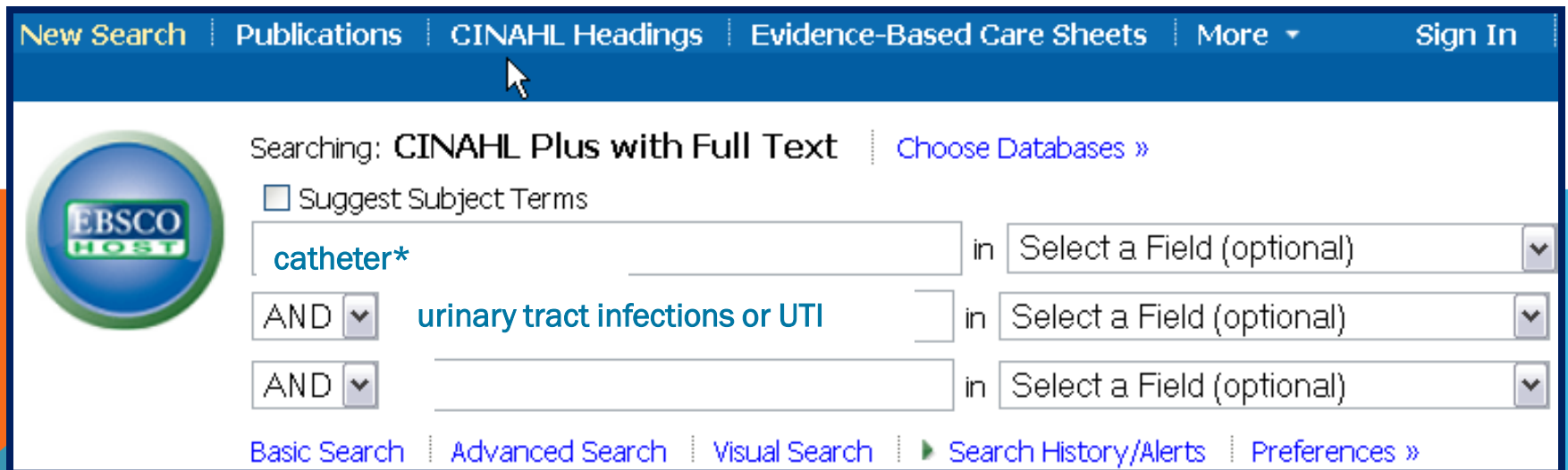
# Search Databases Efficiently for Research Journal Articles

## MEDLINE or CINAHL

- Includes references to original research articles on a topic:
  - Most with abstracts
  - Some with links to full text
- You will see the same interface when searching *MEDLINE* or *CINAHL* (or *Cochrane*) on HEAL-WA

# CINAHL

- Cumulative Index to Nursing and Allied Health Literature
- Provides coverage from 1982+ of nursing and 17 allied health disciplines literature
- 1700+ journals indexed including virtually all English-language nursing journals
- Can easily search for **Research** articles



New Search | Publications | CINAHL Headings | Evidence-Based Care Sheets | More ▾ | Sign In

Searching: CINAHL Plus with Full Text | [Choose Databases »](#)

☐ Suggest Subject Terms

in

AND ▾  in

AND ▾  in

[Basic Search](#) | [Advanced Search](#) | [Visual Search](#) | [Search History/Alerts](#) | [Preferences »](#)



# LIMIT YOUR RESULTS

## Limit your results

Full Text

☐

Abstract Available

☐

Published Date from

Month  Year:  to Month   
Year:

Peer Reviewed

☐

Research Article



Exclude MEDLINE records

☐

Clinical Queries

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

Publication Type

Statistics  
Systematic Review  
Tables/Charts  
Teaching Materials

Gender

All  
Female  
Male

References Available

☐

Publication Year from

to

Author

Publication

English Language



Exclude Pre-CINAHL

☐

Include Pre-CINAHL

☐

Evidence-Based Practice

☐

Journal Subset

All  
Africa  
Allied Health  
Alternative/Complementary Therapies

Language

All  
Afrikaans  
Chinese  
Danish

Pregnancy

☐

Inpatients

☐

Outpatients

☐

# CINAHL PUBLICATION TYPE LIMITS

- Clinical trial
- Critical path
- Meta Analysis
- Meta Synthesis
- Practice guidelines
- Randomized Controlled Trial
- Research
- Standards
- Systematic review

## Publication Type

Standards  
Statistics  
Systematic Review  
Tables/Charts



# CINAHL Results

Searching: **CINAHL with Full Text** | [Choose Databases >](#)

☐ Suggest Subject Terms

(MM "Urinary Tract Infections") in      
and  in   
and  in  [Add Row](#)

[Basic Search](#) | [Advanced Search](#) | [Visual Search](#) | [Search History/Alerts](#) | [Preferences >](#)

**Narrow Results by**

☒ Source Types

All Results

Periodicals

Books/Monographs

Pamphlets

CEUs

☒ Subject: Major Heading

Urinary Tract Infections

Catheter-Related Infections

Catheters, Urinary

Urinary Catheterization

Cross Infection

Escherichia Coli

[More >>](#)

☐ Publication

☐ Age

☐ Gender

**Results: 1-20 of 420** Page: [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#) Sort by:

Results for: (MM "Urinary Tract Infections") ☒ Options set [Alert / Save / Share >](#)

• Search Mode: Boolean/Phrase

1. [Periurethral cleaning prior to urinary catheterization in children: sterile water versus 10% povidone-iodine.](#)   
Objective. To compare urinary infection rate in children cleaned with sterile water versus a 10% povidone-iodine before bladder catheterization. Methods. Prospective randomized controlled study o...  
(includes abstract); Al-Farsi S; Oliva M; Davidson R; Richardson SE; Ratnapalan S; Clinical Pediatrics, 2009 Jul; 48 (6): 656-60 (journal article - clinical trial, research, tables/charts) ISSN: 0009-9228 PMID: 19264723 CINAHL AN: 2010313316  
Database: CINAHL with Full Text  
[Add to folder](#)  
 [PDF Full Text](#)
2. [UTIs in adolescents: common infections, uncommon challenges.](#)   
Diagnosing UTIs in teens can be tricky because symptoms of UTIs and STIs overlap. Antibiotics are standard treatment, though resistance is increasing.  
(includes abstract); Robbins C; Shew ML; Contemporary Pediatrics, 2009 Jul; 26 (7): 48-54 (journal article - pictorial, tables/charts) ISSN: 8750-0507 CINAHL AN: 2010352917  
Database: CINAHL with Full Text  
[Add to folder](#)  
 [PDF Full Text](#)
3. [CDC issues draft UTI guideline.](#)   
OR Manager, 2009 Jul; 25 (7): 20 (journal article - brief item) ISSN: 8756-8047 CINAHL AN: 2010348834  
Database: CINAHL with Full Text  
[Add to folder](#)  
 [PDF Full Text](#)
4. [Sexual activity, alcohol are major factors in a woman's first UTI.](#)   
Urology Times, 2009 Jul; 37 (8): 32 (journal article - brief item) ISSN: 0093-9722 CINAHL AN: 2010366897  
Database: CINAHL with Full Text  
[Add to folder](#)  
 [PDF Full Text](#)

**Link to full text**

**Limit your results**

☒ Full Text  
☐ References Available  
☐ Abstract Available

Filter by Publication Date:  
1982 2009

[Search Options](#) ☒ Options set



Searching: CINAHL with Full Text | [Choose Databases »](#)

☐ Suggest Subject Terms

(MM "Urinary Tract Infections") in    

and  in

and  in  [Add Row](#)

[Basic Search](#) | [Advanced Search](#) | [Visual Search](#) | [Search History/Alerts](#) | [Preferences »](#)

1 of 420 | [Return to Result List](#) | [Refine Search](#)

Citation

PDF Full Text

Abstract record also contains link to full text

<b>Title:</b>	Peri-urethral cleaning prior to urinary catheterization in children: sterile water versus 10% povidone-iodine.
<b>Authors:</b>	<a href="#">Al-Farsi S</a> ; <a href="#">Oliva M</a> ; <a href="#">Davidson R</a> ; <a href="#">Richardson SE</a> ; <a href="#">Ratnapalan S</a>
<b>Affiliation:</b>	The Hospital for Sick Children, University of Toronto, Canada.
<b>Source:</b>	<a href="#">Clinical Pediatrics</a> (CLIN PEDIATR), 2009 Jul; 48(6): 656-60 (21 ref)
<b>Publication Type:</b>	journal article - clinical trial, research, tables/charts
<b>Language:</b>	English
<b>Major Subjects:</b>	<a href="#">Povidone-Iodine</a> -- <a href="#">Administration and Dosage</a> <a href="#">Urinary Catheterization</a> -- <a href="#">In Infancy and Childhood</a> <a href="#">Urinary Tract Infections</a> -- <a href="#">Prevention and Control</a> <a href="#">Urinary Tract Infections</a> -- <a href="#">Risk Factors</a>
<b>Minor Subjects:</b>	<a href="#">Child, Preschool</a> ; <a href="#">Clinical Trials</a> ; <a href="#">Data Analysis Software</a> ; <a href="#">Emergency Service</a> ; <a href="#">Female</a> ; <a href="#">Funding Source</a> ; <a href="#">Infant</a> ; <a href="#">Male</a> ; <a href="#">Prospective Studies</a> ; <a href="#">Random Assignment</a>
<b>Abstract:</b>	Objective. To compare urinary infection rate in children cleaned with sterile water versus a 10% povidone-iodine before bladder catheterization. Methods. Prospective randomized controlled study of children requiring bladder catheterization in the emergency department whose parents consented to the study were randomly assigned to either of 2 groups, in which sterile water (the "sterile water" group) or 10% povidone-iodine (the "10% povidone-iodine" group) was to be used for peri-urethral cleansing prior to catheterization. Results. The sterile water group had 92 patients and the povidone-iodine group had 94. Most children (87%) were under 12 months of age. Urine cultures were positive in 16% of children in the povidone-iodine group and in 18% in the water group. There was no significant difference in signs and symptoms between the 2 groups. There was no significant association between solution preparation and cultures on univariate regression analysis. Conclusions. Cleaning the periurethral area of children with sterile water prior to catheterization is not inferior to cleaning with povidone-iodine.

**Related Information**


**Similar Results**

[Find Similar Results](#) using SmartText Searching.

# CINAHL BASIC TIPS

Try This...	Tell CINAHL...
Limit to Research Articles	Check the <i>Research Article</i> box to show only research articles in your results
Limit to Peer Reviewed Articles	Check the <i>Peer Reviewed</i> box to show only results from peer reviewed journals in your results
Exclude PubMed Results	Check the <i>Exclude MEDLINE Records</i> box to show only results unique to CINAHL
Limit to Evidence-Based Practice	Check the <i>Evidence-Based Practice</i> box to retrieve articles from evidence-based practice journals
Find Similar Results	View a citation of interest and click the title to see the Detailed Record. Click on <i>Find Similar Results</i> on the left side of the screen.
Search by CINAHL Heading	Select a citation of interest and click the title to see the Detailed Display. Inspect the <i>Major Subjects and Minor Subjects</i> fields in the citation record. Click on an individual term to run a search on that subject heading or copy desired terms into individual search boxes to create a new search.

# SEARCH MEDLINE FOR RESEARCH ARTICLES

- MEDLINE (1940's+) is included on PubMed
  - Indexes 5,200 biomedical journals
  - Covers all aspects of biosciences and healthcare
  - 75%-80% of citations have abstracts
  - Updated 5x/week
- 

# **TWO MEDLINE STRATEGIES FOR FINDING EVIDENCE-BASED CITATIONS**

## **1. Use Publication Type limits**

- Randomized Controlled Trial
- Meta-Analysis
- Practice Guideline
- Clinical Trial
- Consensus Development Conference

## **2. Limit to Systematic Reviews in Subject Subset**



# MEDLINE Search Screen

[HEAL-WA](#)

Searching: MEDLINE with Full Text | [Choose Databases >](#)

☐ Suggest Subject Terms

catheter\*

in Select a Field (optional)

AND

urinary tract infections or UTI

in Select a Field (optional)

AND

in Select a Field (optional)

[Add Row](#)

Search

Clear



## Limit your results

Full Text

☐

Publication

Abstract Available

☐

EBM Reviews

☐

Human



Gender

All  
Female  
Male

Clinical Queries

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

Journal & Citation  
Subset

All  
AIDS  
Bioethics  
Core Clinical (AIM)

Date of Publication from

Month Year to Month Year

Author

English Language



Review Articles

☐

Animal

☐

Age Related

All  
Infant, Newborn: birth-1 month  
Infant: 1-23 months  
All Infant: birth-23 months

Subject Subset

All  
AIDS  
Systematic Reviews

Publication Type

All  
Randomized Controlled Trial  
Biography



# MEDLINE Results

## RCT of urethral versus suprapubic catheterization.

(eng) By Dixon L, Dolan LM, Brown K, Hilton P, British Journal Of Nursing (Mark Allen Publishing) [Br J Nurs], ISSN: 0966-0461, 2010 Oct 14-27; Vol. 19 (18), pp. S7-13; PMID: 20948487; To compare the use of intermittent **urethral catheterization** with indwelling **suprapubic catheterization** in women undergoing surgery for urodynamic stress incontinence or uterovaginal prolapse.

Subjects: Cystostomy methods; Drainage methods; Intermittent Urethral Catheterization methods; Postoperative Complications prevention & control; Urinary Retention prevention & control; Female

Database: MEDLINE with Full Text

 Add to folder

 PDF Full Text


 link to full text

## Suprapubic versus transurethral catheterisation of males undergoing pelvic colorectal surgery.

(eng) By Ratnaval CD, Renwick P, Farouk R, Monson JR, Lee PW, International Journal Of Colorectal Disease [Int J Colorectal Dis], ISSN: 0179-1958, 1996; Vol. 11 (4), pp. 177-9; PMID: 8876274; A prospective, randomised double-blind trial of **suprapubic** (SPC) versus transurethral (TUC) **catheterisation** was undertaken in fifty consecutive male patients of median age 66 (range 32-81) years undergoing pelvic colorectal surgery. Twenty-four patients were randomised to SPC. **Catheter** removal times were comparable between the two groups: SPC = mean 7.2 (3-14) days; TUC = mean 7.5 (2-13) days;  $P > 0.5$ . Acute **urinary** retention was recorded in 5 patients with SPC and 6 in the TUC group. Chronic retention with overflow was recorded in one TUC patient. Frequent voiding after **catheter** removal occurred in two SPC, and in eleven TUC patients ( $P < 0.05$ ). Re-**catheterization** was required in two SPC, and seven TUC patients. One culture positive **urinary tract** infection occurred in the SPC, and three in the TUC groups. It is concluded that **suprapubic catheterisation** allows comparable controlled return of normal voiding with fewer bladder and **urethral** symptoms when compared with transurethral **catheterisation**.

Subjects: Colonic Diseases surgery; Rectal Diseases surgery; Urinary Catheterization methods; Urinary Retention etiology; Urinary Tract Infections etiology; Adult: 19-44 years; Aged: 65+ years; Aged, 80 and over; Middle Aged: 45-64 years; All Adult: 19+ years; Male

Database: MEDLINE with Full Text

 Add to folder

# PUBMED BASIC TIPS

Try this...	Tell PubMed...
Start with a keyword search	Enter keywords (and synonyms for these terms) you would expect to find in an <i>article title</i> or <i>abstract</i> [PubMed does not search the full text of articles.]
Search by phrase (“ ”)	Add quotations around words to tell PubMed to find an <i>exact phrase</i>
Search for words in the title [ti]	PubMed to search for words in article titles [Do not use this for comprehensive searches.] Ex: “ <b>pressure ulcer</b> ”[ti] AND <b>mattress</b> [ti].
Use Limits	Limit your results by <i>type of article, date range, age group, journal sets</i> , and more.
Search by Author [au]	Search PubMed for a particular author Ex: <b>Rivara FP</b> [au]
Find Related Citations	In the <i>abstract view</i> , take a look at <i>the related citations</i> generated for a particular article (right hand side of page)

# PUBMED TIPS (CONT.)

Try This...	Tell PubMed...
<p><b>Construct a search using MeSH terms</b></p> <p>MeSH terms are Medical Subject Headings and are assigned to all indexed articles in PubMed</p> <p>MeSH terms describe what the article is about and <i>are a key in constructing targeted searches.</i></p>	<p>Once you've identified an article that looks relevant, take a look at the article's MeSH terms.</p> <ul style="list-style-type: none"><li>•In the abstract view, click on the + next to Publication Types, MeSH terms.</li><li>•Click on a term to send it to the PubMed search box.</li><li>•You may combine terms, but you may receive better results by starting with two or three terms.</li><li>•You may add keywords to your search to narrow your results.</li></ul>

# CINAHL VS. MEDLINE

## CINAHL


- Coverage: 1982+
- Indexes 1700 journals
- Focuses on nursing and allied health literature
- CINAHL Thesaurus with more nursing terms
- Has peer-reviewed limit
- Includes cited references at end of many refs

## MEDLINE

- Coverage: early 1940's+
- Indexes 5000 journals
- Focuses on biomedical literature
- Uses MeSH as its controlled vocabulary
- No peer-reviewed limit
- No cited references

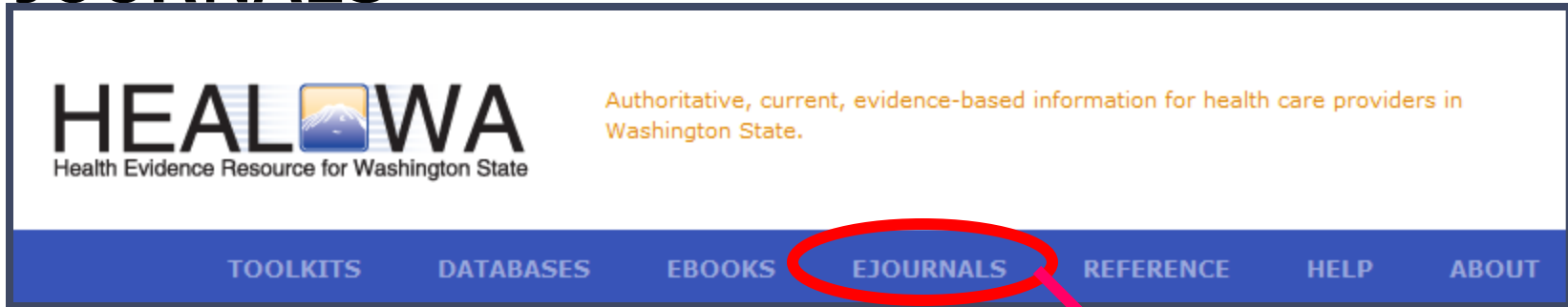
# JOURNALS A-Z

## Finding full text articles:

- Records in MEDLINE and CINAHL link out to those that are available
  - Or, go directly to eJournals tab in HEAL-WA and search by title
  - Fastest: go directly to eJournals tab when you're searching for a specific known article
- 

# HEAL-WA JOURNALS A-Z

## 5,000 FULL-TEXT HEALTH-RELATED JOURNALS



The image shows the "eJournals" page of the HEAL-WA website. The logo "HEAL-WA" is on the left, with the tagline "Health Evidence Resource for Washington State" below it. To the right of the logo is the text "eJournals" and "More than 5000 Full Text Journals". Below this is a navigation bar with links: Titles, Advanced Search, Medical Subjects, eJournals Help, HEAL-WA Main Page, and Subjects. Below the navigation bar is a search bar with the text "Find:" and a "Search" button. To the right of the search bar is a link to "Advanced search". Below the search bar is a list of journals, with the first one being "AAACN viewpoint". The journal entry includes the following information: "CINAHL with Full Text (EBSCO Publishing) 2004 to present", "Publisher: American Academy of Ambulatory Care Nursing", "Subject: Medicine and Health Sciences -- Nursing", "AACN advanced critical care", "LWW Nursing and Health Professions Premier Collection 2006 to present", "ISSN: 1559-7768 Online ISSN: 1559-7776", "Publisher: Lippincott, Williams & Wilkins", "Subject: Medicine and Health Sciences -- Nursing; Medicine and Health Sciences -- Critical Care", "AACN Bold Voices", "CINAHL with Full Text (EBSCO Publishing) 2009 to present".



# EVIDENCE SUMMARIES: PRACTICE GUIDELINE RESOURCES

- National Guideline Clearinghouse
- Nursing Reference Center
- MEDLINE
- CINAHL
- Association/Society guidelines
- Advanced Google or Google Scholar

## Guidelines & Evidence ▾

### **Cochrane Database of Systematic Reviews**

Full text of highly structured systematic reviews and protocols focusing on the effects of healthcare.

### **Clinical Information from the Agency for Healthcare Research and Quality**

Links to information on Evidence-Based Practice, Outcomes & Effectiveness, Effective Healthcare, and more.

### **National Guideline Clearinghouse**

The National Guideline Clearinghouse™ (NGC) is a comprehensive database of evidence-based clinical practice guidelines and related documents.

### **PubMed Clinical Queries**

Specialized PubMed searches for clinicians. Finds citations that correspond to a specific clinical study category, such as etiology, diagnosis, prognosis, and more.

### **Guide to Community Preventive Services (Community Guide)**

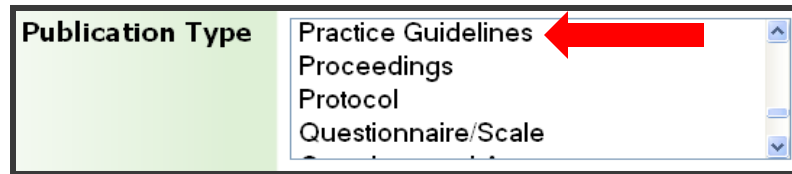
The Guide to Community

# SEARCHING FOR EVIDENCE *PRACTICE GUIDELINES* IN CINAHL AND MEDLINE

In CINAHL:

Limit to **Practice Guidelines** as a Publication Type

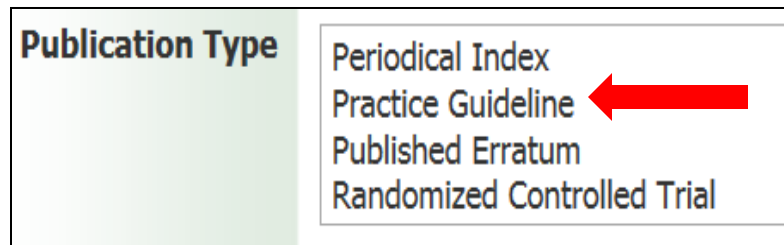
Publication Type	Practice Guidelines
	Proceedings
	Protocol
	Questionnaire/Scale



In MEDLINE:

Limit to **Practice Guideline** as a Publication Type

Publication Type	Periodical Index
	Practice Guideline
	Published Erratum
	Randomized Controlled Trial







ventilator associated pneumonia

Search

[Search Tips](#) [Advanced Search](#) [About Search](#)

T- T+

[Home](#)

[Guidelines](#)

[Expert Commentaries](#)

[Guideline Syntheses](#)

[Guideline Resources](#)

[Annotated  
Bibliographies](#)

[Compare Guidelines](#)

[FAQ](#)

[Submit Guidelines](#)

[About](#)

[< Back](#)

## 'ventilator associated pneumonia'

Search within:

GO

Sort results by: ☒ Relevance ☐ Publication date

1-20 of 35 [Next >](#)

Compare  
Guidelines

1. **Clinical practice guidelines for hospital-acquired pneumonia and ventilator-associated pneumonia in adults.** 2008 Jan. NGC:007473

Association of Medical Microbiology and Infectious Disease Canada - Medical Specialty Society; Canadian Thoracic Society - Medical Specialty Society. [View all guidelines by the developer\(s\)](#)



2. **Strategies to prevent ventilator-associated pneumonia in acute care hospitals.** 2008 Oct. NGC:006807

Infectious Diseases Society of America - Medical Specialty Society; Society for Healthcare Epidemiology of America - Professional Association. [View all guidelines by the developer\(s\)](#)



3. **Prevention of ventilator-associated pneumonia. In: Prevention and control of healthcare-associated infections in Massachusetts.** 2008

Jan 31. NGC:006634

Betsy Lehman Center for Patient Safety and Medical Error Reduction - State/Local Government Agency [U.S.]; Massachusetts Department of Public Health - State/Local Government Agency [U.S.]. [View all guidelines by the developer\(s\)](#)




Guideline Title

Clinical practice guidelines for hospital-acquired pneumonia and ventilator-associated pneumonia in adults.

# Guideline Summary

Bibliographic Source(s)

Rotstein C, Evans G, Born A, Grossman R, Light RB, Magder S, McTaggart B, Weiss K, Zhanel GG. Clinical practice guidelines for hospital-acquired pneumonia and ventilator-associated pneumonia in adults. *Can J Infect Dis Med Microbiol* 2008 Jan;19(1):19-53. [381 references] [PubMed](#) 

Guideline Status

This is the current release of this guideline.

- Jump To
- Guideline Classification
- Related Content

- Scope
- Methodology
- **Recommendations**
- Evidence Supporting the Recommendations
- Benefits/Harms of Implementing the Guideline Recommendations
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Recommendations



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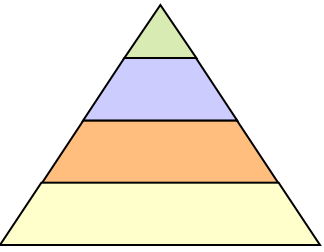
Major Recommendations

The levels of evidence (1-3) and strength of recommendation (A-E) are defined at the end of the "Major Recommendations" field.

Prevention and Risk Reduction

*Major Points and Recommendations*

1. To control the spread of antibiotic-resistant organisms (AROs), an effective infection control program must be implemented in all institutions (**A-1**).
2. Oral intubation should be the preferred way for invasive mechanical ventilation (**B-2**).
3. Patients should be nursed in a semirecumbent position (30° to 45° angle) (**A-2**).
4. Kinetic beds may be useful in some carefully selected groups of patients.
5. Circuit changes should be performed not more than once a week, except if visibly soiled (**A-1**).
6. If not contraindicated, a heat and moisture exchanger (HME) should be used and changed on a weekly basis (**B-2**).
7. The regular use of subglottic secretion drainage should be encouraged in intubated patients (**A-2**).
8. A closed suction catheter should be used for each new patient (**B-2**).
9. Routine prophylaxis of HAP with oral antibiotics (selective decontamination of the digestive tract [SDD]) with or without systemic antibiotics, reduces the incidence of ICU-acquired VAP, has helped



# SEARCH FOR EVIDENCE SUMMARIES

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## Surgical wound infection - prevention

**Updated 2014 Mar 17 08:20:00 AM:** preoperative antibiotics may reduce risk of surgical site infection in patients having breast cancer surgery (Cochrane Database Syst Rev 2014 Mar 9) [view update](#) [Show more updates](#)

### Related Summaries:

- [Surgical wound infection](#)
- [Physician Quality Reporting System 2011 Quality Measures](#)
- [Medicare and Joint Commission National Hospital Inpatient Quality Measures](#)
- [Medicare Hospital Outpatient Quality Reporting Measures](#)

### Overview:

- alcohol rubs used in preparation for surgery by scrub team appear as effective as aqueous scrubbing for prevention of surgical site infections ([level 2 \[mid-level\] evidence](#))
- warming before surgery reduces risk of wound infection ([level 1 \[likely reliable\] evidence](#))
- surgical site preparation
  - insufficient evidence regarding preoperative skin antiseptics, but chlorhexidine for preoperative bathing or showering does not appear effective for reducing risk of surgical site infection ([level 2 \[mid-level\] evidence](#))
  - preoperative hair removal not shown to reduce risk of surgical wound infection ([level 2 \[mid-level\] evidence](#)), but shaving may increase risk of surgical wound infections compared to clipping or depilatory cream ([level 2 \[mid-level\] evidence](#))
  - preoperative intraincisional clindamycin may reduce surgical wound infections ([level 2 \[mid-level\] evidence](#))
- antimicrobial prophylaxis typically given as single IV dose 60 minutes before surgery
  - prophylactic antibiotics may decrease rate of surgical wound infection in patients having colorectal surgery, oral plus IV regimens appear more effective than oral or IV alone ([level 2 \[mid-level\] evidence](#))

**Level of evidence**

Top

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## Surgical wound infection - prevention

### Postoperative Wound Management

#### Bathing:

- **allowing sutures to get wet during normal bathing 12 vs. 48 hours after surgery does not appear to increase risk of wound infections**
  - 870 patients who had minor skin excisions were randomized to wet vs. dry wound management
    - wet group instructed to remove dressing within 12 hours and bathe as normal until sutures removed
    - dry group instructed to keep wound dry for 48 hours, remove dressing at 48 hours, then bathe as usual
  - both groups asked to avoid antiseptic washes and soaps -outcome assessment not blinded to treatment assignment
  - 98.5% completed follow-up
  - wound infection defined as purulent discharge or general practitioner diagnosing a wound infection or general practitioner starting antibiotics
  - 8.4% wet group vs. 8.9% dry group had wound infection within 30 days, statistical likelihood of wet group having higher rate of infections was < 5%
  - Reference - [BMJ 2006 May 6;332\(7549\):1053 full-text](#), commentary can be found in [Am Fam Physician 2006 Oct 1;74\(7\):1200](#)

#### Dressing:

- **for surgical wounds healing by primary intention, neither use of wound dressing (compared to leaving wounds exposed) nor type of wound dressing appears to reduce surgical site infections (level 2 [mid-level] evidence)**
  - based on Cochrane review of trials with methodologic limitations
  - systematic review of 16 randomized trials comparing wound dressings or alternative wound dressings to each other and to leaving wounds exposed in 2,578 patients with wounds healing by primary intention
  - all trials considered to have unclear or high risk of bias
  - no significant differences in surgical site infections in comparisons of
    - basic wound contact dressing vs. wound exposure in 1 trial with 112 patients and in 1 trial with 207 patients (trials could not be combined due to heterogeneity of interventions)
    - advanced dressings vs. exposed wounds in 1 trial with 107 patients
    - different basic wound contact dressings in 1 trial with 50 patients
    - basic wound contact dressings vs. film dressings in analysis of 6 trials with 1,987 patients
    - basic contact wound dressings vs. hydrocolloid dressings in analysis of 5 trials with 834 patients
    - basic wound contact dressings vs. fibrous-hydrocolloid (hydrofiber) dressings in 1 trial with 160 patients
    - different advanced dressings in 1 trial with 494 patients
  - lack of differences in surgical site infections remained when analyses were grouped by type of wound
  - Reference - [Cochrane Database Syst Rev 2011 Jul 6;\(7\):CD003091](#)  [EBSCOhost Full Text](#)

Full text link



# DynaMed: Reviews and Guidelines

## Reviews:

- review of antibiotic prophylaxis to prevent surgical site infections can be found in [Am Fam Physician 2011 Mar 1;83\(6\):743-748](#) **Full Text**
- review of prophylactic antibiotics can be found in [Pediatric Surgery Update 2008 Jul;31\(1\):1](#)
- review of antiseptic use in surgical practice to prevent and treat surgical site infections can be found in [Br J Surg 2011 Jun 1;99\(6\):843-850](#)

## Guidelines:

### United States guidelines:

- United States Department of Health and Human Services prioritized recommendations to prevent surgical site infections [Action Plan to Prevent Healthcare-associated Infections accessed 2009 Jan 7](#)
- Society for Healthcare Epidemiology of America/Infection Diseases Society of America (SHEA/IDSA) practice recommendations for preventing surgical site infections in acute care hospitals can be found in [Infect Control Hosp Epidemiol 2008 Oct;29 Suppl 1:S1-S6](#) **Guideline Clearinghouse 2009 May 18:13399**
- CDC 1999 guideline for prevention of surgical site infection can be found in [Infect Control Hosp Epidemiol 1999 Apr;24\(4\):409-433](#)
- Massachusetts Department of Public Health guideline on prevention of surgical site infections can be found at [National Guideline Clearinghouse 2009 Feb 9:12921](#)
- Institute for Clinical Systems Improvement (ICSI) guideline on perioperative protocol can be found at [ICSI Oct 2010](#) **Guideline Clearinghouse 2011 Apr 4:24226**
- American Society of Health-System Pharmacists therapeutic guidelines on antimicrobials for surgical site infections can be found in [Syst Pharm 1999 Sep 15;56\(18\):1839](#) **Full text link**
- National Surgical Infection Prevention Project (representing 18 North American groups) recommendations for antimicrobial prophylaxis for surgical site infections can be found in [Clin Infect Dis 2004 Jun 15;38\(12\):1706](#)  **EBSCOhost Full Text**, summary can be found in [Am Fam Physician 2005 Mar 15;71\(6\):1199](#)

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## Key Content

*Diseases & Conditions includes:*

### • Quick Lessons

Clinically-organized nursing overviews that are designed to map the nursing work flow

### • Evidence-Based Care Sheets

Evidence-based summaries on key topics incorporating the best available evidence through rigorous systematic surveillance



EVIDENCE-BASED  
CARE SHEET

## What We Know

- fever and chills
- thick, cloudy, bloody, or foul-smelling urine

Diane Pravlikoff, RN, PhD, FAAN  
Clinical Information Systems

## What We Can Do

- Become knowledgeable about evidence-based recommendations for preventing UTIs caused by catheters so you can accurately assess your patients' personal characteristics and health education needs, share this information with your colleagues
- Collaborate with your hospital's education department to provide ongoing training on indications for catheter use, procedures for insertion and securing, and prevention and monitoring of infections
- Wash hands frequently, use aseptic techniques and sterile barriers when inserting a catheter and obtaining urine samples, and follow facility protocols for catheter care, always secure the catheter and maintain a closed drainage system
- Assess your patients for risk factors for catheter-associated UTIs, which include female gender, age over 60, immobility, and history of bladder stones
- Monitor for signs of complications in your patients with catheters: strong smell, cloudy or thick urine, blood around the catheter, urethral swelling around the catheter, urinary incontinence, elevated levels of white blood cells, and the presence of bacteriuria and pyuria; be aware that patients with catheter-related UTIs may be asymptomatic

### Coding Matrix

References are listed in order of strength:

- M Published meta-analysis
- SR Published systematic or integrative literature review
- RCT Published research (randomised controlled trial)
- R Published research (not randomised controlled trial)
- C Case histories, case studies
- G Published guideline
- RV Published review of the literature
- BU Published research (bulletin) report
- QI Published quality improvement report
  - L Legislation
- NGR Published government report
- PRR Published (review) report
- PP Policies, procedures, protocols
- X Practice exemplar, stories, opinions
- G General or background information/background reports
- U Unpublished research, review, poster presentations or other such materials
- C? Conference proceedings, abstracts, presentations

## References

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# NURSING REFERENCE CENTER

## QUICK LESSON

### quickLESSON about...

### Surgical Wounds: Complications

#### Description/Etiology

As a normal incision heals, mild inflammation accompanied by serosanguineous drainage (i.e., a pink-colored liquid composed of red blood cells and serum) is to be expected. Most surgical wounds have a small amount of serosanguineous drainage, but some (e.g., abdominal wounds) typically have a larger amount, in which case the surgeon will place a drain. Over time, the amount of drainage from a wound that is healing normally should decrease and turn from sanguineous (i.e., bloody) to serous (i.e., a clear yellow liquid composed of serum). Potential wound complications include delayed healing, seroma, hematoma, surgical site infection, dehiscence, and evisceration (for details, see *Signs and Symptoms/Clinical Presentation*, below). Surgical site infections (SSIs) are defined as infections at the surgical site occurring within 30 days after surgery not involving an implant and within 1 year after surgery involving an implant (e.g., hip replacement). SSIs are classified as superficial incisional (i.e., involving only the skin and subcutaneous tissue), deep incisional (i.e., involving the deeper, soft tissue), and organ space infections (i.e., involving any part of the anatomy [other than the incision] that was opened or manipulated during the surgery). SSIs most typically arise from exposure to pathogens during surgery. The pathogens usually come from the patient's own skin, mucous membranes, or hollow viscera (e.g., intestines). Drainage is a great culture medium for bacteria, which is why dressings should be kept dry.

Treatment for surgical wound complications may involve antibiotics, drainage, incision and debridement, wound packing, wet-to-dry dressings, and/or negative pressure wound therapy (i.e., vacuum dressings).

#### Facts and Figures

*Staphylococcus aureus* is the organism most commonly isolated from SSIs. Roughly 5% of surgeries result in an SSI; up to 60% require admission to the intensive care unit (ICU). SSIs prolong discharge from the hospital by an average of 7.5 days. Patients who develop an SSI are twice as likely to die as patients who do not develop an SSI.

#### Risk Factors

Risk factors for SSIs include uncontrolled diabetes, immunosuppressant therapy, malnutrition, morbid obesity, smoking, having a current infection, hypothermia, hypoxia, blood transfusion, peripheral vascular disease, older age, history of radiation, longer length of preoperative hospital stay, inadequate surgical preparation of the skin, shaving of the surgical site, and surgery duration of greater than 3 hours. Unrelieved postoperative wound pain interferes with wound healing and constitutes a risk factor for development of chronic pain.

#### Signs and Symptoms/Clinical Presentation

- Signs and symptoms of
  - a healthy incision are mild redness and swelling around the sutures or staples; skin beyond the sutures will be a normal color and temperature
  - a seroma are swelling under the incision that is movable
  - a hematoma are hard swelling and bruising under the incision
  - SSI may appear 3–4 days after surgery and include redness, swelling, pain, increased drainage that is often purulent, fever, malaise, anorexia, and elevated WBC count
  - dehiscence are separation of the wound edges, which may be preceded by a sudden gush of discharge (for more information, see *Red Flags*, below)
  - evisceration are a gush of serosanguineous drainage 48 hours before the wound opens to expose viscera (for more information, see *Red Flags*, below)

#### Assessment

- Laboratory Tests That May Be Ordered
  - Wound cultures will usually be positive and sensitivities will identify appropriate pharmacologic treatment (e.g., antibiotics for bacterial infection)
- Other Diagnostic Tests/Studies
  - Imaging studies may be ordered to assess abscesses or deep infections

#### Treatment Goals

- Prepare for Surgery and Provide Supportive Care
  - Follow facility pre- and postoperative protocols if patient becomes a surgical candidate; reinforce pre- and

postoperative education and ensure completion of facility informed consent documents

- Dispense chlorhexidine gluconate soap with instructions to bathe the night before surgery, if ordered
- Give prophylactic antibiotics 30–60 minutes prior to incision or tourniquet inflation, as ordered
- Remove hair at surgical site with clippers just prior to surgery. Do NOT shave

Shaving causes microabrasions that increase the risk of infection

#### Promote Wound Healing and Reduce Risk of Infection

- Maintain temperatures at 36–38 °C (96.8–100.4 °F) throughout procedure and upon arrival to the postanesthesia care unit (PACU) to promote healing; maintain oxygen saturation at greater than 92% or as ordered. Monitor blood glucose and administer insulin to maintain tight glucose control, if ordered
- Follow facility infection control protocols, including the following precautions:
  - Wash hands before and after any contact with the patient
  - Wear gloves prior to any contact with body fluids or nonintact skin
  - Maintain sterile technique while emptying drains and changing dressings
- Monitor vital signs, pain level, and for signs of infection; report significant changes to the surgeon and administer prescribed symptomatic relief, including antibiotics and pain medications; monitor for efficacy and adverse effects
- Perform wound care as ordered
  - Assess the surgical site at least once a shift, recording the amount and color of drainage, status of dressing (e.g., dry and intact), and status of wound, if visible
    - The surgeon always performs the first dressing change. If the dressing is wet from drainage, reinforce the existing dressing. If there is no drainage after 48 hours, the surgeon may decide to leave the wound open to air
  - Take care to avoid dislodging drains. Drains should be attached to the patient's gown except while being emptied or during a dressing change
  - Follow facility protocols or clinician orders for care of various dressing and drain types (e.g., Purson, Jackson-Pratt, Hemovac)
  - Whenever possible, provide prescribed analgesia 30 minutes before painful dressing changes
  - Remove sutures or staples as ordered
    - Clean incision prior to removal
    - Remove every other suture or staple
    - If wound is still intact, remove the remaining suture and staples. If not intact, leave the remaining sutures and staples in place and notify the surgeon

#### Provide Emotional Support and Education

- Assess anxiety level and coping ability; educate and encourage discussion about surgical wound care, the potential for infection and other complications, and the individualized treatment plan
- Provide written materials, if available, to support verbal education

#### Red Flags

- Wound evisceration is an **emergency**. The nurse should ask for assistance to call the surgeon immediately and stay with the patient. Wet sterile dressings should be applied to the wound, vital signs should be monitored, and the patient should be placed in a supine position with the hips and knees bent and the head of the bed at 10–15° until further instructions are provided by the surgeon
- Wound dehiscence requires urgent attention. A sterile nonadherent or wet dressing should be applied to the wound and the surgeon notified immediately

#### What Do I Need to Tell the Patient/Patient's Family?

- Postoperative education should include reinforcing the need to splint the incision when coughing and follow the prescribed regimen for wound care at home
- Emphasize the importance of continued medical surveillance and seeking immediate medical attention for new or worsening signs and symptoms of infection or other complications

#### Note

- Recent review of the literature has found no updated research evidence on this topic since previous publication on July 9, 2010

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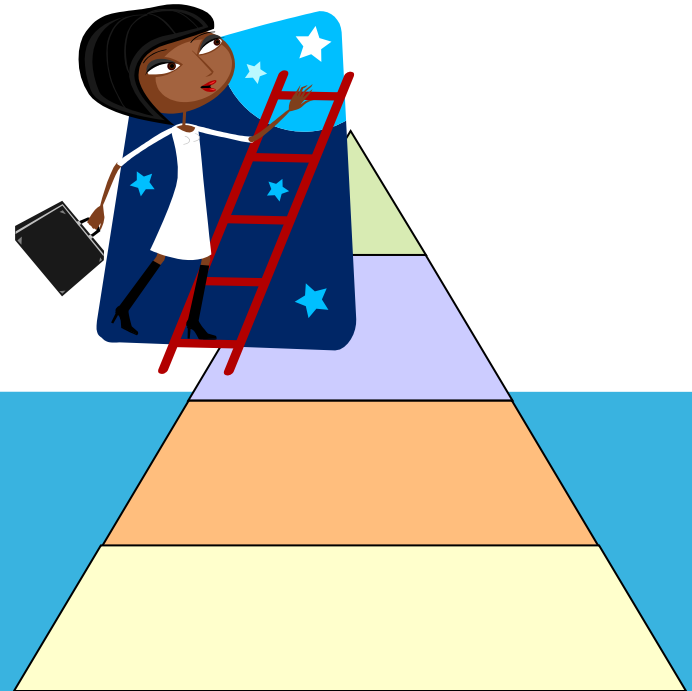
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# SEARCH FOR SYSTEMATIC REVIEW AND META-ANALYSES RESOURCES

- Cochrane Database of Systematic Reviews (CDSR)
- MEDLINE Systematic Reviews
- CINAHL



# SYSTEMATIC REVIEW VS. META-ANALYSIS

## Systematic review:

- Literature review of RCTs focused on a single question which tries to identify, appraise, select and synthesize all high quality research evidence relevant to that question.
- Uses explicit methods to identify, select and critically evaluate relevant research.


## Meta-analysis:

- Systematic review combining results of several studies using quantitative statistics.





# Cochrane Database of Systematic Reviews



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preoperative fasting

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1.



## [Preoperative fasting for adults to prevent perioperative complications](#)

(Cochrane Review). Reviewers: Brady, Marian C; Kinn, Sue; Stuart, Pauline; Ness, Valerie. Review Group: Cochrane Wounds Group; *Cochrane Database of Systematic Reviews*, Edited/Substantively amended: 13 April 2010; Edited (no change to conclusions) this issue.

BACKGROUND: **Fasting** before general anaesthesia aims to reduce the volume and acidity of stomach contents during surgery, thus reducing the risk of regurgitation/aspiration. Recent guidelines have...

Subjects: Adult; Humans; Drinking; Gastroesophageal Reflux prevention & control; Randomized Controlled Trials as Topic; Anesthesia, General; Fasting; Intraoperative Complications prevention & control; Pneumonia, Aspiration prevention & control

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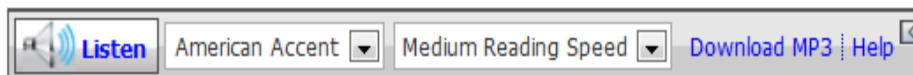
2.



## [Preoperative fasting for preventing perioperative complications in children](#)

### Contents

- Background
- Objectives
- Methods
- Criteria for considering studies for this review
- Search methods for identification of studies
- Data collection and analysis
- Results
- Description of studies
- Risk of bias in included studies
- Effects of interventions
- Discussion
- Authors' conclusions
- Implications for practice
- Implications for research
- Acknowledgements
- Data and analyses
- What's new
- History
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### Abstract

#### Background

Fasting before general anaesthesia aims to reduce the volume and acidity of stomach contents during surgery, thus reducing the risk of regurgitation/aspiration. Recent guidelines have recommended a shift in fasting policy from the standard 'nil by mouth from midnight' approach to more relaxed policies which permit a period of restricted fluid intake up to a few hours before surgery. The evidence underpinning these guidelines however, was scattered across a range of journals, in a variety of languages, used a variety of outcome measures and methodologies to evaluate fasting regimens that differed in duration and the type and volume of intake permitted during a restricted fasting period. Practice has been slow to change.

#### Objectives

To systematically review the effect of different preoperative fasting regimens (duration, type and volume of permitted intake) on perioperative complications and patient wellbeing (including aspiration, regurgitation and related morbidity, thirst, hunger, pain, nausea, vomiting, anxiety) in different adult populations.

#### Search strategy

Electronic databases, conference proceedings

#### Selection criteria

Randomised controlled trials which

#### Data collection and analysis

Details of the eligible studies were

#### Main results

Thirty eight randomised controlled trials were included in the review. The majority of studies assessed the risk of regurgitation/aspiration during anaesthesia. Few studies assessed the effect of fasting on patient wellbeing. There was no evidence that the volume of fluid permitted during the preoperative period (i.e. low or high) resulted in a difference in outcomes from those participants that followed a standard fast. Few trials specifically investigated the effect of preoperative fasting regimen for patient populations considered to be at increased risk during anaesthesia of regurgitation/aspiration and related morbidity.

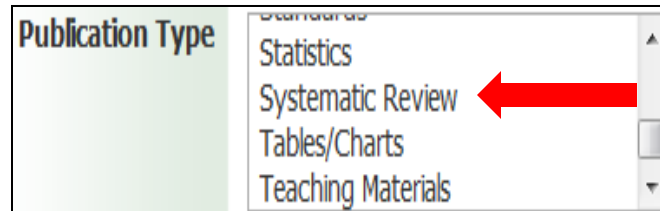
### Authors' conclusions

There was no evidence to suggest a shortened fluid fast results in an increased risk of aspiration, regurgitation or related morbidity compared with the standard 'nil by mouth from midnight' fasting policy. Permitting patients to drink water preoperatively resulted in significantly lower gastric volumes. Clinicians should be encouraged to appraise this evidence for themselves and when necessary adjust any remaining standard fasting policies (nil-by-mouth from midnight) for patients that are not considered 'at-risk' during anaesthesia.

# FINDING SYSTEMATIC REVIEWS AND META-ANALYSES IN *MEDLINE* AND *CINAHL*

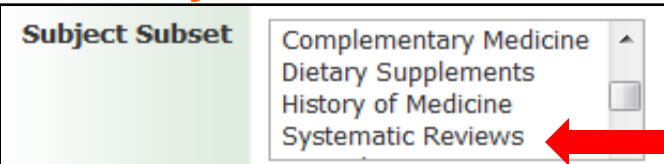
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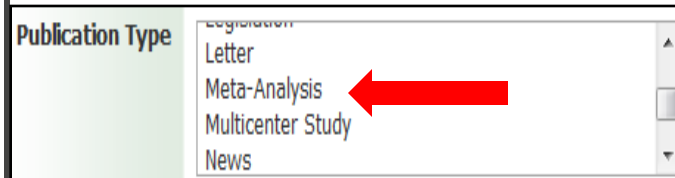


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# SEARCH FOR EVIDENCE IN DRUG AND NATURAL MEDICINES DATABASES

## Drugs, Labs, Diagnostic Tests

### Drugs, Labs, Diagnostic Tests

 **AHFS Drug Information® (2008)**  
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#### **Drug Information Portal**

From the US National Library of Medicine. Searches more than a dozen sources for information about more than 12,000 drugs.

#### **LactMed**


A peer-reviewed and fully referenced database of drugs to which breastfeeding mothers may be exposed. Among the data included are maternal and infant levels of drugs, possible effects on breastfed infants and on lactation, and alternate drugs to consider.


 **Natural Standard**  
Natural Standard provides high-quality, evidence-based information on dietary supplements (including herbs, vitamins, and minerals), functional foods, diets, complementary practices (modalities), exercises, and medical conditions.


 **Lexi-Comp Online - NEW!**

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### Complementary & Alternative Medicine

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Includes complementary medicine, physiotherapy, occupational therapy, rehabilitation, podiatry, palliative care, and more.

 **Alt-HealthWatch**  
Full-text articles, pamphlets, booklets, special reports, original research and book excerpts on the many perspectives of complementary, holistic and integrated approaches to health care and wellness.

 **Natural Standard**  
Natural Standard provides high-quality, evidence-based information on dietary supplements (including herbs, vitamins, and minerals), functional foods, diets, complementary practices (modalities), exercises, and medical conditions.



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## Ginger (*Zingiber Officinale* Roscoe)

Natural Standard Professional Monograph, Copyright © 2011 ([www.naturalstandard.com](http://www.naturalstandard.com)).

### Synonyms/Common Names/Related Substances:

- (+)-germacrene D synthase, 1-(4'-hydroxy-3'-methoxyphenyl)-2-nonadecen-1-one, 1-(4-O-beta-D-glucopyranosyl-3-methoxyphenyl)-3,5-dihydroxydecane, 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-3-hydroxy-5-acetoxyheptane, 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-5-methoxyheptan-3-one, 1-dehydrogingerdione, 1-hydroxy-[6]-paradol, 3-acetoxy-[4]-gingerdiol, 3-acetoxydihydro-[6]-paradol methyl ether, 5-acetoxy-3-deoxy-[6]-gingerol, 5-acetoxy-[6]-gingerdiol (stereoisomer), 5-methoxy-[n]-gingerols, 5-O-beta-D-glucopyranosyl-3-hydroxy-1-(4'-hydroxy-3-methoxyphenyl)decane, 6-(4'-hydroxy-3'-methoxyphenyl)-2-nonyl-2-hydroxytetrahydropyran, 6-dehydro-[6]-gingerol, 6-dehydrogingerdione, 6-gergendiol, 6-gergerol, 8- gingerol, 10- gingerol, 6-gingesulfonic acid, 6-hydroxy-[n]-shogaol, [6]-isoshogaol, 6-paradol, 6-shogaol, 8-shogaol, and 10-shogaol, acetoxy-3-dihydrodemethoxy-[6]-shogaol, aadaa (Assamese, Bengali), adarak (Hindi), adrak (Urdu), adraka (Urdu), adruka (Hindi), adivaa (Nepalese), African ginger, allaama (Telugu), allaamu (Telugu), alpha-curcumenone, alpha-

### Clinical Bottom Line/Effectiveness

#### Brief Background:

- The rhizomes and stems of ginger have assumed significant roles in Chinese, Japanese, and Indian medicine since the 1500s. The oleoresin of ginger is often contained in digestive, antitussive, antilflatulent, laxative, and antacid compounds.
- There is supportive evidence from several randomized controlled trials that ginger reduces the severity and duration of nausea or emesis during pregnancy (1;2;3;4;5;6;7;8;9;10). Ginger's effects on other types of nausea or emesis, such as chemotherapy-induced (11;12;13;14;15), postoperative nausea, or motion sickness remain undetermined (16;17). Zinopin, made of Pycnogenol® and standardized ginger root extract (SGRE), has been suggested as a possible treatment for motion sickness (18). However, a clinical trial reported that patients could not distinguish ginger from placebo (19).
- Ginger is used orally, topically, and intramuscularly for a wide array of other conditions without clear scientific evidence of benefit.
- The most frequent side effects associated with ginger use are gastrointestinal upset, heartburn, gas, and bloating. Ginger may inhibit platelet aggregation or decrease platelet thromboxane production, thus theoretically increasing bleeding risk.

# Natural Standard

## Ginger



Indication	Evidence Grade
Hyperemesis gravidarum	B
Anti-platelet agent	C
Chemotherapy-induced leukopenia	C
Chemotherapy-induced nausea and vomiting	C
Dysmenorrhea	C
Exercise recovery	C
Hemorrhage (upper digestive tract)	C
Hyperglycemia-evoked dysrhythmias	C
Hyperlipidemia	C
Knee pain	C
Migraine	C
Motion sickness/sea sickness	C
Nausea and vomiting (postoperative)	C
Osteoarthritis	C

Rheumatoid arthritis
Shortening labor
Urinary disorders (post-stroke)
Weight loss

Level of Evidence Grade	Criteria
<b>A</b> (Strong Scientific Evidence)	Statistically significant evidence of benefit from >2 properly randomized trials (RCTs), OR evidence from one properly conducted RCT AND one properly conducted meta-analysis, OR evidence from multiple RCTs with a clear majority of the properly conducted trials showing statistically significant evidence of benefit AND with supporting evidence in basic science, animal studies, or theory.
<b>B</b> (Good Scientific Evidence)	Statistically significant evidence of benefit from 1-2 properly randomized trials, OR evidence of benefit from ≥1 properly conducted meta-analysis OR evidence of benefit from >1 cohort/case-control/non-randomized trials AND with supporting evidence in basic science, animal studies, or theory. <i>This grade applies to situations in which a well designed randomized controlled trial reports negative results but stands in contrast to the positive efficacy results of multiple other less well designed trials or a well designed meta-analysis, while awaiting confirmatory evidence from an additional well designed randomized controlled trial.</i>
<b>C</b> (Unclear or conflicting scientific evidence)	Evidence of benefit from ≥1 small RCT(s) without adequate size, power, statistical significance, or quality of design by objective criteria,* OR conflicting evidence from multiple RCTs without a clear majority of the properly conducted trials showing evidence of benefit or ineffectiveness, OR evidence of benefit from ≥1 cohort/case-control/non-randomized trials AND without supporting evidence in basic science, animal studies, or theory, OR evidence of efficacy only from basic science, animal studies, or theory.
<b>D</b> (Fair Negative Scientific Evidence)	Statistically significant negative evidence (i.e., lack of evidence of benefit) from cohort/case-control/non-randomized trials, AND evidence in basic science, animal

# Nausea and related conditions

Levels of scientific evidence for specific therapies

## Grade: A (Strong Scientific Evidence)

Therapy	Specific therapeutic Use(s)
Acupressure, shiatsu, tuina	Nausea (of various etiologies)

## Grade: B (Good Scientific Evidence)

Therapy	Specific therapeutic Use(s)
Acupuncture	Nausea (chemotherapy-induced)
Acupuncture	Post-operative nausea / vomiting (adults)
Acustimulation	Motion sickness
Acustimulation	Nausea (postoperative)
Cayenne	Post-operative nausea / vomiting (plaster at acupoint)
Ginger	Hyperemesis gravidarum

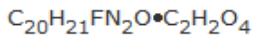
## Grade: C (Unclear or Conflicting Scientific Evidence)

Therapy	Specific therapeutic Use(s)
Acupuncture	Nausea
Acupuncture	Nausea and vomiting of pregnancy
Acupuncture	Post-operative nausea / vomiting (pediatric)
Acustimulation	Nausea (chemotherapy-induced)
Acustimulation	Nausea and vomiting (electroconvulsive therapy-related)
Acustimulation	Nausea and vomiting during pregnancy
Aromatherapy	Nausea and vomiting (postoperative)
Ginger	Motion sickness/sea sickness
Ginger	Nausea and vomiting (postoperative)
Hypnotherapy, hypnosis	Nausea/vomiting
Music therapy	Nausea/vomiting
Peppermint	Post-operative nausea (inhalation)

# AHFS DRUG INFORMATION

## Escitalopram Oxalate

### Introduction



- Escitalopram, the S-enantiomer of citalopram

### Uses

#### • Major Depressive Disorder

Escitalopram oxalate is used in the treatment of major depressive disorder established in 3 placebo-controlled studies of patients with major depressive disorder.<sup>1, 2</sup> In these studies, 10- and 20-mg doses of escitalopram oxalate were superior to placebo in the Montgomery Asberg Depression Rating Scale, Clinical Global Impressions Improvement and Severity of Illness, and Hamilton Depression Rating Scale scores. In addition, escitalopram demonstrated superior efficacy in the treatment of major depressive disorder compared with placebo. In addition, escitalopram demonstrated superior efficacy in the treatment of major depressive disorder compared with placebo. There is some evidence that escitalopram is superior to selective serotonin-reuptake inhibitors (e.g., citalopram, fluoxetine, paroxetine, sertraline, and venlafaxine), however, additional studies are needed to confirm this. The efficacy of escitalopram is not established to date.<sup>1, 8</sup> For further information on use of escitalopram in the treatment of major depressive disorder, see the AHFS Drug Information for Escitalopram Hydrobromide 28:16.04.20.

Routes	Dosage Forms	Strengths	Brand Names
Oral	Solution	5 mg (of escitalopram) per 5 mL	Lexapro <sup>®</sup>
		10 mg (of escitalopram)	Lexapro <sup>®</sup> (scored)
	Tablets, film-coated	5 mg (of escitalopram)	Lexapro <sup>®</sup>
		10 mg (of escitalopram)	Lexapro <sup>®</sup> (scored)

#### • Comparative Pricing

*This pricing information is subject to change at the sole discretion of DS Pharmacy. For the most current pricing information, please visit [drugstore.com](http://drugstore.com).*

Lexapro 10MG Tablets (FOREST): 30/\$92.99 or 90/\$259.97

Lexapro 20MG Tablets (FOREST): 30/\$95.99 or 90/\$265.98

Lexapro 5MG/5ML Solution (FOREST): 240/\$140.86 or 720/\$416.52

#### References

1. Forest Pharmaceuticals, Inc. Lexapro<sup>®</sup> (escitalopram oxalate) tablets/oral solution prescribing information. St. Louis, MO; 2006 Sep.
2. Burke WJ, Gergel I, Bose A. Fixed-dose trial of the single isomer SSRI escitalopram in depressed outpatients. *J Clin Psychiatry*. 2002; 63:331-6. [IDIS 479908] [[PubMed 12000207](http://pubmed.ncbi.nlm.nih.gov/12000207/)]
3. Anon. Forest Lexapro<sup>®</sup> approval includes label claim of greater potency than celexa. FDC Rep. Aug 19, 2002;3.
4. Forest Pharmaceuticals, Inc. Celexa (citalopram hydrobromide) prescribing information. (dated 2000 Dec). In: Physicians' desk reference. 56th ed. Montvale, NJ: Medical Economics Company Inc; 2002:1365-9.
5. American Psychiatric Association. Practice guideline for the treatment of patients with major depressive disorder (revision). *Am J Psychiatry*. 2000; 150(Suppl 4):1-45.
6. The European Agency for the Evaluation of Medicinal Products (EMA). Committee for proprietary medicinal products (CPMP) position paper on selective serotonin uptake inhibitors (SSRIs) and dependency/withdrawal reactions. London, UK; 2000 Apr 12. From EMA website (<http://www.eudra.org/humandocs/PDFs/PP/277599en.pdf>).

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[Monograph](#) [Images](#) [Adult Patient Education](#) [Pediatric Patient Education](#)[Print](#)[Help](#)**Clinical Practice Guidelines****Coronary Artery Bypass Graft Surgery:**

ACCF/AHA, "2011 ACCF/AHA Guideline for Coronary Artery Bypass Graft Surgery," [November 2011](#)

**Diabetes Mellitus:**

American Diabetes Association, "Standards of Medical Care in Diabetes - 2013," [January 2013](#)

Canadian Diabetes Association, "Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada," [2013](#)

**Heart Failure:**

ACCF/AHA, "2009 Focused Update Incorporated Into the ACC/AHA 2005 Guidelines for the Diagnosis and Management of Heart Failure in Adults," [March 2009](#)

ACCF/AHA, "2013 ACCF/AHA Guideline for the Management of Heart Failure," [June 2013](#). **Note:** Information contained within this monograph is pending revision based on these more recent guidelines.

Canadian Cardiovascular Society, "2012 Heart Failure Management Guidelines Update: Focus on Acute and Chronic Heart Failure," [2012](#)

"HFSA 2010 Comprehensive Heart Failure Practice Guideline," [July 2010](#)

**Hypertension:**

"ACCF/AHA Expert Consensus Document on Hypertension in the Elderly," [2011](#)

"National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents," [May 2005](#)

"The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: The JNC 7 Report," [August 2004](#)

Hypertension.



# DAVIS' S DRUG GUIDE FOR NURSES 2012

## NURSING IMPLICATIONS



### ASSESSMENT

- Monitor mood changes and level of anxiety during therapy.
- Assess for suicidal tendencies, especially during early therapy. Restrict amount of drug available to patient. Risk may be increased for children or adolescents. After starting therapy, children and adolescents should be seen by health care professional at least weekly for 4 wks, every 2 wks for next 4 wks, and on advice of health care professional thereafter .
- Assess for sexual dysfunction (erectile dysfunction; decreased libido) .

### POTENTIAL NURSING DIAGNOSES

Ineffective coping (Indications).  
Risk for injury (Side Effects).  
Sexual dysfunction (Side Effects).  
(Indications).

### IMPLEMENTATION

- Do not administer escitalopram and citalopram concomitantly. Taper to avoid potential withdrawal reactions. Reduce dose by 50% for 3 days, then again by 50% for 3 days, then discontinue.
- **PO:** Administer as a single dose in the morning or evening without regard to meals.

### PATIENT/FAMILY TEACHING

- Instruct patient to take escitalopram as directed. Take missed doses on the same day as soon as remembered and consult health care professional. Resume regular dosing schedule next day. Do not double doses. Do not stop abruptly, should be discontinued gradually .
- May cause dizziness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Advise patient to avoid alcohol and other CNS-depressant drugs during therapy and to consult a health care professional before taking other Rx or OTC medications or herbal products.
- Instruct female patients to notify health care professional if pregnancy is planned or suspected or if they plan to breastfeed an infant.
- **Caution patients that escitalopram should not be used for at least 14 days after discontinuing MAO inhibitors, and at least 14 days should be allowed after stopping escitalopram before starting an MAO inhibitor.**
- Emphasize importance of follow-up exams to monitor progress.
- Encourage patient participation in psychotherapy to improve coping skills .
- Refer patient/family to local support groups.

### EVALUATION/DESIRED OUTCOMES

- Increased sense of well-being - Renewed interest in surroundings. May require 1-4 wk of therapy to obtain antidepressant effects. Full antidepressant effects occur in 4-6 wks .


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# Traumatic Brain Injury

Also called: Acquired brain injury, Head injury, Head trauma, TBI

Every year, millions of people in the U.S. sustain head and brain injuries. More than half are bad enough that people must go to the hospital. The worst injuries can lead to permanent brain damage or death.

Half of all traumatic brain injuries (TBIs) are due to [motor vehicle accidents](#). Military personnel are also at risk. Symptoms of a TBI may not appear until days or weeks following the injury. Serious traumatic brain injuries need emergency treatment.

Treatment and outcome depend on the injury. TBI can cause a wide range of changes affecting thinking, sensation, language, or emotions. TBI can be associated with [post-traumatic stress disorder](#). People with severe injuries usually need rehabilitation.

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- [Head Injuries: What to Watch for Afterward](#) (American Academy of Family Physicians)  
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- [Traumatic Brain Injury Interactive Tutorial](#) (Patient Education Institute)  
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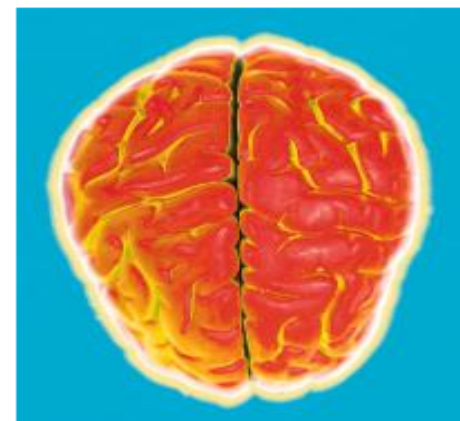
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- [Living with Brain Injury](#) (Brain Injury Association of America)
- [Traumatic Brain Injury](#) (Centers for Disease Control and Prevention)
- [Traumatic Brain Injury](#) **NIH** (National Institute of Neurological Disorders and Stroke) - Short Summary

## Latest News

- [Depression Common After Brain Injury](#) (04/19/2011, HealthDay)
- [Steroid May Help Cut Pneumonia Risk After Brain Trauma](#) (03/22/2011, HealthDay)
- [Learn TBI Signs, Symptoms and How to Respond](#) (03/07/2011, Centers for Disease Control and Prevention)

## Diagnosis/Symptoms

- [CT -- Head](#) (American College of Radiology, Radiological Society of North America)  
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- [Diagnosing Brain Injury](#) (Brain Injury Association of America)
- [Functional MR Imaging \(fMRI\) -- Brain](#) (American College of Radiology, Radiological Society of North America)  
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- [Brain Injury Treatment](#) (Brain Injury Association of America)
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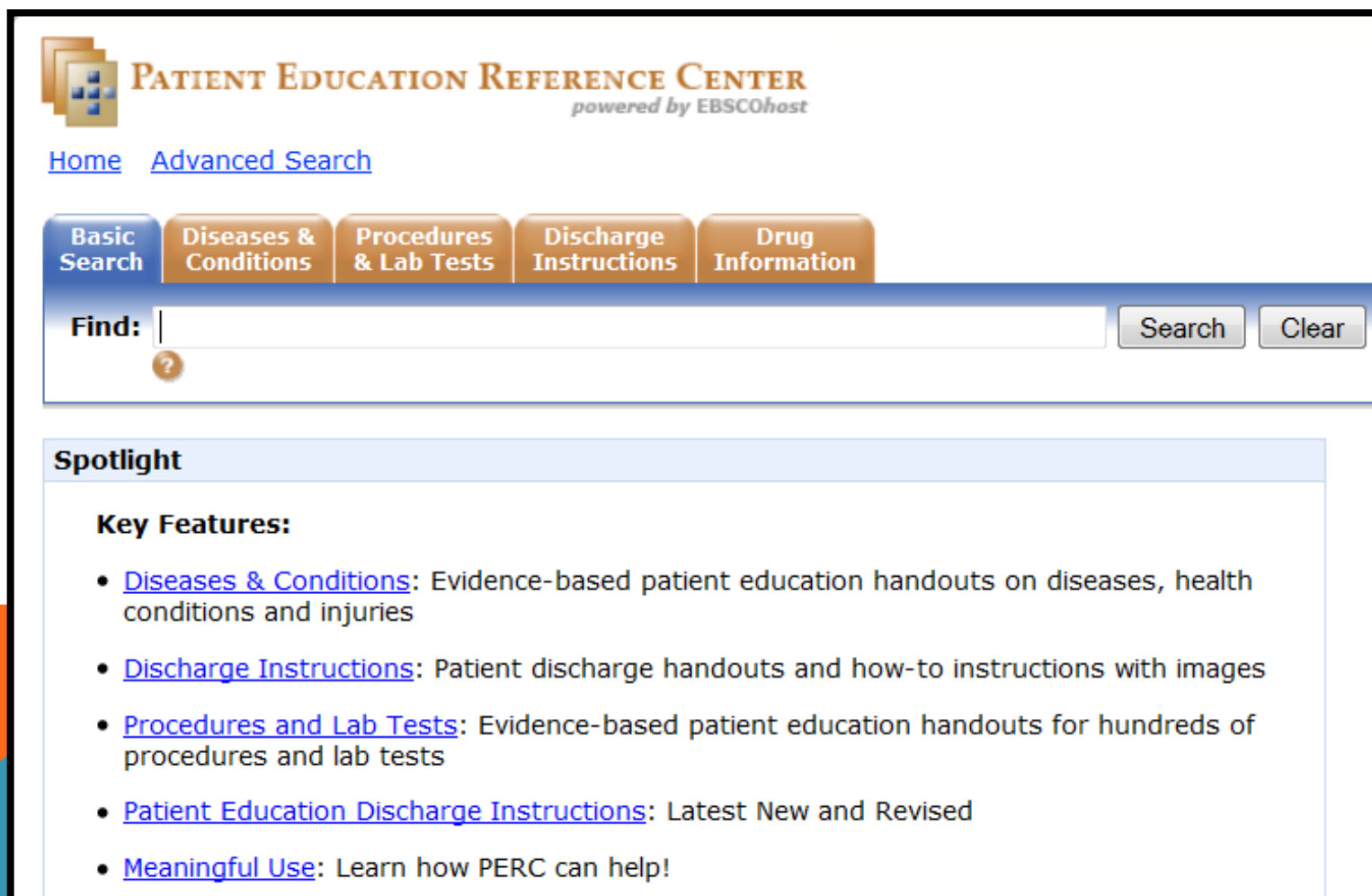
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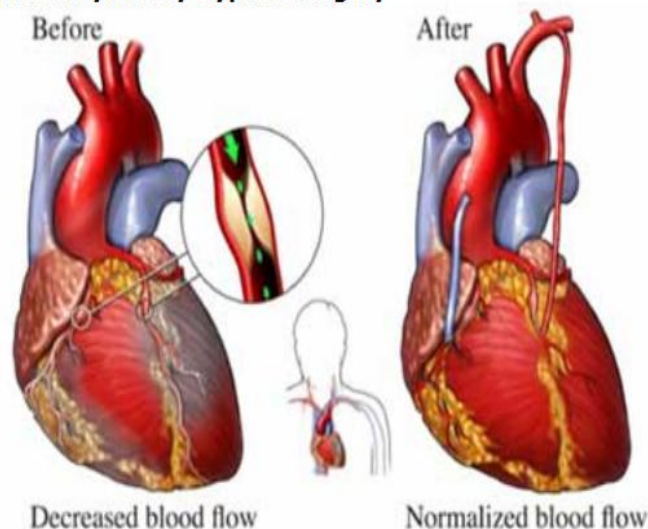
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### (CABG)

#### **Definition**

A coronary artery bypass graft (CABG) is a surgery to restore blood flow to the heart muscle. This is done by using blood vessels from other parts of your body to make a new route for blood to flow around blocked coronary (heart) arteries.

#### **Coronary Artery Bypass Surgery**



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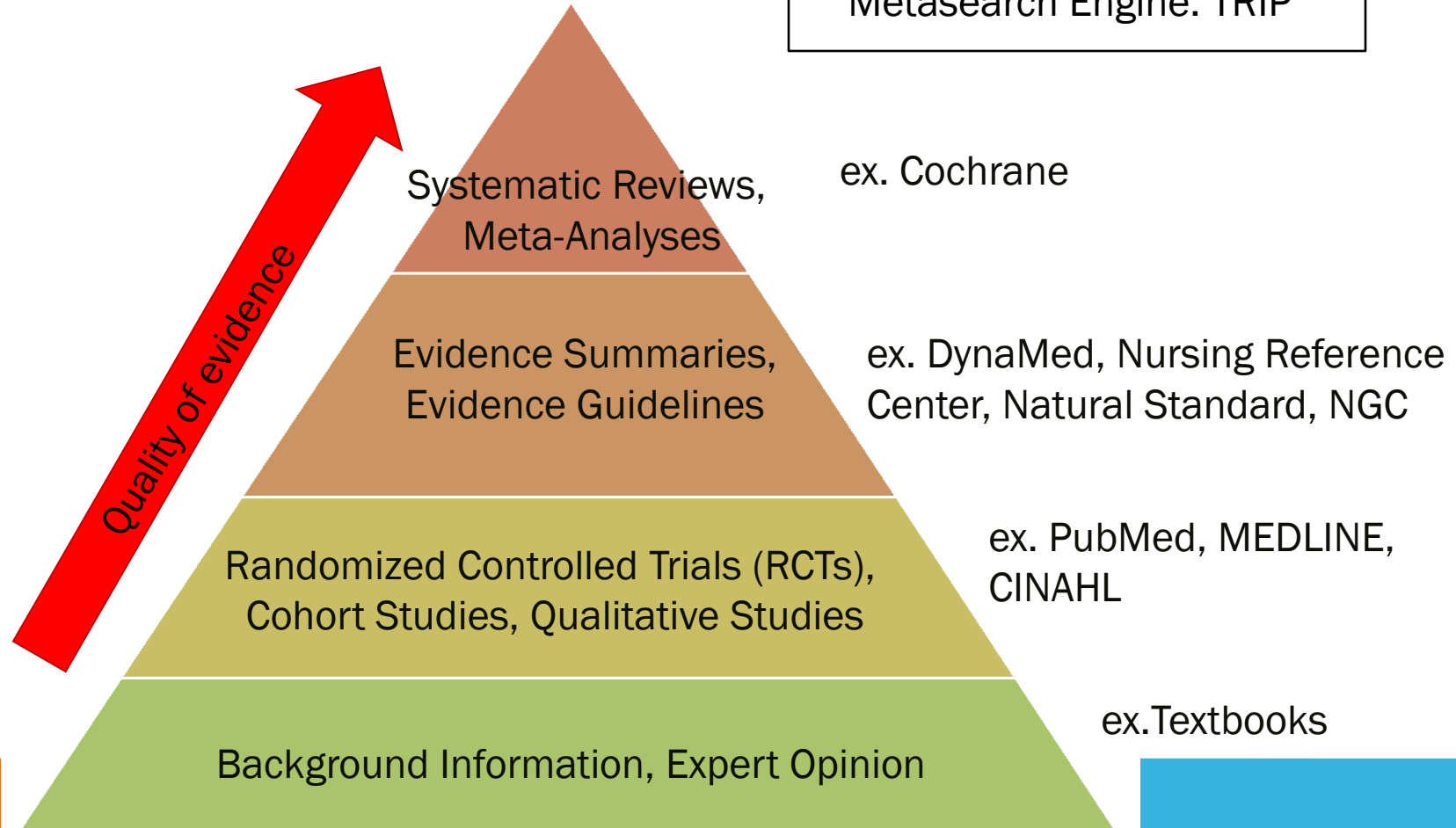
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Evidence-based  
Care Sheet  
Bariatric Surgery:  
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author(s)  
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Sara Grose

# EVIDENCE PYRAMID USING HEAL-WA RESOURCES

Metasearch Engine: TRIP



TOOLKITS

DATABASES

EBOOKS

EJOURNALS

REFERENCE

HELP

ABOUT

## news

Do you have opinions about medical cannabis?

Mar 07, 2014

LPNs Now Eligible

Feb 04, 2014

MDConsult cancellation

Dec 03, 2013

Six new professions added to HEALWA eligibility

Jul 15, 2013

VisualDx Mobile - New Download Instructions

Apr 08, 2013

## search

Go

### Diagnosis & Therapy ▾

DynaMed, VisualDx

### Guidelines & Evidence ▾

Cochrane

### Search for Articles ▾

PubMed, MEDLINE, CINAHL

### Drugs, Labs, Diagnostic Tests ▾

LexiComp

### Complementary & Alternative Medicine ▾

Natural Standard

### Prevention, Screening, Immunizations ▾

### Patient Care Management ▾

Nursing Reference Center

### Multicultural Information ▾

EthnoMed, RHIN

### Information for Patients ▾

MedlinePlus,  
Patient Ed Reference Center

### Contact HEAL-WA ▾

## access



Logged in

### Getting Started

Certain resources in HEAL-WA (indicated by a lock icon) require a HEAL-WA access code (UW NetID) and password for access.

Once you have set up your HEAL-WA access code and password, LOG IN to HEAL-WA by clicking on the "Log In" button at the top of this column.

LOG OUT from HEAL-WA by simply closing your browser.

[Set up your HEAL-WA access](#) - to set up a HEAL-WA access code and password, see the instructions on the [Getting Started](#) page.

BREAK





# GETTING RID OF SACRED COWS

The first step to get rid of them, is to  
identify them

So, what does this have to do with you?




# NWPC EVIDENCE BASED PROJECT

What you possess:

A healthy curiosity and newness to the environment

To complete this project, we encourage you to think about common perioperative practices you observe in the clinical setting in a systematic way:

- Time sensitive critical appraisal
  - Research findings
  - National Standards and Recommendations
  - Your clinical judgment
- 

# EVIDENCE BASED PRACTICE PROJECT

Ask yourself 2 questions about a practice you observe:

1. Is there current research to support this?
2. Why are we carrying out this practice?

If you can't find the answers to these basic questions about the practice

- It is time to formulate a question that will to guide an investigation to determine if evidence supports the practice
- We call this question a PICOT question

For example, you might wonder about “Does performing a timed 5 minute surgical hand scrub really reduce the risk of surgical infections?” Why 5 minutes?




To help answer the question we turn to research studies and other resources looking for “Evidence”

- ❖ Perioperative nurses follow standards of practice from the
  - ❖ American Nurses Association (ANA)
  - ❖ Association of periOperative Registered Nurses (AORN)
- ❖ AORN is our recognized authority on safe perioperative practices. It's mission is to advocate excellence in nursing practice.
- ❖ AORN's set of Standards and Recommended Practices are based on available evidence that helps determine the best patient care. Starting in 2010 the RP's have been evidence rated.



# DEVELOPING A PICOT QUESTION

## Use of PICOT format

- **P**atient or population
  - **I**ntervention or interest – nursing issue
  - **C**omparison intervention
  - **O**utcome of interest
  - **T**imeframe for the intervention to achieve the outcome
- 

# PICOT

**P** For Martini lovers, the best way to mix them.... (Population)

**I** Is it *shaken* versus... (Intervention)

**C** *Stirred* (Comparison)

**O** Ideal martini (Outcome)

**T** During Happy Hour (Time Frame)



# SURGICAL SCRUBBING EXAMPLE

- P When the Surgical Scrub Team
- I Utilizes a 3 minute timed surgical scrub technique
- C Versus a 5 minute timed surgical scrub technique
- O The 3 minute scrub technique is equally effective in reducing microorganisms on the hands and lower arms
- T Immediately after completion of the surgical scrub

**\*\*Assumption is that we have always been taught that the longer we scrub, the fewer microorganisms are present. But does it really matter if all the surfaces are adequately brushed within 3 minutes?**

# A RESEARCH REVIEW PROVIDED THIS INFORMATION:


- One perioperative sources states that a “two to five minute scrub .... Is effective” and this study is rated as a (level C).
- A different perioperative source states that “a properly executed surgical hand scrub, using the anatomic, counted, brush-stroke method usually takes approximately five minutes” (Level C)
- AORN Recommended Practices for Hand Hygiene advises that a “traditional, standardized surgical hand scrub ” be perfumed and further states that “ three-minute surgical hand scrubs are as effective as five minute hand scrubs.” (Level B)



## LEVELS OF EVIDENCE

<b>Level A (strongest)</b>	<b>Meta-Analysis, Systematic Reviews Example: Cochrane</b>
<b>Level B</b>	<b>Evidence Summaries, Evidence Guidelines Examples: AORN Standards and Recommended Practices, DynaMed, Nursing Reference Center, Natural Standard, NGC</b>
<b>Level C</b>	<b>Research Articles, Randomized Control Trials, Cohort Studies, Qualitative Studies Examples Medline, CINAHL</b>
<b>Level D (weakest)</b>	<b>Background Information, Expert Opinion Example: Textbook</b>

# FOR THE PRESENTATION

1. Develop a PICOT question related to perioperative practice and submit your PICOT question in writing to your instructor for feedback
  2. Perform an evidence search and document your search in a bibliography
  3. Based on your research, describe possible changes you would or would not recommend regarding your practice topic
  4. Utilize the PICOT power point template to present your PICOT project to your peers on graduation day
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# **PICOT PROJECT PRESENTATION TEMPLATE**

**(FOR INTERN USE ON PRESENTATION DAY)**

## **NWPC Evidence Based Project Presentation**

**Intern Name and Hospital**



# PICOT QUESTION

P- Population

I- Intervention or Interest

C- Comparison intervention

O- Outcome

T- Timeframe

**My PICOT Question:**

P-

I-

C-

O-

T-



# BIBLIOGRAPHY AND LEVEL OF EVIDENCE RATING

List your evidence using APA format :

Describe to the group how you would rate your evidence:

1. What do you think the level of evidence is for each of your listings?
2. Was your evidence useful for your PICOT intervention?
3. Did you have trouble finding research applicable your PICOT question?



# RECOMMENDATIONS

Based on your Evidence, describe the interventions you would or would not recommend

If your manager gave you the “go ahead” to implement your recommendation in your perioperative setting would you?

Yes, why?

No, why not?



# APA FORMAT EXAMPLES

## Journal article print:

Kendall, P.C., Stark, K.D., & Adam, T. (1990). Cognitive deficit or cognitive distortion of childhood depression. *Journal of Abnormal Psychology*, 18, 255-270.

## Journal article online with DOI:

Wilens, T.E., & Biederman, J. (2006). Alcohol, drugs, and attention-deficit/hyperactivity disorder: A model for the study of addictions in youth. *Journal of Psychopharmacology*, 20, 580-588.  
doi:<http://dx.doi.org/10.1177/0269881105058776>

## Journal article online without DOI:

Tang, P., Yuan, W., & Tseng, H. (2005). Clinical follow-up study on diabetes patients participating in a health management plan. *Journal of Nursing Research*, 13, 253-261. Retrieved from <http://search.ebscohost.com>

For APA format information, see:

**APA Formatting and Style Guide**

<https://owl.english.purdue.edu/owl/resource/560/01/>