



Health Sciences Libraries  
UNIVERSITY OF WASHINGTON

# Finding Evidence on the Web to Improve Wound Care: *Only a Click Away*

Janet G Schnall, MS, AHIP  
Information Management Librarian  
Health Sciences Libraries  
University of Washington, Seattle, WA  
schnall@u.washington.edu  
November 13, 2009

# Objectives

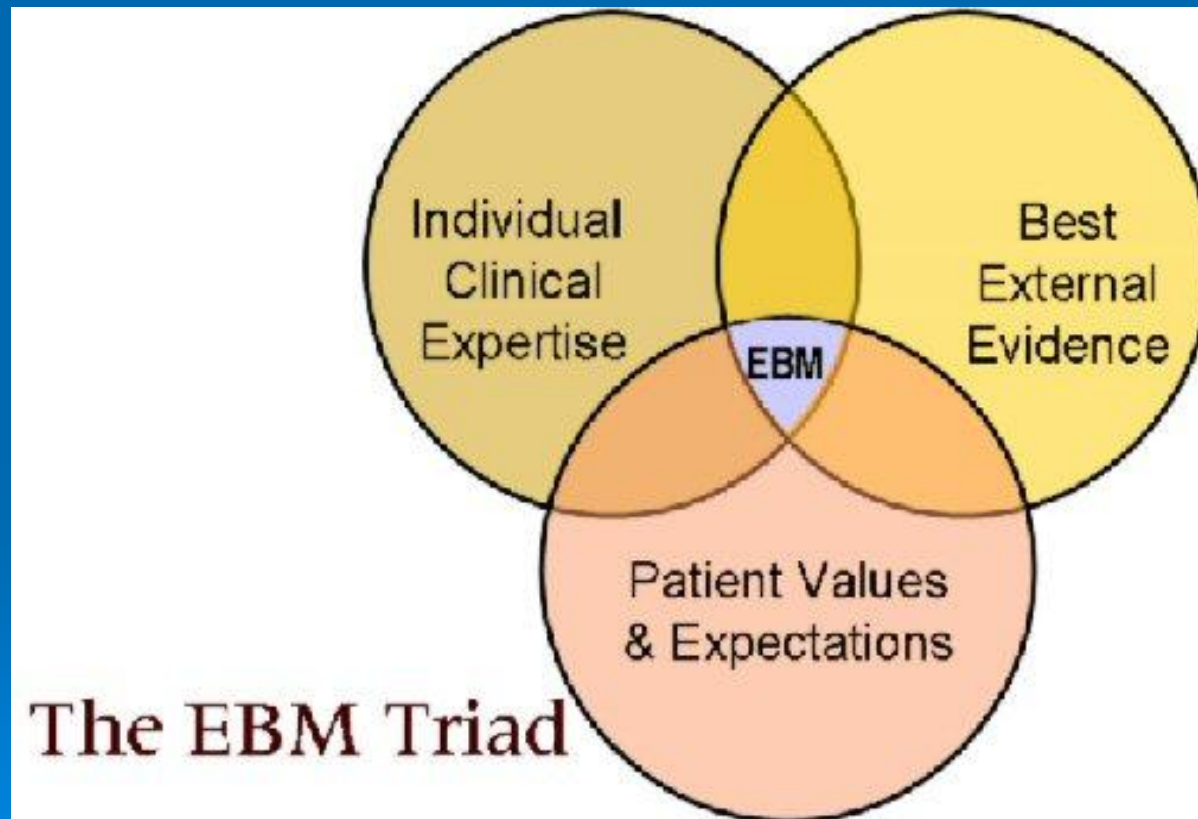
- Describe web resources to use for evidence-based nursing practice to improve wound care
- Locate e-resources on **HEAL-WA**, the health evidence website for Washington State nurses
- Identify strategies to improve searching skills to find appropriate evidence on the web to answer clinical questions

# What is evidence-based practice?

- 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.

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



# Why do nurses need to do EBP?

- Results in better patient outcomes:  
**Failure to use evidence results in lower quality, less effective and more expensive care.**
  - Berwick DM. Disseminating innovations in health care. *JAMA* 2003 Apr 16;289(15):1969-75.
- Standards of practice and “best practices” change over time
- Keeps practice current and relevant
- Increases confidence in decision making

# What makes good evidence?

## *Good*

- Based on scientific research
- RCT
- Systematic review
- Meta-analysis
- Clinical guidelines

## *Shoddy*

- Expert opinion
- Consensus
- Because it's been done this way for 100 years

# Are nurses ready for evidence-based practice?

- Many don't understand or value research
- Many have little or no training to help find evidence on which to base their practice
- Need time!

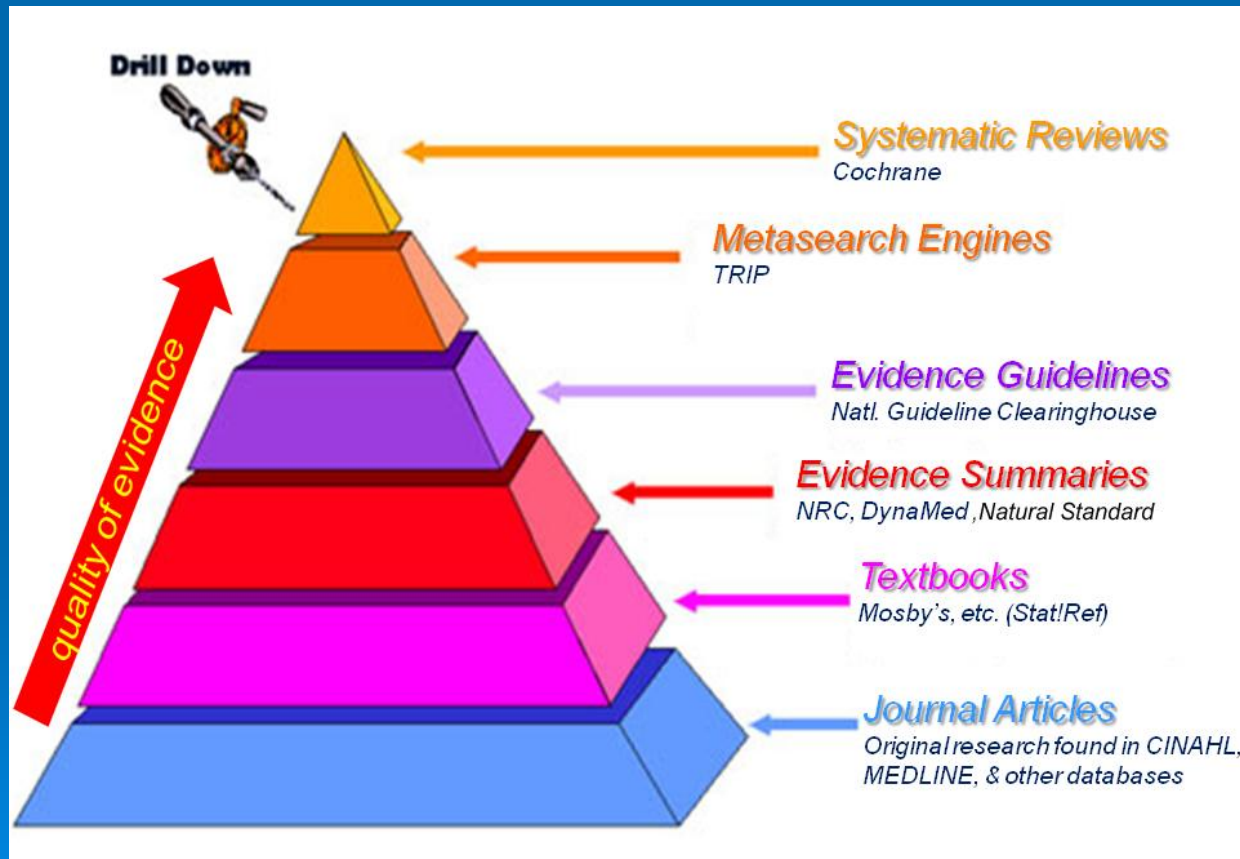
Pravikoff DS, Tanner AB, Pierce ST. Readiness of U.S. nurses for evidence-based practice. *American Journal of Nursing* 2005 Sep;105(9): 40-52.

# Levels and Grades of Evidence

## Levels of Evidence and Grades of Recommendations

Grade of recommendation	Level of evidence	Interventions
A	1a	Systematic review of randomized controlled trials
	1b	Individual randomized controlled trial
B	2a	Systematic review of cohort studies
	2b	Individual cohort study
	3a	Systematic review of case-control studies
	3b	Individual case-control study
C	4	Case series
D	5	Expert opinion without explicit critical appraisal or based on physiology or bench research

# Searching for Evidence Categories



Where can you find evidence  
only one click away?



# HEAL-WA *heal-wa.org*

## Health Electronic Resource for Washington

- Began: January 2009
- Website: offers online access to a collection of health information resources
- Who has access? selected health care providers in Washington **YES, NURSES !**
- Funded by: license fees
- Mission: provide you with evidence-based information to support patient care

# What is included in HEAL-WA?

- Resources: electronic databases, online texts, and e-journals
- Includes information resources specific to nurses, such as *CINAHL* and the *Nursing Reference Center*
- Other excellent resources: *MEDLINE*, *DynaMed*, *Cochrane*, *Natural Standard*
- Gives practitioners access to timely, evidence-based answers to patient care Q's

# How do I get to HEAL-WA?

- Site address: <http://heal-wa.org>
- Use the “Getting Started” links to set up your UW NetID and password
  - You will need your RN license number in order to set up your UW NetID (even if you hold an advanced practice license)



- Professional Toolkits
- Acupuncturist
- Chiropractor
- Massage Practitioner
- Mental Health Counselor, Psychologist, Licensed Social Worker
- Naturopath
- Optometrist
- Physician, PA, ARNP
- Podiatrist
- Registered Nurse

Welcome to HEAL-WA

HEAL-WA is a collection of health information resources funded by license fees from selected health care providers in Washington State. Its mission is to provide evidence-based information to support patient care.

MEDLINE® with Full Text is now available!

Getting Started

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

Set up HEAL-WA access - If you need to set up a HEAL-WA access code (UW NetID) and password, or if you have a UW NetID and need to add HEAL-WA affiliation to it, see the instructions on the Getting Started page.

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

If you have already set up your HEAL-WA access code (UW NetID) and password, log in to HEAL-WA by clicking on the "HEAL-WA Access" button at the upper right hand corner of the screen.

Dec 19, 2008 09

Influenza A (H1N1) Information

Influenza (Dynamed)

- US Centers for Disease Control and Prevention - Influenza A (H1N1)
- Washington State Department of Health Swine Influenza (H1N1) information
- H1N1 Influenza - Patient information on MedlinePlus
- Links to other Federal and Washington State information

Apr 17, 2009 11

News

- New, easier full text journal access Jul 28, 2009
- MEDLINE® with Full Text is now available! Jun 23, 2009
- New Clinical Calculators in DynaMed May 14, 2009
- PsycInfo and other databases now available Mar 06, 2009

Diagnosis & Therapy

- Dynamed (Diseases & Conditions)
- Merck Manual of Diagnosis and Therapy
- Merck Manual of Geriatrics

Guidelines & Evidence

- Cochrane Database of Systematic Reviews
- Clinical Information from the Agency for Healthcare Research and Quality
- National Guideline Clearinghouse
- PubMed Clinical Queries

Search for Articles

- MEDLINE® with Full Text

Drugs, Labs, Diagnostic Tests

- AHFS Drug Information® (2008)
- Drug Information Portal
- LactMed

Complementary & Alternative Medicine

- AMED (Alternative & Natural Medicine Database)
- Alt-HealthWatch
- Natural Standard

Prevention, Screening, Immunizations

- Guide to Clinical Preventive Services
- Immunization Schedules
- Red Book®: 2006 Report of the Committee on Infectious Diseases - 27th Ed.
- The Guide to Community Preventive Services (Community

Patient Care Management

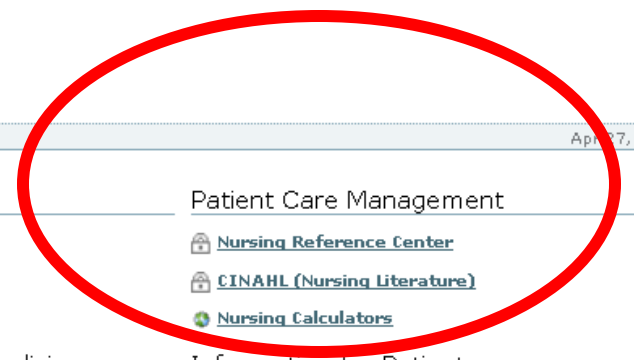
- Nursing Reference Center
- CINAHL (Nursing Literature)
- Nursing Calculators

Information for Patients

- AHFS Consumer Medication Information
- MedlinePlus - Health Information for Patients
- MedlinePlus Health Information in Other Languages (for patients)
- Merck Manual - Home Edition

Contact HEAL-WA

- Send Us Feedback
- Requesting Articles






# Registered Nurse

## Professional Toolkits



-  [Acupuncturist](#)
-  [Chiropractor](#)
-  [Massage Practitioner](#)
-  [Mental Health Counselor, Psychologist, Licensed Social Worker](#)
-  [Naturopath](#)
-  [Optometrist](#)
-  [Physician, PA, ARNP](#)
-  [Podiatrist](#)
-  [Registered Nurse](#)

## Registered Nurse




### Nursing Resources

-  [Nursing Reference Center](#)
-  [CINAHL \(Nursing Literature\)](#)
-  [MEDLINE® with Full Text](#)

### Calculators & Tools

-  [Nursing Calculators](#)
-  [MedCalc3000](#)





### Drugs, Labs, & Diagnostic Tests

-  [Davis's Comprehensive Handbook of Laboratory and Diagnostic Tests - with Nursing Implications - 2nd Ed. \(2006\)](#)
-  [Davis's Drug Guide for Nurses - 11th Ed. \(2009\)](#)
-  [Laboratory Tests and Diagnostic Procedures with Nursing Diagnoses - 7th Ed. \(2008\)](#)

### Complementary & Alternative Medicine

-  [Natural Standard](#)

### Patient Education

-  [Detailed Drug Information for the Consumer™](#)
-  [AAFP Conditions A to Z \(2009\)](#)
-  [MedlinePlus - Health Information for Patients](#)
-  [National Center for Complementary and Alternative Medicine Health Topics A-Z](#)

### Multicultural Information

-  [EthnoMed](#)

# ARNP

## Professional Toolkits




-  [Acupuncturist](#)
-  [Chiropractor](#)
-  [Massage Practitioner](#)
-  [Mental Health Counselor, Psychologist, Licensed Social Worker](#)
-  [Naturopath](#)
-  [Optometrist](#)
-  [Physician, PA, ARNP](#)
-  [Podiatrist](#)
-  [Registered Nurse](#)

## Physician, PA, ARNP




### Diagnosis & Therapy

-  [DynaMed \(Diseases & Conditions\)](#)
-  [Merck Manual of Diagnosis and Therapy](#)
-  [Current Medical Diagnosis & Treatment \(2009\)](#)

### Search for Articles

-  [PubMed Clinical Queries](#)
-  [MEDLINE@ with Full Text](#)
-  [MANTIS](#)

### Drugs

-  [AHFS Drug Information@ \(2008\)](#)
-  [Drug Information Portal](#)
-  [LactMed](#)




### Tools & Calculators

-  [MedCalc3000](#)

### Reference & Other Resources

-  [PAL: Partnership Access Line \(Mental Health Consultation Outreach for children\)](#)

### Information for Patients

-  [AAFP Conditions A to Z \(2009\)](#)
-  [MedlinePlus - Health Information for Patients](#)
-  [MedlinePlus Health Information in Other Languages \(for patients\)](#)

### Complementary & Alternative Medicine

-  [Natural Standard](#)

### Multicultural Information

-  [EthnoMed](#)



***Search for the Best Evidence  
to answer the Question***



# Search Databases Efficiently for Research Journal Articles: *MEDLINE* or *CINAHL*

## ➤ Primary literature:

References to original journal articles on a topic

- Some with full text links
- Most with abstracts

## ➤ You will see same interface when searching *MEDLINE* or *CINAHL* (or *Cochrane*) on HEAL-WA

# MEDLINE [on HEAL-WA] or PubMed *pubmed.gov*

- PubMed includes MEDLINE (1940's+)
- Indexes 5,000 biomedical journals
- Covers all aspects of biosciences and healthcare
- 75%-80% of citations have abstracts
- Updated 5x/week

# 2 *MEDLINE/PubMed* Strategies for Finding Evidence-Based Citations

## 1. Use Publication Type limits

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

## 2. Use Clinical Queries

# MEDLINE Search Screen

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

[HEAL-WA](#)



Suggest Subject Terms

hyperbaric oxygenation in MM Exact Major Subject Heading

and  wound healing in MM Exact Major Subject Heading

and  diabetic foot in Select a Field (optional) [Add Row](#)

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

## Narrow Results by

- Subject: Major Heading
  - Diabetic Foot therapy
  - Wound Healing physiology
  - Hyperbaric Oxygenation
  - Wound Healing
  - Hyperbaric Oxygenation methods
  - Diabetic Foot physiopathology[More >](#)
- Subject
- Publication
- Age
- Gender

Results: 1-20 of 21 Page: 1 [2](#) [Next](#)

Sort by: Date Descending

Results for: MM hyperbaric oxygenation and MM wound healing and... [Alert / Save / Share >](#)

● Search Mode: Boolean/Phrase

- [A three species model to simulate application of Hyperbaric Oxygen Therapy to chronic wounds.](#)   
Chronic wounds are a significant socioeconomic problem for governments worldwide. Approximately 15% of people who suffer from diabetes will experience a lower-limb ulcer at some stage of their li...  
(eng; includes abstract) By Flegg JA, McElwain DL, Byrne HM, Turner IW, Plos Computational Biology [PLoS Comput Biol], ISSN: 1553-7358, 2009 Jul; Vol. 5 (7), pp. e1000451; PMID: 19649306  
Database: MEDLINE with Full Text  
 [Add to folder](#)
- [Hyperbaric oxygen therapy for wound healing and limb salvage: a systematic review.](#)   
This article is a systematic review evaluating published clinical evidence of the efficacy of hyperbaric oxygen therapy (HBOT) for wound healing and limb salvage. The data source is the Ovid/Med...  
(eng; includes abstract) By Goldman RJ, PM & R: The Journal Of Injury, Function, And Rehabilitation [PM R], ISSN: 1934-1482, 2009 May; Vol. 1 (5), pp. 471-89; PMID: 19627935  
Database: MEDLINE with Full Text  
 [Add to folder](#)
- [Can major amputation rates be decreased in diabetic foot ulcers with hyperbaric oxygen therapy?](#)   
Although hyperbaric oxygen therapy has been used for diabetic foot ulcer since the 1980s, there is little information on its efficacy. The aim of this study is to evaluate whether hyperbaric oxyg...  
(eng; includes abstract) By Kaya A, Aydin F, Altay T, Karapinar L, Ozturk H, Karakuzu C, International Orthopaedics [Int Orthop], ISSN: 1432-5195, 2009 Apr; Vol. 33 (2), pp. 441-6; PMID: 18654777  
Database: MEDLINE with Full Text  
 [Add to folder](#)
- [Effect of hyperbaric oxygen therapy on healing of diabetic foot ulcers.](#)   
Hyperbaric oxygen therapy can be used as an adjunct to standard wound care in the treatment of diabetic patients with foot ulcers. We undertook a prospective, randomized investigation of the use ...

## Limit your results

- Full Text
- Abstract Available
- English Language

Filter by Publication Date:

1997 2009

[< Search Options](#)

Search modes ?

- Boolean
- Find all
- Find ar
- Smart

Can easily *limit* your search to:

Age groups  
 Human or Animal studies  
 Language  
 Research or Review articles  
 Subsets, such as Core Clinical Journals or  
 CAM or Nursing Journals

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 &amp; Citation Subset

HISTLINE History of Medicine

MEDLINE

Nursing

OLDMEDLINE

Languages

All

Afrikaans

Albanian

Arabic

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

Bioethics

Cancer

Publication Type

Periodical Index

Practice Guideline

Published Erratum

Randomized Controlled Trial

Research Support, N.H.L. Extramural

Animals

All

Cats

Cattle

Chick Embryo


wound healing diabetic foot

Search

Preview

Clear

## Advanced Search

 No history available - see [Help](#)

### Search History

- Search History will be lost after eight hours of inactivity.
- Search numbers may not be continuous; all searches are represented.

### Limit by Topics, Languages, and Journal Groups


#### Full Text, Free Full Text, and Abstracts

CLEAR

Links to full text    Links to free full text    Abstracts

#### Humans or Animals

CLEAR

  Humans    Animals


#### Gender

CLEAR

Male    Female


#### Type of Article

CLEAR

  Editorial  
 Letter  
 Meta-Analysis  
 Practice Guideline  
 Randomized Controlled Trial

#### Languages

CLEAR

  English  
 French  
 German  
 Italian  
 Japanese

#### Subsets

CLEAR

Core clinical journals  
 Dental journals  
 Nursing journals

#### Topics

AIDS

#### Ages

CLEAR

All Infant: birth-23 months  
 All Child: 0-18 years  
 All Adult: 19+ years  
 Newborn: birth-1 month  
 Infant: 1-23 months

Clear All

Search

NEW


# healthlinks.washington.edu/howto/pubmed


Back Search Favorites Media

Address <http://healthlinks.washington.edu/help/pubmed.html> Go Links

## PubMed at the UW

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=uw>

To watch the instructional video clips (see  VIDEO below) RealOne player is required ([download free player](#))


PubMed provides access to all of MEDLINE back to the mid-1960's and to additional life sciences journals. Updated daily.  VIDEO

### Basic Search Techniques VIDEO


Step 1: Enter your terms


Search PubMed for

Limits Preview/Index History Clipboard Details

Type any key word or phrase into the search box as shown above. Use an asterisk (\*) to retrieve variations on a word, e.g., *bacter\** retrieves *bacteria*, *bacterium*, *bacteriophage*, etc.  VIDEO

- **For a Subject Search:** Enter one or more words (e.g., *asthma drug therapy*) in the **query box** and click on **Go**. PubMed automatically combines (**ANDs**) terms together so that all terms or concepts are present and “translates” your words into MeSH terms.
- **For an Author Search:** Enter the author's name in the format of last name first followed by initials (e.g., *byrnes ca*).
- **For a Journal Search:** To retrieve articles from a specific journal use *PubMed's Journals Database* or *Single Citation Matcher* features (available from the left

 Try

 [Printer-friendly PDF version](#)

### Instructional Video Clips

- [Introduction](#) (1:54)
- [Basic search](#) (0:40)
- [Truncation](#) (0:15)
- [Limits](#) (3:14)
- [Viewing results](#) (2:28)
- [Connecting to fulltext](#) (3:44)
- [Printing and saving](#) (1:31)
- [Ordering articles](#) (2:13)
- [Documenting your search strategy](#) (0:31)
- [Related Articles](#) (0:50)
- [Clipboard](#) (1:42)
- [History](#) (2:12)
- [Single citation matcher](#) (0:30)
- [Clinical queries](#) (2:46)
- [MeSH Browser](#) (3:04)
- [Additional Help](#) (0:28)

Internet

# CINAHL or [CINAHL Plus]

*cinahl.com*

- Cumulative Index to Nursing and Allied Health Literature
- Provides coverage from 1982 [1937] to date, of nursing and 17 allied health disciplines literature
- 1700+ [3800+] journals indexed including virtually all English-language nursing journals
- Can easily search for **Research** articles

# CINAHL Search Screen

[New Search](#) | [Publications](#) | [CINAHL Headings](#) | [Cited References](#) | [More](#) ▾

[Sign In to My EBSCO](#)



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

Suggest Subject Terms

hyperbaric oxygenation in

**Search**

**Clear**



and  wound healing in

and  diabetic foot in

[Add Row](#)

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

## Search Options

### Search modes

- Boolean/Phrase
- Find all my search terms
- Find any of my search terms
- SmartText Searching [Hint](#)

Apply related words

Also search within the full text of the articles

## Limit your results

Full Text

Abstract Available

Published Date from   to

Peer Reviewed

Research Article

Exclude MEDLINE records

Clinical Queries

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

Publication Type

Standards  
Statistics  
Systematic Review  
Tables/Charts

Gender

Female  
Male

References Available

Publication Year from  to

Author

Publication

English Language

Exclude Pre-CINAHL

Evidence-Based Practice

Journal Subset

Africa  
Allied Health  
Alternative/Complementary Therapies

Language

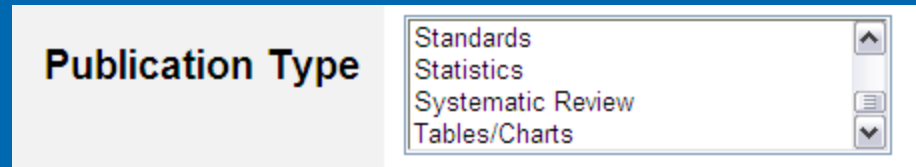
Afrikaans  
Chinese  
Danish

Pregnancy

Inpatients

# CINAHL Publication Type Limits

- Clinical trial
- Critical path
- Practice guidelines
- Research
- Standards
- Systematic review




# CINAHL Results

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

[HEAL-WA](#)

Suggest Subject Terms

hyperbaric oxygenation 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

Subject: Major Heading

- Wound Healing
- Diabetic Foot
- Foot Ulcer
- Leg Ulcer
- Wounds, Chronic
- Fibroblasts

[More >](#)

Publication

Age

Gender

Results: 1-12 of 12 Page: 1

Sort by:

Results for: hyperbaric oxygenation and diabetic foot and wound...  Options set [Alert / Save / Share >](#)

Search Mode: Boolean/Phrase

1. [Does hyperbaric oxygenation therapy benefit in the treatment of non-healing wounds in diabetic patients?](#)



As the incidence of diabetes mellitus type II is steadily increasing in our society, diabetic non-healing lower extremity wounds are complicating patient care. Hospitalization and amputation rate... (includes abstract); Novaleski C; Internet Journal of Academic Physician Assistants, 2009; 6 (2). (9p) (journal article - **research**, tables/charts) ISSN: 1092-4078 CINAHL AN: 2010177105

Database: CINAHL with Full Text

[Cited References: \(14\)](#)

link to full text

2. [Effect of hyperbaric oxygen therapy on healing of diabetic foot ulcers.](#) 

Hyperbaric oxygen therapy can be used as an adjunct to standard wound care in the treatment of diabetic patients with foot ulcers. We undertook a prospective, randomized investigation of the use ... (includes abstract); Duzgun AP; Satir HZ; Ozozan O; Saylam B; Kulah B; Coskun F; Journal of *Foot* & Ankle Surgery, 2008 Nov-Dec; 47 (6): 515-9 (journal article - clinical trial, **research**, tables/charts) ISSN: 1067-2516 PMID: 19239860 CINAHL AN: 2010124171

Database: CINAHL with Full Text

[Cited References: \(23\)](#)

3. [The case for evidence in wound care: investigating advanced treatment modalities in healing chronic diabetic lower extremity wounds.](#) 

BACKGROUND: Major complications of diabetes mellitus include lower leg and foot ulcers, which can result in amputation. Further study is needed to determine optimal treatments for these challengi... (includes abstract); Lyon KC; Journal of *Wound*, Ostomy & Continence Nursing, 2008 Nov-Dec; 35 (6): 585-90 (journal article - pictorial, **research**, tables/charts) ISSN: 1071-5754 PMID: 19018198 CINAHL AN: 2010121597

Database: CINAHL with Full Text

[Cited References: \(13\)](#)

link to full text

Limit your results

Full Text  
 References Available  
 Abstract Available

Filter by Publication Date:

1997 2009



1997

2009

[Search Options](#)  Options set

## WOUND CARE



## The Case for Evidence in Wound Care

### Investigating Advanced Treatment Modalities in Healing Chronic Diabetic Lower Extremity Wounds

Karen C. Lyon

**BACKGROUND:** Major complications of diabetes mellitus include lower leg and foot ulcers, which can result in amputation. Further study is needed to determine optimal treatments for these challenging wounds. Growth factor therapy and hyperbaric oxygen (HBO) treatments are 2 advanced therapeutic modalities that hold promise.

**PURPOSE:** This descriptive, retrospective review investigated healing rates of patients with diabetes mellitus and lower-extremity ulcers managed by growth factor therapy and HBO as compared to standard wound care.

**DESIGN:** Retrospective review of medical records.

**SUBJECTS AND SETTING:** We reviewed medical records of 89 patients with diabetes and lower-extremity wounds treated at a major outpatient wound care program in the southwestern United States.

**METHODS:** Patients were categorized according to 4 treatment modalities: (1) standard wound care, (2) growth factor therapy, (3) standard wound care plus HBO, and (4) growth factor therapy plus HBO. Wounds were measured at the start of the analysis and then weekly for a total of 8 weeks. The change in wound volume from the first to the eighth week was recorded.

**RESULTS:** All patient groups demonstrated healing with the patients who received growth factor therapy alone and those who received growth factor therapy and the HBO treatments demonstrating the greatest decrease in wound volume over the 8 weeks. A 2-by-2 factorial analysis of covariance demonstrated that patients who received HBO as part of their wound care regimen demonstrated significantly greater healing than patients who received only standard wound care or growth factor therapy ( $P < .0001$ ). Although the combination of hyperbaric and growth factor therapy did not show significant synergistic effects for wound healing in this study, it should be noted that the mean size of the wounds in this group was 2.8 times larger than the mean size of the wounds in the other groups.

**CONCLUSION:** Patients managed in a state-of-the-art wound care center experienced progress toward wound healing, regardless of the treatment modality selected. Those who received HBO as part of their wound care regimen healed faster than those who received standard treatment or growth factor therapy.

#### Introduction

It is estimated that 1 in 10 Americans suffers from diabetes mellitus (DM).<sup>1</sup> Diabetes mellitus has become endemic in the US population. Unhealthy eating habits coupled with an increasingly sedentary lifestyle and obesity are major contributing factors. Additionally, a familial link contributes to the increased incidence among Hispanics, African Americans, and Native Americans. It is well known that these populations have a higher incidence of diabetes than Caucasians, Asians, and other Europeans. Cardiovascular complications are the most common sequelae that result in death and disability among persons with DM. In the lower extremities, a combination of vascular disease and neuropathy (loss of protective sensation) leads to chronic foot and leg wounds.

#### Background

Approximately 15% of patients with diabetes will develop a lower-extremity ulcer during the course of their disease process.<sup>2</sup> What makes this number even more significant is the fact that 85% of persons with DM who ultimately succumb to lower-limb amputation started with a lower-leg ulcer. Even more compelling is the fact that survival rates for patients with DM who undergo lower-limb amputation are significantly less than those for age-matched, nondiabetics as well as for diabetics without limb loss.<sup>2</sup> These statistics provide persuasive reasons for aggressive treatment of lower-leg ulcers in using any and all means that will assist in healing the primary ulcer and preventing amputation.

In the elderly population, DM is complicated by comorbidities associated with aging such as chronic venous

■ Karen C. Lyon, PhD, APRN, CNS, CNA, CNOR, Associate Dean for Operations, Samuel Merritt College School of Nursing, Oakland, California.

Corresponding author: Karen C. Lyon, PhD, APRN, CNS, CNA, CNOR, Samuel Merritt College School of Nursing, 3100 Summit Street, 3rd Floor, Room 3454, Oakland, CA 94609 (klyon@samuelmerritt.edu).

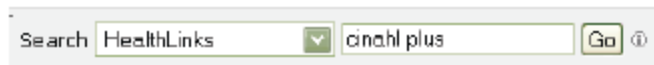
## Searching CINAHL Plus: Cumulative Index to Nursing and Allied Health Literature

### What is CINAHL Plus?

CINAHL Plus with Full Text provides access to the literature in nursing and 17 allied health disciplines dating back to 1937. Over 3500 journals are indexed including virtually all English language nursing journals along with selected titles in biomedicine, alternative therapies, and consumer health. It also offers access to Evidence-Based Care Sheets, searchable cited references, and over 300 research instrument descriptions.

### Getting Connected

Connect through the HealthLinks > Resources > Databases page, or type CINAHL Plus in the Search box on the upper right corner of HealthLinks and follow the link.



Search

- Searching for research instruments:
  - Search for a description of an instrument and possible full text using the research instrument Publication Type (PT): Type *Rosenberg self esteem scale* in one Search box and *research instrument* in another and select the Publication Type field.
  - Search for studies that use a particular instrument by using the Instrumentation (IN): Type *Rosenberg self esteem scale* and choose the Instrumentation field.

### Step 3: Combining Sets/Search History

- Click  next to the search box to remove the current search terms.
- Click  and select the search sets to combine by clicking the Add Search box, choose the desired Boolean operator (AND, OR, etc) from the Combine search with drop down box, and then  and .
- Alternatively, combine results by typing a search number into a new Search box, i.e. *and s2* or *( keyword(s) and s1)*, and click .

# 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

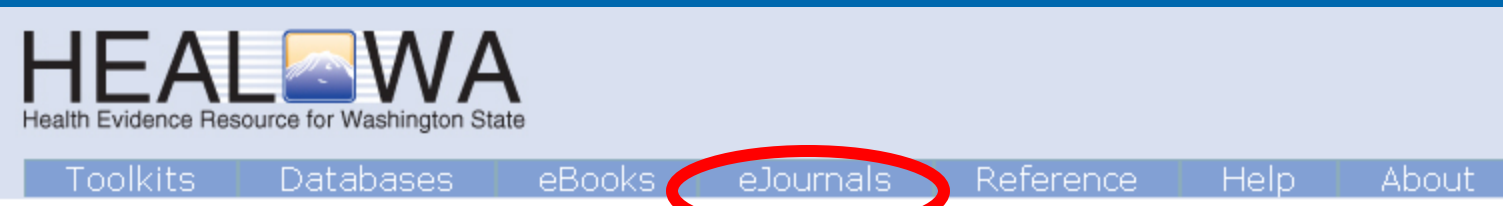
- Coverage: late 1940's+
- Indexes 5000 journals
- Focuses on biomedical literature
- Uses MeSH as its controlled vocabulary
- No peer-reviewed limit
- No cited references

# Locating E-Journals

- Check with **your library** for access to full-text e-journals
- For **UW Affiliates**: use the Proxy service to access full-text e-journals from off-campus  
*[healthlinks.washington.edu/howto/connect](http://healthlinks.washington.edu/howto/connect)*
- **Use HEAL-WA**
  - Includes *CINAHL* and *MEDLINE* links to full-text articles
  - **A-Z Journals**: 2,600 full-text journals

# Journals A-Z

2,600 full-text health-related journals



HEALWA Health Evidence Resource for Washington State

## eJournals

More than 2600 Full Text Journals

Titles | **Advanced Search** | eJournals Help | HEAL-WA Main Page

Find:  Search [Advanced search](#)

[0-9](#) ▶ [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Titles where title name begins with 'A': 314

Page list:  page: [next](#) ▶ [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#)

**AAACN viewpoint**  
[CINAHL with Full Text \(EBSCO Publishing\)](#) 2004 to present  
Publisher: American Academy of Ambulatory Care Nursing  
Subject: [Medicine and Health Sciences -- Nursing](#)

**AACN news**  
[CINAHL with Full Text \(EBSCO Publishing\)](#) 2004 to present  
ISSN: 1075-7732  
Publisher: American Association of Critical-Care Nurses  
Subject: [Medicine and Health Sciences -- Nursing](#)

**AANA journal**  
[CINAHL with Full Text \(EBSCO Publishing\)](#) 1981 to present  
ISSN: 0094-6354  
Publisher: American Association of Nurse Anesthetists  
Subject: [Medicine and Health Sciences -- Nursing](#); [Medicine and Health Sciences -- Anesthesiology](#)

# Email Alerts

- On EBSCO for MEDLINE and CINAHL
- On PubMed My NCBI:
  - Your personal space on the NLM computer system for storing search strategies, references, or creating email alerts
  - help: [healthlinks.washington.edu/howto/myncbi.html](http://healthlinks.washington.edu/howto/myncbi.html)



The screenshot shows the My NCBI sign-in page. At the top, there is a navigation bar with the NCBI logo and links for Home, PubMed, GenBank, and BLAST. Below this is the 'My NCBI' header. A 'Table of Contents' sidebar on the left lists: My NCBI Home, My Saved Data, Search Filters, Preferences, and About My NCBI. The main content area features a yellow banner with the text 'Use My NCBI to save your searches and data, and to set NCBI Web site'. Below the banner is a 'Sign into My NCBI' section with input fields for Username and Password, checkboxes for 'Keep me signed in' and 'Remember my username', and a green 'Sign In' button.










The screenshot shows the My NCBI user dashboard. At the top, there is a 'My NCBI' header. Below this is a 'Table of Contents' sidebar with links for: My NCBI Home, My Saved Data, Search Filters, Preferences, and About My NCBI. The main content area features a yellow banner with the text 'Use My NCBI to save your se'. Below the banner is a 'My Saved Data' section with the text 'You have:' and three items: 32 Saved Searches, 3 Collections, and 1 Bibliography. Below this is a 'Search Filters' section with the text 'You've set filters for:' and one item: PubMed.

# Search eBooks

- Summarize current standards of care, based on experiences of expert clinicians and results of research studies.
- Concise and easy to scan for relevant information, but ...
- Expensive and take years to publish, so information in them may be incomplete or inaccurate

# Search e-books on HEAL-WA: wound healing

-  [6. Wound Healing - Michael G. Franz, MD](#)  
**CURRENT DIAGNOSIS & TREATMENT SURGERY - 13th Ed. (2010)**  
6. **Wound Healing** - Michael G. Franz, MD ¶ Introduction ¶ Essentials of Diagnosis ¶ ♦ Types of Wounds ¶ ...
-  [Chapter 36. Skin Integrity and Wound Care](#)  
**KOZIER & ERB'S FUNDAMENTALS OF NURSING: CONCEPTS, PROCESS, AND PRACTICE - 8th Ed. (2008)**  
» Unit 8 - Integral Components of Client Care  
... ¶ The accompanying Practice Guidelines describe the principles of assessing common pressure sites. ¶ **WOUND HEALING** ¶ **Healing** is a quality of living tissue; it is also referred to as regeneration (renewal) of ...
-  [GOTU KOLA](#)  
**THE REVIEW OF NATURAL PRODUCTS (2009) » "G" MONOGRAPHS**  
... content also are available and have been studied in clinical trials in venous insufficiency and **wound healing** at doses of 30 to 90 mg/day  
**Wound-healing** studies have involved topical application of a hydrogel ...
-  [healing](#)  
**TABER'S® CYCLOPEDIA MEDICAL DICTIONARY - 21st Ed. (2009) » "H" Vocabulary » H disease — heart pump, nuclear-powered**  
... abuse, cancer), as well as the use of several drugs, including corticosteroids. SEE; illus: **WOUND HEALING**. ¶ **COMPLICATIONS:** These may result from the formation of a scar that interferes with the ...
-  [DRAGON'S BLOOD](#)  
**THE REVIEW OF NATURAL PRODUCTS (2009) » "D" MONOGRAPHS**  
... sangre de drago, drago ¶ **CLINICAL OVERVIEW** ¶ Uses: Dragon's blood has been used for its antiviral, **wound healing**, and GI benefits. ¶ Dosing: The standardized dragon's blood product SP-303 (Provir) has been studied ...
-  [Pressure Ulcers](#)  
**ACP PIER, Journal Club & AHFS DI® Essentials™ » ACP PIER: The Physicians' Information and Education Resource » Diseases Alphabetically » "P" Diseases**  
... well-designed, randomized, controlled trial showed that protein supplements improve **wound healing** (34). ¶ Comments: ¶ ..
-  [Edema reduction by mechanical compression improved the healing of foot infection in patients with diabetes mellitus](#)

# *Search for Clinical Practice Guidelines*



# Clinical Practice Guidelines

- Systematically developed statements of appropriate care designed to assist the practitioner and patient make decisions about appropriate health care for specific clinical circumstances
- Usually based on the most current available research if from reputable organizations
- Developed using widely varying standards
  - *Cost* may be considered as well as *health outcomes* or *politics*

# Practice Guidelines Resources

- National Guideline Clearinghouse [guideline.gov](http://guideline.gov)
- Nursing Reference Center [\[on HEAL-WA\] ebscohost.com](http://ebscohost.com)
- MEDLINE/PubMed [pubmed.gov](http://pubmed.gov) [\[on HEAL-WA\]](http://onheal.wa.gov)  
Limit to Practice Guideline under Publication Type
- CINAHL [\[on HEAL-WA\] cinahl.com](http://cinahl.com)  
Limit to Practice Guidelines under Publication Type
- Advanced Google or Google Scholar  
[google.com/advanced\\_search?hl=en](http://google.com/advanced_search?hl=en)  
[scholar.google.com](http://scholar.google.com)



**Search**

pressure ulcers

Results per page: 20

Search

[Search Help](#)  
[Detailed Search](#)  
[Frequent Searches](#)

- Browse**
- » [Disease / Condition](#)
  - » [Treatment / Intervention](#)
  - » [Measures](#)
  - » [Organization](#)
  - » [Guideline Index](#)
  - » [Guidelines In Progress](#)
  - » [Guideline Archive](#)

- Compare**
- » [View My Collection](#)
  - » [Guideline Syntheses](#)

## NGC Search Results

[Search Help](#) | [Guideline Comparison Help](#) | [Guideline Views](#) | [Quick Search Tips](#)

Your search criteria:

**Keyword:** *pressure ulcers*

Your search found 80 related guidelines, which are listed below by relevance. Use the "Limit Search" button to sort by publication date.

To view a guideline summary, click on a title below.

Items 1 to 20

- | Title                    |   |
|--------------------------|---|
| <input type="checkbox"/> | <a href="#">Pressure ulcer prevention and treatment following spinal cord injury</a> , Consortium for Spinal Cord Medicine - Private Nonprofit Organization<br>Paralyzed Veterans of America - Private Nonprofit Organization. 2000 Aug (reviewed 2005). 80 pages. NGC:001815<br><a href="#">Other Guidelines from this Developer</a> |
| <input type="checkbox"/> | <a href="#">Risk assessment &amp; prevention of pressure ulcers</a> , Registered Nurses' Association of Ontario - Professional Association. 2002 Jan (revised 2005 Mar). 80 pages. NGC:004215<br><a href="#">Other Guidelines from this Developer</a>   |
| <input type="checkbox"/> | <a href="#">Assessment and management of stage I to IV pressure ulcers</a> , Registered Nurses' Association of Ontario - Professional Association. 2002 Aug (revised 2007 Mar). 112 pages. NGC:005793<br><a href="#">Other Guidelines from this Developer</a>   |
| <input type="checkbox"/> | <a href="#">Pressure ulcers in the long-term care setting</a> , American Medical Directors Association - Professional Association. 1996 (revised 2008). 44 pages. NGC:006410<br><a href="#">Other Guidelines from this Developer</a>  |
| <input type="checkbox"/> | <a href="#">Preventing pressure ulcers and skin tears. In: Evidence-based geriatric nursing protocols for best practice</a> , Hartford Institute for Geriatric Nursing - Academic Institution. 2003 (revised 2008 Jan). 27 pages. NGC:006346<br><a href="#">Other Guidelines from this Developer</a>                                  |
| <input type="checkbox"/> | <a href="#">Pressure ulcer treatment. Health care protocol</a> , Institute for Clinical Systems Improvement - Private Nonprofit Organization. 2008 Jan. 28 pages. NGC:007032<br><a href="#">Other Guidelines from this Developer</a>  |



# Guideline Summary

## Brief Summary

### GUIDELINE TITLE

**Pressure** ulcer treatment. Health care protocol.

### BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). **Pressure** ulcer treatment. Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Jan. 28 p. [36 references]

### GUIDELINE STATUS

This is the current release of the guideline.

## BRIEF SUMMARY CONTENT

[RECOMMENDATIONS](#)

[EVIDENCE SUPPORTING THE RECOMMENDATIONS](#)

[IDENTIFYING INFORMATION AND AVAILABILITY](#)

[DISCLAIMER](#)

[Go to the Complete Summary](#)

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

**Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI):** For a description of what has changed since the previous version of this protocol, refer to [Summary of Changes Report- January 2008](#).

The recommendations for treatment of **pressure ulcers** are presented in the form of a protocol accompanied by 7 detailed annotations. Clinical highlights and the annotations follow.

Class of evidence (A-D, M, R, X) definitions are provided at the end of the "Major Recommendations" field.

#### Clinical Highlights

- The treatment of **pressure ulcers** should include an assessment specific to the wound, including the following elements: history and physical, etiology, psychosocial needs, nutritional status, wound assessment and documentation of these elements. (*Annotation #1*)
- The treatment of **pressure ulcers** should be consistent and evidence based. (*Annotation #2*)
- Education should be provided to the patient, family, caregivers and health care team members regarding treatment of **pressure ulcers**. (*Annotation #6*)

#### Special Considerations

Persons undergoing palliative or hospice care may need an alteration in their goals of care. The goals of care can shift from prevention and treatment to palliation and management of ulcer pain and odor [R].

#### Annotations for **Pressure** Ulcer Treatment

##### 1. Wound Assessment

###### Key Points:

- The assessment for **pressure** ulcer treatment should focus on the wound and following elements: history and physical, etiology, psychosocial needs,

## Guideline Comparison

<b>GUIDELINE TITLE</b>	<a href="#">Pressure ulcers in the long-term care setting.</a>	<a href="#">Preventing pressure ulcers and skin tears. In: Evidence-based geriatric nursing protocols for best practice.</a>	<a href="#">Pressure ulcer treatment. Health care protocol.</a>
<b>DATE RELEASED</b>	1996 (revised 2008)	2003 (revised 2008 Jan)	2008 Jan
<b>GUIDELINE DEVELOPER(S)</b>	American Medical Directors Association - Professional Association	Hartford Institute for Geriatric Nursing - Academic Institution	Institute for Clinical Systems Improvement - Private Nonprofit Organization
<b>INTENDED USERS</b>	Advanced Practice Nurses Allied Health Personnel Dietitians Nurses Pharmacists Physician Assistants Physicians Social Workers	Advanced Practice Nurses Allied Health Personnel Health Care Providers Hospitals Nurses Physician Assistants Physicians	Advanced Practice Nurses Allied Health Personnel Health Care Providers Health Plans Hospitals Managed Care Organizations Nurses Physician Assistants Physicians
<b>METHODS USED TO COLLECT/SELECT EVIDENCE</b>	Searches of Electronic Databases	Hand-searches of Published Literature (Primary Sources) Hand-searches of Published Literature (Secondary Sources) Searches of Electronic Databases	Searches of Electronic Databases
<b>METHOD OF GUIDELINE VALIDATION</b>	External Peer Review Internal Peer Review	External Peer Review Internal Peer Review	Internal Peer Review
<b>VIEW MAJOR RECOMMENDATIONS</b>	<a href="#">View Major Recommendations</a>	<a href="#">View Major Recommendations</a>	<a href="#">View Major Recommendations</a>
<b>VIEW AVAILABILITY OF FULL TEXT</b>	<a href="#">View Availability Information</a>	<a href="#">View Full-text Guideline</a>	<a href="#">View Full-text Guideline</a>

# Search for Evidence Summaries

- DynaMed [on HEAL-WA]  
*[www.ebscohost.com/dynamed](http://www.ebscohost.com/dynamed)*
- Nursing Reference Center [on HEAL-WA]  
*[www.ebscohost.com](http://www.ebscohost.com)*

# DynaMed [on HEAL-WA]

[www.ebscohost.com/dynamed](http://www.ebscohost.com/dynamed)

- Provides summaries of the best evidence for over 3,000 clinical topics
- Can quickly browse and find key recommendations
- Updated daily
- Links out to full-text articles HEAL-WA has access to
- Download available for PDA and iPhones

Find:

Search

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#)  
[Z](#)

[Browse by Category](#)

## Diabetic foot ulcer

 Search within text [Expand All](#) [Collapse All](#)      

Get CME For This Search

You are viewing a DynaMed summary. Use of DynaMed indicates acceptance of [DynaMed Terms of Use](#). Limitations of DynaMed are contained in the [DynaMed Terms of Use](#).

Top

General Information  
(including ICD-9/-10 Codes)

### Diabetic foot ulcer

Updated 2009 Oct 27 12:36 PM: review of foot ulcers and amputations in diabetes (Am Fam Physician 2009 Oct 15) [update](#)  
granulocyte-colony stimulating factor (G-CSF) may reduce amputation risk in patients with diabetic foot infections (Cochrane Database Syst Rev 2009 Jul 8) [update](#)  
ACR Appropriateness Criteria for suspected osteomyelitis in patients with diabetes mellitus (National Guideline Clearinghouse 2009 Jun 28)

Causes and Risk Factors

Complications and  
Associated Conditions

#### Related Summaries:

- [Diabetes mellitus type 1](#)
- [Diabetes mellitus type 2](#)
- [Diabetic neuropathy](#)
- [Physician Quality Reporting Initiative \(PQRI\) 2009 Physician Quality Measures](#)

History

Physical

Diagnosis

▶ [General Information \(including ICD-9/-10 Codes\)](#)

Prognosis

▶ [Causes and Risk Factors](#)

Treatment

▶ [Complications and Associated Conditions](#)

Prevention and Screening

▶ [History](#)

Quality Improvement

▶ [Physical](#)

References including  
Reviews and Guidelines

▶ [Diagnosis](#)

▶ [Prognosis](#)

▶ [Treatment](#)

Patient Information

▶ [Prevention and Screening](#)

Acknowledgements


▶ [Quality Improvement](#)

▶ [References including Reviews and Guidelines](#)

Send Comment to Editor

▶ [Patient Information](#)

## Low-molecular-weight heparins:



- **dalteparin improves healing of chronic foot ulcers in patients with diabetes and peripheral arterial disease (level 1 [likely reliable] evidence)** ←
  - based on randomized trial
  - 87 patients randomized to dalteparin (Fragmin) 5,000 units vs. saline subcutaneously once daily until ulcer healing or maximum 6 months
  - comparing dalteparin vs saline
    - ulcer healing with intact skin in 32% vs. 21% (NNT 10)
    - ulcer area decreased by 50% or more (or healed) in 67.4% vs. 47.6% (NNT 5)
    - amputation in 4.5% vs. 18.6% (NNT 7)
  - Reference - [Diabetes Care 2003 Sep;26\(9\):2575 full-text](#), commentary can be found in Evidence-Based Medicine 2004 May-Jun;9(3):73
- **bemiparin may not improve complete ulcer healing in patients with chronic diabetic foot ulcers (level 2 [mid-level] evidence)**
  - based on randomized trial with inadequate power to rule out clinically significant differences
  - 70 diabetic patients > 8 years old with foot ulcer > 3 months randomized to bemiparin vs. placebo
    - bemiparin 3,500 units/day given for 10 days followed by 2,500 units/day for ≤ 3 months
    - both groups received usual care
  - comparing bemiparin vs. placebo
    - ulcer improvement by digital photography in 70.3% vs. 45.5% (p = 0.035, NNT 4, 95% CI for NNT 2-43)
    - complete healing at 3 months in 35.1% vs. 33.3% (not significant)
    - similar number of adverse events between groups
  - Reference - [Diabet Med 2008 Sep;25\(9\):1090](#)  [EBSCOhost Full Text](#) ←

## Granulocyte-colony stimulating factor (G-CSF):

- **granulocyte-colony stimulating factor (G-CSF) may reduce amputation risk in patients with diabetic foot infections (level 2 [mid-level] evidence)**
  - based on Cochrane review with clinical heterogeneity of studies
  - systematic review identified 5 randomized trials comparing G-CSF to placebo or no added growth factor in 167 patients with diabetic foot infections
  - all patients received usual care with antibiotics
  - clinical heterogeneity of studies included
    - patients with varying degrees of infection severity

## Guidelines:

### United States guidelines:

- Infectious Diseases Society of America (IDSA) guideline on diagnosis and treatment of diabetic foot infections can be found in [Clin Infect Dis 2004 Oct 1;39\(7\):885](#)  [EBSCOhost Full Text full-text](#) or at [National Guideline Clearinghouse 2005 Jan 31:5888](#), summary can be found in [Am Fam Physician 2005 Apr 1;71\(7\):1429](#)
- Wound Healing Society guideline for treatment of diabetic ulcers can be found in [Wound Repair Regen 2006 Nov-Dec;14\(6\):680](#)  [EBSCOhost Full Text](#)
- American College of Foot and Ankle Surgeons clinical practice guideline on diabetic foot disorders can be found in [J Foot Ankle Surg 2006 Sep-Oct;45\(5 Suppl\):S1](#) or at [National Guideline Clearinghouse 2007 Jan 22:9846](#)
- American Diabetes Association (ADA) guidelines
  - American Diabetes Association (ADA) standards of medical care in diabetes can be found in [Diabetes Care 2009 Jan;32 Suppl 1:S13 full-text](#)
  - prevention and management of diabetes complications can be found in [Diabetes Care 2007 Jan;30\(Suppl 1\):S15-24](#) or at [National Guideline Clearinghouse 2008 Jun 2:12185](#)
  - policy statement on preventive foot care in diabetes can be found in [Diabetes Care 2004 Jan;27\(suppl 1\):S63-S64](#)
- American Society of Plastic Surgeons guideline on chronic wounds of lower extremity can be found at [National Guideline Clearinghouse 2007 Nov 5:11513](#)
- Wound, Ostomy, and Continence Nurses Society (WOCN) guideline for management of wounds in patients with lower-extremity neuropathic disease can be found at [National Guideline Clearinghouse 2005 Jan 17:5912](#)

# Nursing Reference Center

[on HEAL-WA] *ebscohost.com*

## ➤ Evidence-based summaries

- Diseases & Conditions
- Evidence-based Care Sheets
- Quick Lessons
- Information about drugs and medicationsa
- Skills & Procedures
- Patient Education

- Basic Search**
- Diseases & Conditions
- Skills & Procedures
- Drug Information
- Patient Education
- Practice Resources
- Continuing Education

Browse for:  in   

**Alphabetical**  Relevancy Ranked

Page: [Previous](#) | [Next](#)    [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) 

- [Waardenburg Syndrome](#)
- [Wandering Patient Interventions](#) 
- [Warfarin Sodium \(Coumadin®\)](#)
- [Water Intoxication](#)
- [Water Intoxication in Children](#)
- [Wegener's Granulomatosis](#)
- [Weight Loss, Unintentional: an Overview](#)
- [Wellbutrin](#)
- [Wernicke's Encephalopathy](#)
- [West Nile Virus Infection](#)
- [Whipple's Disease](#)
- [Wiskott-Aldrich Syndrome](#)
- [Withdrawal Syndrome, Alcohol](#)
- [Wolff-Parkinson-White Syndrome](#)
- [Women and Alcohol Abuse](#)
- [Workplace Violence: an Overview](#) 
- [Wound Botulism](#)  
- [Wounds, Chronic: Hyperbaric Oxygen Therapy](#)

## Botulism, Wound

## Evidence-based care sheet

### Contents

[What We Know](#)

[What We Can Do](#)

[References](#)

[Reviewer\(s\)](#)

### Evidence-Based Care Sheet

By: Suzanne Pinto, MSW; Sharon Richman, MSPT, Physical Therapist

Edited by: Diane Pravikoff, RN, PhD, FAAN

Cinahl Information Systems

### What We Know

- Botulism is a rare paralytic neuromuscular disease caused by the bacterium *Clostridium botulinum*, which is generally found in soil. *C. botulinum* is an anaerobic (i.e., grows without oxygen) bacterium. It produces nerve toxins that

are absorbed into the bloodstream and inhibit acetylcholine release, resulting in impaired motor function and **potentially life-threatening** illness<sup>(1)(5)(6)(9)</sup>

- *C. botulinum*, which can be used as a **bioweapon**, can spread via contaminated food products or by inhalation. The U.S. Centers for Disease Control and Prevention (CDC) has classified botulism as a category A agent
- Three main clinical forms of botulism are infant botulism, foodborne (referred to as classic) botulism, and wound botulism<sup>(1)(5)(6)(9)</sup>
  - Wound botulism results from *C. botulinum* spores entering an open wound<sup>(1)(5)(7)(9)</sup>
    - Symptoms may not develop for up to 2 weeks
    - The wound may appear benign throughout the infectious episode, or cellulitis or abscesses may develop
    - Systemic symptoms include fatigue, vertigo, muscle weakness, double or blurred vision, drooping eyelids, fever, difficulty swallowing or speaking, sore throat, dry mouth, and dyspnea
      - Unlike foodborne botulism, gastrointestinal disturbances (e.g., nausea, vomiting, diarrhea) are rare in wound botulism
- Potential complications of wound botulism include descending paralysis, aspiration pneumonia, respiratory failure, and death<sup>(5)</sup>
- Risk factors for the development of wound botulism include injection drug use (especially of black tar heroin), trauma (e.g., crush injury, compound fractures), sinusitis from intranasal drug use, and surgery (e.g., cesarean delivery)<sup>(1)(5)(7)</sup>
  - Patient history may include drug abuse or recent traumatic injury, typically with wounds that are contaminated with soil<sup>(7)</sup>
- Diagnosis is made by wound cultures, which can identify presence of *C. botulinum* in a wound<sup>(5)</sup>
- Treatment of wound botulism includes supportive care, including mechanical ventilation; prescribed antitoxins and antibiotics (e.g., penicillin); parenteral nutrition; and surgical wound debridement<sup>(1)(5)(7)(9)</sup>
- Facts and figures
  - In 2003, there were 126 cases of botulism reported in the United States; wound botulism accounted for about 23.8% of these cases

### Related Information

- [Quick Lessons](#)
- [Evidence-Based Care Sheets](#)
- [Drugs](#)
- [Patient Education](#)
- [Guidelines](#)
- [Books](#)
- [Legal Cases](#)
- [News](#)



# Quick Lessons

## quickLESSON about...

### Wound Dressings: Composite

#### What are Composite Wound Dressings?

- ▶ Composite wound dressings are dressings that are manufactured as a combination of two or more different products. They may, for example, contain a bacterial barrier, plus foam, hydrocolloid, and/or other components. These dressings may be adherent or nonadherent
- ▶ These dressings are used in both inpatient and outpatient care settings. They may be applied by nurses, physicians, and other licensed healthcare providers who have been trained in their use. When patients are cared for in the home, they may be applied by a properly trained family member. It is very important, however, that the healing wound be regularly evaluated by a nurse or physician to identify potential problems in wound healing

#### Why Composite Wound Dressings Were Ordered

- ▶ These dressings protect the wound surface and promote healing by various methods, depending on the materials contained in them

#### Why Composite Wound Dressings are Important

- ▶ Composite wound dressings are useful as primary or secondary dressings for partial- and full-thickness wounds, minimally to heavily draining wounds, dermal ulcers, and surgical incisions; some types are suitable for prevention and/or treatment of pressure ulcers
- ▶ Most composite wound dressings have an adhesive border and are easy to apply and remove. They conform well to the wound surface and are available in many sizes and shapes
- ▶ Frequency of composite wound dressing changes varies, so check product information

#### Facts and Figures

- ▶ Some types of composite dressings do not provide a moist healing environment and cannot be used on dry wounds (e.g., third-degree burns) and are contraindicated for stage IV pressure ulcers
- ▶ The adhesive borders of composite dressings may limit their use on fragile skin
- ▶ Frequency of composite wound dressing changes varies, so check product information for the particular type you are using

#### What You Need to Know Before Applying Composite Wound Dressings

- ▶ Refer to the facility protocol, if available
- ▶ Identify patient per facility protocol
- ▶ Verify physician's order or facility policy on composite wound dressings
- ▶ Verify whether or not patient is allergic to latex. If so, use non-latex gloves during the dressing change
- ▶ Read product information for the type of composite dressing you are applying. Confirm that it is appropriate for the patient's wound type, and read the manufacturer's instructions for applying the dressing
- ▶ Because some dressing changes are painful, assess patient for a history of procedural pain and anticipatory anxiety
  - If patient is responsive, ask whether pain was experienced during prior dressing changes. If so, ask him/her to rate this pain on a 1 to 10 scale. Administer prescribed analgesic proactively 30 minutes before the procedure, as appropriate
  - If patient reports anxiety, teach deep-breathing exercises or other stress reduction techniques, as needed
  - If patient is unresponsive, do not assume that he/she will not experience pain. If pain appears likely during the dressing change, administer prescribed analgesic proactively 30 minutes before you begin the procedure
  - Record the above information in the patient's medical record

#### What Will Happen During Application of Composite Wound Dressings

- ▶ Assemble supplies:
  - Clean gloves

- Sterile gloves
  - Sterile saline or other cleansing solution
  - Sterile scissors
  - The appropriate type and size of composite wound dressing
  - A sterile procedure pack or other materials to maintain a sterile field, if needed
  - Waterproof bag for disposal of soiled dressing change materials
- ▶ Wash your hands and don clean gloves
  - ▶ Remove existing dressing from wound site using clean technique
  - ▶ Inspect wound appearance for exudate and integrity, and gently palpate the wound edges for drainage and/or boggy areas. Ask the patient if palpation causes any increase in pain
  - ▶ If wound appearance suggests the presence of infection, use sterile technique to collect a sample of wound drainage for culture and sensitivity testing
  - ▶ Wash your hands again and don sterile gloves, maintaining a sterile field, if appropriate
  - ▶ Cleanse the wound site and the surrounding skin to remove surface bacteria and soiling to reduce the chance of wound infection
  - ▶ Blot excess moisture from the wound surface and dry intact skin around the wound
  - ▶ Assess and measure the wound for subsequent documentation in the patient's medical record
  - ▶ Open the dressing package, remove the dressing, and use the sterile scissors to trim the dressing to a size that will overlap the wound by 3 to 4 cm on all sides
  - ▶ Apply the composite dressing according to manufacturer's directions. Apply a secondary dressing to secure the composite dressing, if needed
  - ▶ Remove and dispose of soiled gloves
  - ▶ Clean or dispose of soiled dressing change materials according to facility protocol
  - ▶ Wash your hands again
  - ▶ If you suspect wound infection, consult facility protocol or contact the treating clinician for further orders
  - ▶ Assess patient for pain and anxiety during the procedure, and adjust the above interventions as necessary. If patient reports pain, ask him/her to rate it on a 1 to 10 scale, and administer prescribed analgesics, as appropriate. Reassess pain in 30 minutes, and provide prescribed analgesia, as appropriate
  - ▶ Record the above procedures, findings, and interventions in the patient's medical record

#### Other Tests, Treatments, or Procedures That May Be Necessary Before or After Composite Wound Dressings are Applied

- ▶ Culture and sensitivity testing of wound drainage may be ordered if the appearance of the wound suggests infection

#### What to Expect After Composite Wound Dressings are Applied

- ▶ The patient will be pain-free after the dressing change. If not, the patient's pain will be appropriately assessed and treated
- ▶ The patient will comfortably return to prior level of physical activity

#### Red Flags

- ▶ Fever, increasing wound pain, and changes in wound drainage should be reported promptly to the treating clinician because these findings suggest wound infection
- ▶ High fever, restlessness, and disorientation may indicate worsening wound infection and/or sepsis. These findings should be reported immediately to the treating clinician

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

- ▶ Encourage discussion about all questions and concerns the patient/family may have about the dressing change procedure
- ▶ Instruct the patient/family about signs and symptoms of wound infection and explain that these changes should be reported immediately to their nurse, treating clinician, or other health care provider
- ▶ Explain how the patient's nurse or doctor can be contacted
- ▶ Reinforce the above teaching with written patient education materials

#### References

- Barcock, S. (2005). Woundwedge: A myriad of analgesic options. *Home Healthcare Nurse*, 23(5), 307-311.
- Barcock, S. (2005). Wound & skin care: Choosing a wound dressing part 1. *Nursing*, 33(1), 50-61.
- Barcock, S. (2005). Wound & skin care: Choosing a wound dressing part 2. *Nursing*, 33(2), 44-50.
- Collier, M. (2002). Understanding the principles of wound management. *Journal of Wound Care*, 13(1) (Suppl.), S7-S10.
- Hess, C. (2002). When to use composite dressings. *Advances in Skin & Wound Care*, 13(4), P11-112.
- Jones, A. H., & Ben Niguel, L. (2005). Are modern wound dressings a distinct and effective alternative to the use of gauze? *Journal of Wound Care*, 15(2), 65-69.

**Author**  
Nathalie Smith, RN, MSN, CNP

**Reviewers**  
Dawn Stone, MN, APRN, BC,  
ANP, COHN-S  
Associate Professor  
College of Graduate Nursing,  
Western University of Health Sciences  
Reno, California

**Darlene A. Strayer, RN, MBA**  
Oral Information Systems  
Glendale, California

**Nursing Practice Council**  
Glendale Adventist Medical Center  
Glendale, California

**Editor**  
Diane Pavlikoff, RN, PhD, FAAN  
Oral Information Systems

May 1, 2009

Browse for:

Alphabetical  Relevancy Ranked

- [Aboriginal, Navajo Patients: Providing Culturally Co](#)
- [Access Device, Central Venous, Blood Sampling th](#)
- [Accidental Hypothermia Management](#)
- [Administration of Medication: Intramuscular](#)
- [Administration of Medication: Subcutaneous Infus](#)
- [Administration of Medications: Nasal Instillation](#)
- [Administration of Medications: Nasogastric Tube](#)
- [Administration of Medications: Rectal Suppository](#)
- [Administration of Medications: Vaginal Instillation](#)
- [Administration of Medications: Z-track Injection](#)
- [Adolescent Hmong Patients: Providing Culturally C](#)
- [Adult Cardiopulmonary Resuscitation \(CPR\)](#)
- [Airway Obstruction: Managing](#)
- [Alginate Absorptive Wound Dressings](#)
- [Alternative and Complementary Medicine, Use of - Providing Cultu](#)
- [Ambu-Bag®: Use of](#)
- [Amish Patients: Gynecological and Obstetrical Care - Providing Cu](#)

**Contents**

- [What is Administration of Medications by Nasogastric Tube?](#)
- [Why Administration of Medications by Nasogastric Tube was Ordered](#)
- [Why Administering Medications by Nasogastric Tube is Important](#)
- [Facts and Figures](#)
- [What You Need to Know Before Administering Medications by Nasogastric Tube](#)
- [What Will Happen During Administration of Medications by Nasogastric Tube](#)
- [Other Tests, Treatments, or Procedures That May be Necessary Before or After Administering Medications by Nasogastric Tube](#)
- [What to Expect After Administering Medications by Nasogastric Tube](#)
- [Red Flags](#)
- [What to Tell the Patient/Patient Family](#)
- [References](#)

**Red Flags**

- Respiratory distress during medication administration through the NG tube may indicate migration of tube into the bronchus, cyanosis, decreased oxygen saturation by pulse oximetry, vomiting, increasing restlessness, stridor, and wheezing. If these symptoms occur, stop the medication, remove or reposition the tube. Alert the clinician immediately and, if needed, initiate oxygen therapy and other emergency measures
- Sustained-release drugs must not be administered by NG tube. The crushing that is necessary in order for the pill to pass through the tube may result in a high dose of medication into the patient's stomach, making overdose likely to occur. Contact the clinician for an adjustment to the dose prescribed for NG administration
- If you note resistance when attempting to flush the tube, it may have become blocked by the precipitation of medication. Stop the medication, pull back on the plunger of the syringe, then pressing on the plunger to create a moderate amount of positive pressure within the tube

## Wound Dehiscence

### Contents

[Definition](#)

[Causes](#)

[Risk Factors](#)

[Symptoms](#)

[Diagnosis](#)

[Treatment](#)

[Prevention](#)

### (Surgical Wound Dehiscence; Operative Wound Dehiscence)

by: Catherine Duffek, MLS, MS

#### Definition

Wound dehiscence is the parting of the layers of a surgical wound. Either the surface layers separate or the whole wound splits open. This is a serious condition and requires care from your doctor.

#### Causes

Wound dehiscence varies depending on the kind of surgery you have. The following is a list of generalized causes:

- Infection at the wound
- Pressure on sutures
- Sutures too tight

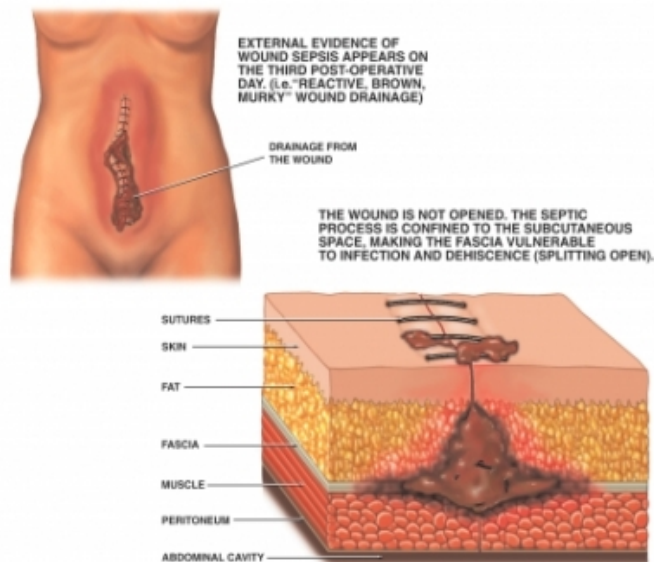
- Injury to the wound area
- Weak tissue or muscle at the wound area
- Incorrect suture technique used to close operative area
- Poor closure technique at the time of surgery
- Use of high-dose or long-term corticosteroids
- Severe vitamin C deficiency ( [scurvy](#) )

### Related Information

- [Patient Education](#)
- [Books](#)

Patient Education

### Wound Infection



# Use Meta-Search Engines

Allow you to search multiple other search engines simultaneously and combines the results



# Special Meta -Search Engines that find evidence sites

*TRIP*

*tripdatabase.com*



*SUMSearch*

*sumsearch.uthscsa.edu*

**SUMSearch** 

# TRIP Database

[www.tripdatabase.com](http://www.tripdatabase.com)

- Meta-search engine
- Performs a simple search of more than 75 databases
- Finds evidence-based resources
- Searches *Cochrane*, *National Guideline Clearinghouse*, *Bandolier*, etc.

# TRIP search: prevention of pressure ulcers



pressure ulcers prevention

Search

Advanced Search Search Tips

pressure sores

pressure sore

Below are links to articles providing background knowledge relating to *pressure sores*

eMedicine Background eMedicine Diagnosis eMedicine Treatment eMedicine Follow-up Mentor GP Notebook Wikipedia Wrong Diagnosis Search Trip just for "pressure sores"

Order By: **Date Relevance**

SELECT ALL

1. [Risk assessment tools for the prevention of pressure ulcers](#)

Cochrane Database of Systematic Reviews 2008  
Use as CPD Preview Conclusion

2. [Alternating pressure air mattresses as prevention for pressure ulcers: a literature review](#)

DARE, 2008  
Use as CPD Preview Conclusion

3. [Best Practice Statement - prevention and management of pressure ulcers](#)

NHS Quality Improvement Scotland 2009   
Use as CPD Preview Conclusion

4. [Skin safety protocol: risk assessment and prevention of pressure ulcers. Health care protocol.](#)

Institute for Clinical Systems Improvement 2007  
Use as CPD Preview Conclusion

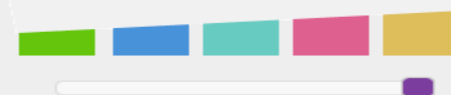
5. [Support surfaces for treating pressure ulcers](#)

Cochrane Database of Systematic Reviews 2008  
Use as CPD Preview Conclusion

6. [Alternating pressure air mattresses as prevention for pressure ulcers: A literature review](#)

EvidenceUpdates 2008  
Use as CPD Preview Conclusion

## Filter Your Search [what is this?](#)



Total	736
Evidence Based Synopses	19
Systematic Reviews	61
Guidelines	
Aus. & NZ	7
Canada	12
UK	46
USA	27
Other	6
Clinical Q&A	6
Core primary research	10
Extended primary research	69
eTextbooks	429
Patient Information	42
More	2
News	1

## Medline Articles

<a href="#">Therapy</a>	141
<a href="#">Diagnosis</a>	38
<a href="#">Etiology</a>	126
<a href="#">Prognosis</a>	87
<a href="#">Systematic Reviews</a>	265

# SUMSearch

[sumsearch.uthscsa.edu](http://sumsearch.uthscsa.edu)

## SUMSearch - Documents found

Search for **PRESSURE ULCERS**  
(Focus: NOFOCUS, ages: all, subjects: HUMAN)

[New Online EBP calculator](#)

For broad discussions that are easy to read, but not as up-to-date

### Texts

 Wikipedia 276 documents.

*Scroll down or [Click here to view first 10](#)*

 [Selected journals](#) at PubMed 0 documents.  
PubMed-FullText did not complete a response within time, consider searching PubMed-FullText [directly](#) or searching later.

### Practice Guidelines *(some guidelines are systematic reviews)*

 National Guideline Clearinghouse™ 29 documents.

*Scroll down or [Click here to view first 20](#)*  
Additional guidelines for your topic may be available from:  
[AHRQ-Practice Guidelines](#)

 PubMed (possible guidelines) 30 documents.

*Scroll down or [Click here to view first 20](#)*

For more up-to-date answers to specific questions, but are harder to read

### Systematic reviews *(what is so good about systematic reviews?)*

 DARE (includes [Cochrane abstracts](#)) 33 documents.

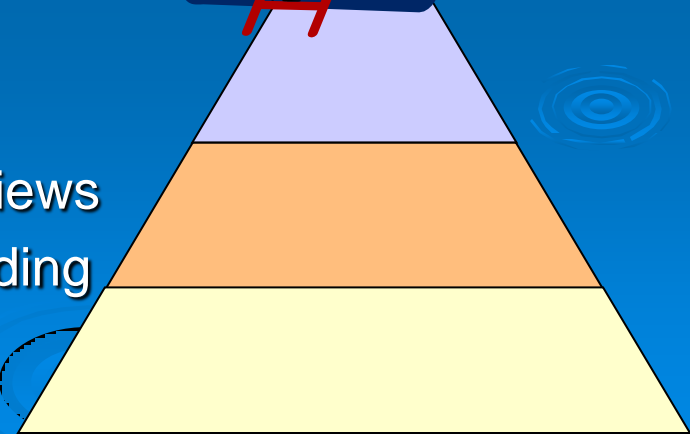
*Scroll down or [Click here to view first 20](#)*

 PubMed (possible systematic reviews) 284 documents.

*Scroll down or [Click here to view first 20](#)*

# Search for Systematic Review and Meta-Analyses Resources

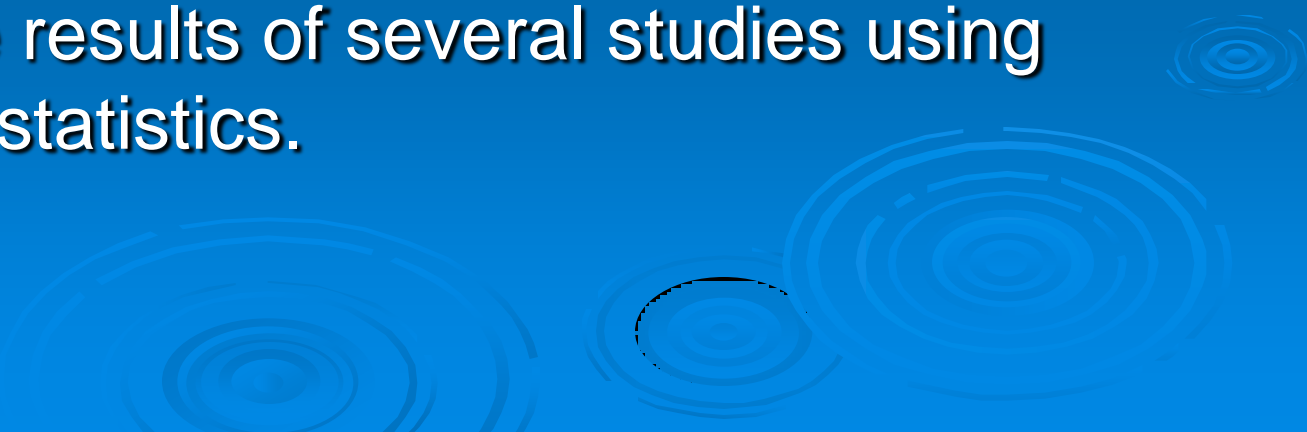
- Cochrane Database of Systematic Reviews [[on HEAL-WA](#)]
  - “gold standard” for high quality SRs
  - Includes full-text
  - Abstracts in MEDLINE and CINAHL
- MEDLINE/PubMed Systematic Reviews
  - Use Clinical Queries [[on HEAL-WA](#)]
  - Limit to Publication Type: Meta-Analysis
- CINAHL [[on HEAL-WA](#)]
  - Refine search to PubType: Systematic Reviews
  - Search for Meta Analysis as a Subject Heading



# Systematic review vs Meta-analysis

**Systematic review:** a literature review focused on a single question which tries to identify, appraise, select and synthesize all high quality research evidence relevant to that question.

**Meta-analyses:** systematic reviews that combine the results of several studies using quantitative statistics.

A decorative graphic consisting of several sets of concentric circles, resembling ripples in water, located in the bottom right corner of the slide.



SEARCH  
Enter search term  Title, Abstract or Keyword   
[More info](#) [Advanced Search](#) | [MeSH Search](#) | [Search History](#) | [Saved Searches](#)

**[Intervention Review]**  
**Water for wound cleansing**

- PDF
- [Summary](#) (57 K)
- [Standard](#) (344 K)
- [Full](#) (382 K)

- [Abstract](#)
- [Plain language summary](#)

- [Quick links](#)
- [What's new](#)

- [The review](#)
- [Background](#)
- [Objectives](#)
- [Methods](#)
- [Results](#)
- [Discussion](#)
- [Authors' conclusions](#)
- [Acknowledgements](#)
- [References](#)

- [Figures](#)
- [Tables](#)

- [Supplementary information](#)
- [Data and analyses](#)
- [Appendices](#)
- [Feedback](#)

- [About this article](#)
- [Contributions of authors](#)

- [Declarations of interest](#)
- [Sources of support](#)
- [Differences between protocol and review](#)
- [Index terms](#)

- [Submit feedback](#)
- [Export Citation](#)

- [Protocol and previous](#)

**[Intervention Review]**  
**Water for wound cleansing**

Ritlin Fernandez<sup>1</sup>, Rhonda Griffiths<sup>1</sup>

<sup>1</sup> Centre for Applied Nursing Research, South Western Sydney Area Health Service, Liverpool BC, Australia

Contact address: Ritlin Fernandez, Centre for Applied Nursing Research, South Western Sydney Area Health Service, Locked bag 7103, Liverpool BC, New South Wales, 1871, Australia. [r.fernandez@uws.edu.au](mailto:r.fernandez@uws.edu.au) (Editorial group: [Cochrane Wounds Group](#).)

*Cochrane Database of Systematic Reviews*, Issue 4, 2009 (Status in this issue: *Unchanged*)

Copyright © 2009 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

DOI: 10.1002/14651858.CD003861.pub2

This version first published online: 23 January 2008 in Issue 1, 2008. Last assessed as up-to-date: 1 November 2007. ([Help document](#) - [Dates and Statuses](#) explained).

This record should be cited as: Fernandez R, Griffiths R. Water for wound cleansing. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD003861. DOI: 10.1002/14651858.CD003861.pub2.

## Abstract

### Background

Various solutions have been recommended for cleansing wounds, however normal saline is favoured as it is an isotonic solution and does not interfere with the normal healing process. Tap water is commonly used in the community for cleansing wounds because it is easily accessible, efficient and cost effective, however, there is an unresolved debate about its use.

### Objectives

The objective of this review was to assess the effects of water compared with other solutions for wound cleansing.

### Search strategy

Randomised and quasi-randomised controlled trials were identified by electronic searches of Cochrane Wounds Group Specialised Register (November 2007), Ovid MEDLINE (1996-October 2007), Ovid EMBASE (1980-October 2007), CINAHL (1982-October 2007) and the Cochrane Central Register of Controlled Trials (Issue 3; 2007). Primary authors, company representatives and content experts were contacted to identify eligible studies. Reference lists from included trials were also searched.

### Selection criteria

Randomised and quasi randomised controlled trials that compared the use of water with other solutions for wound cleansing were eligible for inclusion. Additional criteria were outcomes that included objective or subjective measures of infection or healing.

### Data collection and analysis

Trial selection, data extraction and quality assessment were carried out independently by two authors and checked by a third author. Differences in opinion were settled by discussion. Some data were pooled using a random effects model.

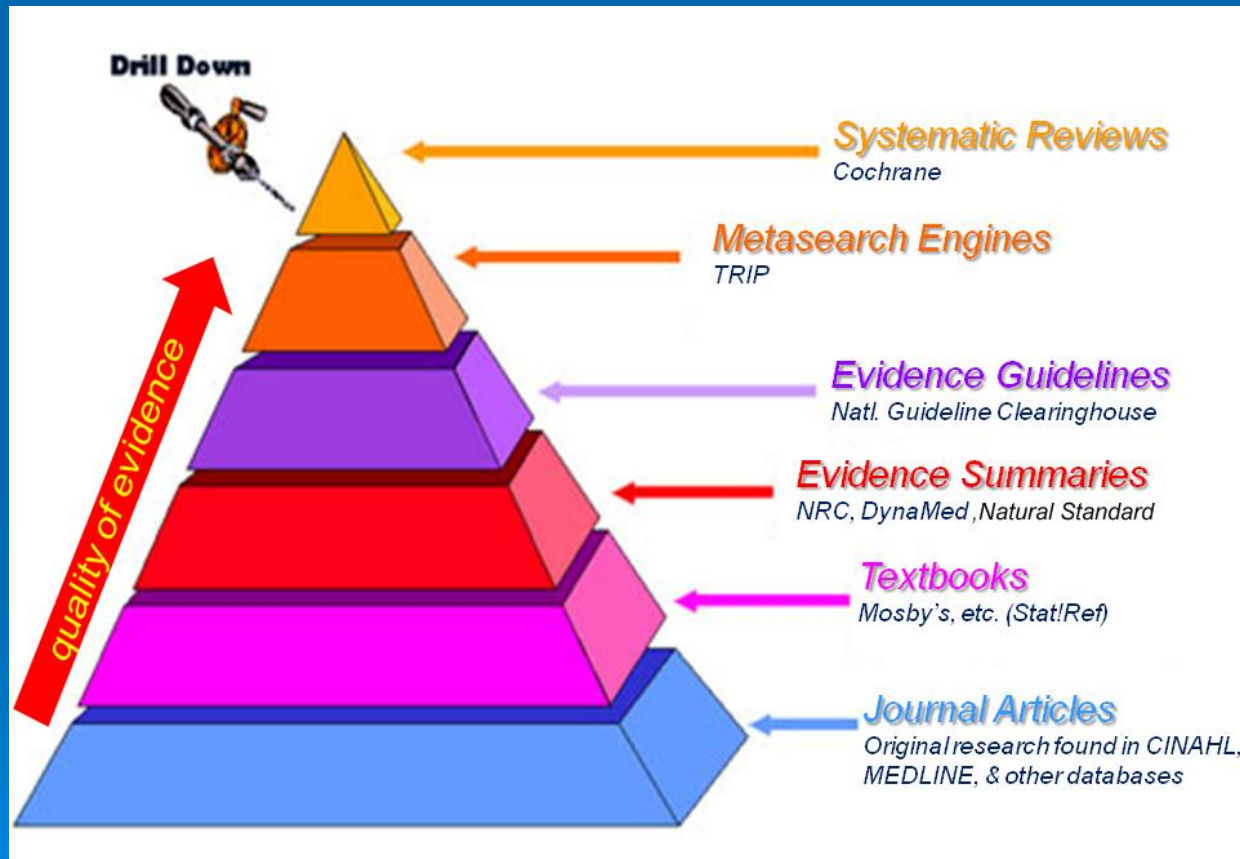
### Main results

Eleven trials were included in this review. Seven trials were identified that compared rates of infection and healing in wounds cleansed with water and normal saline, three trials compared cleansing with no cleansing and one trial compared procaine spirit with water. There were no standard criteria for assessing wound infection across the trials which limited the ability to pool the data. The major comparisons were water with normal saline, and tap water with no cleansing. In acute wounds, the relative risk of developing an infection when cleansed with tap water compared with normal saline was 0.16, (95% CI 0.01 to 2.96). Tap water was more effective than saline in reducing the infection rate in adult acute wounds (RR 0.63, 95% CI 0.40 to 0.99). The use of tap water to cleanse acute wounds in children was not associated with a statistically significant difference in infection when compared to saline (RR 1.07, 95% CI 0.43 to 2.64). Statistically significant differences in infection rates were seen when wounds were cleansed with tap water or not cleansed at all (RR 1.06, 95% CI 0.07 to 16.50). Likewise, there was no difference in the infection rate in episiotomy wounds cleansed with water or procaine spirit. The use of isotonic saline, distilled water and boiled water for cleansing open fractures also did not demonstrate a statistically significant difference in the number of fractures that were infected.

### Authors' conclusions

There is no evidence that using tap water to cleanse acute wounds in adults increases infection and some evidence that it reduces it. However there is not strong evidence that cleansing wounds per se increases healing or reduces infection. The absence of potable tap water, boiled and cooled water as well as distilled water can be used as wound cleansing agents.

# Searching for Evidence Categories



# Search for Evidence in Drug and Natural Medicines Databases

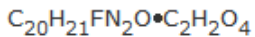
- AHFS Drug Information [on HEAL-WA]  
*ahfsdruginformation.com*
- Davis's Drug Guide for Nurses [on HEAL-WA]
- Natural Standard [on HEAL-WA]  
*naturalstandard.com*

# AHFS Drug Information

[ahfsdruginformation.com](http://ahfsdruginformation.com)

## Escitalopram Oxalate

### Introduction



- Escitalopram, the S-enantiomer of citalopram, is a selective serotonin-reuptake inhibitor (SSRI) and an antidepressant.<sup>1</sup>

### Uses

#### • Major Depressive Disorder

Escitalopram oxalate is used in the treatment of major depressive disorder as established in 3 placebo-controlled studies.<sup>1, 2</sup> In these studies, 10-Montgomery Asberg Depression Rating Scale Impression Improvement and Seven-item Hamilton Depression Rating Scale scores were noted in patients receiving escitalopram.<sup>2, 14, 16</sup> In addition, escitalopram was shown to be effective in the treatment of 20-40 mg daily.<sup>4, 16</sup> There is some evidence that escitalopram is a selective serotonin-reuptake inhibitor; however, additional studies are needed to establish this to date.<sup>1, 8</sup> For further information, see the monograph on Escitalopram Oxalate Hydrobromide 28:16.04.20.

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

#### • Comparative Pricing

*This pricing information is subject to change at the sole discretion of DS Pharmacy. For the most current 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

### References

**Lexapro** 5M

**Lexapro** 5M

1. Forest Pharmaceuticals, Inc. **Lexapro**® (escitalopram oxalate) tablets/oral solution prescribing information.

2. Burke WJ, Gergel I, Bose A. Fixed-dose trial of the single isomer SSRI escitalopram in depressed outpatients. *Am J Psychiatry*. 1999;156:63:331-6. [IDIS 479908] [[PubMed 12000207](http://pubmed.ncbi.nlm.nih.gov/12000207/)]

3. Anon. Forest **Lexapro**® approval includes label claim of greater potency than celexa. FDC Rep. Aug 1999;15:10:10-11.

# Davis's Drug Guide for Nurses 2009

## 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 .

# Natural Standard

*naturalstandard.com*

- Information about complementary and alternative medicine (CAM)
  - Includes evidence-based information about supplements, herbs
  - Also includes information about different CAM modalities such as acupuncture, massage, etc.

# Natural Standard



Natural Standard

The Authority on Integrative Medicine

SEARCH F

HOME

FOODS, HERBS, SUPPLEMENTS

HEALTH & WELLNESS

EFFECTIVENESS

CONDITIONS

GENOMICS

About Us

Products

News & Events

Blog

Audio/Podcast

Webinars

Dictionary

Calculators

Nutrition

Education

Practitioners

Demo

Subscribe

Login

Logout

**Natural Standard** was founded by clinicians and researchers to provide high quality, evidence-based information about complementary and alternative therapies. This international multidisciplinary collaboration now includes contributors from more than 100 eminent academic institutions.

## DATABASES



[Foods, Herbs & Supplements](#)



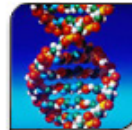
[Health & Wellness](#)



[Comparative Effectiveness](#)



[Medical Conditions](#)



[Genomics & Proteomics](#)



[Environmental Resources](#)



[Brand Names](#)



[Interactive Tools](#)

For each therapy covered by **Natural Standard** and expert opinions. Validated rating scales and information is incorporated into comprehensive decision making. All monographs undergo **Standard** databases.

Aloe

### PROFESSIONAL MONOGRAPH

A comprehensive evidence-based systematic review of scientific literature, peer reviewed by **Natural Standard** editorial contributors. Provides in-depth coverage of efficacy, adverse effects, interactions, pregnancy/lactation, pharmacology/toxicology, and quality of evidence. Includes evidence table and discussion(s), statistical analysis, and quality of evidence. [Click Here](#)

Professional reading level

### BOTTOM LINE MONOGRAPH

A concise evidence-based review, designed for use by patients or professionals. Based on the most current peer-reviewed and analyzed scientific literature, historic/folkloric precedent, and expert consultation. Edited and peer-reviewed blindly by **Natural Standard** editorial contributors. Includes evidence table and discussion(s), statistical analysis, and quality of evidence. [English](#) | [Spanish](#)

12<sup>th</sup> grade reading level

### FLASHCARD

Quick look-up or patient handout. Easy reading level for consumers. Adapted from a **Natural Standard** comprehensive professional evidence-based systematic review. Concise information includes brief summary, uses, safety, side effects, interactions and dosing. [Click Here](#)

Patient handout 5<sup>th</sup> grade

### NATURAL STANDARD/HARVARD MEDICAL SCHOOL MONOGRAPH

These evidence-based monographs are written in collaboration between **Natural Standard** and the faculty of Harvard Medical School. These include data on efficacy, safety, interactions, and dosing, with pertinent references provided. [Click Here](#)

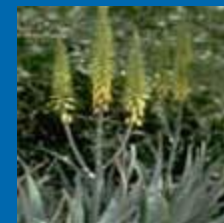
NEWS ITEMS

## Scientific Evidence for Common/Studied Uses:

Indication	Evidence Grade
<a href="#">Constipation (laxative)</a>	<a href="#">B</a>
<a href="#">Genital herpes</a>	<a href="#">B</a>
<a href="#">Psoriasis vulgaris</a>	<a href="#">B</a>
<a href="#">Seborrheic dermatitis</a>	<a href="#">B</a>
<a href="#">Aphthous stomatitis</a>	<a href="#">C</a>
<a href="#">Cancer prevention</a>	<a href="#">C</a>
<a href="#">Diabetes (type 2)</a>	<a href="#">C</a>
<a href="#">Dry skin</a>	<a href="#">C</a>
<a href="#">HIV infection</a>	<a href="#">C</a>
<a href="#">Lichen planus</a>	<a href="#">C</a>
<a href="#">Skin burns</a>	<a href="#">C</a>
<a href="#">Skin ulcers</a>	<a href="#">C</a>
<a href="#">Ulcerative colitis (including inflammatory bowel disease)</a>	<a href="#">C</a>
<a href="#">Wound healing</a>	<a href="#">C</a>
<a href="#">Mucositis</a>	<a href="#">C</a>
<a href="#">Pressure ulcers</a>	<a href="#">C</a>

# Natural Standard

Aloe



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

**Wound healing and related conditions**  
**levels of scientific evidence for specific therapies**

Natural Standard does not recommend specific therapies or practitioners.

<b><u>Grade: C (Unclear or Conflicting Scientific Evidence)</u></b>	
Therapy	Specific therapeutic Use(s)
<a href="#">Aloe</a>	Skin ulcers
<a href="#">Aloe</a>	Wound healing
<a href="#">Alpha-lipoic acid</a>	Wound healing (in patients undergoing hyperbaric oxygen therapy)
<a href="#">Arginine</a>	Anal fissures
<a href="#">Arginine</a>	Wound healing
<a href="#">Aromatherapy</a>	Wound care
<a href="#">Ayurveda</a>	Anal fissure
<a href="#">Bovine cartilage</a>	Skin care (laser resurfacing adjunct)
<a href="#">Calendula</a>	Wound healing
<a href="#">Chamomile</a>	Wound healing
<a href="#">Chitosan</a>	Wound healing
<a href="#">DMSO</a>	Diabetic ulcers
<a href="#">DMSO</a>	Extravasation
<a href="#">DMSO</a>	Surgical skin flap ischemia
<a href="#">Eucalyptus oil</a>	Skin ulcers
<a href="#">Gotu kola</a>	Wound healing
<a href="#">Honey</a>	Skin graft healing (split thickness)
<a href="#">Honey</a>	Wound healing
<a href="#">Hydrotherapy</a>	Pressure ulcers/wound care
<a href="#">Iodine</a>	Wound healing
<a href="#">Pantothenic acid</a>	Wound healing
<a href="#">Papain</a>	Wound healing
<a href="#">Physical therapy</a>	Skin ulcers
<a href="#">Physical therapy</a>	Wound care
<a href="#">Psyllium</a>	Anal fissures
<a href="#">Rose hip</a>	Wound healing
<a href="#">TENS</a>	Skin ulcer
<a href="#">Therapeutic touch</a>	Wound healing
<a href="#">Vitamin A</a>	Wound healing
<a href="#">Zinc</a>	Incision wounds
<a href="#">Zinc</a>	Skin damage caused by incontinence

**Traditional or Theoretical Uses which Lack Sufficient Evidence**

# MedlinePlus

*medlineplus.gov*

- **#1 SOURCE** for basic quality consumer/patient information
- Includes drug information
- Medical Encyclopedia – full-text with illustrations
- Spanish version
- Preformulated *PubMed* searches
- Interactive tutorials
- Current health news

# MedlinePlus Content

Interactive tutorials:  
**165 total**

ClinicalTrials links on display:  
**640 (today)**

NIH-Seniorhealth  
**43 topics**

OR-Live surgery videos:  
**73**

Announcement listservs:  
**11 daily & weekly**



Health topics (today):  
**800 English**  
**700 Spanish**

3 drug and herbal databases:  
**approx 1700 monographs**

ADAM.com encyclopedia:  
**approx 4000 monographs**

Health news:  
**Approx 15-20 new stories added per day**

Directories:  
**Over 100 directories covering doctors, hospitals, clinics and libraries.**

- Health Topics**  
Start here with over 700 topics on conditions, diseases and wellness
- Drug Information**  
About your prescription and over-the-counter medicines
- Medical Encyclopedia**  
Includes pictures and diagrams
- Dictionary**  
Spellings and definitions of medical words
- News**  
Health News from the past 30 days
- Directories**  
Find doctors, dentists and hospitals
- Other Resources**  
Local libraries, health organizations, international sites and more

- Current Health News**
  - ▶ [Mouthguards Essential for Back-to-School Sports](#)
  - ▶ [Newest Breast Cancer Drugs Can Cause Joint Pain in Patients](#)
  - ▶ [Excessively Sleepy? Could Be More Than Poor Sleep](#)
  - ▶ [More news](#)
- Featured Site**  
Hurricane Katrina links: [Disasters and Emergency Preparedness](#), [Coping with Disasters](#), [NIH Response](#), [Recovery Information](#)
- In the Spotlight**  
September is Prostate Cancer Awareness Month. Learn more:
  - ▶ Go to [Prostate Cancer](#)
  - ▶ [Prostate Cancer Interactive Tutorial](#)
  - ▶ News about [Prostate Cancer](#)

- Interactive Tutorials**  
Over 165 slideshows with sound and pictures
- ClinicalTrials.gov**  
Studies for new drugs and treatments
- NIH SeniorHealth**  
Health information for older adults
- Surgery Videos**  
Videos of surgical procedures
- ▶ What's new on MedlinePlus?  
[Sign up now!](#)
- ▶ [Add MedlinePlus to your site](#)
- ▶ Take a [tour](#) of the site

[Copyright](#) | [Privacy](#) | [Accessibility](#) | [Quality Guidelines](#)  
U.S. National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894  
National Institutes of Health | Department of Health & Human Services  
[Freedom of Information Act](#)

Page last updated: 07 September 2005  
URL for this page: <http://medlineplus.gov>

Search MedlinePlus

FAQs | Site Map | About MedlinePlus | Contact Us

español



## Other Health Topics:

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [XYZ](#) [List of All Topics](#)

## Diabetic Foot

If you have [diabetes](#), your blood sugar levels are too high. Over time, this can damage your nerves or blood vessels. Nerve damage from diabetes can cause you to lose feeling in your feet. You may not feel a cut, a blister or a sore. Foot injuries such as these can cause ulcers and infections. Serious cases may even lead to amputation. Damage to the blood vessels can also mean that your feet do not get enough blood and oxygen. It is harder for your foot to heal, if you do get a sore or infection.

You can help avoid foot problems. First, control your blood sugar levels. Good foot hygiene is also crucial.

National Institute of Diabetes and Digestive and Kidney Diseases

[Printer-friendly version](#) [E-mail to a friend](#)



### Start Here

- [Diabetes - Foot Care Interactive Tutorial](#) (Patient Education Institute)  
Also available in [Spanish](#)
- [Diabetes: Foot Care](#) (American Academy of Family Physicians)  
Also available in [Spanish](#)
- [Take Care of Your Feet for a Lifetime](#) [NIH](#) (National Diabetes Education Program)  
Also available in [Spanish](#)

Basics	Learn More	Multimedia & Cool Tools
<ul style="list-style-type: none"><li>• <a href="#">Overviews</a></li><li>• <a href="#">Latest News</a></li><li>• <a href="#">Treatment</a></li><li>• <a href="#">Prevention/Screening</a></li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Specific Conditions</a></li><li>• <a href="#">Related Issues</a></li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Pictures &amp; Photographs</a></li><li>• <a href="#">Tutorials</a></li></ul>
Research	Reference Shelf	For You
<ul style="list-style-type: none"><li>• <a href="#">Clinical Trials</a></li><li>• <a href="#">Research</a></li><li>• <a href="#">Journal Articles</a></li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Dictionaries/Glossaries</a></li><li>• <a href="#">Directories</a></li><li>• <a href="#">Organizations</a></li><li>• <a href="#">Statistics</a></li></ul>	No links available

### Related Topics

- [Diabetes](#)
- [Diabetes Complications](#)
- [Diabetic Nerve Problems](#)
- [Foot Health](#)
- [Foot Injuries and Disorders](#)
- [Blood, Heart and Circulation](#)
- [Bones, Joints and Muscles](#)
- [Brain and Nerves](#)
- [Endocrine System](#)

### Go Local

Services and providers for **Diabetic Foot** in the U.S.

Select Location

### Languages

- [Amharic](#) (amarunya)
- [Somali](#) (af Soomaali)
- [Spanish](#) (español)



### Overviews

- [Diabetic Complications and Amputation Prevention](#) (American College of Foot and Ankle Surgeons)

### Latest News

- [Health Tip: Foot Care for People with Diabetes](#) (10/27/2009, HealthDay)

### Treatment

- [Total Contact Cast: What It Is and Why It's Used](#) (American Academy of Family Physicians)

Print this page

Close this window

## Pressure ulcer

URL of this page: <http://www.nlm.nih.gov/medlineplus/ency/article/007071.htm>

A pressure ulcer is an area of skin that breaks down when you stay in one position for too long without being moved, even for a short period of time (for example, after surgery or an injury). The constant pressure causes the tissue to die.

A pressure ulcer starts as reddened skin but gets progressively worse, forming a blister, then an open sore. It often occurs over bony prominences (bones close to the skin) like the elbow, heels, hips, ankles, shoulders, back, and the

### Causes

These factors increase the risk for pressure ulcers:

- Being bedridden or in a wheelchair
- Fragile skin
- Having a chronic condition, such as diabetes or vascular disease, that prevents areas of the body from receiving proper blood flow
- Inability to move certain parts of your body without assistance, such as after spinal or brain injury or if you have a neuromuscular disease (like multiple sclerosis)
- Malnourishment
- Mental disability from conditions such as Alzheimer's disease -- the patient may not be able to properly prevent or treat pressure ulcers
- Older age
- Urinary incontinence or bowel incontinence

### Symptoms

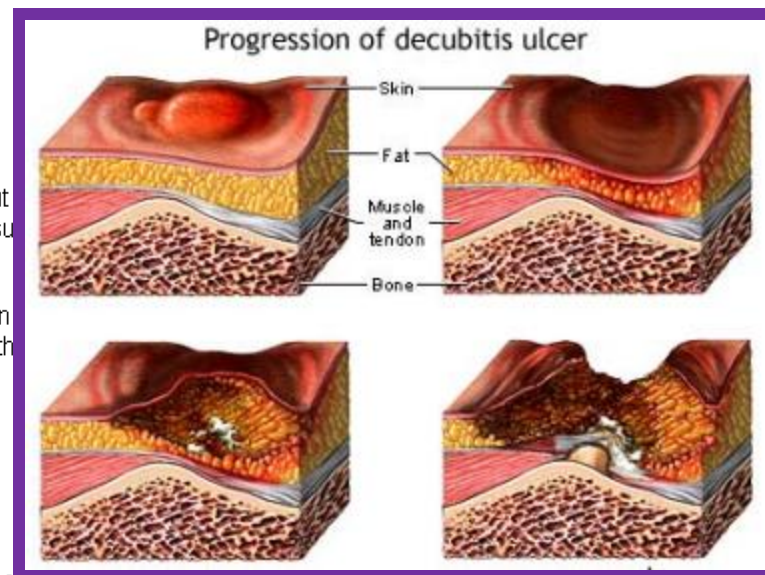
Pressure sores are categorized by severity, from Stage I (earliest signs) to Stage IV (worst):

- **Stage I:** A reddened area on the skin that, when pressed, is "non-blanchable" (does not turn white). This indicates that a pressure ulcer is starting to develop.
- **Stage II:** The skin blisters or forms an open sore. The area around the sore may be red and irritated.
- **Stage III:** The skin breakdown now looks like a crater where there is damage to the tissue below the skin.
- **Stage IV:** The pressure ulcer has become so deep that there is damage to the muscle and bone, and sometimes tendons and joints.

### First Aid

Once a pressure ulcer is identified, steps must be taken immediately:

- Relieve the pressure on that area. Use pillows, special foam cushions, and sheepskin to reduce the pressure.
- Treat the sore based on the stage of the ulcer. Your health care provider will give you specific treatment and care instructions.



# Navigate the Web Beyond Basic Google To Find Evidence?

## Navigation Difficulties:

- Size of the Web
- Lack of control or review
- Lack of quality standards



# Navigating the Web Beyond Google

## ➤ Google [google.com](http://google.com)

- Largest search engine: over *11.5 billion* pages
- *Relevance ranking* based on link analysis

## ➤ Google Advanced Search

[www.google.com/advanced\\_search?hl=en](http://www.google.com/advanced_search?hl=en)

## ➤ Google Scholar [scholar.google.com](http://scholar.google.com)

# Google Scholar (beta)

*[scholar.google.com](http://scholar.google.com)*

- Searches for **scholarly literature**, including peer-reviewed papers, theses, books, abstracts and technical reports
- Finds articles from academic publishers, professional societies, universities, etc. as well as scholarly articles on the web
- "**Cited by**" link identifies # that have cited the original
- Access to full text only available with subscription
- **Caution:** Not a reliable sole source for searching scholarly literature

Scholar since 2008 include citations

[Incidence and risk factors for pressure ulcers in the intensive care unit.](#) - [burncareresearch.org](#) - [Find UW Holdings](#)N Nijs, A Toppets, T Defloor, K Bernaerts, K ... - *Journal of Clinical Nursing*, 2009 - [ccmjournals.org](#)

Results.: Cumulative incidence of **pressure ulcers** grade 2-4 was 20.1%. The following variables were positively associated with **pressure ulcers** grade 2-4: history of vascular disease, treatment with Dopamine @ or Dobutamine @ , ...

[Cited by 1](#) - [Related articles](#) - [Import into RefWorks](#) - [All 6 versions](#)[Validity of the Waterlow scale for pressure ulcer risk assessment in the intensive care unit: a ...](#)F Compton, M Strauss, T Horig, J Frey, F ... - *Pflege*, 2008 - [ncbi.nlm.nih.gov](#)

Critically ill patients are at a particular risk for developing **pressure ulcers**. Yet until now, no sufficiently specific, validated **pressure ulcer** risk assessment instruments exist for critically ill patients. In a prospective ...

[Import into RefWorks](#) - [BL Direct](#)[... improvement program to reduce the prevalence of pressure ulcers in an intensive care unit](#) - [Find UW Holdings](#)R Elliott, S McKinley, V Fox - *American Journal of Critical Care*, 2008 - AACN

*American Journal of Critical Care*. 2008;17: 328-334 Copyright © 2008 by the American Association of Critical-Care Nurses. ... By Rosalind Elliott, RN, MN, Sharon McKinley, RN, PhD and Vicki Fox, RN, BN, **Intensive Care** Nursing ...

[Cited by 4](#) - [Related articles](#) - [Import into RefWorks](#) - [All 2 versions](#)[Incidence of pressure ulcers in intensive care unit patients at risk according to the Waterlow ...](#) - [Find UW Holdings](#)S Sayar, S Turgut, H Dogan, A Ekici, S ... - *Journal of Clinical Nursing*, 2009 - [interscience.wiley.com](#)

It is also possible that your web browser is not configured or not able to display style sheets. In this case, although the visual presentation will be degraded, the site should continue to be functional. We recommend using the ...

[Cited by 1](#) - [Related articles](#) - [Import into RefWorks](#) - [All 3 versions](#)[Prevention and treatment of pressure ulcers in the surgical intensive care unit](#) - [prsjournal.net](#) - [Find UW Holdings](#)JP Kirby, OL Gunter - *Current Opinion in Critical Care*, 2008 - [journals.lww.com](#)

Introduction The rates of hospital-acquired **pressure ulcers** vary widely – even among hospitals with dedicated programs – for poorly understood reasons [1–3]. The risk factors for development of **pressure ulcers** have increased ...

[Related articles](#) - [Import into RefWorks](#) - [All 7 versions](#)[PDF\] ► ... , prevention and treatment of pressure ulcers in intensive care patients: A longitudinal study](#) - [Find UW Holding](#)ESM Shahin, T Dassen, RJG Halfens - *International Journal of Nursing Studies*, 2009 - [unimaas.nl](#)

... There are only few incidence studies concerning **pressure ulcers** in **intensive care units** in Ger- many, although it is a common problem in ICUs in various ...

[Related articles](#) - [View as HTML](#) - [Import into RefWorks](#) - [All 17 versions](#)

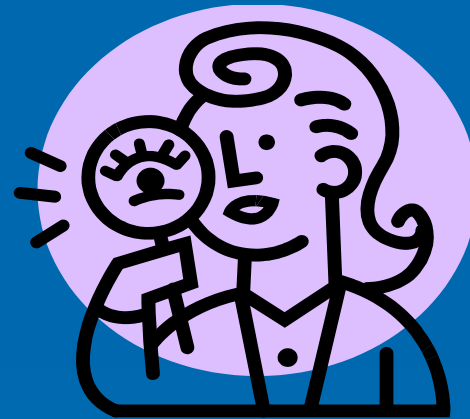
# Must Evaluate Web Resources: Evaluation Strategies

- Evaluate using **Criteria for Evaluating Web Resources**
- Determine the type of site by analyzing **Web Site Addresses**
- A User's Guide to Finding and Evaluating Health Information on the Web  
*[www.mlanet.org/resources/userguide.html](http://www.mlanet.org/resources/userguide.html)*

# Criteria for Evaluating Web Sites

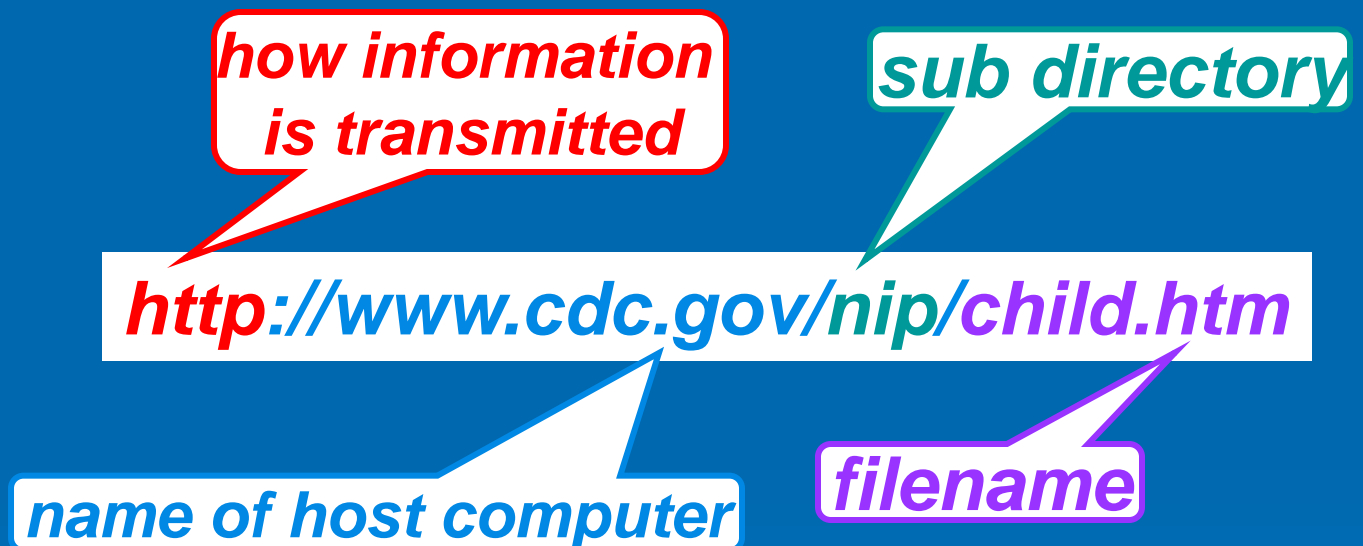
[healthlinks.washington.edu/howto/navigating/criteria.pdf](http://healthlinks.washington.edu/howto/navigating/criteria.pdf)

- Authority
- Accuracy
- Objectivity
- Currency
- Coverage
- Design



# Web Site Address: URL (Uniform Resource Locator)

- edu
- org
- com
- gov
- net



The URL includes the name of the host computer which can indicate the purpose of the web site.

# Final Thoughts

- Contact Your **Ultimate Search Engine...**  
*a librarian!*
- Remember **key evidence-based practice resources on HEAL-WA:**
  - MEDLINE and CINAHL
  - DynaMed, Cochrane, Natural Standard
  - Nursing Reference Center

- Professional Toolkits
- Acupuncturist
- Chiropractor
- Massage Practitioner
- Mental Health Counselor, Psychologist, Licensed Social Worker
- Naturopath
- Optometrist
- Physician, PA, ARNP
- Podiatrist
- Registered Nurse

## Welcome to HEAL-WA

**HEAL-WA is a collection of health information resources funded by license fees from selected health care providers in Washington State. Its mission is to provide evidence-based information to support patient care.**

MEDLINE® with Full Text is now available!

### Getting Started

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

**Set up HEAL-WA access** - If you need to set up a HEAL-WA access code (UW NetID) and password, or if you have a UW NetID and need to add HEAL-WA affiliation to it, see the instructions on the [Getting Started page](#).

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

If you have already set up your HEAL-WA access code (UW NetID) and password, log in to HEAL-WA by clicking on the "HEAL-WA Access" button at the upper right hand corner of the screen.

Dec 19, 2008 09:...

### Influenza A (H1N1) Information

#### Influenza (Dynamed)

[US Centers for Disease Control and Prevention - Influenza A \(H1N1\)](#)

[Washington State Department of Health Swine Influenza \(H1N1\) information](#)

[H1N1 Influenza - Patient information on MedlinePlus](#)

[Links to other Federal and Washington State information](#)

Apr 27, 2009 11:...

- News
- New, easier full text journal access  
Jul 28, 2009
- MEDLINE® with Full Text is now available!  
Jun 23, 2009
- New Clinical Calculators in DynaMed  
May 14, 2009
- PsycInfo and other databases now available  
Mar 06, 2009
- [More news...](#)

### Diagnosis & Therapy

- [Dynamed \(Diseases & Conditions\)](#)
- [Merck Manual of Diagnosis and Therapy](#)
- [Merck Manual of Geriatrics](#)

### Guidelines & Evidence

- [Cochrane Database of Systematic Reviews](#)
- [Clinical Information from the Agency for Healthcare Research and Quality](#)
- [National Guideline Clearinghouse](#)
- [PubMed Clinical Queries](#)

### Search for Articles

- [MEDLINE® with Full Text](#)

### Drugs, Labs, Diagnostic Tests

- [AHFS Drug Information® \(2008\)](#)
- [Drug Information Portal](#)
- [LactMed](#)

### Complementary & Alternative Medicine

- [AMED \(Alternative & Natural Medicine Database\)](#)
- [Alt-HealthWatch](#)
- [Natural Standard](#)

### Prevention, Screening, Immunizations

- [Guide to Clinical Preventive Services](#)
- [Immunization Schedules](#)
- [Red Book®: 2006 Report of the Committee on Infectious Diseases - 27th Ed.](#)
- [The Guide to Community Preventive Services \(Community](#)

### Patient Care Management

- [Nursing Reference Center](#)
- [CINAHL \(Nursing Literature\)](#)
- [Nursing Calculators](#)

### Information for Patients

- [AHFS Consumer Medication Information](#)
- [MedlinePlus - Health Information for Patients](#)
- [MedlinePlus Health Information in Other Languages \(for patients\)](#)
- [Merck Manual - Home Edition](#)

### Contact HEAL-WA

- [Send Us Feedback](#)
- [Requesting Articles](#)



Health Sciences Libraries  
UNIVERSITY OF WASHINGTON

# Finding Evidence on the Web to Improve Wound Care: *Only a Click Away*

PowerPoint presentation located:

[healthlinks.washington.edu/hsl/liaisons/schnall/wound2009.ppt](http://healthlinks.washington.edu/hsl/liaisons/schnall/wound2009.ppt)

Handout:

[healthlinks.washington.edu/hsl/liaisons/schnall/wound2009.doc](http://healthlinks.washington.edu/hsl/liaisons/schnall/wound2009.doc)