National Medical Association

August 2, 2010
Orlando, Florida

National Library of Medicine

Evidenced-based Information At Your Fingertips

National Library of Medicine: Evidence-based Information At Your Fingertips

A workshop

developed for the

National Medical Association

Presented at the

2010 Convention and Scientific Assembly

Orlando, Florida
August 2, 2010

The Oak Ridge Institute for Science and Education (ORISE) is a U.S. Department of Energy institute focusing on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists. ORISE is managed by Oak Ridge Associated Universities.

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Preface

The *National Library of Medicine: Evidenced-Based Information at Your Fingertips* workshop is designed specifically for physicians attending the Community Medicine and Public Health Section portion of the National Medical Association 2010 Annual Convention and Scientific Assembly. This course seeks to address the digital divide issue by teaching participants to use the NLM resources and to improve their ability to use health information technology to treat their patients and develop strategies to eliminate race-based disparities in health.

Participants will receive hands-on practice with selected online resources from the National Library of Medicine to address these issues, allowing them to increase their knowledge as well as to provide their patients with user-friendly information resources to increase understanding of their own health problems.

Medical databases covered in the course include MEDLINE®/PubMed®, and MedlinePlus®. **MEDLINE/PubMed** is a medical literature database containing more than 19 million references to journal articles published in 5,400 journals in the fields of medicine and the life sciences. **MedlinePlus** is an online consumer health information resource that includes links to authoritative information on more than 800 health topics; information on drugs and supplements; a medical encyclopedia; a medical dictionary; more than 165 interactive health tutorials; directories of libraries, hospitals, and health care professionals; links to current health news; and links to health information in more than 40 languages other than English. Additional medical resources covered in this workshop and referred to as the Drug Suite include: the Dietary Supplements Labels Database, the Drug Information Portal, and the Pillbox [Beta] Database.

The prevalence of toxins and other hazardous substances in today's environment makes it ever more important for health professionals to be able to recognize the impact of chemical exposures on community health. NLMs TOXNET® (Toxicology Data Network) databases provide the means to research and find solutions to these problems. TOXNET's factual and bibliographic databases provide quality, up-to-date, and relevant information on hazardous substances in the environment. The TOXNET database covered in this workshop is the Hazardous Substances Data Bank (**HSDB**®), which contains comprehensive, peer-reviewed toxicological data for more than 5,000 chemicals. Additional environmental health resources referred to as Disaster Information & Preparedness Suite include Radiation Emergency Medical Management (REMM), Tox Town®, and the Wireless Information System for Emergency Responders (WISER®).

For more information on NLMs TOXNET resources, visit http://toxnet.nlm.nih.gov.

This workbook is designed to be used as a reference following the workshop. It contains exercises using realistic scenarios for the resources covered in the class as well as information on some of NLMs newest resources and lists of other health information resources selected for their quality and relevant content.

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Savvy Health Surfing (a pull-out flyer) .....*final page*

The National Library of Medicine:
Evidence-based Information At Your Fingertips

Developed for the National Medical Association 2010 Convention & Scientific Assembly

Gaylord Palms Hotel and Convention Center – Orlando, Florida
August 2, 2010

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Agenda

Welcome and Orientation

Introduction to NLM's Online Resources

MEDLINE/PubMed *(with hands-on practice)*

Information RX

MedlinePlus *(with hands-on practice)*

Introduction to NLM's Environmental Health and Toxicology Information Resources

HSDB *(with hands-on practice)*

Other Resources *(instructor demonstrations)*

- Dietary Supplements Labels Database
- Drug Information Portal
- Pillbox[BETA]
- Radiation Emergency Medical Management (REMM)
- Tox Town
- Wireless Information Systems for Emergency Responders (WISER)

Questions/Evaluations

Class ends

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Introduction

Introduction

National Library of Medicine:
Evidence-based Information At Your Fingertips

A workshop developed for the
National Medical Association
Annual Convention & Scientific Assembly

Orlando, Florida
August 2, 2010

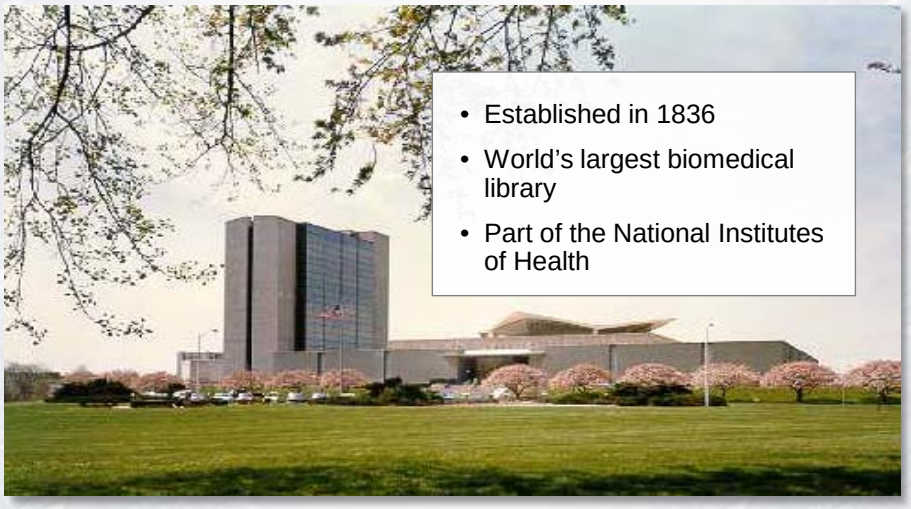
Purpose

- Familiarize physicians affiliated with the National Medical Association (NMA) with the National Library of Medicine's(NLM) online medical information resources and other resources that address health disparities and related medical conditions.
- Skills and knowledge acquired in this training class will empower NMA physicians to
  - remain current in their area of specialty,
  - conduct medical research, and
  - prepare to provide consumer level information to their patients.

Objectives

- Identify and evaluate quality, accurate, and authoritative online resources pertaining to health disparities and related information.
- Demonstrate the ability to perform strategic search techniques in order to find health disparities and related information.
- Apply the skills and knowledge obtained in this course in their medical practice and research.

The National Library of Medicine



National Library of Medicine

- Books, journals, and historical collections
- Health information resources and databases
- Biomedical informatics research
- Biotechnology information resources
- Toxicology and environmental health resources

Why the National Library of Medicine?

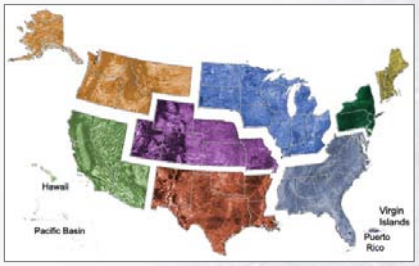
- Easy
- Quick access
- Quality information
- Free

NLM Database Assistance

- Training Manuals: PubMed, and TOXNET
  - http://www.nlm.nih.gov/pubs/web_based.html
  - http://sis.nlm.nih.gov/enviro/manuals.html
- PubMed Quick Start/FAQ and Tutorial
  - http://pubmed.gov (Using PubMed)
- NLM Fact Sheets
  - http://www.nlm.nih.gov/pubs/factsheets/factsheets.html
- Help Links for TOXNET Databases
  - http://sis.nlm.nih.gov/toxnet_faq.html

The National Network of Libraries of Medicine (NN/LM)

- Call to find your NN/LM Regional Medical Library
  - 1.800.338.7657
  - Monday-Friday 8:30 a.m.–5:00 p.m. in all time zones
- Visit the NN/LM Web site
  - http://nnlm.gov



NLM Resources Covered in this Class

- PubMed
- MedlinePlus & Information Rx
- Hazardous Substances Data Bank

Other Resources

- Drug Suite:
  - Dietary Supplements Labels Database
  - Drug Information Portal
  - Pill Box BETA
- Disaster Information & Preparedness Suite:
  - Radiation Emergency Medical Management (REMM)
  - Tox Town
  - Wireless Information System for Emergency Responders (WISER)

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MEDLINE/PubMed

National Library of Medicine:
Evidence-based Information At Your Fingertips

MEDLINE/PubMed

PubMed

- PubMed is a search tool for accessing literature citations from NLM's premiere bibliographic database, MEDLINE, and other databases
- Special Features
  - New materials added Tuesday through Saturday
  - Clinical Queries
  - Topic-Specific Queries
  - Related articles
  - Links to full-text journals at Web sites of participating publishers

MEDLINE Overview

- Over 19 million references dating back to 1948
- Citations and author abstracts from approximately 5,400 biomedical worldwide journals
- Majority of records are English language sources
- Approximately 79% of the citations include English language abstracts
- Most articles written for health care professionals
- Spell check feature

MEDLINE Subject Coverage

- Clinical, research, educational, and administrative aspects of
  - Dentistry
  - Medicine
  - Nursing
  - Veterinary Medicine
  - Allied Health
  - Pre-clinical Sciences

PubMed Searching

- Key words
  - Automatically matched to MeSH, journal titles, phrase list, and author index
  - Not case sensitive
- Phrases ("heart attack")
  - Phrases in quotes will not be matched to MeSH, journal titles, phrase list, and author index
- Auto Suggest
  - Based on the terms you enter, some of the most popular PubMed searches will be displayed in the menu
- Author's name format for searching (smith ja)
- Full name may be used for citations from 2002 forward

PubMed Searching

- Boolean commands or connector words: **AND**, **OR**, and **NOT**
  - HIV **AND** AIDS (finds all search terms)
  - Treatment **OR** Therapy (finds either term or both)
  - Tuberculosis **NOT** Pneumonia (eliminates specified terms)
- Stop words
  - Frequently used words such as: about, because, can, each, should, and would

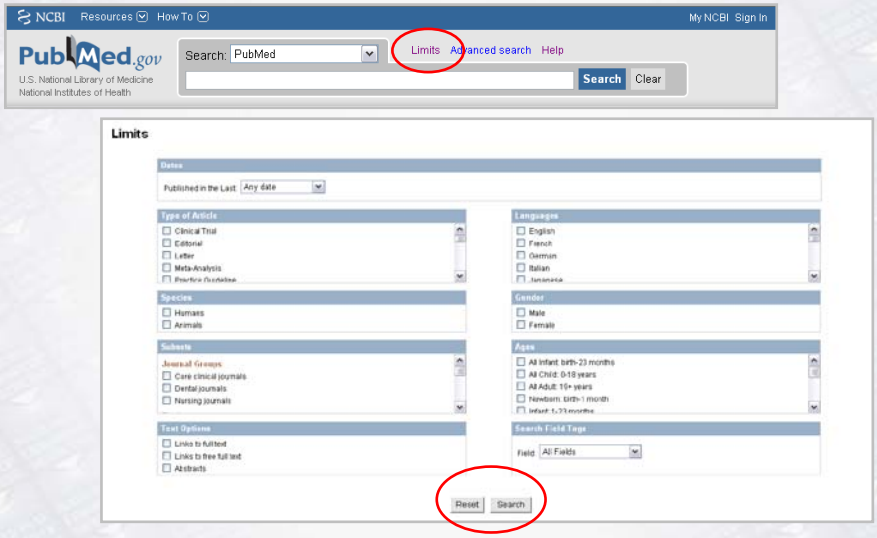
PubMed Searching

- Truncation
  - Finds all words beginning with a given root word or text string
  - Place an asterisk (*) at the end of the term

Example

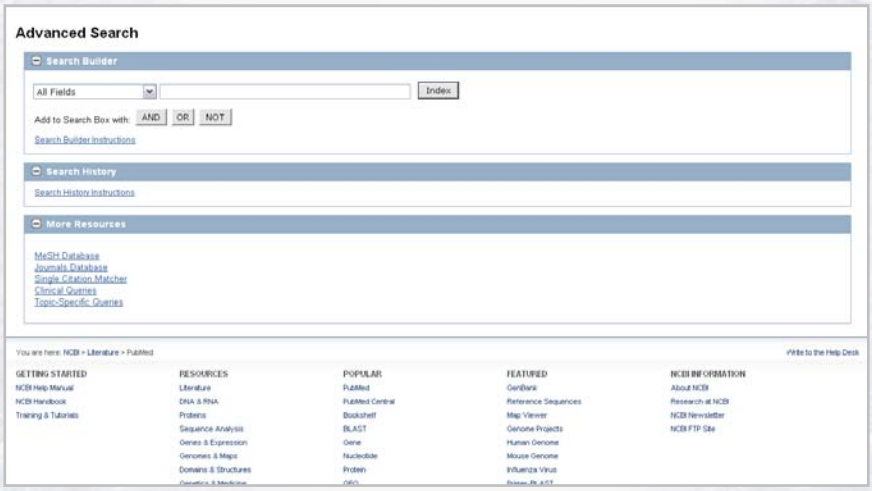
Search Term	Retrieves
infect*	infect infection infections infectious etc.

Limits



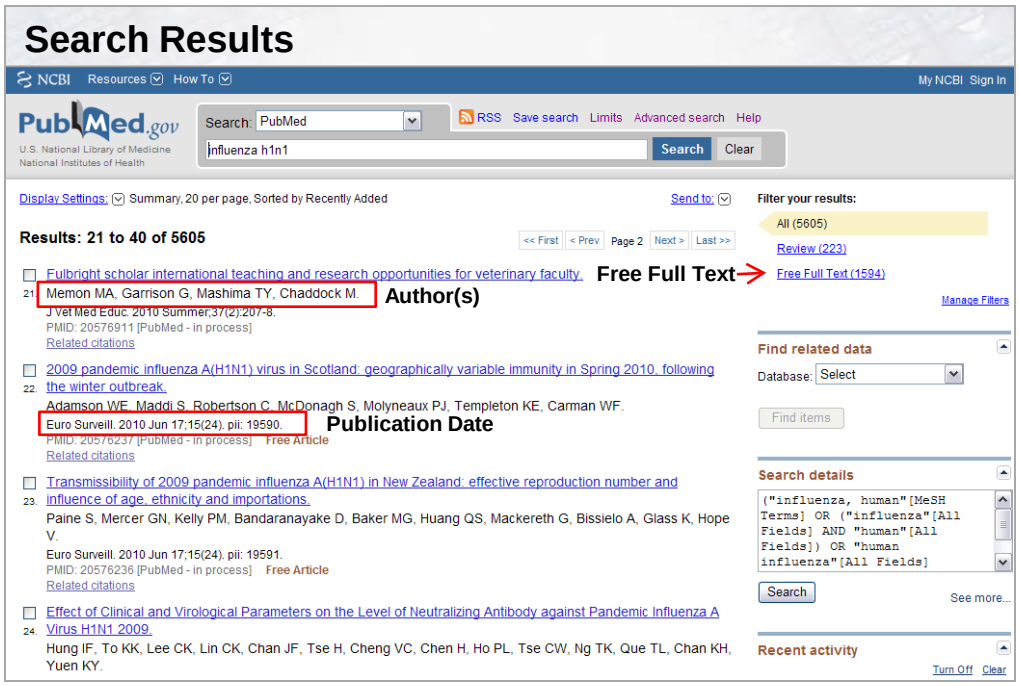
Note the Reset and Search button

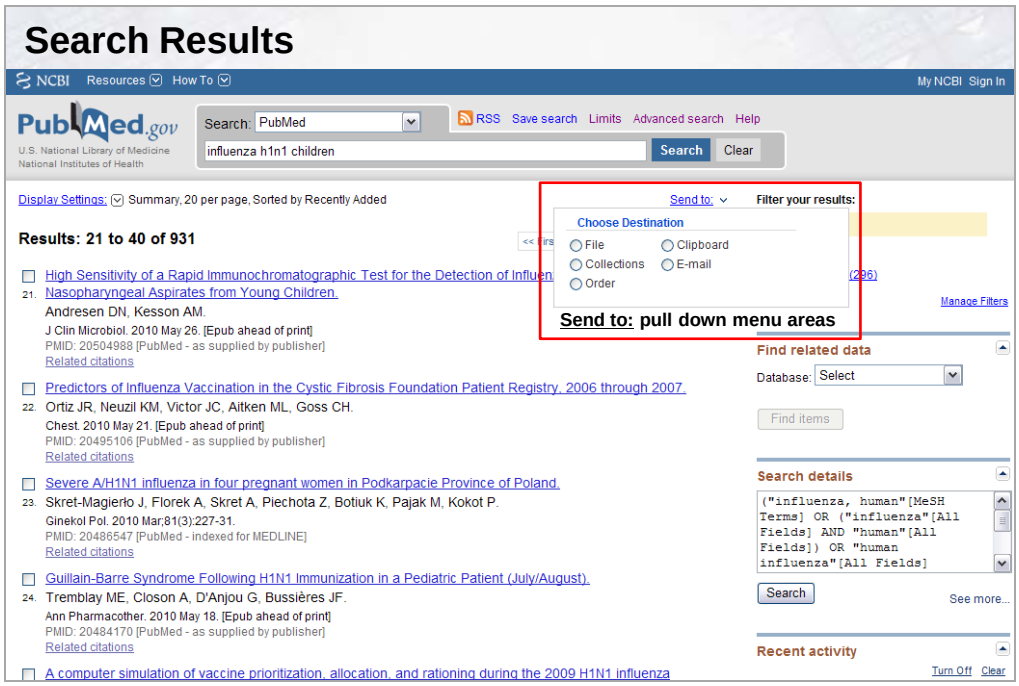
Advanced Search



Search Results

- Results displayed in order entered into system – last in, first out
- Display summary, abstract, MEDLINE, or other record format
- Provides option to Save Search via My NCBI feature
- Link to Related Articles
- Send to:
  - File
  - Collections
  - Order
  - Clipboard
  - E-mail


Search Results
NCBI Resources How To
My NCBI Sign In
PubMed.gov
U.S. National Library of Medicine
National Institutes of Health
Search: PubMed
RSS Save search Limits Advanced search Help
influenza h1n1
Search Clear
Display Settings: Summary, 20 per page, Sorted by Recently Added
Send to:
Filter your results:
All (5605)
Review (223)
Free Full Text (1594)
Manage Filters
Results: 21 to 40 of 5605
<< First < Prev Page 2 Next > Last >>
Fulbright scholar international teaching and research opportunities for veterinary faculty.
Free Full Text
21 Memon MA, Garrison G, Mashima TY, Chaddock M.
Author(s)
J Vet Med Educ. 2010 Summer;37(2):207-8.
PMID: 20576911 [PubMed - in process]
Related citations
2009 pandemic influenza A(H1N1) virus in Scotland: geographically variable immunity in Spring 2010, following the winter outbreak.
22. Adamson WE, Maddi S, Robertson C, McDonagh S, Molyneaux PJ, Templeton KE, Carman WF.
Euro Surveill. 2010 Jun 17;15(24). pii: 19590.
Publication Date
PMID: 20576237 [PubMed - in process] Free Article
Related citations
Transmissibility of 2009 pandemic influenza A(H1N1) in New Zealand: effective reproduction number and influence of age, ethnicity and importations.
23. Paine S, Mercer GN, Kelly PM, Bandaranayake D, Baker MG, Huang QS, Mackereth G, Bissielo A, Glass K, Hope V.
Euro Surveill. 2010 Jun 17;15(24). pii: 19591.
PMID: 20576236 [PubMed - in process] Free Article
Related citations
Effect of Clinical and Virological Parameters on the Level of Neutralizing Antibody against Pandemic Influenza A Virus H1N1 2009.
24. Hung IF, To KK, Lee CK, Lin CK, Chan JF, Tse H, Cheng VC, Chen H, Ho PL, Tse CW, Ng TK, Que TL, Chan KH, Yuen KY.
Find related data
Database: Select
Find items
Search details
("influenza, human"[MeSH Terms] OR ("influenza"[All Fields] AND "human"[All Fields]) OR "human influenza"[All Fields]
Search
See more...
Recent activity
Turn Off Clear


Search Results
NCBI Resources How To
My NCBI Sign In
PubMed.gov
U.S. National Library of Medicine
National Institutes of Health
Search: PubMed
RSS Save search Limits Advanced search Help
influenza h1n1 children
Search Clear
Display Settings: Summary, 20 per page, Sorted by Recently Added
Send to:
Filter your results:
Choose Destination
File Clipboard
Collections E-mail
Order
Send to: pull down menu areas
Manage Filters
Results: 21 to 40 of 931
High Sensitivity of a Rapid Immunochromatographic Test for the Detection of Influen (296)
21. Nasopharyngeal Aspirates from Young Children.
Andresen DN, Kesson AM.
J Clin Microbiol. 2010 May 26. [Epub ahead of print]
PMID: 20504988 [PubMed - as supplied by publisher]
Related citations
Predictors of Influenza Vaccination in the Cystic Fibrosis Foundation Patient Registry, 2006 through 2007.
22. Ortiz JR, Neuzil KM, Victor JC, Aitken ML, Goss CH.
Chest. 2010 May 21. [Epub ahead of print]
PMID: 20495106 [PubMed - as supplied by publisher]
Related citations
Severe A/H1N1 influenza in four pregnant women in Podkarpacie Province of Poland.
23. Skret-Magierło J, Florek A, Skret A, Piechota Z, Botiuk K, Pajak M, Kokot P.
Ginekol Pol. 2010 Mar;81(3):227-31.
PMID: 20486547 [PubMed - indexed for MEDLINE]
Related citations
Guillain-Barre Syndrome Following H1N1 Immunization in a Pediatric Patient (July/August).
24. Tremblay ME, Closon A, D'Anjou G, Bussières JF.
Ann Pharmacother. 2010 May 18. [Epub ahead of print]
PMID: 20484170 [PubMed - as supplied by publisher]
Related citations
A computer simulation of vaccine prioritization, allocation, and rationing during the 2009 H1N1 influenza
Find related data
Database: Select
Find items
Search details
("influenza, human"[MeSH Terms] OR ("influenza"[All Fields] AND "human"[All Fields]) OR "human influenza"[All Fields]
Search
See more...
Recent activity
Turn Off Clear

Register for My NCBI

- An easy way to STORE and UPDATE searches on topics of continuing interest
  - Store your searches in MY NCBI
  - Update your stored search(es) to see what's new
  - Set up e-mail alerts for new content
  - Display links to Web resources (Link Out)
  - Choose filters that group search results

How to Order Documents

- Loansome Doc
  - An automated document ordering program
  - Accessible directly from PubMed
    - Click Order under the Send to: drop down menu
  - Allows you to order the full text of an article from a Loansome Doc participating library

Clinical Queries

- Specialized PubMed searches for clinicians, including:
  - Clinical Study Categories
    - Etiology
    - Diagnosis
    - Therapy
    - Prognosis
  - Systematic Reviews
  - Medical Genetics

Topic-Specific Queries

- Directory of topic-specific PubMed Queries containing:
  - Queries targeted for clinicians and health services researchers
- Specific subject queries
- Additional search queries/interfaces
- Journal collections

Print Research Results

- Use Web browser print function
- Can print only records on displayed page
- Use Display Settings to increase the number of records on displayed page (up to 200)
- Use your browser's print options to print record(s)

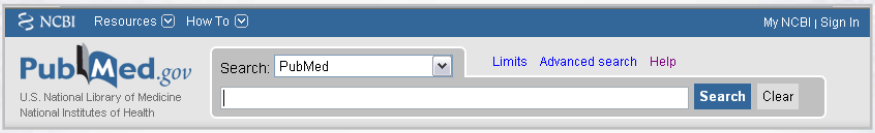
Save Search Results

- Default: Entire retrieval of one search
  - Up to 5,000 items
- Select specific records by clicking in the check box above the item number you want to save
- Choose a Display Format and Sort by selection if desired
- Select File from the Send to menu and select the MEDLINE format to download record(s) for use with reference management software

Additional Resources

- PubMed Tutorial Web-based learning program
  - http://www.nlm.nih.gov/bsd/pubmed_tutorial/m1001.html
- MeSH Video
  - http://www.nlm.nih.gov/bsd/disted/video
- NLM Training Manuals and Resources
  - http://www.nlm.nih.gov/pubs/web_based.html
    - Workbook sections 1, 2, and 3
- NLM Distance Education Program Resources
  - http://www.nlm.nih.gov/bsd/dist_edu.html

Access

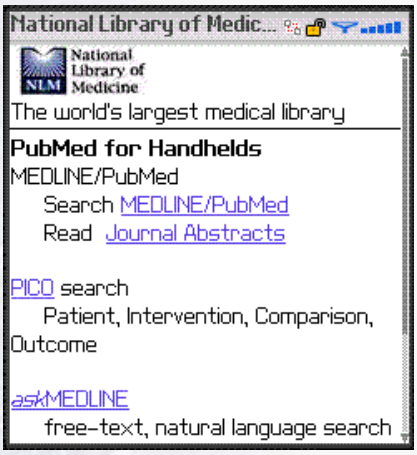


http://pubmed.gov

Or...

Click the PubMed link on NLM's home page: **http://www.nlm.nih.gov**

PubMed for Handhelds Web site



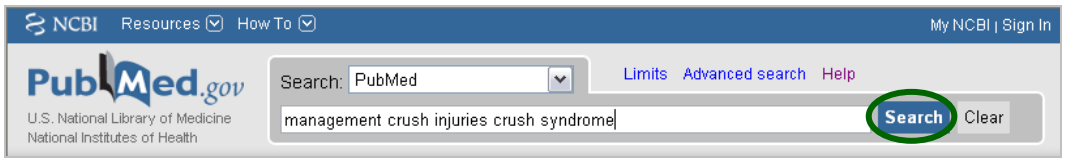
- A website for searching MEDLINE® with the web browser of any mobile device.

http://pubmedhh.nlm.nih.gov

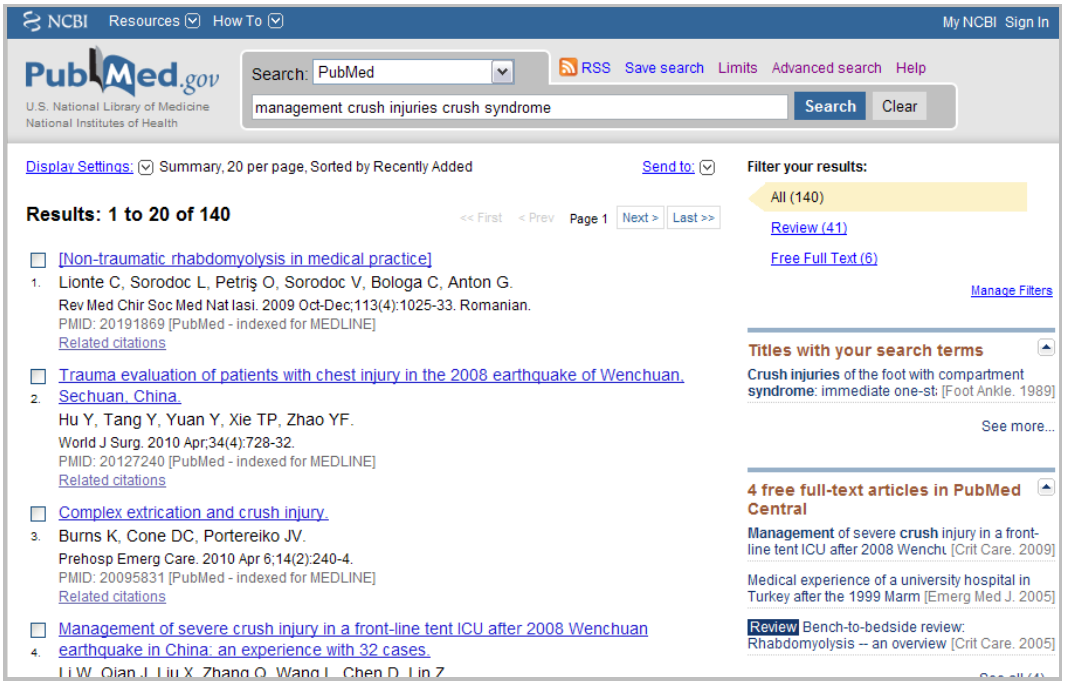
MEDLINE/PubMed Exercises

Search Example: Crush injuries and crush syndrome are common among earth quake victims. What information has been written about the management of these conditions?

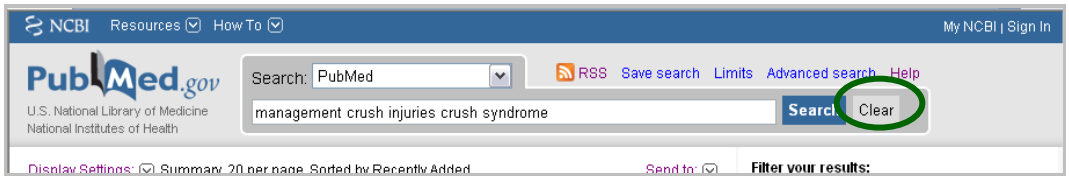
- Go to **http://pubmed.gov** and type **management crush injuries crush syndrome** in the search box:



- Click the **Search** button and review the citation(s) retrieved:



- Click the **Clear** button to prepare for the next search.



Basic Searches

Exercise 1: What is the impact of disasters on diabetic and renal patients?

Keyboard Help:

Type	**impact disasters AND diabetic renal patients** in the search box
Click	the **Search** button and review the citations retrieved
Click	the **Clear** button to prepare for the next search

Exercise 2: Locate an article titled *Earthquakes and Crush Syndrome Casualties: Lessons Learned from the Kashmir Disaster.*

Keyboard Help:

Type	**earthquakes crush syndrome casualties** in the search box
Click	**Limits** above the search box
Select	**Title** from the pull down menu under **Search Field Tags**
Click	the **Search** button and review the citation
Click	**Remove** in the yellow bar above the citation to deactivate limits
Click	the **Clear** button to prepare for the next search

Exercise 3: Locate citations on disaster preparedness training for health care professionals. Next, access free full-text articles.

Keyboard Help:

Type	**disaster preparedness training health care professionals** in the search box
Click	the **Search** button and scan the citations retrieved
Click	**Free Full Text** under “Filter your results:” in the top right of the page and scan citations
Select	a citation by clicking on the title
Click	the icon to the right of the citation.
	Some icons may indicate free full text.
Close	the pop-up window
Click	the backspace button to return to search results page
Click	the **Clear** button to prepare for the next search

Exercise 4: Find citations on metabolic syndrome in African Americans. Limit your search to articles published during the past five years.

Keyboard Help:

Type	**metabolic syndrome african americans** in the search box
Click	**Limits** above the search box
Click	Any date from the "Published in the Last:" pull-down menu under Dates
Select	5 years from the "Published in the Last:" pull-down menu under Dates
Click	the **Search** button and review the citations retrieved
Click	on "Remove" next to "Limits Activated:" in the yellow bar above the search results
Click	**Clear** to prepare for the next search

Exercise 5: Find an article by D. Mohr titled "Southern Cooking and Lung Cancer."

Keyboard Help:

Type	**southern cooking lung cancer** in the search box
Apply	**Limits**
	The limits search screen should already be displayed form your previous search.
Scroll	down right side of the page and select Title from the "Field" pull-down menu under **Search Field Tags**
Click	the **Search** button and review the citation retrieved
Click	on Change next to "Limits Activated:" in the yellow bar above the search results
Click	All Fields from the "Field" pull-down menu under **Search Field Tags**
Click	**Clear** to prepare for the next search

Advanced Searches

Exercise 6: Search the AIDS subset to locate articles that discuss taking Nevirapine during pregnancy for the prevention of HIV transmission. Limit retrieval to human studies and articles written in English.

Keyboard Help:

Type	**nevirapine AND pregnancy AND transmission** in the search box
	Always capitalize Boolean operators (AND, OR, NOT) in PubMed.

Apply	**Limits**
	The limits search interface should already be selected from your previous search.
Select	the Humans checkbox under **Species**
Select	the English checkbox under **Languages**
Select	the AIDS topic checkbox under **Subsets**
Click	the **Search** button and review the citation(s) retrieved
Click	Remove next to "Limits Activated:" in the yellow bar above the search results
Click	**Clear** to prepare for the next search

Exercise 7: Research articles on the subject of health care access in African American populations. Next, e-mail to yourself the abstract of the first record in text format

Keyboard Help:

Type	**African American health care access** in the search box
Click	the **Search** button
Click	the checkbox to the left of the first record
Select	E-mail from the "Send to:" pull-down menu
Select	Abstract from the "Format" pull-down menu
Type	your e-mail address in the "E-mail" field
Click	the **E-mail** button
Review	the e-mail confirmation message highlighted in green above the abstract
Click	the **Clear** button to prepare for the next search

Exercise 8: Using the Single Citation Matcher, locate an article published in 1999 titled "Barriers to prostate cancer screening in African American men."

Keyboard Help:

Click	Advanced Search above the search box
Scroll	down and click Single Citation Matcher under **More Resources**
Type	**1999** in the box next to "Date"
Type	**barriers screening prostate cancer african american** in the "Title words" search box
Click	the **Go** button and review the citation
Click	the **Clear** button to prepare for the next search

Exercise 9: Set up a My NCBI user account and conduct a search for journal articles on the prevalence of asthma children. Next, access all free full-text articles and review choice.

Keyboard Help:

Click	**My NCBI** at the top right of the page
Click	Register for an account
Follow	the directions for setting up a User Name and Password
	Clicking the "Keep me signed in" checkbox will create a permanent cookie so that My NCBI will be indefinitely available on your computer without signing in again.
Type	**asthma prevalence children** in the search box
Click	the **Search** button
Click	**Save Search** at the top of the screen
Click	**Save** button
	You must validate e-mail address to receive search e-mails and notifications.
Select	E-mail update options and click **Save** button
Review	search results
	Note that your search was saved in the green bar above the citations. Click Edit your search settings to change your search settings.
Click	**Free Full Text** link under "Filter your results:" at the top right of the screen
Select	citation and click title to review
Click	the icon(s) to the right of the citation indicating free full text
Review	select article and close window(s)
Click	the **Clear** button and prepare for the next search

Saving and Printing Records in PubMed

The **Send to:** button is available on screens with search results. You can save the entire results of a specific search or selected citations. If you don't select specific citations before clicking on the **Send to:** button, you will create a file on your computer that will contain the entire search results, up to a maximum of 5,000 items.

You can also save records collected from multiple searches by using the **Send to:** Clipboard feature. The Clipboard holds a maximum of 500 items. When you save a file, your browser will prompt you where this file should be placed on your computer, and also give you the opportunity to rename the file.

Saving Entire Search Results

- Click **Send to:** File to select your formatting and sorting preferences.
  - The default for the File feature is to save the entire retrieval—up to 5,000 items— unless you specifically select citations. For example, if you use the **Send to:** File feature on a screen displaying 1-20 items of 2,356, your saved file will contain all 2,356 citations.
- Click Create File

Saving Selected Citations from a Single Search

- Click the check box next to each citation you want to save.
  - You can move to other pages within the search results to make more selections.
- Click **Send to:** File to select your formatting and sorting preferences.
  - Saving a large retrieval may take several minutes. To save citations in html format, use the Save As function of your browser, and change the file extension to html. This will save only the citations displayed on the screen, so you may wish to consider changing the number of items per page form the Display Settings.
- Click Create File

Using the Clipboard

- Click the check box next to each citation you want to send to the Clipboard, select Clipboard from the **Send to**: pull-down menu. Click Add to Clipboard and those items selected will automatically be saved to the clipboard.
  - Once you have added a citation to the Clipboard, the item will display a note, "Item in Clipboard" in green beneath the selected citation.
  - If you use the Clipboard feature without selecting citations using the check box(es), PubMed will add all of your search results—up to 500 citations—to the Clipboard. The Clipboard will be lost after eight hours of inactivity.

PubMed uses cookies to add your selections to the clipboard. In order for you to use this feature, your Web browser must be set to accept cookies.

Citations in the clipboard are represented by the search number "#0," and may be used in Boolean search statements. For example, to limit the citations you have collected in the Clipboard to English language citations, use the following search:

#0 AND english [la]

- This does not affect or replace the Clipboard contents.

E-mailing Citations

- Select E-mail from the **Send to**: menu
- Select your formatting and sorting preferences
- Select the number to send (if sending more than the first 20 records)
- Enter an e-mail address
  - Only one is permitted, to prevent spam
- Add additional text if you wish
- Click E-mail

Ordering Full-text Articles

The **Order Documents** function allows you to order the full-text copy of an article from a medical library. Prior to using this feature, you must establish an agreement with a Loansome Doc participating library. During the registration process, you will have the opportunity to search for a Loansome Doc provider in your area (U.S. and International). Local fees may apply. To register, click Order from the **Send to**: menu, then Order articles to get to the **Loansome Doc Screen**, then **Sign up!** from the Loansome Doc screen.

After you have registered with a Loansome Doc participating library, you can order citations by clicking the check box to the left of each citation you want to order. When you have finished marking your selections (you may move to other pages within your results), select Order from the **Send to:** pull-down menu.

You may use the Clipboard to collect items from multiple searches before ordering.

For some journals, full-text articles are available via a PubMed link to the publisher's Web site. Publisher links for the full-text of the article are displayed on the Abstract or Citation display. LinkOut is a PubMed feature that links to outside sources for the full text of the article (e.g., a publisher's Web site), as well as other resources such as biological databases and sequencing centers. User registration, a subscription fee, or some other type of fee may be required to access full-text articles in some journals.

Exporting Citations into a Reference Manager Program

To export your search results into a reference manager program, select File from the **Send to:** pull-down menu. Select the MEDLINE format to download records for use with reference management software.

Consider changing the .fcgi extension to .txt if you wish to open the file in a text editor, word processor, or reference manager program.

Printing Your Search Results

To print your search results, use the print function of your Web browser. Before printing, consider using the **Display Settings** feature to increase the number of documents per page so that the total number of documents is displayed on one page (maximum: 200 per page). You can print only the citations from the displayed page.

To print selected items from one or more searches on a single page, use the Clipboard feature first to collect them.

MEDLINE and MedlinePlus: What is the Difference?

MEDLINE is the National Library of Medicine's (NLM) premier bibliographic database. This Web-based research tool covers the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences. It contains more than 19 million citations and abstracts. Most of the articles found in MEDLINE are very technical and written for health care professionals. MEDLINE is available free through NLM's PubMed search system.

While MEDLINE is a source of medical research literature for health professionals, **MedlinePlus** provides health information especially written for consumers and patients by the National Institutes of Health and other reliable sources. MedlinePlus provides information on over 800 health topics. Additionally, consumers can search for information in the online medical encyclopedia or medical dictionary, get information on prescription and over-the-counter medication, and obtain information on local physicians and dentists. MedlinePlus is not a database for references to journal articles.

Use this Decision Tree to choose the correct database:

MEDLINE/PubMed	**MedlinePlus**
Database	Directory
Journal citations	Health topics
Published medical literature	Multiple sources
Health professionals	Consumers and patients
Clinical terminology	Easy to understand language
Search only	Browse and search
Value added: • Links to publishers • Selected full text articles • Selected consumer health journals • Links to MedlinePlus	Value added: • Drug information • Medical encyclopedia • Links to other Web resources • Link to MEDLINE searches • Spanish version • Surgery videos

3

MedlinePlus & Information Rx

National Library of Medicine:
Evidence-based Information At Your Fingertips

MedlinePlus

http://medlineplus.gov

MedlinePlus

- User-friendly source
- Health information for patients and the public
- Comprehensive, reliable, non-commercial and free
- Credible sources
- Easy-to-read language
- Links to PubMed searches
- Spanish version

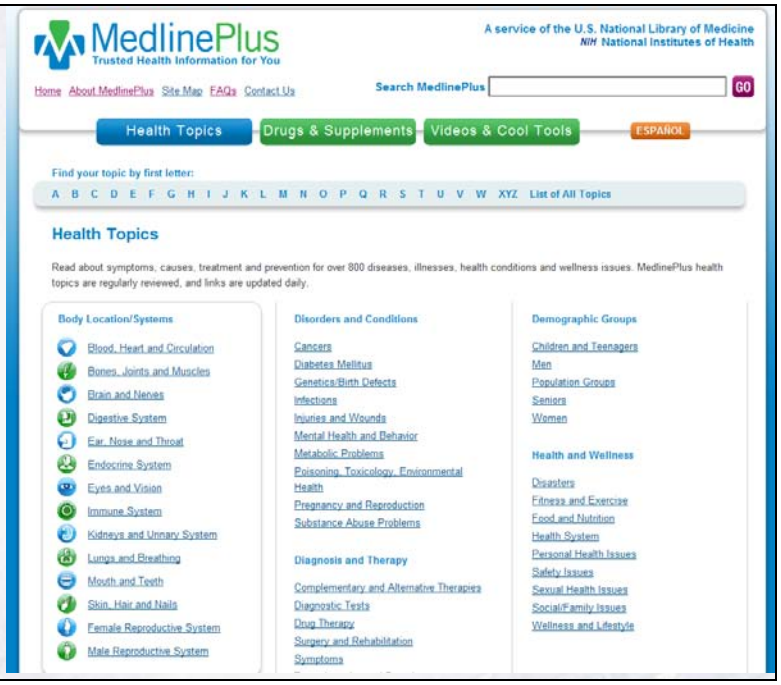
MedlinePlus

- Over 800 topics on health conditions, diseases, and wellness
  - Including Videos & Cool Tools
- Drug and herbal supplement information
- Current health news
- Illustrated medical encyclopedia
- Medical dictionary with over 60,000 definitions
  - audio pronunciation

MedlinePlus

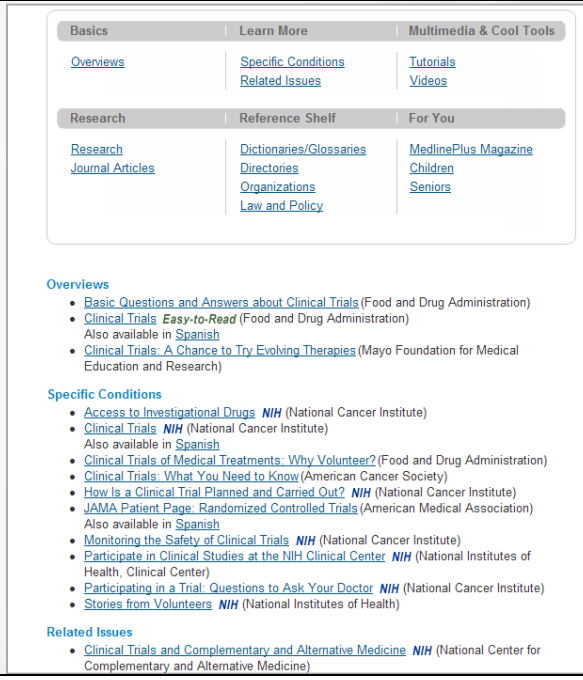
- Directories of physicians and health care facilities
- Organizations
- Multiple Languages
- Mobile Application
- MedlinePlus Magazine
- Medical Words
  - http://www.nlm.nih.gov/medlineplus/medicalwords.html

Health Topics



MedlinePlus - Clinical Trials

MedlinePlus - Clinical Trials



Basics | Learn More | Multimedia & Cool Tools

Overviews | Specific Conditions, Related Issues | Tutorials, Videos

Research | Reference Shelf | For You

Research, Journal Articles | Dictionaries/Glossaries, Directories, Organizations, Law and Policy | MedlinePlus Magazine, Children, Seniors

Overviews

- Basic Questions and Answers about Clinical Trials (Food and Drug Administration)
- Clinical Trials *Easy-to-Read* (Food and Drug Administration)
  Also available in Spanish
- Clinical Trials: A Chance to Try Evolving Therapies (Mayo Foundation for Medical Education and Research)

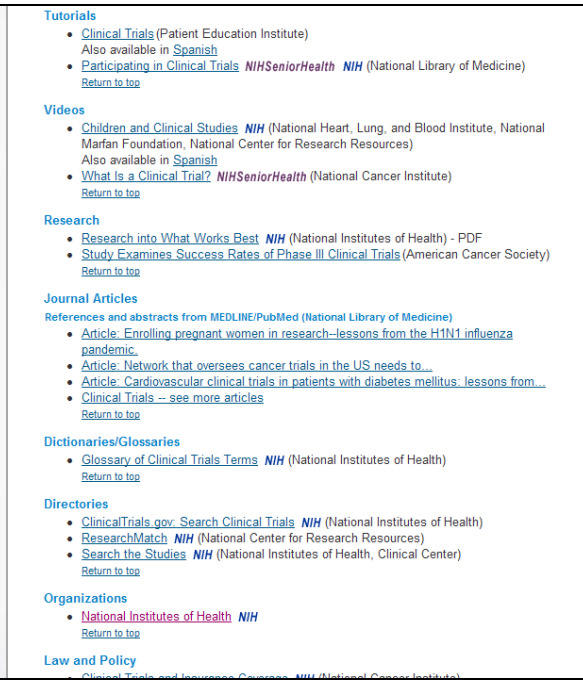
Specific Conditions

- Access to Investigational Drugs *NIH* (National Cancer Institute)
- Clinical Trials *NIH* (National Cancer Institute)
  Also available in Spanish
- Clinical Trials of Medical Treatments: Why Volunteer? (Food and Drug Administration)
- Clinical Trials: What You Need to Know (American Cancer Society)
- How Is a Clinical Trial Planned and Carried Out? *NIH* (National Cancer Institute)
- JAMA Patient Page: Randomized Controlled Trials (American Medical Association)
  Also available in Spanish
- Monitoring the Safety of Clinical Trials *NIH* (National Cancer Institute)
- Participate in Clinical Studies at the NIH Clinical Center *NIH* (National Institutes of Health, Clinical Center)
- Participating in a Trial: Questions to Ask Your Doctor *NIH* (National Cancer Institute)
- Stories from Volunteers *NIH* (National Institutes of Health)

Related Issues

- Clinical Trials and Complementary and Alternative Medicine *NIH* (National Center for Complementary and Alternative Medicine)

MedlinePlus - Clinical Trials



Tutorials

- Clinical Trials (Patient Education Institute)
  Also available in Spanish
- Participating in Clinical Trials *NIHSeniorHealth* *NIH* (National Library of Medicine)

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Videos

- Children and Clinical Studies *NIH* (National Heart, Lung, and Blood Institute, National Marfan Foundation, National Center for Research Resources)
  Also available in Spanish
- What Is a Clinical Trial? *NIHSeniorHealth* (National Cancer Institute)

Return to top

Research

- Research into What Works Best *NIH* (National Institutes of Health) - PDF
- Study Examines Success Rates of Phase III Clinical Trials (American Cancer Society)

Return to top

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Enrolling pregnant women in research--lessons from the H1N1 influenza pandemic.
- Article: Network that oversees cancer trials in the US needs to...
- Article: Cardiovascular clinical trials in patients with diabetes mellitus: lessons from...
- Clinical Trials -- see more articles

Return to top

Dictionaries/Glossaries

- Glossary of Clinical Trials Terms *NIH* (National Institutes of Health)

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Directories

- ClinicalTrials.gov: Search Clinical Trials *NIH* (National Institutes of Health)
- ResearchMatch *NIH* (National Center for Research Resources)
- Search the Studies *NIH* (National Institutes of Health, Clinical Center)

Return to top

Organizations

- National Institutes of Health *NIH*

Return to top

Law and Policy

MedlinePlus - Clinical Trials

Organizations
- National Institutes of Health *NIH*

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Law and Policy
- Clinical Trials and Insurance Coverage *NIH* (National Cancer Institute)
- Clinical Trials: State Laws Regarding Insurance Coverage (American Cancer Society)
- Medicare and Clinical Research Studies (Centers for Medicare & Medicaid Services) - PDF
- Medicare Clinical Trial Policies (Centers for Medicare & Medicaid Services)
- Reporting Complaints Related to FDA-Regulated Clinical Trials (Food and Drug Administration)

Return to top

MedlinePlus Magazine
- Clinical Trials: A Crucial Key to Human Health Research *NIH*
- Clinical Trials: Key to Medical Progress *NIH*
- Value of Medical Research *NIH*

Return to top

Children
- Children and Clinical Studies *NIH* (National Heart, Lung, and Blood Institute, National Marfan Foundation, National Center for Research Resources)
  Also available in Spanish
- Children's Assent to Clinical Trial Participation *NIH* (National Cancer Institute)
- Should Your Child Be in a Clinical Trial? (Food and Drug Administration)

Return to top

Seniors
- Participating in Clinical Trials *NIHSeniorHealth* *NIH* (National Library of Medicine)

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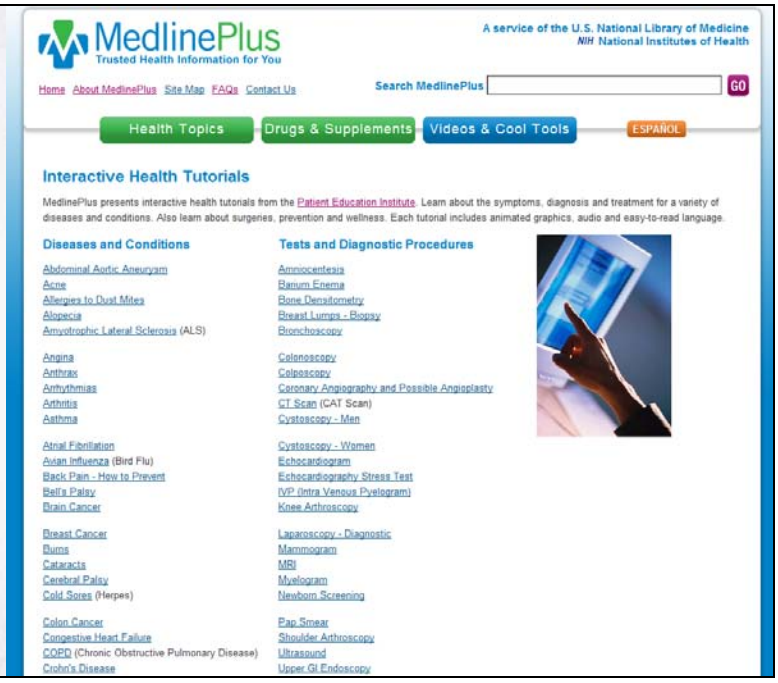
U.S. National Library of Medicine 8600 Rockville Pike, Bethesda, MD 20894 U.S. Department of Health and Human Se

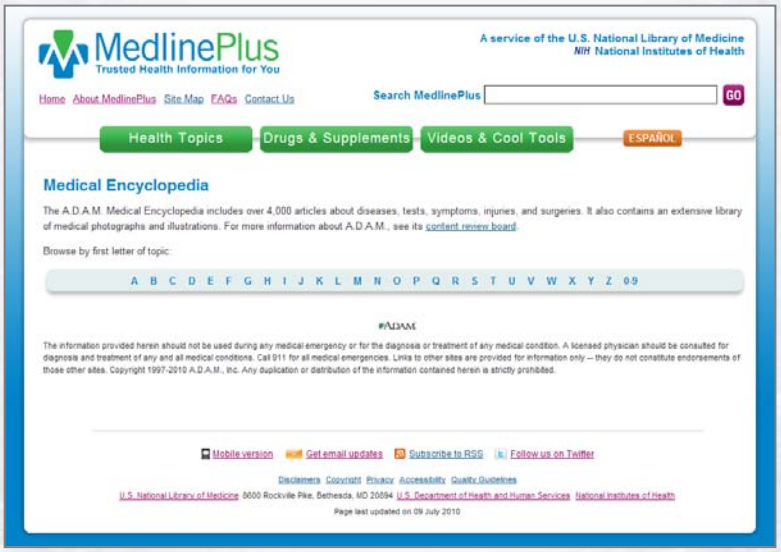
Videos and Cool Tools

MedlinePlus – Interactive Health Tutorial



Drugs, Supplements, and Herbal Information

Medical Encyclopedia



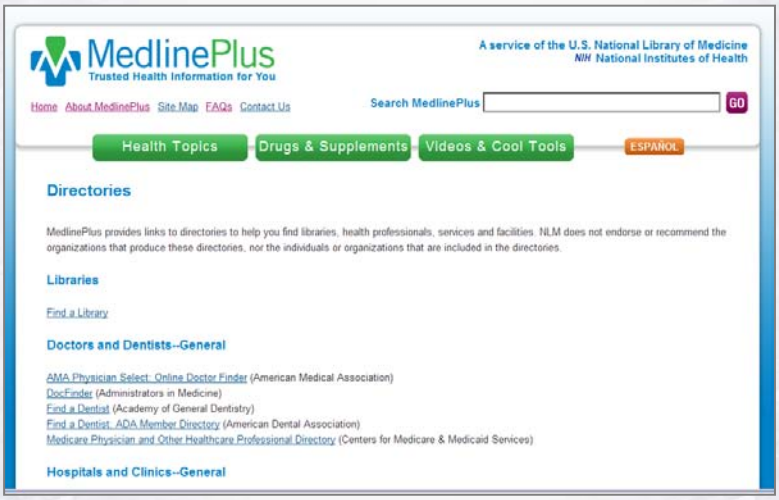
Medical Dictionary

News

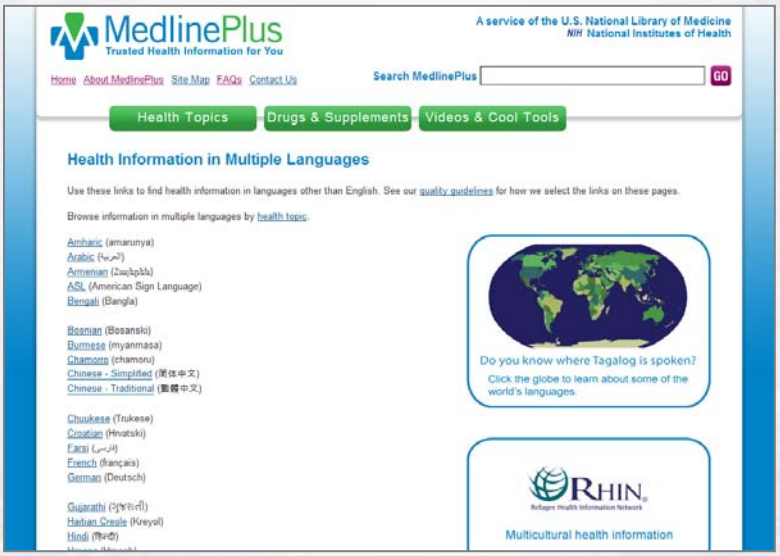
Home Page

More Health News

Directories



Multiple Languages



MedlinePlus Mobile

- Available in English and Spanish
- Includes a subset of content from the full Web site.
- Over 800 diseases, wellness topics, the latest health news, an illustrated medical encyclopedia, and information on prescription and over-the-counter medications.

http://m.medlineplus.gov

Awards and Recognition

One of 5 winners - Best of 2005 in E-Health category internationally

(March 2009)

"Web Sites that Work" – recognized as the "most reliable and easiest to navigate" government health Web site

(September 30, 2008)

Mentioned as one of the best places to find medical information

http://www.nlm.nih.gov/medlineplus/recognition.html

Additional Features

NIH Medline Magazine

- Quarterly guide for patients and their families
- FREE subscription

E-mail Updates and RSS Feeds

- E-mail announcement list with links to consumer health topics and Web sites
- RSS (Really Simple Syndication): Keep up-to-date without cluttering your e-mail inbox

The NIH MedlinePlus Magazine

- The latest and most authoritative medical and health care information from the National Institutes of Health (NIH), as featured online on the MedlinePlus Web site

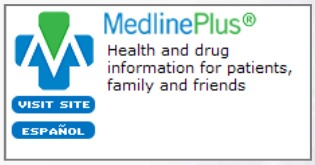
Subscribe for FREE—OR

Multiple copies for $1.00 each

Access

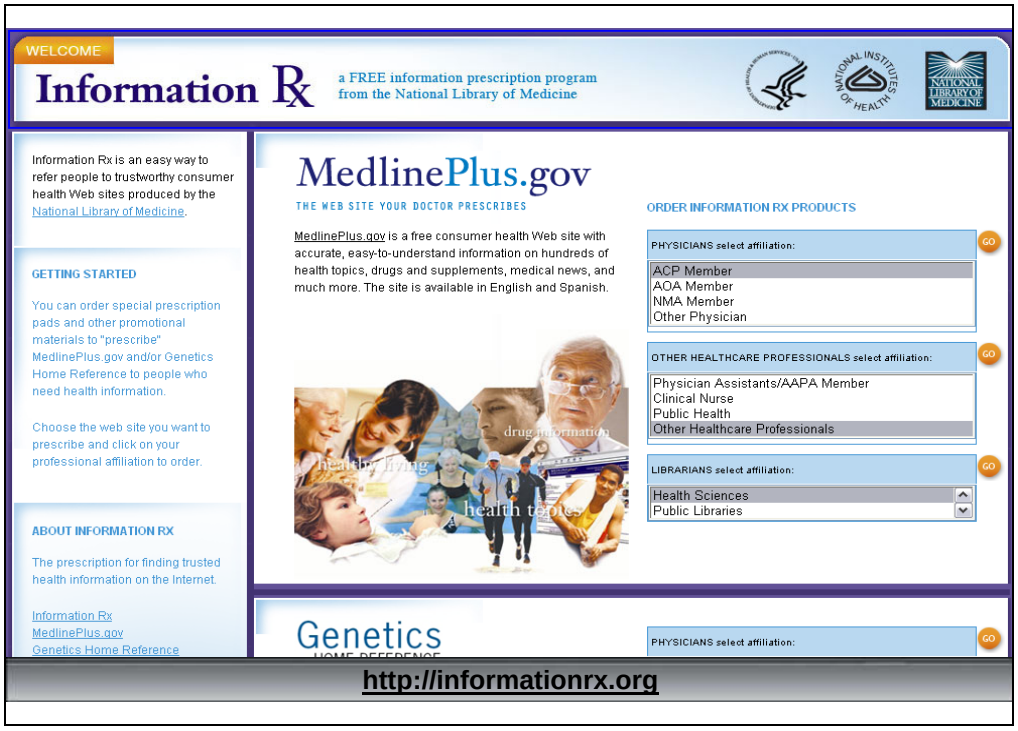
http://medlineplus.gov

Or . . . Click the MedlinePlus link on NLM's home page: http://www.nlm.nih.gov



Spanish version: http://medlineplus.gov/esp

Information Rx Program



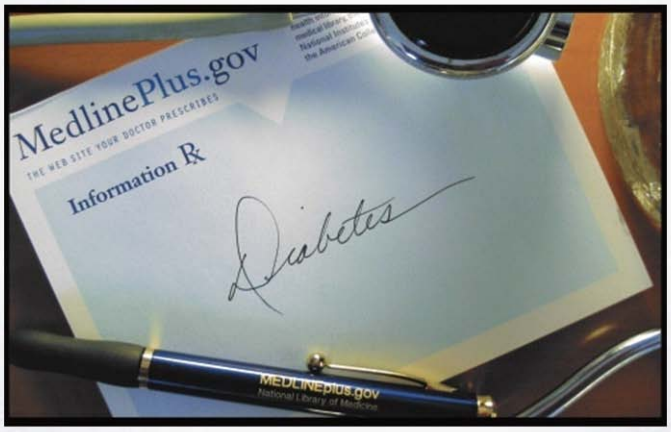
Information Rx

- Easy mechanism for physicians to refer their patients to MedlinePlus
- Partners in promoting MedlinePlus.gov; American College of Physicians Foundation, National Medical Association, American Osteopathic Association, and the American Academy of Physician Assistants

Information Rx

- NLM → Healthcare Professionals
  - Educational materials, FREE
- Healthcare Professionals → Patients to MedlinePlus
  - Information related to a new diagnosis, chronic condition, etc.

Information Prescription Pad



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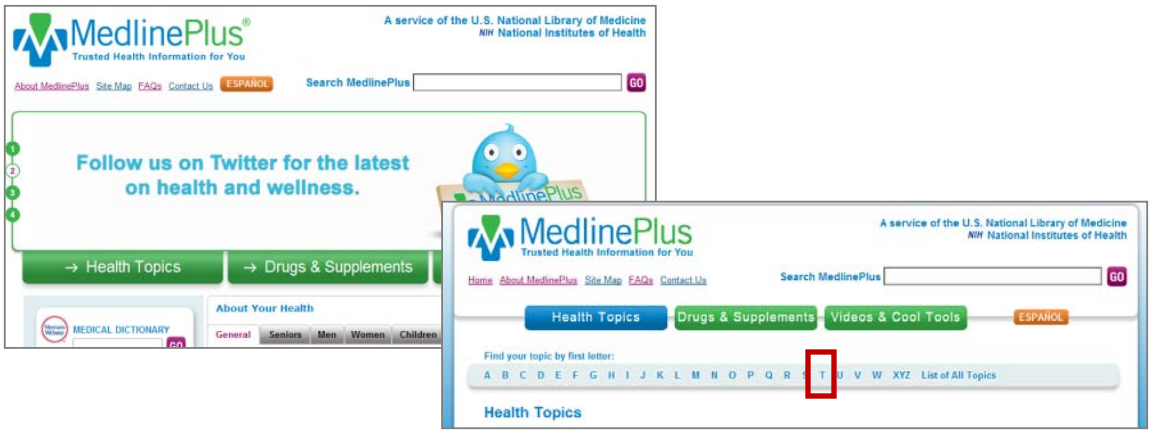
Benefits of Information Rx

- Provides healthcare providers with a new clinical service that enhances patient education
- Improves quality health information searches on the Internet
- Increases patients' comfort with Internet health information-seeking and discussing findings with a healthcare provider

MedlinePlus Search Exercises

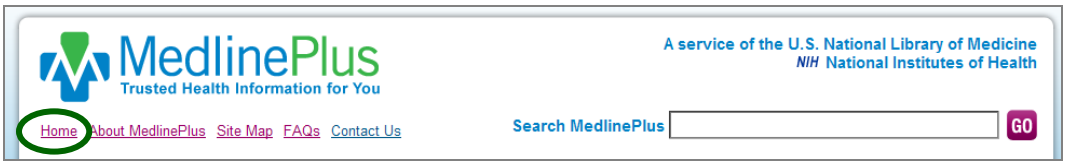
Search Example: Find general information about health issues related to travel.

- Go to **http://medlineplus.gov** and click **Health Topics**, then click **T**:



- Click **Traveler's Health** in the alphabetical list:

- Click a topic of interest to you and review the information. Then close the pop-up window and click the **Home** tab at the top of the MedlinePlus page to prepare for the next search.



Exercise 1: Dengue, Diphtheria and Malaria are potential illnesses that may affect relief workers as a result of working in Haiti after the recent earthquake. Using the alphabetical search feature, locate information about each of these diseases.

Suggested Solution:

Click	the **Health Topics** tab
Click	**D**
Click	Dengue from the alphabetical list
Click	a topic of interest to you
Review	the information retrieved and close the pop-up window
	Repeat these steps for: Diphtheria and Malaria

Exercise 2: Locate disaster preparation and recovery information written in Haitian Creole.

Suggested Solution:

Click	the **Multiple Languages** button at the bottom of the **Home** page
Click	**Haitian Creole (Kreyol)**
Scroll	down to **Disaster Preparation and Recovery**
Select	a topic in Kreyol
Review	the information and close the pop-up window

Exercise 3: What is the risk of an earthquake occurring in my state? What precautions should I take to prepare for an earthquake?

Suggested Solution:

Click	the **Health Topics** tab
Click	**E**
Click	**Earthquakes** from the alphabetic list
Click	**Directories** under "Reference Shelf"
Click	**Earthquake Risk by State and Territory** (Federal Emergency Management Agency)
Locate	your state on the chart and close the pop-up window
Scroll	back up to the middle of the page
Click	**Related Issues** under **"**Learn More"
Click	Are You Ready? Earthquakes (Federal Emergency Management Agency)
Review	the information retrieved and close the pop-up window

Exercise 4: What are the risk factors and warning signs of stroke?

Keyboard Help:

Click	the **Health Topics** tab
Click	**S**
Click	**Stroke** from the alphabetical list
Click	**Diagnosis/Symptoms** under **Basics**

Click	**Stroke Risk Factors and Symptoms** ***NIH*** (National Institute of Neurological Disorders and Stroke) and review the information retrieved
Close	the pop-up window

Exercise 5: Find information on child and teen health.

Keyboard Help:

Click	the **Health Topics** tab
Click	**Children and Teenagers** under **Demographic Groups**
Click	a topic of your choice and review the information retrieved
Close	the pop-up window

Exercise 6: Locate information on prostate cancer prevention and screening.

Keyboard Help:

Click	the **Health Topics** tab
Click	**P**
Click	**Prostate Cancer** from the alphabetical list
Click	**Prevention/Screening** under **Basics**
Click	**Prostate Cancer (PDQ): Prevention** ***NIH*** (National Cancer Institute)
Review	the information retrieved and close the pop-up window
Click	**Prostate-Specific Antigen (PSA) Test** ***NIH*** (National Cancer Institute) and review the information retrieved
	Note that this information is also available in Spanish.
Close	the pop-up window

Exercise 7: Are there any side effects that patients taking *Ritalin* should know about?

Keyboard Help:

Click	the **Drugs and Supplements** tab
Click	**R** from the alphabetical drug list
Scroll	to *Ritalin*® and click *Methylphenidate*

Click	**What side effects can this medication cause?**
Review	the information

Exercise 8: Using the MedlinePlus search box, locate information on factors to consider before using an alternative medicine therapy.

Keyboard Help:

Type	**alternative medicine** in the **Search MedlinePlus** box at the top of the page
Click	the **Go** button
Click	**Complementary and Alternative Medicine** in the list of results
Click	Be an Informed Consumer NIH (National Center for Complementary and Alternative Medicine) under **Start Here**
Review	the information retrieved
Close	the pop-up window

Exercise 9: Find the MedlinePlus AIDS page and link to the first news article. Next, view the AIDS Interactive Tutorial.

Keyboard Help:

Click	the **Health Topics** tab
Click	**A**
Click	**AIDS** in the alphabetical list
Click	**Latest News** under **Basics**
Click	the link of your choice, review the information retrieved, then close the pop-up window or the browser **Back** button to return to the AIDS page
Click	**Tutorials** under “Multimedia & Cool Tools” near the top of the page
Click	**HIV and AIDS** (Patient Education Institute)
Click	the **Start Interactive Tutorial** button and follow the instructions
Close	the tutorial window and return to the MedlinePlus AIDS health topic page

Exercise 10: Using the Medical Encyclopedia, locate an illustration depicting blood testing for diabetes.

Keyboard Help:

Click	**Medical Encyclopedia** at the bottom of the Home page
Click	**D**
Click	**Diabetes** in the alphabetical list
Click	the **Blood test** link (or the image above it) under **Images** to the right of the page
Review	the information retrieved

4

NLM Environmental Health and Toxicology Information Portal

National Library of Medicine:
Evidence-based Information At Your Fingertips

NLM Environmental Health and Toxicology Information Portal

What is TOXNET?

- TOXicology Data NETwork
- A free Web-based system of searchable databases covering
  - Environmental health
  - Toxicology
  - Hazardous chemicals
  - Toxic releases

Types of Information in TOXNET Databases

- Specific chemicals, mixtures, and products
- Unknown chemicals
- Specific toxic effects in humans and/or animals
- Examples
  - What are some probable routes of human exposure to lead?
  - What solvents can cause CNS (central nervous system) depression in humans?
  - What environmental triggers can cause asthma in children?

TOXNET on the Web

- **Toxicology Data**
  - **HSDB**
  - CCRIS
  - IRIS
  - ITER
  - LactMed
  - GENE-TOX
- **Toxicology Literature**
  - TOXLINE
  - DART/ETIC
- **Chemical Information**
  - ChemIDplus
  - HSDB Structures
  - NCI-3D
- **Toxic Release Information**
  - TRI (1987-2008)
  - TOXMAP
- **Environmental Health**
  - Haz-Map
  - Tox Town
  - Household Products

http://toxnet.nlm.nih.gov

NLM's TOX/ENV Listserv

- An e-mail announcement list
- Announces updates to SIS's resources, services, and outreach activities in environmental health and toxicology

Access:

- From the NLM Environmental Health and Toxicology Portal: http://tox.nlm.nih.gov, under **Stay Connected**, click: "Join the Listserv"

Access

http://sis.nlm.nih.gov/enviro.html

http://toxnet.nlm.nih.gov

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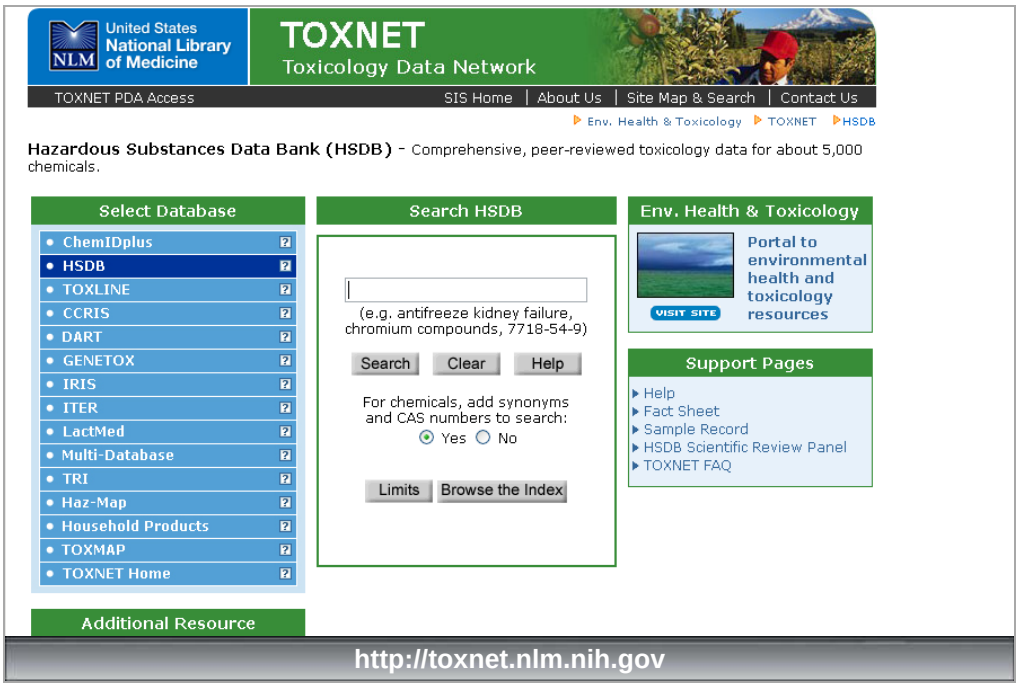
5

Hazardous Substances Data Bank

National Library of Medicine:
Evidence-based Information At Your Fingertips

HSDB



Hazardous Substances Data Bank (HSDB)

- Comprehensive toxicology data
- Over 5000 records – fully referenced
- Created and maintained by NLM
- Factual database/online handbook
- Peer-reviewed by a panel of experts in the areas of hazardous substances and toxicology
- Access from PubMed searches

HSDB Content

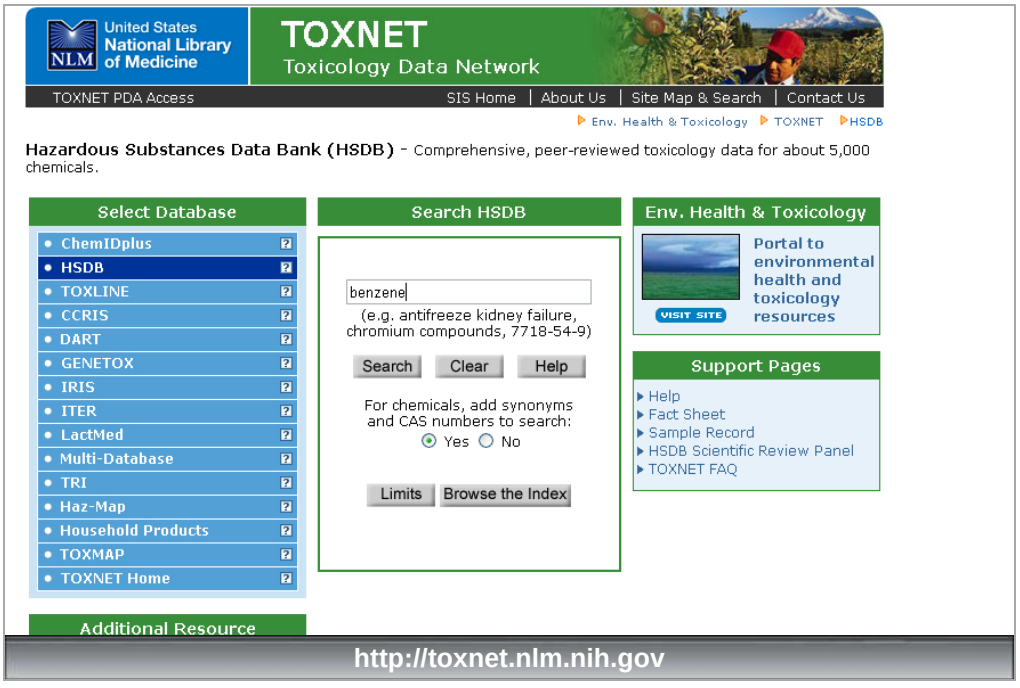
- Human Health Effects – evidence of carcinogenicity
- Emergency Medical Treatment
- Animal Toxicity Studies
- Metabolism/ Pharmacokinetics
- Pharmacology
- Environmental Fate & Exposure
- Environmental Standards & Regulations
- Chemical/Physical Properties
- Chemical Safety & Handling
- Occupational Exposure Standards
- Manufacturing/Use Information
- Laboratory Methods
- Special References
- Synonyms and Identifiers
- Administrative Information

HSDB Information Sources

- Books
- Government documents
  - Department of Transportation
  - Occupational Safety and Health Administration
  - Environmental Protection Agency
- Technical reports
- Selected primary literature
- Databases

HSDB Information Sources

- Data sources include
  - International Agency for Research on Cancer
  - World Health Organization
  - American Conference of Governmental Industrial Hygienists

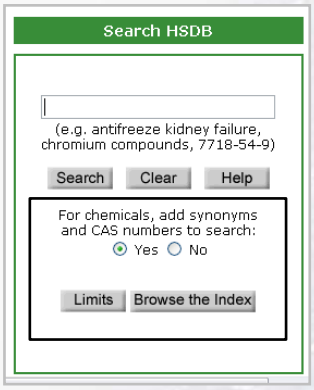


Searching HSDB

- Chemical name or other name
- Synonym
- Chemical name fragment
- Chemical Abstracts Service (CAS) Registry Number
- Subject terms

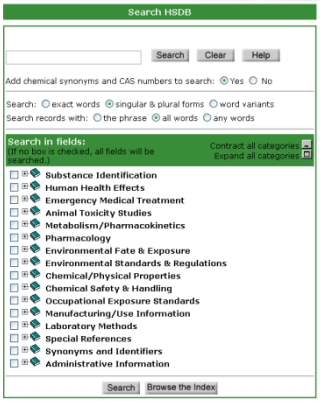
Searching HSDB

- By default, the system searches for synonyms and CAS numbers of chemicals
- Refine results with
  - Truncation (*)
  - Boolean operators (AND, OR, NOT)
  - Phrase searching
  - Nested Parentheses
  - Limits
  - Index browsing

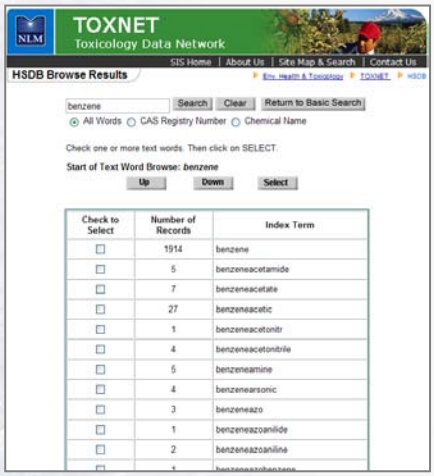


HSDB Limits

- Click the Limits button to search
  - Exact words, singular & plural forms, word variants
  - All the words, any of the words, or as a phrase
  - In specific fields or categories of fields



Browse the Index



- Select the record(s) you want to view by clicking the appropriate box in the Check to Select column
- Click the **Select** button
- Scan the index above or below the original display by clicking the **Up** or **Down** button

Search Results—Primary Record

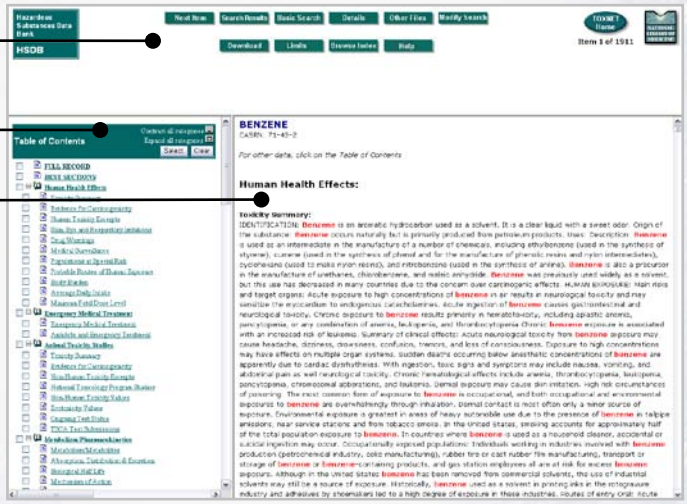
The initial matching chemical record is the "primary record"

Additional chemical records that contain the chemical name or search term you entered appear below

Click a substance name to retrieve the record for that substance

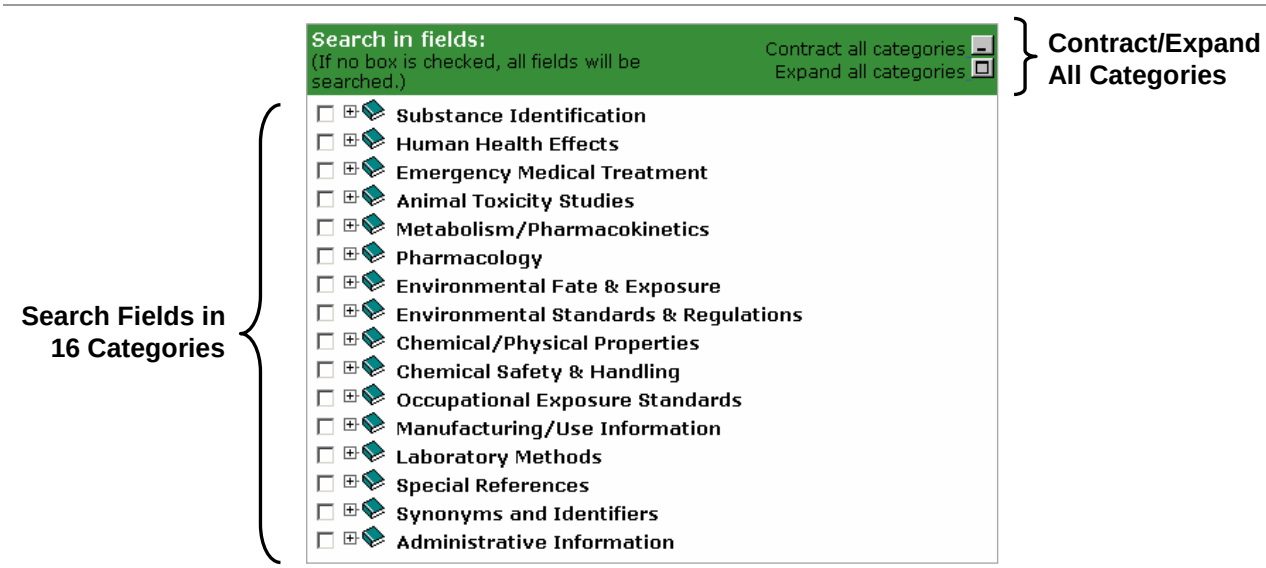
Search Results—Record Screen

1. **Navigation buttons**
2. **Table of Contents**
3. **Chemical data**



HSDB Limits Search Fields

The **Limits** feature allows you to specify a particular field or category of fields to search. By default, the system will search all fields in all categories. To see all fields within a specific category, click the "+" beside that category.



Expanded Categories (All Fields)

Substance Identification
- Chemical Names
- CAS Registry Number

Human Health Effects
- Toxicity Summary
- Evidence for Carcinogenicity
- Human Toxicity Excerpts
- Human Toxicity Values
- Skin, Eye and Respiratory Irritations
- Drug Warnings
- Medical Surveillance]
- Populations at Special Risk
- Probably Routes of Human Exposure
- Body Burden
- Average Daily Intake
- Minimum Fatal Dose Level

Emergency Medical Treatment
- Emergency Medical Treatment
- Antidote and Emergency Treatment

Animal Toxicity Studies
- Toxicity Summary
- Evidence for Carcinogenicity
- Non-Human Toxicity Excerpts
- Ecotoxicity Excerpts
- National Toxicology Program Studies
- Non-Human Toxicity Values
- Ecotoxicity Values
- Ongoing Test Status
- TSCA Test Submissions

Metabolism/Pharmacokinetics
- Metabolism/Metabolites
- Mechanism of Action
- Interactions

Pharmacology
- Therapeutic Uses
- Drug Warnings
- Interactions
- Drug Idiosyncrasies
- Drug Tolerance
- Minimum Fatal Dose Level
- Maximum Drug Dose
- Bionecessity

Environmental Fate & Exposure
- Environmental Fate/Exposure Summary
- Probably Routes of Human Exposure
- Body Burden
- Average Daily Intake
- Natural Pollution Sources
- Artificial Pollution Sources
- Environmental Fate
- Environmental Biodegradation
- Environmental Abiotic Degradation
- Environmental Bioconcentration
- Soil Adsorption/Mobility
- Volatilization from Water/Soil
- Environmental Water Concentrations
- Effluent Concentrations
- Sediment/Soil Concentrations
- Atmospheric Concentrations
- Food Survey Values
- Plant Concentrations
- Fish/Seafood Concentrations
- Animal Concentrations
- Milk Concentrations
- Other Environmental Concentrations

Environmental Standards & Regulations
- FIFRA Requirements
- Acceptable Daily Intakes
- TSCA Requirements
- CERCLA Reportable Quantities
- RCRA Requirements
- Atmospheric Standards
- Clean Water Act Requirements
- Federal Drinking Water Standards
- Federal Drinking Water Guidelines
- State Drinking Water Standards
- State Drinking Water Guidelines
- Soil Standards
- FDA Requirements
- Allowable Tolerances

Chemical/Physical Properties
- Molecular Formula
- Molecular Weight
- Color/Form
- Odor
- Taste
- Boiling Point
- Melting Point
- Corrosivity
- Critical Temperature & Pressure
- Density/Specific Gravity
- Dissociation Constants
- Heat of Combustion
- Heat of Vaporization
- Octanol/Water Partition Coefficient
- pH
- Solubilities
- Spectral Properties
- Surface Tension
- Vapor Density
- Vapor Pressure
- Relative Evaporation Rate

- Viscosity
- Other Chemical/Physical Properties

Chemical Safety & Handling

- Hazards Summary
- DOT Emergency Guidelines
- Odor Threshold
- Skin, Eye and Respiratory Irritations
- Fire Potential
- NFPA Hazard Classification
- Flammable Limits
- Flash Point
- Autoignition Temperature
- Fire Fighting Procedures
- Toxic Combustion Products
- Firefighting Hazards
- Explosive Limits & Potential
- Hazardous Reactivities & Incompatibilities
- Hazardous Decomposition
- Hazardous Polymerization
- Other Hazardous Reaction
- Prior History of Accidents
- Immediately Dangerous to Life or Health
- Protective Equipment & Clothing
- Preventive Measures
- Stability/Shelf Life
- Shipment Methods and Regulations
- Storage Conditions
- Cleanup Methods
- Disposal Methods
- Radiation Limits & Potential

Occupational Exposure Standards

- OSHA Standards
- Threshold Limit Values
- NIOSH Recommendations
- Immediately Dangerous to Life or Health
- Other Occupational Permissible Levels

Manufacturing/Use Information

- Major Uses
- Manufacturers
- Methods of Manufacturing
- General Manufacturing Information
- Formulations/Preparations
- Impurities
- Consumption Patterns
- U. S. Production
- U. S. Import
- U. S. Exports

Laboratory Methods

- Clinical Laboratory Methods
- Analytic Laboratory Methods
- Sampling Procedures

Special References

- Special Reports

Synonyms and Identifiers

- Related HSDB Records
- Synonyms
- Associated Chemicals
- Formulations/Preparations
- Shipping Name/ Number DOT/UN/NA/IMO
- Standard Transportation Number
- EPA Hazardous Waste Number
- Wiswesser Line Notation
- RTECS Number

Administrative Information

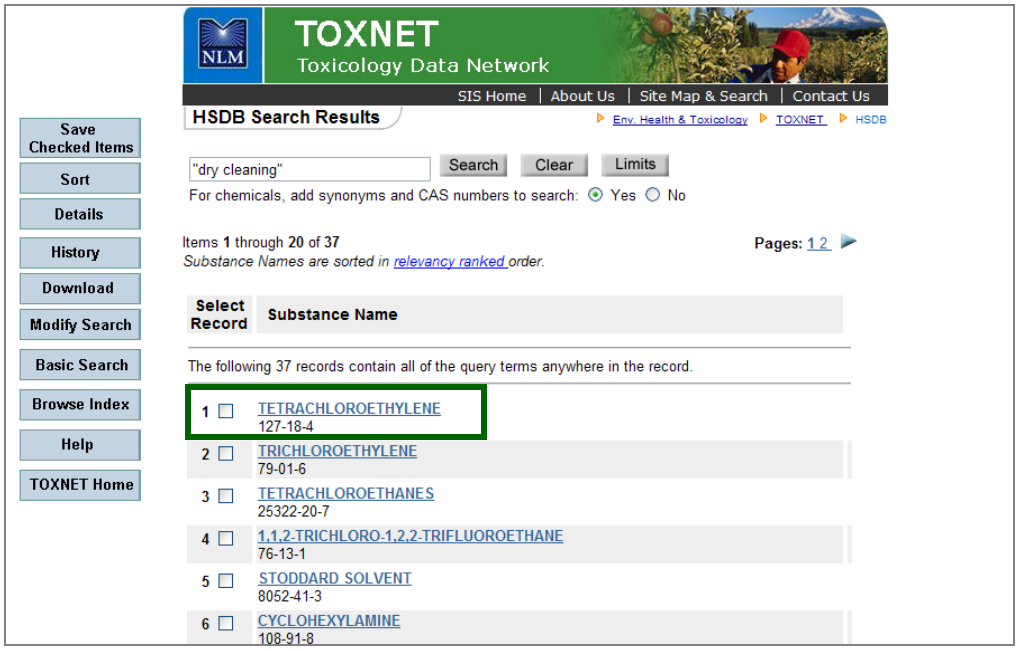
- Hazardous Substances Databank Number
- Last Review Date

HSDB Exercises

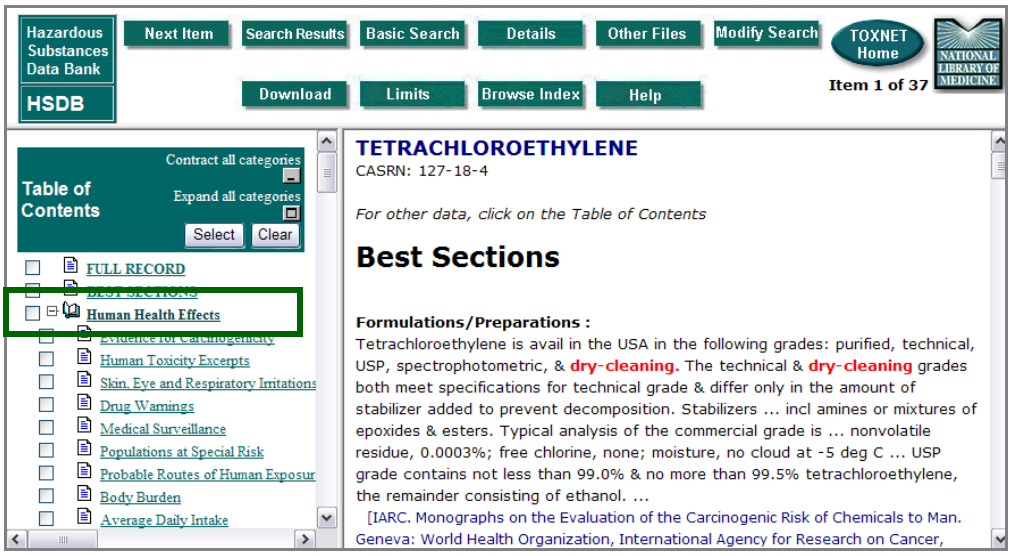
Search Example: What are some chemicals used in dry cleaning and what are their human health effects?

- Go to **http://toxnet.nlm.nih.gov** and click **HSDB** in the **Select Database** column
- Type **"dry cleaning"** in the search box.

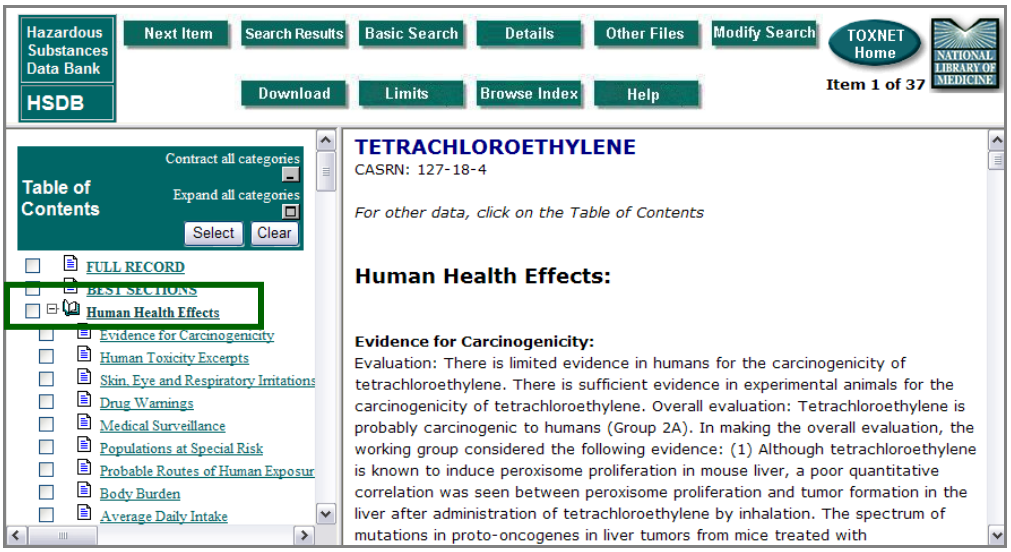
- Click the **Search** button



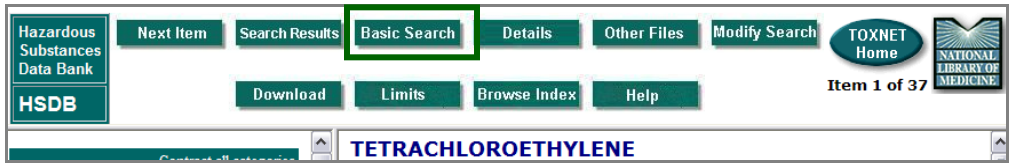
- Click the first chemical and review the information in the right frame.



- Click **Human Health Effects** in the Table of Contents frame on the left to review the human health effects information:



- Click the **Basic Search** button at the top of the screen to prepare for the next search.



Exercise 1: What are the health risks associated with *Ecstasy*?

Keyboard Help:

Type	**ecstasy** in the search box
Click	the **Search** button
Click	the first record and review the information in the right frame
Click	the **Basic Search** button at the top of the screen to prepare for the next search

Exercise 2: Using the limits feature, search for the probable routes of human exposure to *asbestos*.

Keyboard Help:

Click	the **Limits** button
Type	**asbestos** in the search box
Click	the plus sign (+) next to **Human Health Effects** to expand the category
Check	the box for "Probable Routes of Human Exposure"
Click	the **Search** button
Click	**ASBESTOS** and review the "Probable Routes of Human Exposure" in the right frame
	Use your browser's back button to return to the search results screen. Then select the other substance names and review probable routes of human exposure for those substances
Click	the **Basic Search** button at the left of the screen to prepare for the next search

Exercise 3: What are some anabolic steroids? Are there any drug warnings associated with anabolic steroids?

Keyboard Help:

Type	**anabolic steroids** in the search box
Click	the **Search** button
Click	the first chemical and review the information in the right frame
Click	Drug Warnings under **Human Health Effects** in the Contents frame
Review	the information in the right frame
Click	the **Basic Search** button at the top of the screen to prepare for the next search

Exercise 4: I have heard of teens using cans of whipped cream as a drug. What is dangerous about these cans?

Keyboard Help:

Type	**whipped cream** in the search box
Click	the **Search** button
Click	**NITROUS OXIDE**
Review	the information in the right frame
Click	the **Basic Search** button at the top of the screen to prepare for the next search

Exercise 5: Using the limits feature, identify some chemicals manufactured by Monsanto.

Keyboard Help:

Click	the **Limits** button
Expand	the **Manufacturing/Use Information** category
Check	the box for “Manufacturers”
Type	**monsanto** in the search box
Click	the **Search** button
Review	the substance names retrieved

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6

Other Resources

Drug Suite

- **Dietary Supplements Labels Database**
- **Drug Information Portal**
- **Pillbox** BETA

Disaster Information & Preparedness Suite

- **REMM**
- **Tox Town**
- **WISER**

Other Resources

Other Resources

Drug Suite:

- Dietary Supplements Labels Database
- Drug Information Portal
- Pillbox BETA

Disaster Information & Preparedness Suite:

- REMM
- ToxTown
- WISER

Dietary Supplements Labels Database

Dietary Supplements Labels Database

- Ingredient information on over 4,000 brands of dietary supplements sold in the U.S.
- Provides a centralized information portal that facilitates making informed decisions about supplements
- Provides direct links to health information, fact sheets, research findings, and ongoing clinical studies

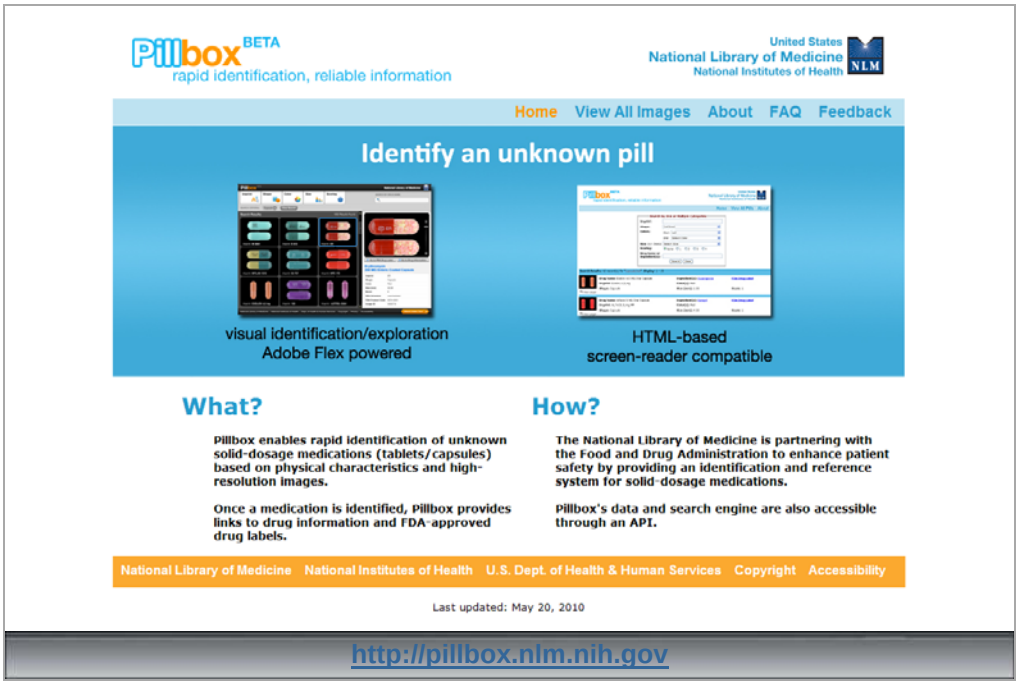
Based on the Dietary Supplements On-Line Database (DSOL) ©2005-2007 by DeLima Associates. All rights reserved.

Drug Information Portal

NLM Drug Information Portal

- Information on over 19,000 selected drugs
  - Cover drugs from entry into clinical trials through entry into the marketplace
- Search by trade name or generic name
  - Spell checker gives suggestions if name not found
  - Use asterisk (*) before and/or after partial names
- Results return
  - Type and usage summary
  - Links to further information

Pillbox BETA



Pillbox BETA

- Combines pictures of tablets and capsules with FDA-approved appearance information (imprint, shape, color, etc.) to enable users to visually search for and identify an unknown solid dosage pharmaceutical.
  - Primarily for emergency physicians, first responders, Poison Control Center staff, and concerned citizens
- Once a solid dosage form has been identified, additional information is provided, including brand/generic name, ingredients, and the National Drug File identification number.

Disaster Information & Preparedness Suite

The Disaster Information Management Research Center (DIMRC)

was created by the National Library of Medicine (NLM) to aid the nation's disaster management efforts. NLM is considered a global leader in providing authoritative, credible, and timely information. DIMRC provides free access to resources that will assist government agencies, private organizations, and local communities to plan, prepare, respond, and recover from disasters and other public health emergencies.

Disaster Information & Preparedness Suite

http://disasterinfo.nlm.nih.gov

Emergency Response Tools

Radiation Emergency Medical Management (REMM)

Guidance on the clinical diagnosis and treatment of mass casualty radiological/nuclear events for health care providers

- **Mobile Application**

Wireless Information System for Emergency Responders (WISER)

A system to help emergency responders identify and respond to hazardous materials incidents. Contains information on over 400 chemical, biological and radiological agents

- **Mobile Application**

Medical and Public Health Literature

PubMed

Thousands of references on disaster/emergency preparedness and response including natural disasters, bioterrorism, chemical terrorism, and pandemic flu

- **Mobile Application**

PubMed Central

Includes archive of thousands of free full-text articles on disaster/emergency preparedness and response

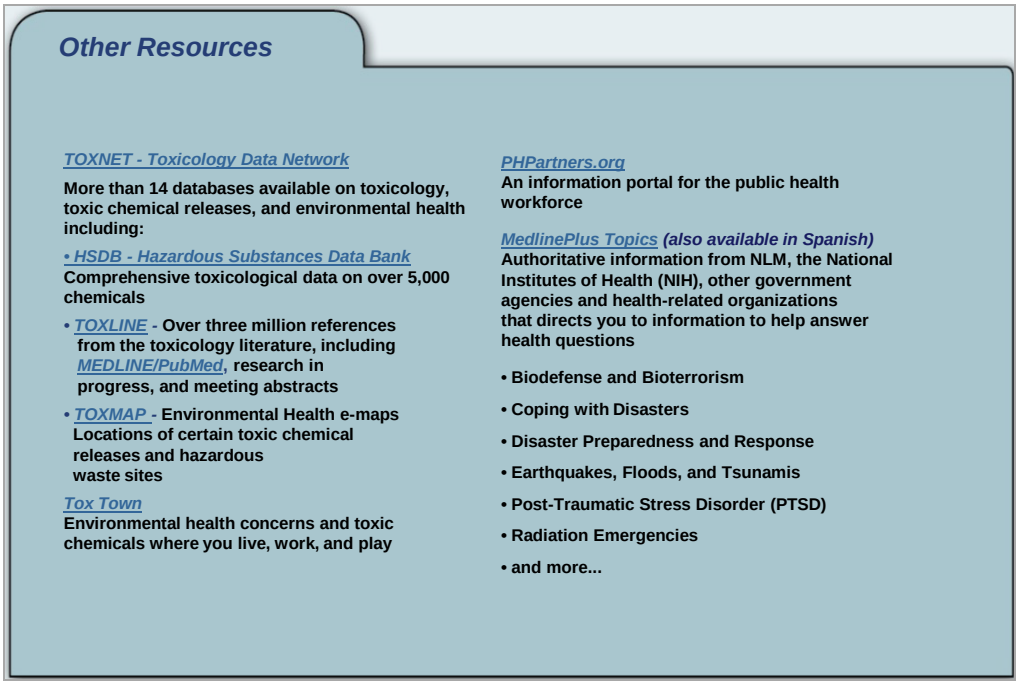
Resource Guide for Public Health Preparedness

A gateway to free online resources on public heath preparedness including expert guidelines, fact sheets, Web sites, technical reports, articles, and other tools aimed at the public health community

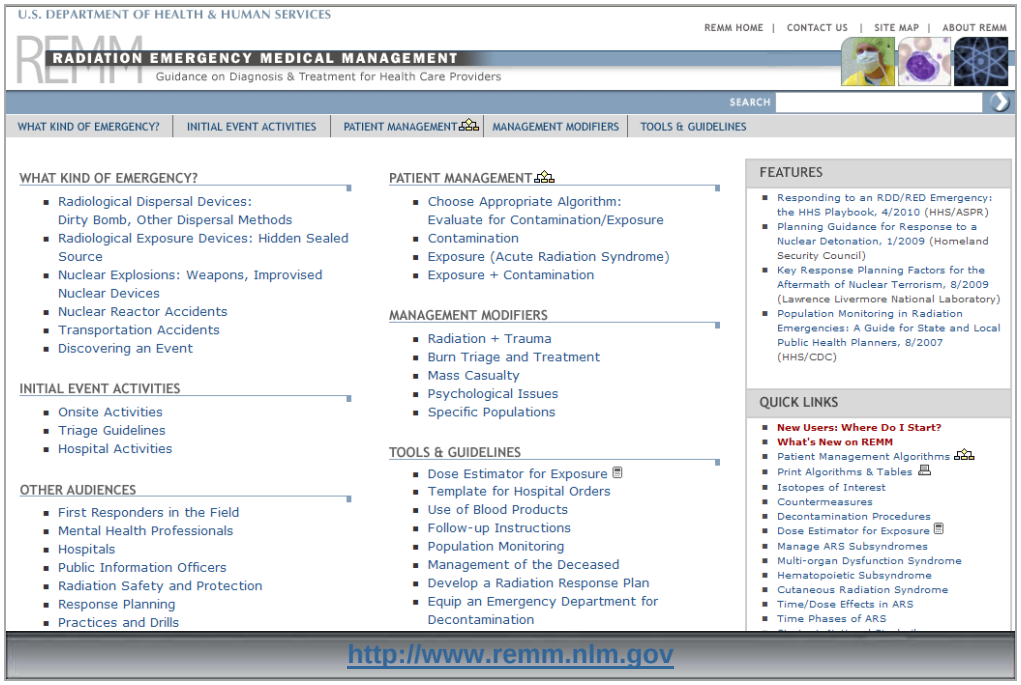
Disaster Health Links

- **Biological and Chemical Warfare Agents**
- **Disaster Recovery and Environmental Health**
- **H1N1 (Swine) Flu**
- **Haiti Earthquake**
- **Health Effects from the Collapse of the World Trade Center**
- **Hurricanes, Tornadoes, and Wildfires**
- **Public Health Preparedness for Mass Gatherings**
- **Special Populations: Emergency and Disaster Preparedness**

Disaster Information & Preparedness Suite



Radiation Emergency Medical Management



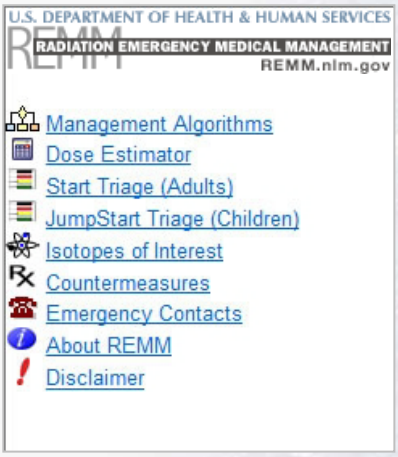
REMM

- Guidance for health care providers on clinical diagnosis and treatment during mass casualty radiological/nuclear emergencies
  - Primarily for physicians
- Understandable for those with no formal radiation medicine expertise
- Downloadable in advance
- Mobile Application

Radiation Emergency Medical Management

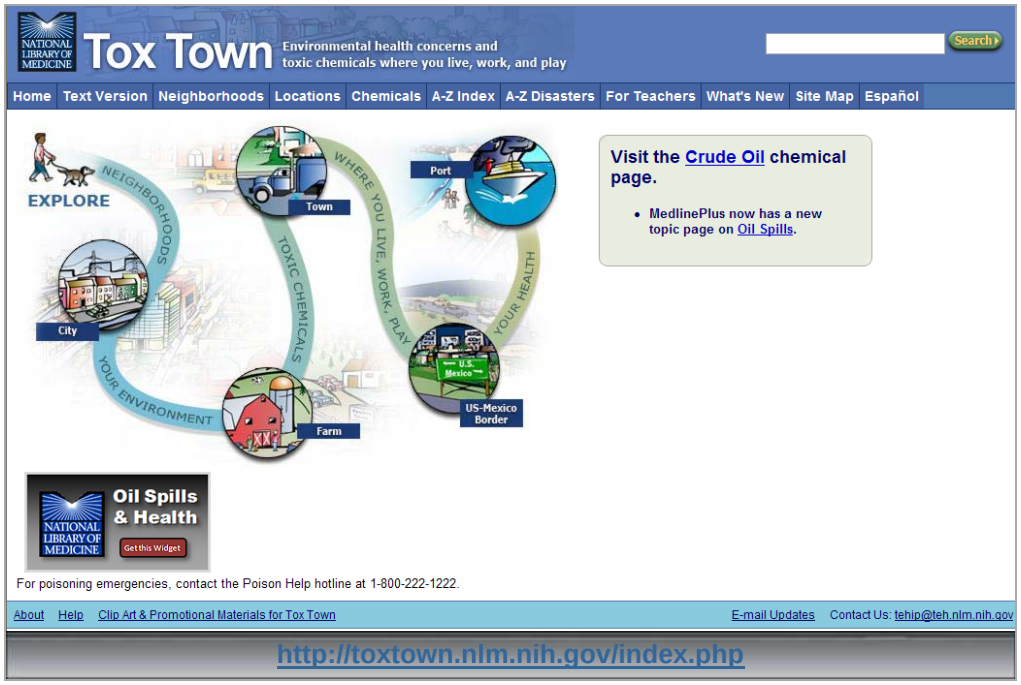
REMM Mobile Application

- Guidance on diagnosis and treatment for healthcare providers during radiation events. Download REMM to your mobile device.



http://www.remm.nlm.gov

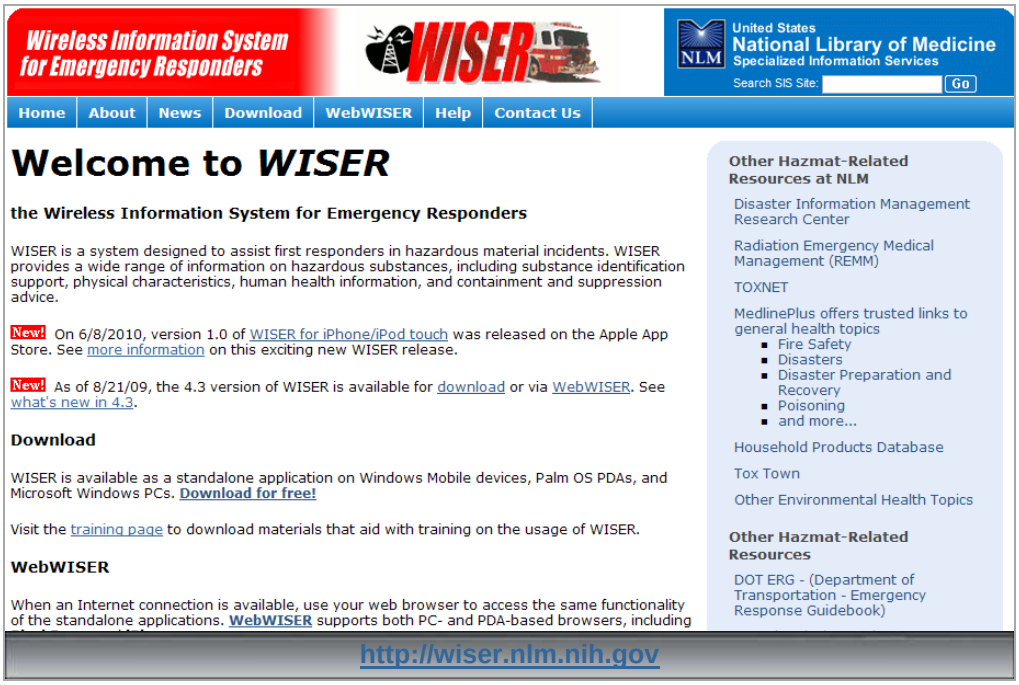
Tox Town



Tox Town

- Non-technical descriptions of chemicals
- Links to selected, authoritative chemical information on the Internet
- How the environment can impact human health
- Internet resources on environmental health topics

Wireless Information System for Emergency Responders



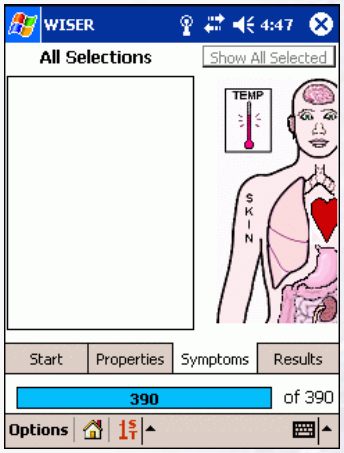
WISER

- Rapid access to information about hazardous substances
- Substance identification support
- Physical characteristics
- Human health information
- Containment and suppression advice
- Available on Palm, Pocket PC, and Microsoft Windows™ platforms
- A web-based WISER supports Web browsers for PCs and PDAs, including BlackBerry
- Mobile Application

Wireless Information System for Emergency Responders

WISER Mobile Application

- Software for Palm Powered or Pocket PC devices to assist first responders in hazardous material incidents.



http://wiser.nlm.nih.gov

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7

Select Internet Resources

Selected Internet Resources in Health

Agency for Healthcare Research and Quality
http://www.ahrq.gov

—Although this Web site is primarily for health care professionals, it also contains a section on consumer health. Other topics include Clinical Information, Funding Opportunities, Research Findings, Specific Populations, Public Health Preparedness, Data & Surveys, and Quality and Patient Safety.

American Medical Association
http://www.ama-assn.org

—Information for physicians, doctor and hospital finders, the Journal of the American Medical Association, and health and fitness information.

BioMed Central
http://www.biomedcentral.com/browse/journals

—Free access to a wide variety of over 100 journals and other services. The Quick Search feature allows searching of not only BioMed Central, but also PubMed and PubMed Central.

CDC Diseases and Conditions
http://www.cdc.gov/DiseasesConditions

—An index of illnesses, conditions, concerns, and programs from the Center for Disease Control and Prevention. Includes links to relevant publications, news and events, and related CDC organizations.

CDC Environmental Health
http://www.cdc.gov/environmental

—Informs the general public about environmental health. Topics include food safety, extreme cold, hydrocarbons, lead poisoning, mold, and carbon monoxide. Under Featured Items see links for upcoming events and recently released reports on environmental health topics. From the Centers for Disease Control and Prevention.

Center for Drug Evaluation and Research
http://www.fda.gov/cder

—This site includes information about prescription and over-the-counter drugs, drug safety, and links to major drug information pages. From the U.S. Food and Drug Administration.

ClinicalTrials.gov
http://clinicaltrials.gov

—Developed by the National Institutes of Health through its National Library of Medicine to provide patients, family members, and members of the public current information about clinical research studies. It is updated regularly.

CNN Health
http://www.cnn.com/HEALTH

—Health links to Cable News Network news stories regarding health concerns.

Directory of Open Access Journals
http://www.doaj.org

—Provides access to free, full text, quality controlled scientific and scholarly journals. Journals may be browsed by title or subject, and many are searchable at article level.

Doctor's Guide
http://www.docguide.com

—A comprehensive source of links to medical information of interest to physicians, as well as information and resources a doctor may want to recommend to patients. Includes news stories, a list of webcasts and continuing medical education (CME) opportunities, Case Studies, and the Congress Resource Center, a database of meetings with links to relevant travel planning information.

U.S. Food and Drug Administration
http://www.fda.gov

—Provides links to FDA resources, including research information on food, drugs, biologics, cosmetics, medical devices, tobacco, and toxicology.

Health Disparities/CDC
http://www.cdc.gov/omhd/Topic/HealthDisparities.html

—Links to extensive information on health disparities organized on the home page by Topics, Quick Links, Key Resources, Programs and Campaigns, and more.

Health Disparities: A Selected Bibliography
http://www.cdc.gov/nccdphp/publications/healthdisparities/

—A compilation of peer-reviewed journal articles, book chapters, and monographs written by CDC staff and partners between January 2000 and January 2005, compiled for the 19th National Conference on Chronic Disease Prevention and Control, March 1–3, 2005.

Health Hotlines
http://healthhotlines.nlm.nih.gov

—A National Library of Medicine online database of health-related organizations operating toll-free telephone services.

Health Literacy Training [FREE]
http://www.hrsa.gov/healthliteracy/training.htm

—The U.S. Department of Health and Human Services, Health Resources and Services Administration, offers this free online training for health providers titled Unified Health Communication 101: Addressing Health Literacy, Cultural Competency, and Limited English Proficiency. The course has five modules, is estimated to take five hours to complete, and can be completed at your own pace. Credits can be elected for CEU/CE, CHES, CME, or CNE.

Healthfinder
http://www.healthfinder.gov

—A Web site of the U.S. government's links to dependable consumer health information.

Healthy People 2010
http://healthypeople.gov

—A health initiative for the nation coordinated by the Office of Disease Prevention and Health Promotion of the U.S. Department of Health and Human Services. The overarching goals of Healthy People 2010 are to increase quality and years of healthy life and to eliminate health disparities. It is designed to be used by people on many levels—personal, community, state, and national—to improve health.

Healthy People 2010 Information Access Project
http://phpartners.org/hp

—A Web resource developed by the National Library of Medicine with assistance from subject experts and public health librarians. The site provides "pre-formulated" PubMed searches for selected Healthy People 2010 focus areas to make current information and evidence-based strategies related to the HP2010 objectives easier to find. Also provides links to relevant full-text resources on NLM's Web site. This site is a pilot project funded by the National Library of Medicine with assistance from the Public Health Foundation and the National Network of Libraries of Medicine. Feedback is requested for project expansion to all HP2010 focus areas.

Healthy Schools Healthy Youth
http://www.cdc.gov/healthyyouth/

—The Centers for Disease Control and Prevention's Division of Adolescent and School Health Web site provides tools and resources to promote school health.

Medical Matrix
http://www.medmatrix.org/reg/register.asp

—A physician peer-reviewed list with useful topical and specialty categorizations. It contains good links to MEDLINE, CME, and online publications. Registration is required.

MedicineNet
http://www.medicinenet.com

—A network of physician educators dedicated to providing up-to-date, quality medical information for the public. Links from this site include subject areas such as "Hot News!," "Diseases & Treatments," "Pharmacy Drugs," "Ask The Experts," "Medical Dictionary," and "First Aid Information."

MedlinePlus
http://medlineplus.gov

—A consumer health Web site from the National Library of Medicine, providing health professionals and consumers a wealth of authoritative, up-to-date medical information on over 700 diseases and medical conditions. Resources include lists of hospitals and physicians, a medical encyclopedia, a medical dictionary, extensive information on prescription and non-prescription drugs, health

information from the media, and links to thousands of clinical trials. MedlinePlus is updated daily. Available in English and Spanish.

Medscape®
http://www.medscape.com

—Medscape, from WebMD®, offers medical specialists, primary care physicians, and other health professionals integrated medical information and education tools. Key features include "physician-optimized" MEDLINE, CME activities, conference coverage, daily professional medical news in your specialty, and the Internet's first primary-source medical journal, Medscape General Medicine. A one-time, free registration allows Medscape to automatically deliver you to the specialty page (which you can change at any time) that best fits your profile.

My Family Health Portrait
https://familyhistory.hhs.gov

—A tool from the U.S. Surgeon General that allows users to create a family tree (drawing) and personalized family health history report from any computer with an Internet connection and an up-to-date browser. Focus is on six common diseases: heart disease, stroke, diabetes, colon cancer, breast cancer, and ovarian cancer. Other conditions that are of particular interest to the family can also be included. The drawing and the report can be printed and shared with family members and personal physicians. Also available in Spanish.

National Library of Medicine
http://www.nlm.nih.gov

—The National Library of Medicine (NLM), on the campus of the National Institutes of Health in Bethesda, Maryland, is the world's largest medical library. The library collects materials and provides information and research services in all areas of biomedicine and health care.

National Library of Medicine Free Biomedical Literature Resources
http://www.nlm.nih.gov/docline/freehealthlit.html

—This National Library of Medicine Web site offers links to a number of free biomedical literature resources, including PubMed, NCBI Bookshelf, the Public Library of Science, BioMed Central, and the Directory of Open Access Journals.

National Medical Association
http://www.nmanet.org

—Focuses primarily on health issues related to African Americans and medically underserved populations. Links include Continuing Medical Education (CME), Journal of the National Medical Association (JNMA), and Health Policy.

National Women's Health Information Center
http://www.womenshealth.gov

—This site offers information on more than 800 health topics specifically for women and staffs a call center. Includes information on special populations and information in Spanish. From the U.S. Department of Health and Human Services Office on Women's Health.

NIH Health Information
http://health.nih.gov

—From the National Institutes of Health. Includes quick links to Child & Teen Health, Men's Health, Minority Health, Seniors' Health, Women's Health, and Wellness & Lifestyle.

NursingNet
http://www.nursingnet.org

—Provides a forum for medical professionals and students to obtain and disseminate information about nursing and medically related subjects.

Office of Minority Health, U.S. Department of Health and Human Services
http://www.omhrc.gov

—Serves as a national resource and referral service on minority health issues for health professionals, consumers, grantseekers, students, and the media. Online resources include publications, funding announcements, and links to federal/state/local government agencies, educational institutions, non-profit/national advocacy/private organizations, and minority group health sites.

Partners in Information Access for the Public Health Workforce
http://phpartners.org

—A collaboration of U.S. government agencies, public health organizations, and health science libraries. The site provides links to health resources in the areas of Health Promotion and Education, Literature and Guidelines, Health Data Tools and Statistics, Grants and Funding, Education and Training, Legislation, Conferences and Meetings, Finding People, Discussion and E-mail Lists, and Jobs and Careers.

Public Health Information and Data Tutorial
http://phpartners.org/tutorial

—This tutorial from Partners in Information Access for the Public Health Workforce provides instruction on issues related to information access and management. Clear connections are established to recognized competencies in public health, and examples are included which represent much of the diversity inherent in the practice of public health. Content contributors and authors represent city, county, state, and federal agencies.

National Clearinghouse for Alcohol and Drug Information
http://ncadi.samhsa.gov

—Current and comprehensive information about substance abuse prevention and addiction treatment from the Substance Abuse and Mental Health Services Administration (SAMHSA).

Public Library of Science
http://www.plos.org/journals

—Provides free online access to original published reports of ideas, discoveries, and research results in the life sciences and medicine. The journals are searchable online and also available in print.

PubMed
http://pubmed.gov

—One of the National Library of Medicine's free search services. It provides access to over 18 million citations in MEDLINE and about HIV/AIDS, with links to participating online journals.

Rural Assistance Center State Resources
http://www.raconline.org/states

—The Rural Assistance Center (RAC) is a health and human services information portal established by the U.S. Department of Health and Human Services' Rural Initiative. Its objective is to provide rural communities and stakeholders access to the full range of programs, funding, and research available to them to enable them to provide quality health and human services to rural residents.

Virtual Hospital®
http://uihealthcare.com/vh

—After 13 years of service, on January 1, 2006, Virtual Hospital and Virtual Children's Hospital® ceased operations due to a lack of funding. However, the patient information is now available on the University of Iowa's UI Health Care.com Web site. The information is prepared and reviewed by health professionals.

WebMD
http://www.webmd.com

—Provides a wide range of online health information for health care professionals and consumers. WebMD Health® includes consumer health information, health and wellness news, support communities, and interactive health management tools. Medscape® from WebMD provides clinical information and educational tools for health care professionals, including online continuing education, online coverage of medical conferences, access to over 100 medical journals, and daily medical news.

WholeHealthMD
http://www.wholehealthmd.com

—A complementary and alternative medicine Web site that is dedicated to providing the best in integrative health and wellness solutions. All material has been reviewed and developed by board-certified doctors. The Healing Center section of the site provides overviews on a wide range of conditions. Other sections include Healing Kitchen, Expert Opinions, Reference Library, News and Perspectives, and Supplements.

Selected Internet Resources in HIV/AIDS

AIDS.GOV
http://aids.gov

AIDS.ORG
http://aids.org

AIDS Action Committee of Massachusetts
http://www.aac.org

AIDS Education Global Information System (AEGIS)
http://www.aegis.org

AIDS History Project
http://www.library.ucsf.edu/collections/archives/manuscripts/aids

AIDS Images Library
http://www.aids-images.ch

AIDS Information and Controversy 1985–1995
http://aidsinfobbs.org

AIDS InfoNet
http://www.aidsinfonet.org

AIDS Project Los Angeles
http://www.apla.org

AIDS Resource List
http://www.specialweb.com/aids

AIDS Treatment Data Network
http://www.atdn.org

AIDS Treatment News
http://www.thebody.com/content/art31573.html

AIDS*info*
http://www.aidsinfo.nih.gov

aidsinfonyc.org
http://www.aidsinfonyc.org

Aidsmap
http://www.aidsmap.com

All the Virology on the WWW
http://www.virology.net/garryfavweb.html

The Alternative Medicine HomePage
http://www.pitt.edu/~cbw/altm.html

American Foundation for AIDS Research (amfAR) Global Link
http://www.amfar.org/globallink

American Red Cross
http://www.redcross.org

Australian Federation of AIDS Organisations
http://www.afao.org.au

The Body
http://www.thebody.com

California AIDS Clearinghouse
California AIDS Clearinghouse (CAC)

Canadian AIDS Treatment Information Exchange
http://www.catie.ca

Canadian HIV Trials Network
http://www.hivnet.ubc.ca/e/home/

Center for AIDS Prevention Studies
http://www.caps.ucsf.edu

Centers for Disease Control and Prevention (CDC) HIV/AIDS
http://www.cdc.gov/hiv

Center for Mental Health Research on AIDS (CMHRA)
http://www.nimh.nih.gov/about/organization/dahbr/center-for-mental-health-research-on-aids/

Critical Path AIDS Project
http://www.critpath.org

GMHC on the Web Gay Men's Health Crisis
http://www.gmhc.org

Healthfinder.gov
http://www.healthfinder.gov

Health Resources and Services Administration (HRSA) HIV/AIDS Program: Caring for the Underserved
http://www.hab.hrsa.gov

Health Services/Technology Assessment Text (HSTAT)
http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat

HIV Databases
http://www.hiv.lanl.gov/

HIV InSite
http://hivinsite.ucsf.edu

HIV/AIDS Prevention Web Sites for Communities of Color
http://orise.orau.gov/healthcomm/hiv-aids-prevention.htm

HIV/AIDS Surveillance (U.S. Census Bureau)
http://www.census.gov/ipc/www/hivaidsn.html

HIV/AIDS Vaccines
http://www3.niaid.nih.gov/topics/HIVAIDS/research/vaccines/

HIVandHepatitis.com
http://hivandhepatitis.com

HIVdent (dental information)
http://www.hivdent.org

HIVpositive.com
http://www.hivpositive.com

How to Find Reliable HIV/AIDS Treatment Information on the Internet
http://orise.orau.gov/healthcomm/hiv-aids-treatment.htm

International AIDS Society
http://www.iasociety.org

International Association of Physicians in AIDS Care
http://www.iapac.org

Johns Hopkins HIV Guide
http://www.hopkins-aids.edu

Joint United Nations Programme on HIV/AIDS
http://www.unaids.org

MedlinePlus AIDS
http://medlineplus.gov/aids

Medscape HIV/AIDS
http://www.medscape.com/hiv

National AIDS Treatment Advocacy Project (NATAP)
http://www.natap.org

National Clearinghouse for Alcohol and Drug Information
http://ncadi.samhsa.gov

National HIV/AIDS Clinicians' Consultation Center (NCCC)
http://www.nccc.ucsf.edu

National Institute of Allergy and Infectious Diseases (NIAID)
http://www3.niaid.nih.gov/

National Institutes of Health (NIH) Office of AIDS Research (OAR)
http://www.oar.nih.gov

National Library of Medicine HIV/AIDS Portal
http://sis.nlm.nih.gov/hiv.html

National Minority AIDS Council
http://www.nmac.org

National Prevention Information Network
http://www.cdcnpin.org

New York Academy of Medicine, HIV/AIDS Information Outreach Program
http://www.aidsnyc.org

NIAID Division of Acquired Immunodeficiency Syndrome
http://www3.niaid.nih.gov/about/organization/daids/

Partners in Information Access for the Public Health Workforce––HIV
http://phpartners.org/hp/hiv.html

Positive.org
http://www.positive.org/Home

Project Inform
http://www.projinf.org

PubMed
http://pubmed.gov

PubMed Training Manual (NLM)
http://www.nlm.nih.gov/pubs/web_based.html

PubMed Tutorial (NLM)
http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/

Rural Center for AIDS/STD Prevention
http://www.indiana.edu/~aids

San Francisco AIDS Foundation
http://www.sfaf.org

Social Security Administration
http://www.ssa.gov

The TB/HIV Research Laboratory at Brown University
http://research.brown.edu/research/labs.php

U.S. Department of Health and Human Services
http://www.os.dhhs.gov

U.S. Food and Drug Administration, HIV and AIDS
http://www.fda.gov/oashi/aids/hiv.html

World Health Organization, Tuberculosis
http://www.who.int/tb/en/

Yahoo AIDS/HIV Resources
http://dir.yahoo.com/health/diseases_and_conditions/aids_hiv

Selected Resources in Environmental Health and Toxicology

Biostatistics and Epidemiology

Bureau of Labor Statistics (BLS) ..... http://stats.bls.gov

CDC Wonder ..... http://wonder.cdc.gov

Centers for Disease Control and Prevention (CDC) ..... http://www.cdc.gov

Comprehensive Epidemiologic Data Resource (CEDR) ..... http://cedr.lbl.gov

Morbidity and Mortality Weekly Report (MMWR) ..... http://www.cdc.gov/mmwr/mmwr.html

National Center for Health Statistics (NCHS) ..... http://www.cdc.gov/nchs

World Health Organization (WHO) ..... http://www.who.int

Bioterrorism and Disaster Medicine

Institute for Biosecurity ..... http://bioterrorism.slu.edu

Hospital Preparedness for Mass Casualties ..... http://www.hospitalconnect.com/ahapolicyforum/resources/disaster.html

Radiation Event Medical Management (REMM) ..... http://remm.nlm.gov

Consumer Information

American Lung Association (ALA) ..... http://www.lungusa.org

Environmental Health Clearinghouse ..... http://infoventures.com

Federal Citizen Information Center (FCIC) ..... http://www.pueblo.gsa.gov

U.S. Consumer Product Safety Commission (CPSC) ..... http://www.cpsc.gov

Environmental Health

American Lung Association (ALA) ..... http://www.lungusa.org

American Public Health Association (APHA) ..... http://www.apha.org

American Public Works Association (APWA) ..... http://www.apwa.net

Comprehensive Epidemiologic Data Resource (CEDR) ..... http://cedr.lbl.gov

CRISP (Computer Retrieval of Information on Scientific Projects) ..... http://crisp.cit.nih.gov

Duke Occupational & Environmental Medicine ..... http://dukeoccmed.mc.duke.edu

Enviro-Net (Southeast U.S.) ..... http://www.enviro-net.com

Environmental Fate Databases & more (from Syracuse Research Corporation) ..... http://www.syrres.com/Esc/efdb.htm

Environmental Health Clearinghouse ..... http://infoventures.com

Environmental Protection Agency (EPA) ..... http://www.epa.gov

Environmental Protection Magazine Online ..... http://www.eponline.com

Free Full Text Health Science/Medical Journals (from the National Library of Medicine) http://sis.nlm.nih.gov/pdf/FreeFullTextListApril07.pdf

International Agency for Research on Cancer (IARC) ..... http://www.iarc.fr

National Center for Environmental Health (NCEH) ..... http://www.cdc.gov/nceh

National Environmental Data Index (NEDI) ..... http://www.nedi.gov

National Institute of Environmental Health Sciences (NIEHS) ..... http://www.niehs.nih.gov

Office of Environmental Management (EM) ..... http://www.em.doe.gov

Organisation for Economic Co-operation and Development's (OECD's) Work on Environment, Health and Safety ..... http://www.oecd.org/ehs

Specialized Information Services (SIS), National Library of Medicine (NLM) ..... http://sis.nlm.nih.gov

United Nations Environment Programme (UNEP) ..... http://www.unep.org

Water Resources of the United States ..... http://water.usgs.gov

World Health Organization (WHO) ..... http://www.who.int

General Information

FedWorld (Federal government information locator from the National Technical Information Service [NTIS]) ..... http://www.fedworld.gov

The National Academies ..... http://www.nas.edu

National Agricultural Library (NAL) ..... http://www.nalusda.gov

National Institutes of Health (NIH) ..... http://www.nih.gov

National Library of Medicine (NLM) ..... http://www.nlm.nih.gov

U.S. Department of Energy (DOE) ..... http://www.energy.gov

U.S. Department of Health & Human Services (DHHS) ..... http://www.dhhs.gov

U.S. Department of Labor (DOL) ..... http://www.dol.gov

U.S. Department of Transportation (DOT) ..... http://www.dot.gov

World Health Organization (WHO) ..... http://www.who.int

Genetic Information

Genetics Home Reference ..... http://ghr.nlm.nih.gov

Human Genome Resources ..... http://www.ncbi.nlm.nih.gov/projects/genome/guide/human/

National Human Genome Research Institute http://www.genome.gov/11510197

Office of Rare Diseases (NIH) ..... http://rarediseases.info.nih.gov

Occupational Health and Safety

American Industrial Hygiene Association (AIHA) ..... http://www.aiha.org

Bureau of Labor Statistics (BLS) ..... http://stats.bls.gov

Canadian Centre for Occupational Health and Safety (CCOHS) ..... http://www.ccohs.ca

Duke Occupational & Environmental Medicine ..... http://dukeoccmed.mc.duke.edu

Finnish Institute of Occupational Health (FIOH) ..... http://www.ttl.fi/Internet/English/default.htm

Health and Safety Executive (HSE) ..... http://www.hse.gov.uk

Injury Control Resource Information Network (ICRIN) ..... http://www.injurycontrol.com/icrin

International Occupational Safety and Health Information Centre (CIS) ..... http://www.ilo.org/public/english/protection/safework/cis/

International Programme for Chemical Safety (IPCS) INCHEM ..... http://www.inchem.org

Laboratory Chemical Safety Summaries (LCSS) ..... http://www.hhmi.org

Mine Safety and Health Administration (MSHA) ..... http://www.msha.gov

National Agricultural Library (NAL) ..... http://www.nalusda.gov

National Institute for Occupational Safety and Health (NIOSH) ..... http://www.cdc.gov/niosh

Occupational Safety and Health Administration (OSHA) ..... http://www.osha.gov

OshWeb (Occupational Safety & Health) ..... http://www.oshweb.com

Vermont Safety Information Resources, Inc. (SIRI) ..... http://hazard.com

Where to find Material Safety Data Sheets on the Internet ..... http://www.ilpi.com/msds

Research

International Agency for Research on Cancer (IARC) ..... http://www.iarc.fr

Laboratory Chemical Safety Summaries (LCSS) ..... http://www.hhmi.org

National Center for Toxicological Research (NCTR) ..... http://www.fda.gov/AboutFDA/CentersOffices/nctr/default.htm

National Institute of Environmental Health Sciences (NIEHS) ..... http://www.niehs.nih.gov

National Institutes of Health (NIH) ..... http://www.nih.gov

National Institutes of Health (NIH) RePORTER ..... http://projectreporter.nih.gov

National Toxicology Program (NTP) ..... http://ntp-server.niehs.nih.gov

Office of Human Radiation Experiments ..... http://www.hss.energy.gov/healthsafety/ohre/

Human Subjects Protection Program (Department of Energy) ..... http://humansubjects.energy.gov/

Standards

International Organization for Standardization (ISO) ..... http://www.iso.ch

National Standards System Network (NSSN) ..... http://www.nssn.org

Toxicology

Agency for Toxic Substances and Disease Registry (ATSDR) ..... http://www.atsdr.cdc.gov

Canadian Poisonous Plants Information System ..... http://www.cbif.gc.ca/pls/pp/poison

Carcinogenic Potency Project (CPDB) ..... http://potency.berkeley.edu/cpdb.html

Center for Food Safety and Applied Nutrition (CFSAN) ..... http://www.cfsan.fda.gov

Chemfinder ..... http://chembiofinder.cambridgesoft.com

Comprehensive Epidemiologic Data Resource (CEDR) ..... http://cedr.lbl.gov

Food and Drug Administration (FDA) ..... http://www.fda.gov

Human Subjects Protection Program (Department of Energy)..... http://humansubjects.energy.gov/

Injury Control Resource Information Network (ICRIN) .....http://www.injurycontrol.com/icrin

International Agency for Research on Cancer (IARC) ..... http://www.iarc.fr

Laboratory Chemical Safety Summaries (LCSS)..... http://www.hhmi.org

National Center for Toxicological Research (NCTR) ..... http://www.fda.gov/AboutFDA/CentersOffices/nctr/default.htm

National Institutes of Health (NIH) RePORTER..... http://projectreporter.nih.gov

National Toxicology Program (NTP)..... http://ntp-server.niehs.nih.gov

Office of Human Radiation Experiments..... http://www.hss.energy.gov/healthsafety/ohre/

Organisation for Economic Co-operation and Development's (OECD's) Work on Environment, Health and Safety..... http://www.oecd.org/ehs

Pesticide Action Network Pesticide Database (PAN)..... http://www.pesticideinfo.org

Specialized Information Services (SIS), National Library of Medicine (NLM) ..... http://sis.nlm.nih.gov

United Nations Environment Programme (UNEP) ..... http://www.unep.org

U.S. Department of Transportation (DOT)..... http://www.dot.gov

Vermont Safety Information Resources, Inc. (SIRI) .....http://hazard.com

Selected World Wide Web Search Tools

Major Search Directories and Search Engines

- **AllTheWeb.com** http://www.alltheweb.com
- **AltaVista.com** http://altavista.com
- **Ask.com** http://ask.com
- **Bing.com** http://www.bing.com
- **Google** http://www.google.com
- **HotBot** http://www.hotbot.com
- **Yahoo!** http://www.yahoo.com

Meta Search Engines

- **Dogpile** http://www.dogpile.com
- **InfoGrid** http://www.infogrid.com
- **Ixquick** http://www.ixquick.com
- **Mamma** http://www.mamma.com
- **SurfWax** http://www.surfwax.com
- **Vivisimo** http://vivisimo.com

Miscellaneous

- **Search Engine Watch––Information for Web Designers** http://www.searchenginewatch.com
- **CataList––Reference Site for LISTSERV® lists**
  http://www.lsoft.com/lists/listref.html

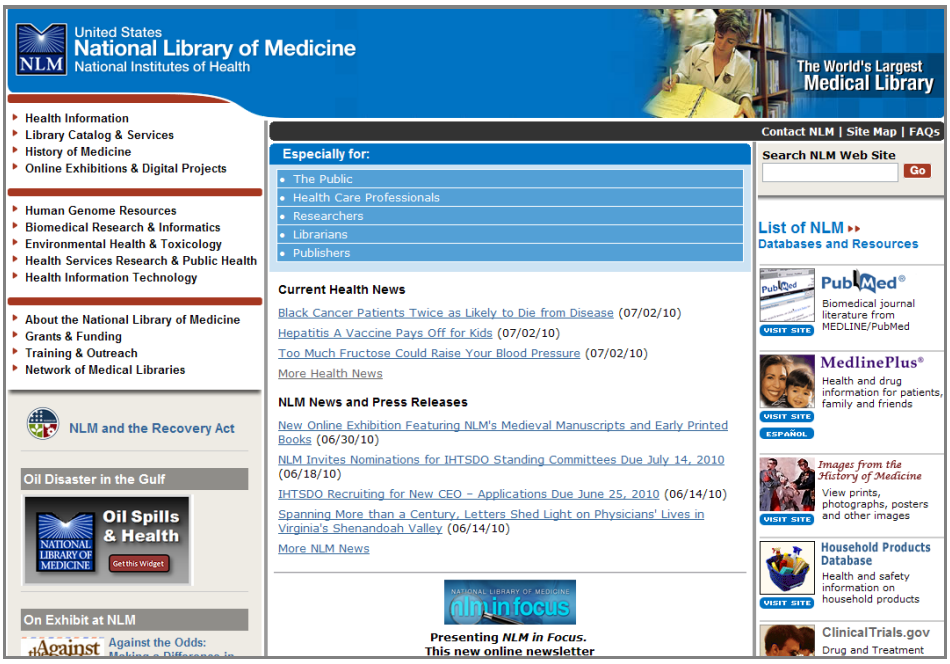
8

Finding Quality Health Information on the Internet

National Library of Medicine:
Evidence-based Information At Your Fingertips

Finding Quality Health Information on the Internet

The World Wide Web contains an abundance of free health information, available 24 hours per day. Finding health information online is easy, but how do we know that the information we find is reliable and trustworthy?



Evaluating Internet Resources

The **National Library of Medicine** (NLM) is a good place to start to find trustworthy, up-to-date health information. Beyond that, there are some important questions you can ask yourself to determine if a site is trustworthy. Briefly, the categories you should consider are the following:

- **Authority and Accuracy**
- **Coverage**
- **Currentness**
- **Objectivity**
- **Design Features**

"Savvy Health Surfing," developed by the National Library of Medicine, contains a complete list of the questions that should be asked in each category. You will find this pull-out reference sheet in the back of this workbook.

Additional Resources

For further information, we recommend these additional resources:

- HON Code of Conduct for Medical and Health Web Sites
  http://www.hon.ch/HONcode
- Evaluating Internet Health Information: A Tutorial from the National Library of Medicine
  http://www.nlm.nih.gov/medlineplus/webeval/webeval.html
- MedlinePlus—Evaluating Health Information
  http://www.nlm.nih.gov/medlineplus/evaluatinghealthinformation.html
- National Network of Libraries of Medicine—Is this health information good for me?
  http://nnlm.gov/pnr/hip/criteria.html
  (en Español: http://nnlm.gov/pnr/hip/informacion.html)
- Quackwatch
  http://www.quackwatch.com
- National Cancer Institute – Evaluating Health Information on the Internet
  http://www.cancer.gov/cancertopics/factsheet/Information/internet

Savvy Health Surfing Exercises

Review the following Web sites and determine if each is reliable according to the Savvy Health Surfing criteria discussed in class.

	Authority/ Accuracy	Coverage	Currentness	Objectivity	Design
1. http://www.thinktwice.com					
2: http://www.hivpositive.com					
3: http://www.healthfree.com					
4: http://www.malepregnancy.com					
5: http://www.drkoop.com					
6: http://www.drugs.com					
7: http://www.thebody.com					
8: http://nisa-sids.org					
9: http://www.uoa.org					
10: http://www.webmd.com					
11: http://www.drclark.net					
12: http://www.aaem.com					
13: http://www.medicalacupuncture.org					
14: http://www.amaasportsmed.org					
15: http://www.bonetumor.org					
16: http://www.biausa.org					
17: http://www.connectforkids.org					

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Contacting the National Library of Medicine for Database Assistance

Toll-free: 888-FIND-NLM (346-3656)
E-mail: custserv@nlm.nih.gov
TOXNET E-mail: tehip@teh.nlm.nih.gov

Online Resources	
Online Training Manuals	http://www.nlm.nih.gov/pubs/web_based.html (ClinicalTrials.gov, NLM Gateway, PubMed, TOXNET)
Tutorials	http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/ (PubMed)
Fact Sheets	http://www.nlm.nih.gov/pubs/factsheets/factsheets.html
Frequently Asked Questions	http://www.nlm.nih.gov/services/faq.html
See also Help and FAQ links on each database home page.	

The National Network of Libraries of Medicine

Toll-free number for all Regional Medical Libraries: 800-338-7657
Monday-Friday 8:30 a.m.–5:00 p.m. in all time zones

Web site: http://nnlm.gov

Instructors	
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