The National Library of Medicine's Downloadable, Online, and Smartphone Tools for First Responders and Others

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Learning Objectives

- Brief introduction to the National Library of Medicine’s toxicology and environmental health databases, and other NLM resources.

- Overview of NLM's three tools to assist first responders and others: WISER, CHEMM, and REMM.
U. S. National Library of Medicine

- Part of the U. S. National Institutes of Health
- World's largest biomedical library

http://www.nlm.nih.gov/
SIS Environmental Health & Toxicology

- Founded in 1967 as the Toxicology Information Program
- Expanded in mid-1990s to include environmental health
TOXNET® (TOXicology Data NETwork)


- Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.
- Accessible free of charge
Mobile TOXNET Access


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Now you can access the NLM TOXNET with any mobile device.

Haz-Map®

Health effects of exposure to chemicals and biologicals at work.

Links jobs and hazardous tasks with occupational diseases and their symptoms.

[Image of Haz-Map interface]


National Library of Medicine
NATIONAL INSTITUTES OF HEALTH ◆ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NLM Disaster Information Management Research Center (DIMRC)

Ensure access to health information and effective use of libraries and librarians when disasters occur, and for planning and training purposes.

NLM Disaster and Emergency Response Tools

- Wireless Information System for Emergency Responders (WISER) --- released about eight years ago
- Chemical Hazards Emergency Medical Management (CHEMM) --- released in mid-2011
- Radiation Emergency Medical Management (REMM) --- released about four years ago
Wireless Information System for Emergency Responders (WISER)

www.wiser.nlm.nih.gov
WISER Platforms – A Little History

August 2011

Palm Pilot → Pocket PC → Laptop

Android → Blackberry → iPhone → WebWISER
Either you know what you’re dealing with…

… or you don’t!

National Library of Medicine
Examples of Recent Announcements

August 24, 2011: Version 1.0 of WISER for Android available

January 19, 2012: Protective distance mapping for WebWISER available

March 1, 2012: Version 2.0 WISER for iPhone/iPod touch available

July 1, 2012: Version 3.0 WISER 3.0 for iOS available
WISER for iPhone/iPod touch 2.0 included:

Fully featured implementation of Help Identify Chemical

Identify using physical properties, signs/symptoms, categorization, NFPA placards, and transportation containers

Can save a help identify search for later recall and freely search the result list using any identifier
As an app

Select criteria for your search
- Properties: 2
- Symptoms: 3
- Categories: 0
- NFPA
- Transport

Results: 160 of 438 chemicals
WISER for iOS 3.0 added native support for the iPad in addition to support for the iPhone and iPod touch.

WISER’s full set of known substances

WISER's popular Help Identify Chemical capability.

WISER's protective distance mapping feature.

and

Various updates for iPhone/iPod touch devices.
Chlorine
CAS RN: 7782-50-5

NFPA Classification

Health: 4 (Extreme)
Materials that, on very short exposure, could cause death or major residual injury, including those that are too dangerous to be approached without specialized protective equipment. A few whiffs of the vapor or gas can cause death, or contact with the vapor or liquid may be fatal, if it penetrates the fire fighter's normal protective gear. The normal full protective clothing and breathing apparatus available to the typical fire fighter will not provide adequate protection against inhalation or skin contact with these materials.

Flammability: 0 (Minimal)
This degree includes any material that will not burn under typical fire conditions.

Instability: 0 (Minimal)
This degree includes materials that are normally stable, even under fire exposure conditions, and that do not react with water. Normal fire fighting procedures may be used.

Special: Oxidizer
The material is an oxidizer.
CBRNE Information in WISER

- ~420 Chemical Agents
- ~20 Radiological Agents
- CDC Category A Biological Agents
Radiation Emergency Medical Management (REMM)

http://www.remm.nlm.gov/

National Library of Medicine

NATIONAL INSTITUTES OF HEALTH ◆ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Respond to Mass Casualty Radiation Events

Provide:

- Guidance for health care providers about clinical diagnosis and treatment during mass casualty radiological/nuclear events
- Evidence-based information that makes complex issues understandable to those *without* formal radiation medicine expertise
- Web-based information that is also downloadable in advance and available if the Internet is not accessible
How can you access REMM?

- Downloadable versions for Windows and Mac
- Mobile REMM, with selected key files from the full version of REMM
  - iPhone®/ iPod Touch/ iPad®
  - Blackberry®
  - Windows Mobile®
  - Android®
  - Palm OS® (no longer supported)
- Selected content included in WISER
Collaborative effort between:

- U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response (ASPR) - Office of Preparedness and Emergency Operations (OPEO)

- National Institutes of Health, National Library of Medicine - Division of Specialized Information Services (NLM\SIS)

- Many medical, emergency response, toxicology, industrial hygiene, and other experts
CHEMM – Overarching Goals

- Provide a comprehensive, user-friendly resource that will enable first responders, first receivers, other healthcare providers, and planners to plan for, respond to, recover from, and mitigate the effects of a mass-casualty incident involving chemicals.

- Be available on the Internet and also for download so that it can be used in an emergency even without an Internet connection.

- Scope – to be used for:
  - Training
  - Planning
  - Response at time of an emergency
Role-based Navigation and Key Features
Introduction of Key Component #1: CHEMM-IST
Today, downloadable and online

The CHEMM Intelligent Syndromes Tool
Introduction of Key Component #2: Medical Management Content
• Detailed step-by-step medical management guidelines for first responders at the scene and providers in the hospital including the emergency department and intensive care

• Guidelines for children, pregnant women, and elderly patients

• Extensive input from other physicians
Example of Medical Management Content: Prehospital Management

- Agent Management Overview
- Hot Zone
- Decontamination Zone
- Support Zone

and more
In Progress

Adding additional key chemicals

Add medical countermeasures

Information capture module

and

Combining CHEMM and WISER, e.g., as an app
Comments?

Suggestions?

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