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An Overview of Free and Useful Resources from the National Library of Medicine

Alicia Lillich

National Network of Libraries of Medicine, alillich@kumc.edu

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An Overview of Free and Useful Resources from the National Library of Medicine

Alicia Lillich Kansas/Technology Coordinator National Network of Libraries of Medicine A. R. Dykes Library University of Kansas Medical Center



National Library of Medicine



The world's _____ library!

http://nlm.nih.gov

Objectives

By the end of this session I want to equip you to:

- Provide instruction on a variety of resources suitable for students/faculty teaching health professions and science curricula.
- Know where to find appropriate handouts and educational tools

MedlinePlus.gov



- Over 900 health topics
- Drug and herbal supplement information
- Videos
- Health check tools
- Magazine
- Medical dictionary & encyclopedia
- Health news

M+ Handouts and Tutorials

Information for Librarians and Trainers









The goal of MedlinePlus is to bring appropriate, authoritative health information to those who need it. We appreciate your efforts in training people on how to use MedlinePlus. Here are some training resources which might help you with your classes and health fairs.

Resources for Teaching MedlinePlus

MedlinePlus Tour

MedlinePlus Tour in English and Spanish - A narrated tour of the main features of MedlinePlus. The video runs about 2.5 minutes.

MedlinePlus Brochures

- MedlinePlus PDF Brochure in English (updated May 2015) and Spanish (updated May 2015)
- MedlinePlus for Health Professionals PDF Brochure (updated July 2015)
- MedlinePlus Connect PDF Brochure (updated June 2014)
- MedlinePlus XML Data Sources PDF Brochure (updated December 2013)

About MedlinePlus

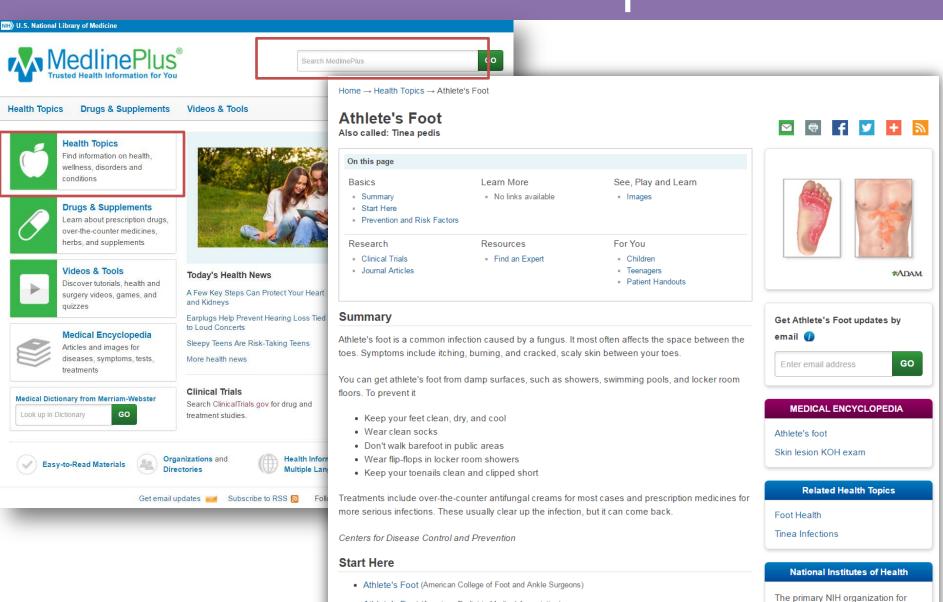
- Articles about MedlinePlus
- Citing MedlinePlus FAQ
- E-mail Updates Sign up to receive emails containing links to new topics, new sites, and health news.
- MedlinePlus FAQs
- MedlinePlus Quality Guidelines
- · MedlinePlus Search Tips

Resources for Teaching How to Find Health Information Online

General

- Evaluating Internet Health Information: A Tutorial from the National Library of Medicine (download)
- Finding Accurate and Reliable Health Information on the Internet PDF (University of Minnesota Health Sciences Libraries)
- Finding Quality Health Information on the Web: A Tool Kit (University of Washington Center for Public Health Nutrition)
- MedlinePlus Guide to Healthy Web Surfing
- · MedlinePlus Page: Evaluating Health Information
- · MedlinePlus Page: Understanding Medical Research

M+ Health Topics



· Athlete's Foot (American Podiatric Medical Association)

Provention and Dick Eactors

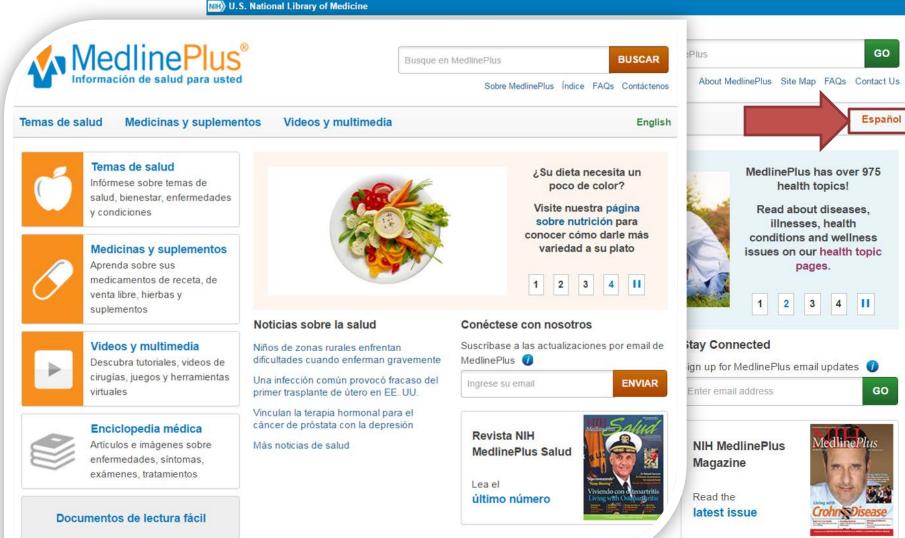
. Athlete's Foot (Mayo Foundation for Medical Education and Research)

research on Athlete's Foot is the

National Institute of Allergy and Infectious Diseases

M+ Language Resources

NIH) U.S. National Library of Medicine











M+ Videos and Tools





GO Search MedlinePlus

About MedlinePlus Site Man FAOs Contact III

GO

Health Topics

Drugs & Supplements



Videos & Tools

Discover tutorials, health and surgery videos, games, and quizzes

Medical Encyclopedia

Articles and images for diseases, symptoms, tests, treatments

Videos & Tools

Watch health videos on topics such as anatomy, body systems, and surgical procedures. Test your knowledge with interactive tutorials and games. Check your health with calculators and guizzes.

Health Videos

View videos of anatomy and body systems and how diseases and conditions affect them.

Surgery Videos

Find videos of operations and surgical procedures.



Health Check Tools

Check your health with interactive calculators, guizzes and questionnaires.



Games

Boost your health knowledge by playing interactive health games.



Search all Videos & Tutorials

Understanding Medical Words

Evaluating Health Information

To Your Health: NLM update

NIHSeniorHealth Videos

Sleepy Teens Are Risk-Taking Teens

More health news

Clinical Trials

NIH MedlinePlus Magazine

Read the Intent incur



Understanding Medical Words



NIH MedlinePlus Magazine



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Genetics Home Reference



Your Guide to Understanding Genetic Conditions



Health Conditions Genes Chromosomes & mtDNA Resources Help Me Understand Genetics Genetics Home Reference provides consumer-friendly information about the effects of genetic variation on human health. **New & Updated Health Conditions** New More than 1.100 health cryptogenic cirrhosis conditions, diseases, and syndromes fibrochondrogenesis DOLK-congenital disorder of Browse A-Z glycosylation Past 12 Months



Genes

More than 1,300 genes and the health effects of genetic changes

Browse A-Z



Updated

Moebius syndrome

Poland syndrome

spondyloepiphyseal dysplasia congenita

tetrasomy 18p

Past 12 Months

GHR Classroom Resources



Health Conditions

Genes

Chromosomes & mtDNA

Resources

Help Me Understand Genetics



Resources

Each of the following categories provides links to useful genetics resources on the web.

Open All

Close All

- ► Support and Advocacy
- General Genetics
- Genetic Testing
- **▼ Classroom Resources**

A Closer Look at Chromosomes (U.S. National Library of Medicine)

A Revolution In Progress: Human Genetics and Medical Research (National Institutes of Health)

Arizona State University: Ask a Biologist 2

BioInteractive (Howard Hughes Medical Institute)

Bookshelf (National Center for Biotechnology Information)

Deciphering the Genetic Code: Marshall Nirenberg (National Institutes of Health)

DNA From the Beginning (Cold Spring Harbor Laboratory)

Dolan DNA Learning Center (Cold Spring Harbor Laboratory)

G2C2: Genetics/Genomics Competency Center for Education 2

G3C: Global Genetics and Genomics Community 27

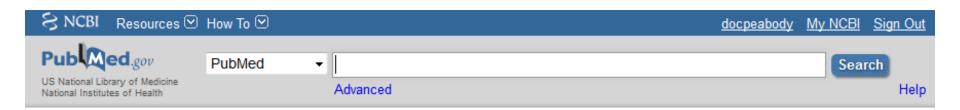
GeneEd: Teacher Resources

Genetic Education Modules for Teachers (National Human Genome Research Institute)

Genetic Science Learning Center (University of Utah) [2]

Genetics Education Materials for School Success (GEMSS)

PubMed.gov





PubMed

PubMed comprises more than 25 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

PubMed Commons



Featured comment - Oct 2

Protecting the kidneys? Journal Club @NephJC wraps up discussion of remote ischemic preconditioning trial.

1.usa.gov/1EZic4N

Using PubMed	PubMed Tools	More Resources
PubMed Quick Start Guide	PubMed Mobile	MeSH Database
Full Text Articles	Single Citation Matcher	Journals in NCBI Databases
PubMed FAQs	Batch Citation Matcher	Clinical Trials
PubMed Tutorials	Clinical Queries	E-Utilities (API)
New and Noteworthy	Topic-Specific Queries	LinkOut

How to Search PubMed



Automatic Term Mapping (ATM)

PubMed uses Automatic Term Mapping which recognizes thousands of concepts and maps to an appropriate term.

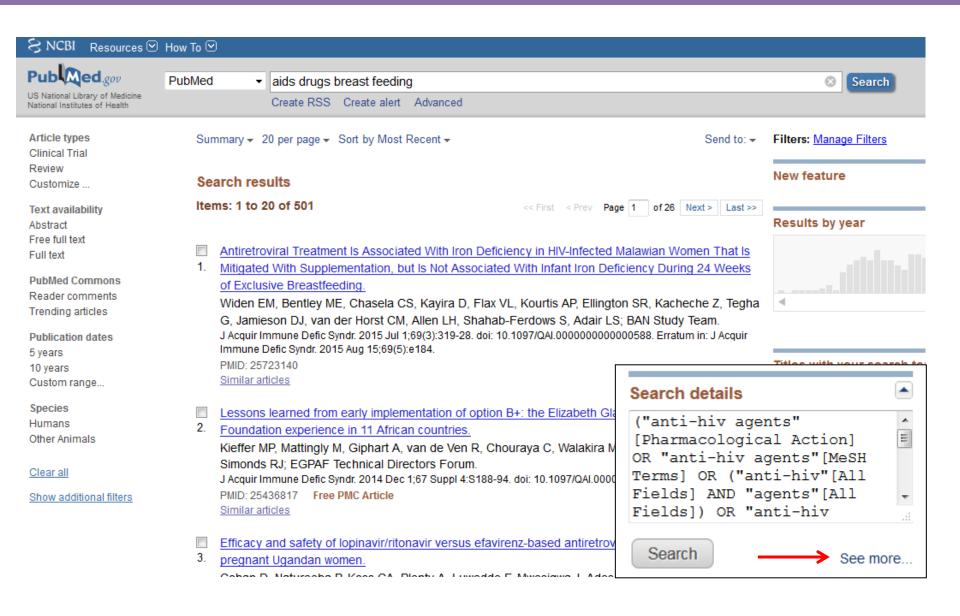
aids drugs breast feeding

Search

ATM Checks these tables:

- Subjects (Medical Subject Headings)
- Journal Titles
- Authors

PubMed Search Details



PubMed Search Details (cont.)

Query Translation:

```
("anti-hiv agents"[Pharmacological Action] OR "anti-hiv
agents"[MeSH Terms] OR ("anti-hiv"[All Fields]
AND "agents"[All Fields]) OR "anti-hiv agents"[All Fields]
OR ("aids"[All Fields] AND "drugs"[All Fields]) OR "aids
drugs"[All Fields])
AND
("breast feeding"[MeSH Terms] OR ("breast"[All Fields]
AND "feeding"[All Fields])
```

See the difference:

```
"aids drugs" AND "breast feeding" = 3

aids drugs breast feeding = 501

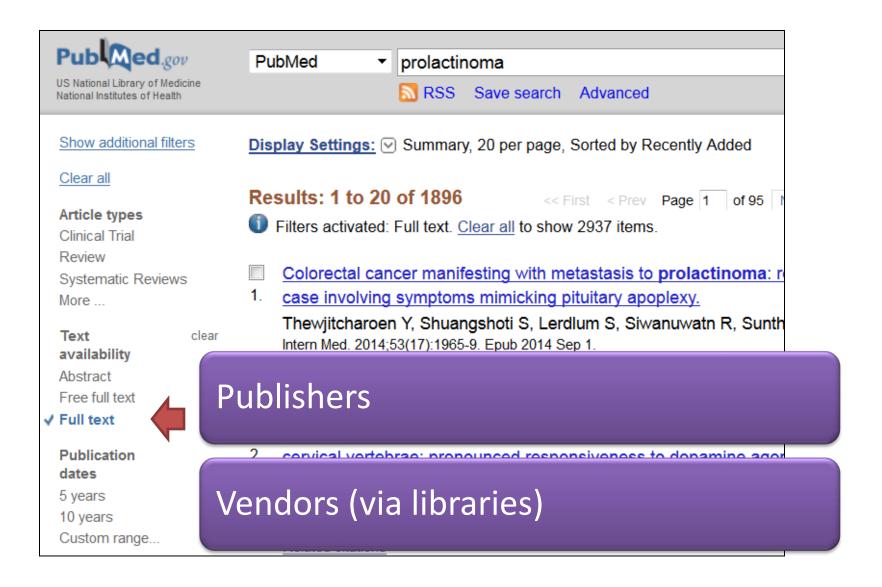
(processed using ATM)
```

PubMed Quiz

Which is the best PubMed search (according to NLM)?

- a) "mouth cancer" tobacco men
- b) "mouth cancer" AND tobacco AND men
- c) mouth cancer tobacco men

Full Text in PubMed



Free Full Text in PubMed

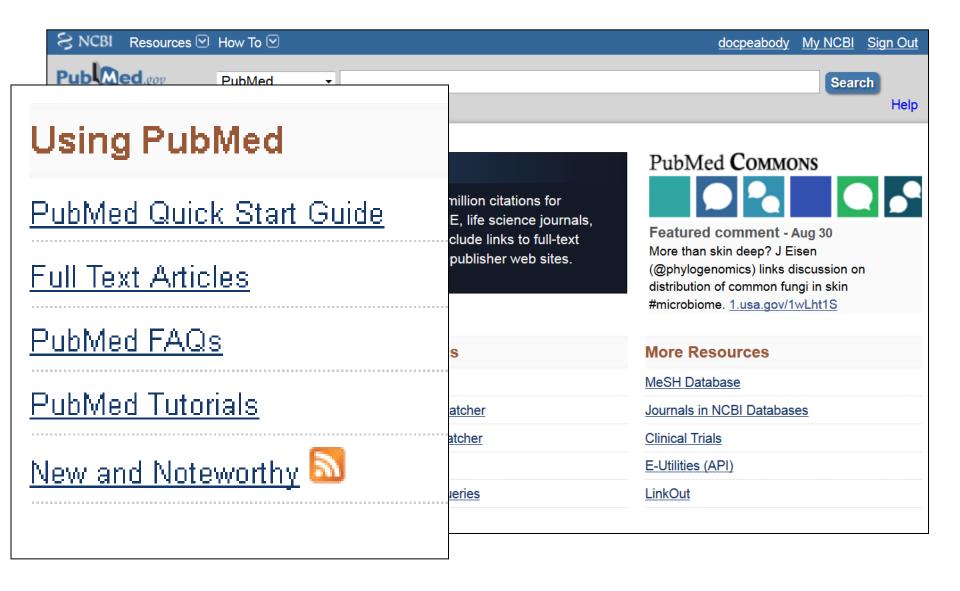


Facilitator of Full-Text Availability: The NIH Public Access Policy

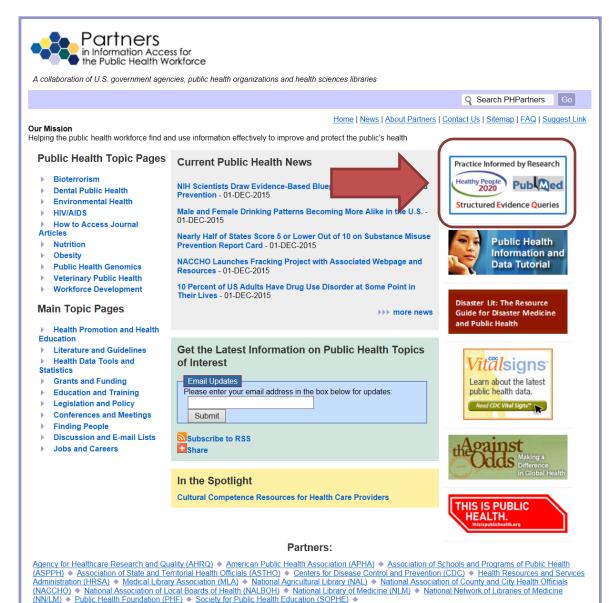
- Published results of research supported by NIH must be available to the public (as of April 7, 2008)
- Final, peer-reviewed (journal article) manuscripts accepted for publication



PubMed Help and Training



Public Health Partners



- One-stop portal for public health information
- Components include:
 - Current news
 - PH topic pages
 - Data, tools & statistics
 - Reports, guidelines and more!
- Updated daily
- Quality guidelines with strict selection criteria

Healthy People 2020

HP2020 LHI SEQ Home | HP2020

Healthy People 2020 Structured Evidence Queries

Practice Informed by Research

This resource provides pre-formulated PubMed search strategies to find published literature to support achieving Healthy People 2020 objectives.

Search by Topic Area | About this Project | FAQs | Give Us Feedback | Handout | Contributors

Search by Topic Area

Access to Health Services

Adolescent Health

Arthritis, Osteoporosis, and Chronic Back Conditions

Blood Disorders and Blood Safety

Chronic Kidney Disease

Dementias, Including Alzheimer's Disease

Diabetes

Early and Middle Childhood

Environmental Health

Family Planning

Food Safety

Genomics

Health Communication and Health IT

Healthcare-Associated Infections

Heart Disease and Stroke

HIV

Maternal, Infant, and Child Health

Medical Product Safety

Mental Health and Mental Disorders

Nutrition and Weight Status

Occupational Safety and Health

Oral Health
Physical Activity

<u>Preparedness</u>

Respiratory Diseases

Sexually Transmitted Diseases

Sleep Health

Substance Abuse

Tobacco Use

Vision

HP20/20 Objective

Dementias, Including Alzheimer's Disease

Search by Topic Area | About this Project | FAQs | Give Us Feedback | Handout | Contributors

Pub Qed

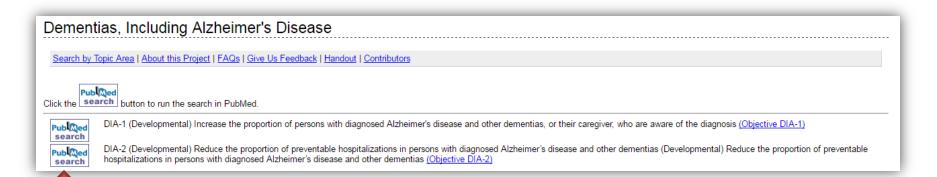
Click the search button to run the search in PubMed.

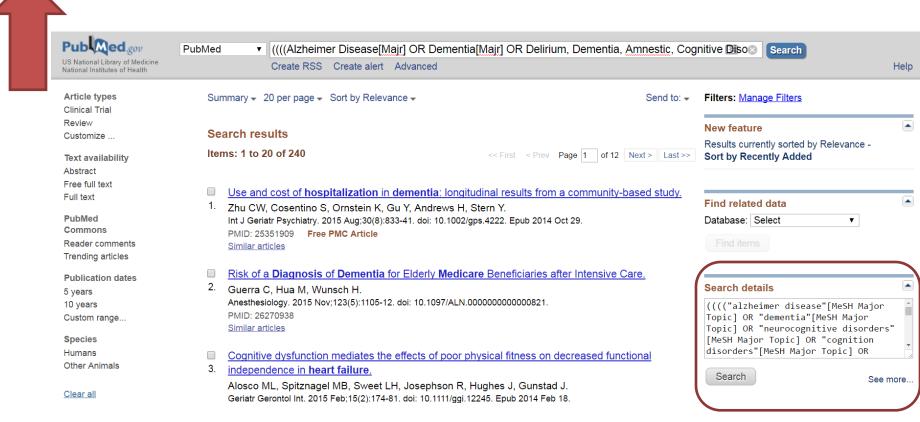
Pub Med search Pub Med search DIA-1 (Developmental) Increase the proportion of persons with diagnosed Alzheimer's disease and other dementias, or their caregiver, who are aware of the diagnosis (Objective DIA-1)

DIA-2 (Developmental) Reduce the proportion of preventable hospitalizations in persons with diagnosed Alzheimer's disease and other dementias (Developmental) Reduce the proportion of preventable hospitalizations in persons with diagnosed Alzheimer's disease and other dementias (Objective DIA-2)

The second secon	of preventable hospitalizations in adults aged 65 years and zheimer's disease and other dementias	
Baseline:	25.3 percent of adults aged 65 or older with a dementia diagnosis had a preventable hospitalization in 2006–08	
Target:	22.8 percent	
Target-Setting Method:	10 percent improvement	
Data Sources:	Medicare Administrative Data, CMS	
Data:	Spotlight on Disparities: Disparities by sex Disparities by race and ethnicity Disparities by education Details about the methodology and measurement of this HP2020 objective	
Revision History:	This objective was revised. Read more about the <u>revision history</u> .	
More Information:	Related research articles on PubMed	

Structured Query Search





Structured Query Search Details

Query Translation:

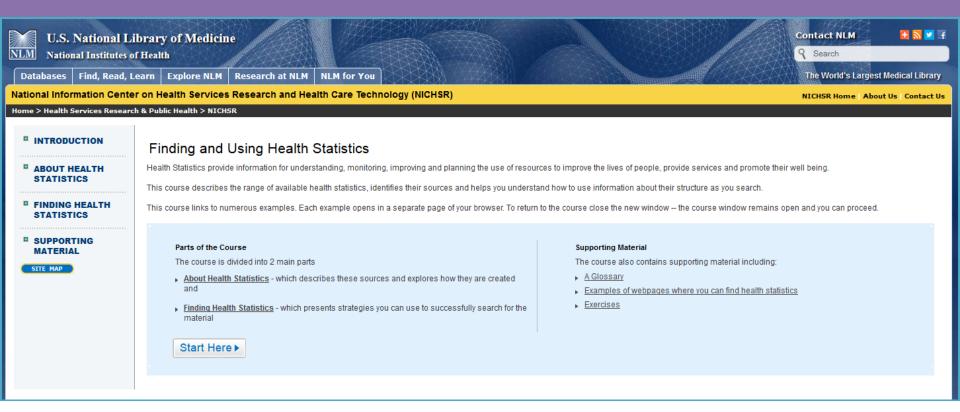
(((("alzheimer disease"[MeSH Major Topic] OR "dementia"[MeSH Major Topic] OR "neurocognitive disorders"[MeSH Major Topic OR "cognition disorders"[MeSH Major Topic OR "mental disorders"[MeSH Terms]) AND ("complications" [Subheading] OR "diagnosis"[Subheading] OR "diet therapy"[Subheading] OR "drug therapy"[Subheading] OR "economics" [Subheading] OR "epidemiology"[Subheading] OR "etiology"[Subheading] OR "immunology"[Subheading] OR "microbiology" [Subheading] OR "mortality"[Subheading] OR "prevention and control"[Subheading] OR "rehabilitation"[Subheading] OR "therapy"[Subheading])) AND (("length of stay"[MeSH Major Topic] OR "nursing homes"[MeSH Major Topic] OR "day care, medical"[MeSH Major Topic] OR "institutionalization"[MeSH Major Topic] OR "hospitalization"[MeSH Major Topic] OR "primary prevention"[MeSH Terms] AND "medicare"[MeSH Terms] OR "health services misuse"[MeSH Major Topic] OR "primary health care"[MeSH Major Topic] OR "drug utilization"[MeSH Major Topic] OR "activities of daily living" [MeSH Major Topic]) AND ("economics"[Subheading] OR "legislation and jurisprudence"[Subheading] OR "standards" [Subheading] OR "statistics and numerical data"[Subheading] OR "trends"[Subheading] OR "education"[Subheading] OR "manpower"[Subheading] OR "organization and administration"[Subheading] OR "methods"[Subheading] OR "prevention and control"[Subheading] OR "classification"[Subheading])) AND ("comorbidity"[MeSH Terms] OR "epidemiologic factors" [MeSH Terms] OR "diabetes mellitus"[MeSH Terms] OR "pulmonary disease, chronic obstructive"[MeSH Terms] OR "asthma" [MeSH Terms] OR "pneumonia"[MeSH Terms] OR "dehydration"[MeSH Terms] OR "polypharmacy"[MeSH Terms] OR "urinary tract infections"[MeSH Terms] OR "angina pectoris"[MeSH Terms] OR "heart failure"[MeSH Terms])) OR ("neurocognitive disorders"[MeSH Terms] AND ("institutionalization"[MeSH Terms] OR "hospitalization"[MeSH Terms] OR "day care, medical"[MeSH Terms]) AND "epidemiologic factors"[MeSH Terms] AND ("preventive health services"[MeSH Terms] OR "public health practice"[MeSH Terms] OR "preventive psychiatry"[MeSH Terms] OR "preventive medicine"[MeSH Terms])) AND ("united states/epidemiology"[Mesh Terms] OR "united states/ethnology"[Mesh Terms] OR "united states/history" [Mesh Terms] OR USA[All Fields]) AND "humans"[MeSH Terms] AND English[lang] AND ("aged"[MeSH Terms] OR "aged, 80 and over"[MeSH Terms]) AND "2006/04/23"[PDat] : "2016/04/19"[PDat]) OR 21217558[UID] NOT 19671904[UID]

Search URL

Result:

240

Health Statistics



National Information Center on Health Services
Research and Health Care Technology
http://www.nlm.nih.gov/nichsr/usestats/index.htm

TOXNET

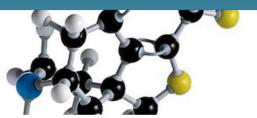


TOXNET TOXICOLOGY DATA NETWORK

Mobile | Help | FAQs | TOXNET Fact Sheet | Training Manual & Schedule

Share

Includes:



Welcome to TOXNET

Your resource for searching databases on toxicology, hazardous chemicals, environmental health, and toxic releases

SEARCH TOXNET Search all or select specific databases

BROWSE

ADVANCED SEARCH

e.g. benzene, endocrine disruptor

ALL DATABASES *

Search

TOXNET Databases

MOST VISITED BY TOXNET USERS

Hazardous Substances Data Bank. Peer-reviewed toxicology data for over 5,000 hazardous chemicals

TOXI INF

4 million references to literature on biochemical, pharmacological, physiological, and toxicological effects of drugs and other chemicals

Chem I Dplus

Dictionary of over 400,000 chemicals (names, synonyms, and structures)

BREASTEEDING & DRUGS

LactMed

Drugs and Lactation Database. Drugs and other chemicals to which

breastfeeding mothers may be exposed

DEVELOPMENTAL **TOXICOLOGY** LITERATURE

Developmental and Reproductive Toxicology Database. References to developmental and reproductive toxicology literature



Did you know



There is a guide to choosing a database

Which Resource Should I Use can help you pick the right resource for your search.

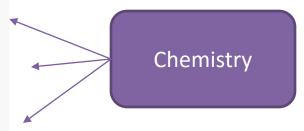
More FAQs

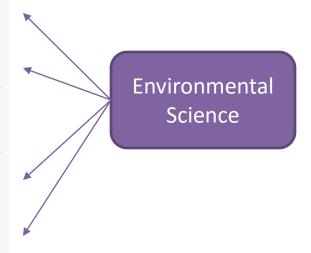
- Specific chemicals, mixtures, and products
- Chemical nomenclature
- Unknown chemicals
- Special toxic effects of chemicals in humans and/or animals
- Citations from the scientific literature.

TOXNET Databases

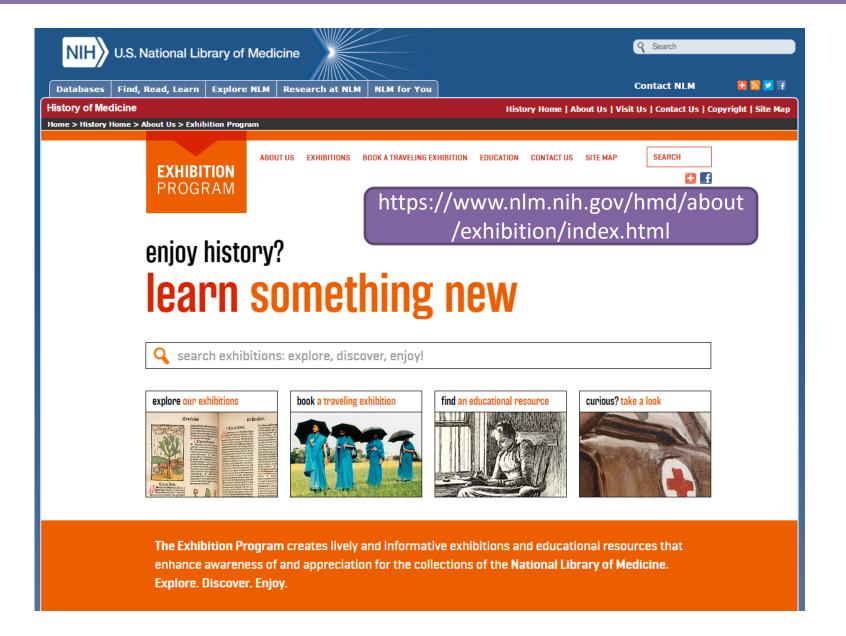
MOST VISITED BY **HSDB** Hazardous Substances Data Bank. Peer-reviewed toxicology data for over 5,000 TOXNET USERS hazardous chemicals TOXI INF 4 million references to literature on biochemical, pharmacological, physiological, and toxicological effects of drugs and other chemicals Chem I Dplus Dictionary of over 400,000 chemicals (names, synonyms, and structures) **BREASTFEEDING &** LactMed DRUGS Drugs and Lactation Database. Drugs and other chemicals to which breastfeeding mothers may be exposed DEVELOPMENTAL DART TOXICOLOGY Developmental and Reproductive Toxicology Database. References to LITERATURE developmental and reproductive toxicology literature CHEMICAL RELEASES **TOXMAP** & MAPPING TOXMAP: Environmental Health Maps provides searchable, interactive maps of EPA TRI and Superfund data, plus US Census and NCI health data TRI Toxics Release Inventory. Annual environmental releases of over 600 toxic chemicals by U.S. facilities GENOMICS CTD Comparative Toxicogenomics Database. Access to scientific data describing relationships between chemicals, genes and human diseases HOUSEHOLD PRODUCT Household Products Database SAFETY Potential health effects of chemicals in more than 10.000 common household products OCCUPATIONAL Haz-Map **EXPOSURE TO** Links jobs and hazardous tasks with occupational diseases and their symptoms

CHEMICALS





NLM Exhibition Program



Online Exhibition Resources



ABOUT US EXHIBITIONS

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SEARCH



EDUCATION SERVICES: Online Resources

FIND RESOURCES BY: ALL LEVELS TYPES

MIDDLE SCHOOL HIGH SCHOOL

HIGHER EDUCATION

view education facts

literature



CHANGING EXPLANATIONS IN MIND-BODY MEDICINE

AUTHOR: Theodore M. Brown, PhD



"AND THERE'S THE HUMOR OF IT": Shakespeare and the Four Humors TYPE: Curator's Bibliography



VISIBLE PROOFS: Forensic Views of the

TYPE: Online Resources

history & social studies



RECONSTRUCTING STATE AND SOLDIER: Disability and the American Civil War AUTHOR: Susan-Mary Grant, PhD



THE ORDEAL OF WAR AUTHOR: Peter Carmichael, PhD



LIFE AND LIMB: The Toll of the American Civil War

AUTHOR: Manon Parry, Ph.D.

health education



HEALING ELEMENTS: A Native Hawaiian Perspective

AUTHOR: Davianna Pomaika'i McGregor, PhD



LITERATURE OF PRESCRIPTION: Charlotte Perkins Gilman and "The Yellow Wall-Paper"

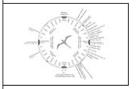
TYPE: Professional Organizations



LITERATURE OF PRESCRIPTION:

Charlotte Perkins Gilman and "The

science & technology



HAWAIIAN STAR COMPASS

TYPE: Interactive exercise



VISIBLE PROOFS: Forensic Views of the Body

TYPE: Radio Interviews

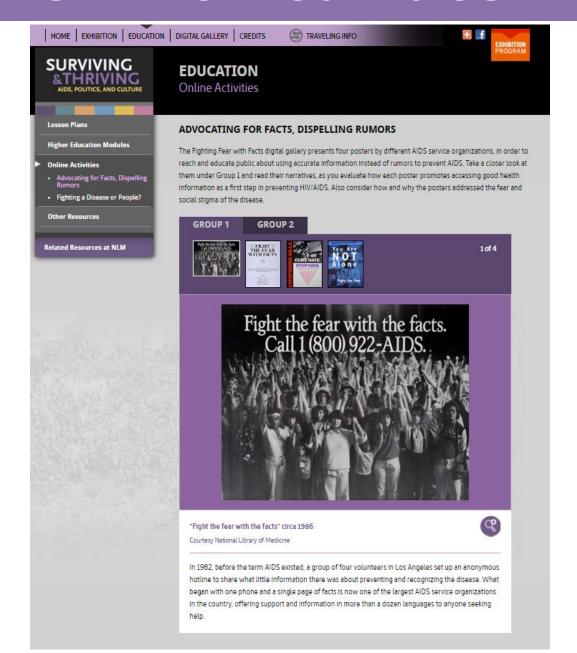


VISIBLE PROOFS: Forensic Views of the

TYPE: Online Resources

view more view all view more view all view all view all

Online Activities



Higher Education Modules

LESSON PLANS

HIGHER EDUCATION MODULES

ONLINE ACTIVITIES

OTHER RESOURCES

literature



CHANGING EXPLANATIONS IN MIND-BODY MEDICINE

AUTHOR: Theodore M. Brown, PhD



A MEDICINE OF THEIR OWN: The Stories of American Women Healers
AUTHOR: Sarah L. Berry, PhD

history & social studies



AMERICA'S MIND-ALTERING HISTORY AUTHOR: Sarah W. Tracy, PhD



CHANGING EXPLANATIONS IN MIND-BODY MEDICINE

AUTHOR: Theodore M. Brown, PhD



DISSEMINATING HEALTH KNOWLEDGE: Public Health Campaigns in 20th-Century China

ATITHOD: Lining But DhD

view more



٧

view all

health education



DISSEMINATING HEALTH KNOWLEDGE: Public Health Campaigns in 20th-Century China

AUTHOR: Liping Bu, PhD



HEALING ELEMENTS: A Native Hawaiian Perspective

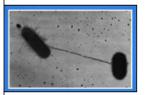
AUTHOR: Davianna Pomaika'i McGregor, PhD



RACE, MEDICINE, AND HEALTH IN AMERICA

AUTHOR: Richard Mizelle Jr. PhD

science & technology



ENGINEERING THE GENES: Ethical Dilemmas in Modern Biotechnology

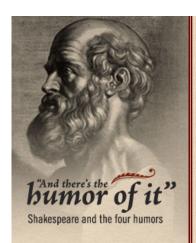
AUTHOR: Nadine Weidman, PhD



FOLLOWING FRANKENSTEIN: Mary Shelley, the Monster, and Medical Science

AUTHOR: Susan E. Lederer, PhD

Higher Education Modules



Exhibition Education

Lesson Plans

Higher Education

Class 1

Class 2

Class 3

Class 4

Class 5

Class 6

About the Module

Projects

Additional Resources

Traveling Exhibition

Credits

Exhibition Program

Higher Education

The Changing Explanations in Mind-Body Medicine module provides teachers and students with the opportunity to discuss the implications of the exhibition "And there's the humor of it" Shakespeare and the four humors for our understanding of how practicing physicians and medical scientists have, over a considerable period of time, typically explained disease and the factors which cause it. Looking selectively at Western medicine over its long history and in the most basic terms, it focuses on the recurrent ways in which biological (body-based) and psychological (mind- or emotion-based) explanations have been used to account for diseases of both the body and mind, and it challenges the common assumption that biological explanations are always better.

The module consists of three units with two classes each. The first unit covers the period from Greek antiquity through the Medieval period (ca. 450 BCE to ca. 1450), the second the Early Modern period (ca. 1450 to ca. 1650), and the third the Modern period (ca. 1650 to the present). Each class includes an introduction, suggested primary and secondary source readings, and a set of discussion questions. Information about the module's author, suggested use, and academic objectives, is available online at About the Module.

Unit 1. The Classical and Medieval Inheritance provides information about the medical knowledge and key ideas that Shakespeare and his contemporaries inherited from classical and medieval authorities. <u>Class 1</u> examines the biologically-focused foundational concepts and explanatory strategies of Western medicine first inscribed in the works of Hippocrates. <u>Class 2</u> explores Hippocrates' principal successor Galen among the late ancient medical writers, Galen's departures from Hippocrates' ideas on mind and body, and Avicenna's and Maimonides' continuation of Galen's approach among the medieval writers.

Class 1: Hippocratic Foundations

Class 2: Late Ancient and Medieval Medical Views of Mind and Body

Review

I hope you are now feel ready to:

- Provide instruction on a variety of resources suitable for students/faculty teaching health professions and science curricula.
- Know where to find appropriate handouts and educational tools

Any Questions?

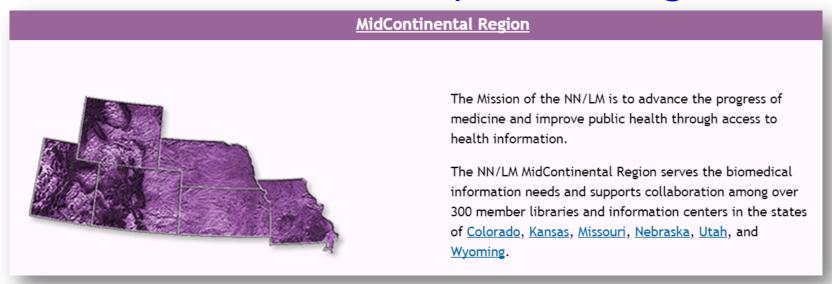


Join NN/LM

Consider joining for additional training opportunities and updates on health information resources.

Membership is free!

http://nnlm.gov/mcr



Acknowledgements and Funding

Many of these slides were used with permission from the NN/LM National Training Center.

This project has been funded in whole or in part with Federal funds from the Department of Health and Human Services, National Institutes of Health, National Library of Medicine, under Contract No. HHSN-276-2011-00006-C with the University of Utah