Helping Decipher Doctorspeak: Health Literacy in Your Community

Katherine Chew
Research/Outreach Services Librarian
Health Sciences Libraries
University of Minnesota

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Agenda

- Health Literacy: What It Is and Why It Matters
- Health Literacy & Your Community
- Health Literacy Tools & Resources

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Health Literacy: What It Is And Why It Matters

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What Is Literacy?

"Using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential."

This includes a combination of skills:

- Verbal
- Listening
- Writing
- reading

National Assessment of Adult Literacy (NAAL 2003) https://nces.ed.gov/naal/

It's More Than Just Reading Grade Level

Prose Literacy:
Written text like instructions or articles

Requires ability to search, comprehend, and use continuous text

Document Or Graphical Literacy:
Short forms or graphically displayed information

Non-continuous text. Requires ability to search, comprehend, & use information

Quantitative OR Numerical Literacy:
Arithmetic using numbers imbedded in print

Requires ability to identify & perform computations, using numbers within printed materials

National Assessment of Adult Literacy (NAAL)

- Conducted in 2003
- More than 19,000 adults
- One-on-one administration
- GOAL: assess literacy in English
- http://nces.ed.gov/NAAL

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Results of NAAL: Literacy Statistics

- Functionally illiterate = 23% of adults
- Marginal literacy skills = 28% of adults
- Proficient = Only 13% of adults
- 66% of adults over age 60 have inadequate or marginal literacy skills
- Average reading level in the U.S. is 8th grade; 20% read at 5th grade level or below

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Overview Of Literacy Levels

Table 1-1. Overview of the literacy levels

Level and definition	Key abilities associated with level
Below Basic indicates no more than the most simple and concrete literacy skills. Score ranges for *Below Basic*: Prose: 0–209 Document: 0–204 Quantitative: 0–234	Adults at the *Below Basic* level range from being nonliterate in English to having the abilities listed below: ■ locating easily identifiable information in short, commonplace **prose** texts ■ locating easily identifiable information and following written instructions in simple **documents** (e.g., charts or forms) ■ locating numbers and using them to perform simple **quantitative** operations (primarily addition) when the mathematical information is very concrete and familiar
Basic indicates skills necessary to perform simple and everyday literacy activities. Score ranges for *Basic*: Prose: 210–264 Document: 205–249 Quantitative: 235–289	■ reading and understanding information in short, commonplace **prose** texts ■ reading and understanding information in simple **documents** ■ locating easily identifiable **quantitative** information and using it to solve simple, one-step problems when the arithmetic operation is specified or easily inferred

Continued

Intermediate indicates skills necessary to perform moderately challenging literacy activities.

Score ranges for *Intermediate*:

Prose:	265–339
Document:	250–334
Quantitative:	290–349

- reading and understanding moderately dense, less commonplace **prose** texts as well as summarizing, making simple inferences, determining cause and effect, and recognizing the author's purpose
- locating information in dense, complex **documents** and making simple inferences about the information
- locating less familiar **quantitative** information and using it to solve problems when the arithmetic operation is not specified or easily inferred

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Proficient indicates skills necessary to perform more complex and challenging literacy activities.

Score ranges for *Proficient*:

Prose:	340–500
Document:	335–500
Quantitative:	350–500

- reading lengthy, complex, abstract **prose** texts as well as synthesizing information and making complex inferences
- integrating, synthesizing, and analyzing multiple pieces of information located in complex **documents**
- locating more abstract **quantitative** information and using it to solve multistep problems when the arithmetic operations are not easily inferred and the problems are more complex

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NOTE: Although the literacy levels share common names with the National Assessment of Educational Progress (NAEP) levels, they do not correspond to the NAEP levels.

SOURCE: Hauser, R.M, Edley, C.F. Jr., Koenig, J.A., and Elliott, S.W. (Eds.). (2005). *Measuring Literacy: Performance Levels for Adults, Interim Report*. Washington, DC: National Academies Press; White, S. and Dillow, S. (2005). *Key Concepts and Features of the 2003 National Assessment of Adult Literacy* (NCES 2006-471). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Differences between good and poor readers

Skilled Readers	Poor Readers	Managing the Problem
Interpret meaning	Take words literally	Explain the meaning
Read with fluency	Read slowly – miss meaning	Use common words give appropriate ex.
Get help for uncommon word	Skip over words	Use examples, review
Grasp the content	Miss the content	Explain content, use visuals
Persistent Reader	Tire quickly	Short segments, easy clear layout

Teaching Patients with Low Literacy Skills 2nd ed. by Doak, Doak, & Root, 1996

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NAAL Health Literacy Assessment

Asked 28 questions specifically related to health:

- 3 clinical
- 14 prevention
- 11 system navigation

Basic & Below Basic Health Literacy Results

• Entire Population	36%
• White	28%
• Native Americans	48%
• Blacks	58%
• Hispanics	66%

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Percent of Adults in Below Basic Health Literacy NAAL Populations

Characteristics	% in Below Basic	% in total population
Did not graduate from high school	51	15
Did not speak English before starting school	39	13
Adults reporting poor health	10	4
Hispanic adults	35	12
Age 65+	31	15
No medical insurance	36	18
Did not obtain information over the Internet	80	43
Black adults	19	12
One or more disabilities	48	30

Kutner, M., Greenberg, E., Jin, Y., and Paulsen, C. (2006). The Health Literacy of America's Adults: Results From the 2003 National Assessment of Adult Literacy (NCES 2006–483). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

found that 36 percent of adults have only basic or below-basic skills for dealing with health material.

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What is Health Literacy?

"The degree to which an individual has the capacity to ***obtain***, ***communicate***, ***process***, and ***understand*** basic health information and services to make appropriate health decisions."

Patient Protection and Affordable Care Act of 2010, Title V

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Realities of Health Care Today

- Patients are now asked to make decisions about their own disease process
- Most patients do not have the tools to make these kinds of decisions

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Can you read this?

Your physician has recommended that you have a colonoscopy. Colonoscopy is a test for colon cancer. It involves inserting a flexible viewing scope into your rectum. You must drink a special liquid the night before the examination to clean out your colon.

Weiss, Barry: Health Literacy and Patient Safety: Help Patients Understand; AMA Foundation

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Literacy skills are a stronger predictor of health status than:

- Age
- Income
- Employment status
- Education level
- Race or Ethnic group

Weiss, BD. Health Literacy: A Manual for Clinicians. AMA 2003
Health Literacy and Patient Safety: Help Patients Understand, American Medical Association Foundation, 2007

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Prose Literacy Example: Surgical Consent Form

INFORMED CONSENT TO SURGERY OR SPECIAL PROCEDURE

1. This form is called an "Informed Consent Form." It is your doctor's obligation to provide you with the information you need in order to decide whether to consent to the surgery or special procedure that your doctors have recommended. The purpose of this form is to verify that you have received this information and have given your consent to the surgery or special procedure recommended to you. You should read this form carefully and ask questions of your doctors so that you understand the operation or procedure before you decide whether or not to give your consent. If you have questions, you are encouraged and expected to ask them before you sign this form. Your doctors are not employees or agents of the hospital. They are independent medical practitioners.

2. Your doctors have recommended the following operation or procedure: _____ _____ and the following type of anesthesia: _____

   Upon your authorization and consent, this operation or procedure, together with any different or further procedures which, in the opinion of the doctor(s) performing the procedure, may be indicated due to any emergency, will be performed on you. The operations or procedures will be performed by the doctor named below (or, in the event the doctor is unable to perform or complete the procedure, a qualified substitute doctor), together with associates and assistants, including anesthesiologists, pathologists, and radiologists from the medical staff of *(name of hospital)* _____ _____ to whom the doctor(s) performing the procedure may assign designated responsibilities.

3. Name of the practitioner who is performing the procedure or administering the medical treatment[1]: _____

   The hospital maintains personnel and facilities to assist your doctors in their performance of various surgical operations and other special diagnostic or therapeutic procedures. However, your doctors, surgeons and the persons in attendance for the purpose of performing specialized medical services such as anesthesia, radiology, or pathology are not employees or agents of the hospital or of doctor(s) performing the procedure. They are independent medical practitioners.

4. All operations and procedures carry the risk of unsuccessful results, complications, injury or even

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Prose Literacy Example: Patient Education Handout

THINGS YOU SHOULD KNOW ABOUT OSTEOPOROSIS

In the Clinic
Annals of Internal Medicine

What is osteoporosis?

- Osteoporosis is a disease that makes bones weak and susceptible to fractures (broken), even when there has been no trauma or only a low level of trauma that would not cause a normal bone to break.
- Osteoporosis can be diagnosed before a fracture occurs with a bone mineral density (BMD) test using dual-energy x-ray absorptiometry (DXA).
- If a low-trauma fracture occurs in a postmenopausal woman or a man aged 50 or older, a presumptive diagnosis of osteoporosis may be made regardless of BMD.

Why is it important?

- About 44 million Americans have osteoporosis or low bone mass (osteopenia) that could lead to low-trauma fractures.
- A 50-year-old white woman has a 50% chance of having an osteoporotic fracture in her remaining lifetime, and a man the same age has about a 20%

How is it treated?

- All adults should take care to be physically active and maintain an adequate amount of calcium and vitamin D.

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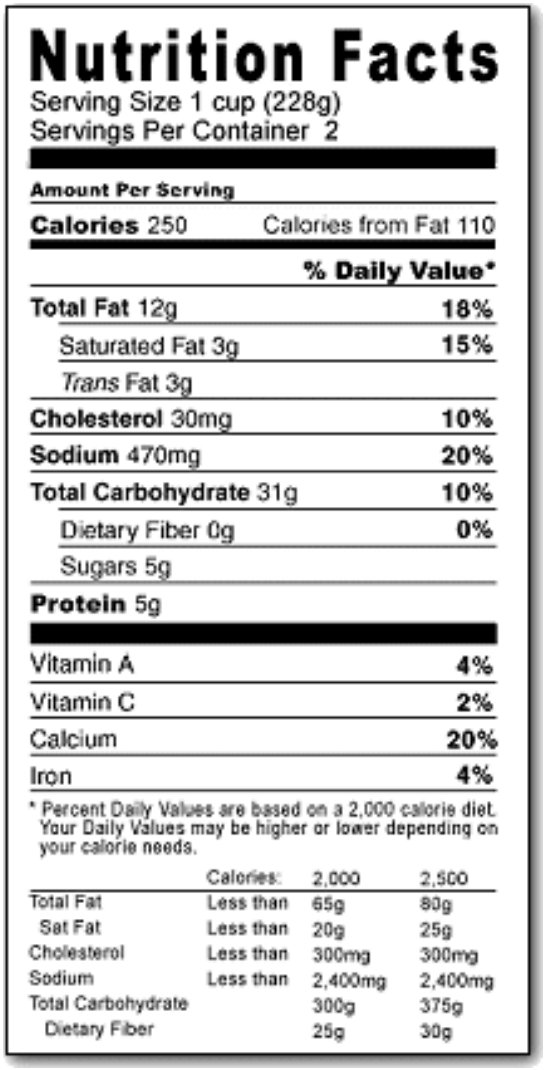
Document Literacy Examples



Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving

Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	**18%**
Saturated Fat 3g	**15%**
Trans Fat 3g	
Cholesterol 30mg	**10%**
Sodium 470mg	**20%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g	**0%**
Sugars 5g	
Protein 5g	
Vitamin A	**4%**
Vitamin C	**2%**
Calcium	**20%**
Iron	**4%**

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Drug Facts

Active ingredient (in each tablet) ***Purpose***
Chlorpheniramine maleate 2 mg ..... Antihistamine

Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies:
- sneezing
- runny nose
- itchy, watery eyes
- itchy throat

Warnings

Ask a doctor before use if you have
- glaucoma
- a breathing problem such as emphysema or chronic bronchitis
- trouble urinating due to an enlarged prostate gland

Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives

When using this procuct
- You may get drowsy
- Avoid alcoholic drinks
- Alcohol, sedatives, and tranquilizers may increase drowsiness
- Be careful when driving a motor vehicle or operating machinery
- Excitability may occur, especially in children

If pregnant or breastfeeding, ask a health professional before use.

Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions

Adults and children 12 years and over	Take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours
Children 6 years to under 12 years	Take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours
Children under 6 years	Ask a doctor

Other information Store at 20-25° C (68-77° F)
- Protect from excessive moisture

Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch

Quantitative Literacy Examples

Nutrition Facts	
Serving Size: 1 cup (85g) (3 oz.)	
Servings Per Container: 2.5	
Amount Per Serving	
Calories 45	Calories from Fat 0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 55 mg	2%
Total Carbohydrate 10g	3%
Dietary Fiber 3g	12%
Sugars 5g	
Protein 1g	

You ate half the container of carrots. How many grams of carbohydrates did you eat?

You have a prescription for metformin extended release 500 mg tablets. The label says, "take 1 tablet with supper each night for the first week. Then, increase by 1 tablet each week for a total of 4 tablets daily with supper." How many tablets should you take with supper each night the **second** week?

Your doctor tells you that you have high cholesterol. He informs you that you have a 10% risk of having a heart attack in the next 5 years. If you start on a cholesterol-lowering drug you can reduce your risk by 10%. What is your 5-year risk if you take the drug?

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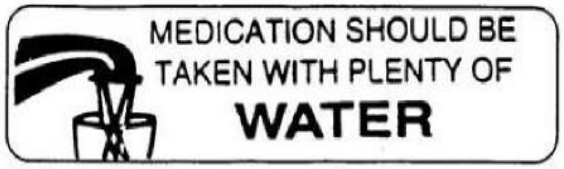
Medication Safety and Health Literacy

Only about 50% of patients take medications as directed



→ What's "plenty" of water?

→ "Take twice a day"

→ "Don't take medicine if you've been in the sun too long."

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Functional Health Literacy

"The ability to read and comprehend prescription bottles, appointment slips, and the other essential health related materials required to successfully function as a patient"

AMA Council of Scientific Affairs

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Health Literacy: A National Priority

The Affordable Care Act, the National Action Plan to Improve Health Literacy, and the Plain Writing Act all address health literacy as a systems-level challenge.

WEB FIRST

By Howard K. Koh, Donald M. Berwick, Carolyn M. Clancy, Cynthia Baur, Cindy Brach, Linda M. Harris, and Eileen G. Zerhusen

DOI: 10.1377/hlthaff.2011.1169
HEALTH AFFAIRS 31,
NO. 2 (2012): –
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The People-to-People Health
Foundation, Inc.

New Federal Policy Initiatives To Boost Health Literacy Can Help The Nation Move Beyond The Cycle Of Costly 'Crisis Care'

ABSTRACT Health literacy is the capacity to understand basic health information and make appropriate health decisions. Tens of millions of Americans have limited health literacy—a fact that poses major challenges for the delivery of high-quality care. Despite its importance, health literacy has until recently been relegated to the sidelines of health care improvement efforts aimed at increasing access, improving quality, and better managing costs. Recent federal policy initiatives, including the Affordable Care Act of 2010, the Department of Health and Human Services' National Action Plan to Improve Health Literacy, and the Plain

Howard K. Koh, (Howard.Koh@HHS.gov) is assistant secretary for health at the Department of Health and Human Services (HHS), in Washington, D.C.

Donald M. Berwick is the former administrator of the Centers for Medicare and Medicaid Services (CMS), in Washington, D.C.

Carolyn M. Clancy is director

Affordable Care Act https://www.hhs.gov/healthcare/
National Action Plan to Improve Health Literacy
https://health.gov/communication/initiatives/health-literacy-action-plan.asp
Plain Writing Act of 2010 http://www.plainlanguage.gov/plLaw/

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Health Information Literacy

Health information literacy is the set of abilities needed to: recognize a health information need; identify likely information sources and use them to retrieve relevant information; assess the quality of the information and its applicability to a specific situation; and analyze, understand and use the information to make good health decisions.

MLA Task Force on Communicating Health Information Literacy. (2005). Communicating Health Information Literacy. *Medical Library Association*

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Why is Health Literacy Important?

Health literacy is considered an essential life skill:

- To fill out a patient information forms
- To understand health-related instructions
- To follow discharge instructions
- To identify signs
- To keep appointments
- To understand insurance
- To sign consent forms

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Health Literacy Contributes to the Ability to:

- Responsibility
  - Take responsibility for one's health and healthcare decision-making
- Interaction
  - Locate health information and communicate on health matters with health care providers
  - Calculate dosages and interpret test results
- Confidence
  - Take action to improve personal and community health
- Navigation
  - Navigate in society and health care systems
- Evaluation
  - Filter, interpret, and evaluate or understanding health risks
  - Evaluate information for credibility and quality

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Skills Needed for Health Literacy

In order to accomplish these tasks, individuals may need to be:

- Visually literate (able to understand graphs or other visual information)
- Computer literate (able to operate a computer)
- Information literate (able to obtain and apply relevant information)
- Numerically or computationally literate (able to calculate or reason numerically)

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“Costs” of Low Health Literacy

- Low health literacy is a major source of economic inefficiency in the U.S. healthcare system. An initial approximation places the order of magnitude of the cost of low health literacy to the U.S. economy in the range of **$106 billion** to **$238 billion** annually. This represents between 7 % and 17 % of all personal healthcare expenditures.

- The savings that could be achieved by improving health literacy – a lower bound of $106 billion and an upper bound of $238 billion – translate into enough funds to insure every one of the more than 47 million persons who lacked coverage in the United States in 2006, according to recent Census Bureau estimates.

- When one accounts for the future costs of low health literacy that result from current actions (or lack of action), the real present day cost of low health literacy is closer in range to **$1.6 trillion** to **$3.6 trillion.** This measure is relevant to guide choices about where the social investment might go today.

Low Health Literacy: Implications for National Health Policy
http://publichealth.gwu.edu/departments/healthpolicy/CHPR/downloads/LowHealthLiteracyReport10_4_07.pdf

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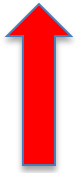
Not having the needed health literacy skills can lead to:

4x  Health care cost = More $$$

6% More trips to the hospital

2 More days in the hospital

National Assessment of Adult Literacy, U.S. Department of Education, 2003
Partnership for Clear Health Communication at the National Patient Safety Foundation Not having

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Risk Factors for Low Health Literacy

- Older adults (65+ years)
- Limited English Proficiency (LEP)
- Socioeconomically disadvantaged
  - Lower educational attainment
  - Lower income level
  - Higher percent minorities
  - Medicare/Medicaid recipients or uninsured
- Chronic and severe health conditions
- Black or Hispanic

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HEALTH LITERACY & YOUR COMMUNITY

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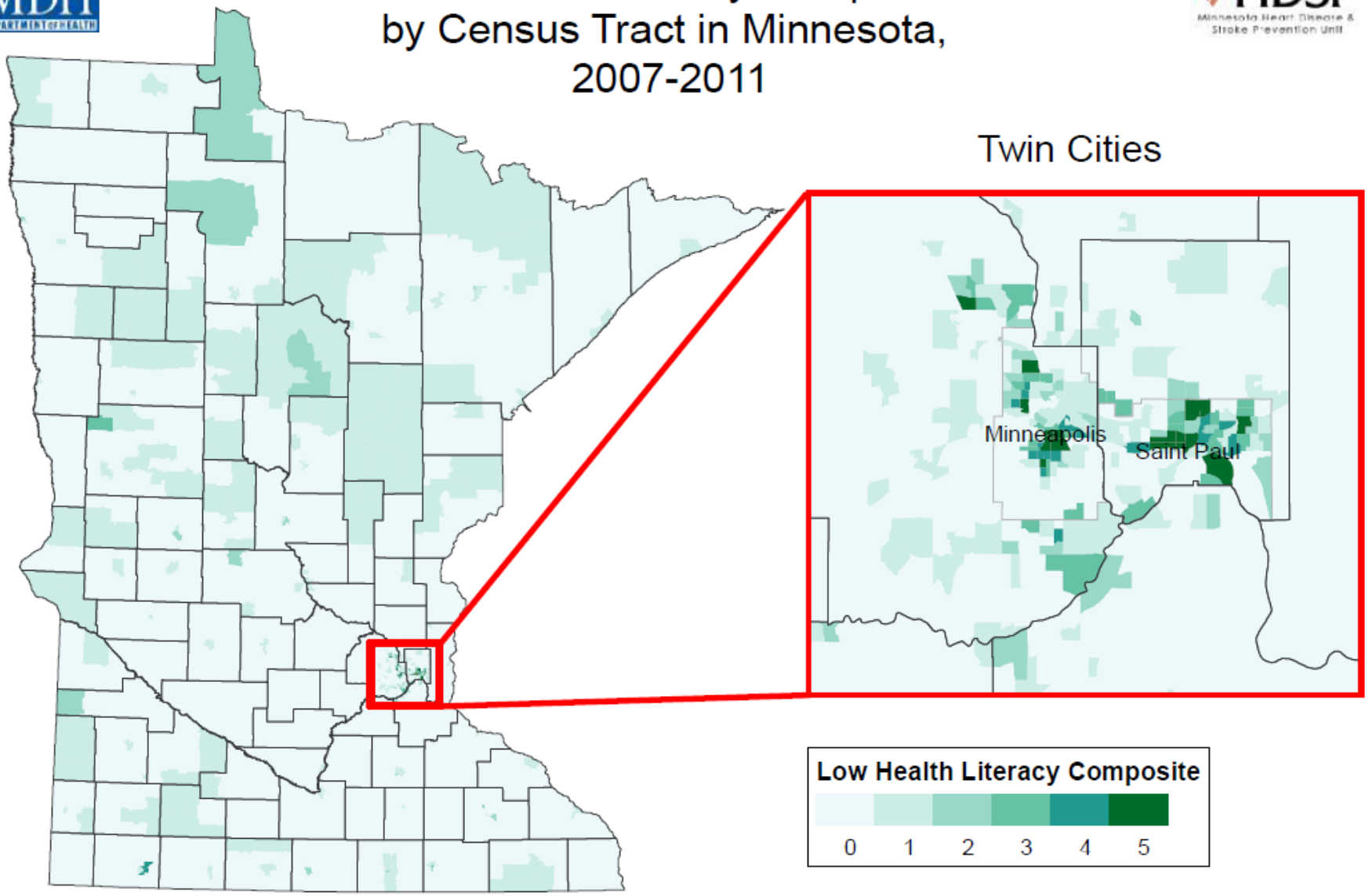
Low Health Literacy Composite by Census Tract in Minnesota, 2007-2011



Source: 2007-2011 American Community Survey Minnesota/prepared by the U.S. Census Bureau, 2012.
Composite measure of 0-6 points defined as 1 point for a) Non Hispanic White <25%, b) >15% Speaking English Less than "Very Well"; c) >20% Foreign Born; d) >16% Living in Poverty; e) >23% Age 65 or Over; f) <75% with High School education or more
Map by James Peacock, MDH Heart Disease & Stroke Prevention Unit, June 2013

“Can You Crack The Health Care Code?”

The University of Minnesota Health Sciences Libraries conducted a health literacy study at the Minnesota State Fair in 2015.

Number of surveys completed: 353

Summary of results:

- Graduate or professional degree or being under the age of 21 were associated with increased health literacy scores
- High school diploma or some high school education, being Asian American, or being American Indian/Alaska Native were associated with lower health literacy scores.

Bakker CJ, Koffel JB, Theis-Mahon NR. *Measuring the health literacy of the upper midwest.* Journal of the Medical Library Association. In press, to be published January 2017.

Healthy Minnesota 2020

Healthy Minnesota 2020 is a framework whose emphasis is on creating conditions that allow people to be healthy, conditions that assure a healthy start and that set the stage for healthy choices throughout life.

The framework features three themes that reflect the importance of social and economic determinants for health: capitalize on the opportunity to influence health in early childhood; assure that the opportunity for health is available everywhere and for everyone, and strengthen communities to create their own healthy futures.

http://www.health.state.mn.us/healthymnpartnership/hm2020/

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Health Literacy:
A Priority for Minnesota

The mission of the Minnesota Health Literacy Partnership is to improve the health of all Minnesotans through clear health communication.

We believe:

- Low health literacy affects everyone in Minnesota
- Clear communication increases patient safety
- Helping providers communicate health information in a clear and easy-to-understand manner is key to improving health literacy in Minnesota

Patients need to be empowered to ask questions of health care professionals and systems so they can make informed choices about their health care

Our goals are threefold:

- Train health care providers about health literacy
- Empower patients to ask for clear communication
- Share health literacy resources

http://www.healthliteracymn.org

MINNESOTA Health Literacy PARTNERSHIP

Minnesota Health Literacy Action Plan

1. **Adopt and use health literacy best practices across all verbal, written and visual communication**. To make it easier for consumers to access and understand health information, the health care community should develop and implement best practices for providing written, verbal and visual health information in jargon-free, understandable language.

2. **Make information about health relevant and accessible**. Patients and their caregivers should have easy access to usable information presented in a variety of mediums so they can understand diagnoses, make treatment and prevention decisions, and evaluate health risks.

3. **Increase and improve patient -centered resources**. Health care professionals should provide patients with the necessary resources to understand the health care system and receive the most appropriate care. Whether individual assistance is provided in-person, by phone, or online, health care professionals should help patients coordinate and navigate health care.

4. **Implement and enhance education opportunities at all levels**. Health literacy concepts should be integrated into primary, secondary and professional education.

5. **Streamline processes within the health care system**. Productive partnerships within the health care system could identify and implement effective strategies and actions to lessen the burden on patients to navigate the fragmented health care system

6. **Invest in language and cultural resources**. Because limited English proficiency has a profound impact on health literacy, health care organizations need to take language and cultural differences into account when providing health information

http://healthliteracymn.org/sites/default/files/images/files/MN_Health_Literacy_Action_Plan.pdf

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Role of the Librarian

What is the role of the librarian in helping people find the information they need to make good decisions about their health?

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Role of the Library/Librarian

Public libraries are in a strong position to advance the following multiple literacies to promote active health literacy through providing reliable and timely information on health topics.

- visual literacy,
- computer literacy,
- information literacy and
- numeric/computational literacy.

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Literacy needs related to health that may occur in your community:

- Adult community members who need assistance building health care budgets or understanding insurance terminology
- Uncertainty about the importance and process of taking medications according to prescribed methods and doses
- Lack of awareness that not all information found online is of equal authority, indicating a literacy shortfall information evaluation skills.

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Libraries 2016

(Pew Research Center Survey, 9 Sept 2016)

- Most Americans view public libraries as important parts of their communities, with a majority reporting that libraries have the resources they need and play at least some role in helping them decide *what information they can trust*. (p.3)
- There is also a growing sense that *libraries can help people decide* what information they can trust: 37% of Americans feel that public libraries contribute "a lot" in this regard, a 13-point increase from a survey conducted at a similar point in 2015. (p.4)
- Many Americans are interested in libraries offering a range of services – including those that help people improve their digital skills and learn how to determine *what information is trustworthy*. (p.7)
- Of particular note is the role libraries play in helping people decide what information they can trust. There was a large increase in people saying *libraries help "a lot"* in deciding what information they can trust from 2015, when the figure stood at 24%, to 2016, where it now stands at 37%. (p.8)
- As to attitudes about libraries, the main difference between library users and non-users has to do with trust and information. People who have used libraries in the past year are more likely than others to say that *libraries are a resource that can help them* decide what information to trust. Some 43% of library users say they agree "a lot" that libraries are a place that helps people decide what information to trust, while 29% of those who have never been say this. (p.17)

Horrigan, John B. "Libraries 2016" Pew Research Center, September 2016
Available at: http://www.pewinternet.org/2016/09/09/2016/Libraries-2016/

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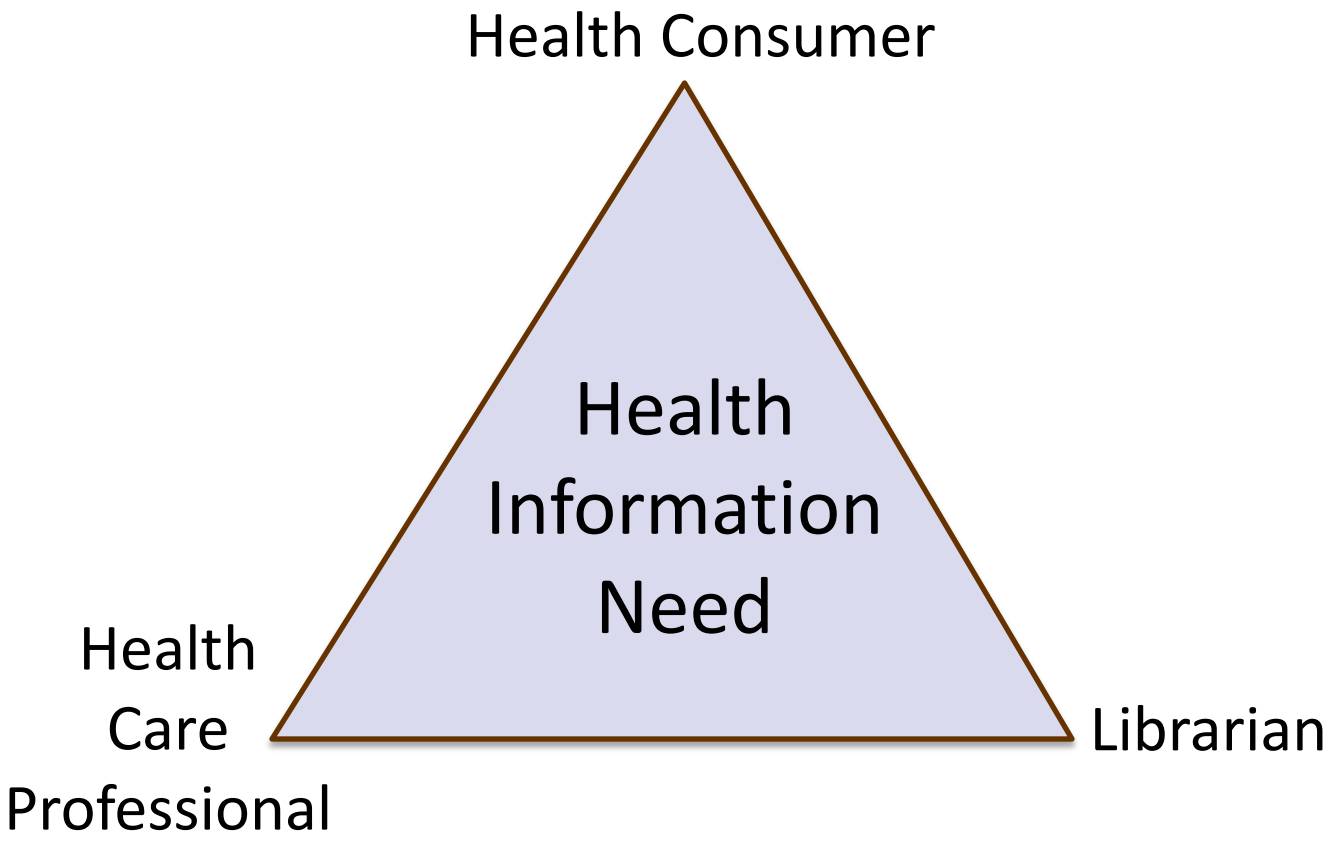
Triangle Connection



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Frequently Asked Questions

- Descriptions of particular procedures
- Latest treatment for …
- “Everything” about …
- The best doctor or hospital
- Drug information
- Herbal information

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The Reference Interview … in the context of health information

- What are these patrons really looking for?
  - —Sick lick vomiting
    - —Cyclic vomiting
  - —Dropped Bladder
    - —Cystocele
  - —Fireballs in the Eucharist
    - —Fibroids in the uterus
  - — Smiling Mighty Jesus
    - — Spinal Meningitis
  - — Bavarian Enemy
    - — Barium enema
  - — Corroded arteries
    - — Carotid Artery

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The Reference Interview … in the context of health information: Librarian Challenges

- Not being familiar with the resources
- Medical terminology
- Knowing how much to ask
- Not offering personal experiences
- Language and cultural barriers pose special problems
- Know the limits of your collection
- Avoiding interpreting medical information
- Know where you can refer your patrons

Medical Jargon

Tylenol vs. Tylenol PM

Hypothermia vs. Hyperthermia

prednisolone vs. prednisone

a.c.: Before meals.

b.i.d.: Twice daily.

Vertebrae?
Cervical
Lumbar
Thoracic

Dysphasia vs. dysphagia

Cerebrum vs. cerebellum vs cerebral cortex

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The Reference Interview … in the context of health information: Tips

- Be empathetic
- Be an active listener
- Use open ended questions
- Respect privacy / confidentiality
- Be prepared for emotions
- Be aware of body language
- Do not be afraid to tell the person “I don’t know” or “I can’t get that information for you”
- Do not be afraid to refer the patron back to his/her health care provider

“The Consumer Health Reference Interview and Ethical Issues,” *NN/LM Consumer Health Manual* http://nnlm.gov/outreach/consumer/ethics.html

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HEALTH LITERACY
TOOLS & RESOURCES

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Seeking Health Information Online

- Pew Internet and American Life Project
  - 61% of American adults look online for health information
  - 80% of US Internet users have searched for information on at least one health topic
  - 52% of searchers on the Internet are on behalf of someone else
  - 60% of e-patients say they (or someone they know) has been helped following medical advice or health information from the Internet
  - 66% started at a search engine for their most recent inquiry

- BUT …
  - Only one quarter of online health seekers said they always or usually check the source and date of health information online!

Health Online (2013)
http://www.pewinternet.org/2013/01/15/health-online-2013/

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"Can This Website Be Trusted"? Guidance Questions to Ask:

- Who runs the site? Can they be contacted?
- Does the site have advertisements? Are they labeled?
- Where does the information on the site come from? Is the information reviewed by experts? Is it up-to-date? Does it make unbelievable claims?
  - "breakthrough"
  - "Miracle cure"

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“Can This Website Be Trusted”? Guidance Questions to Ask (cont.):

- Maintaining privacy is important. Do they ask for personal information?
- Do they want to sell something?
- How is the site designed? Is it easy to find your way around?

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Tools & Resources

- MedlinePlus
- Drug Information Portal
- Genetic Home Reference
- Lab Tests Online
- HealthReach
- Plain Language Medical Dictionary
- NIH Senior Health

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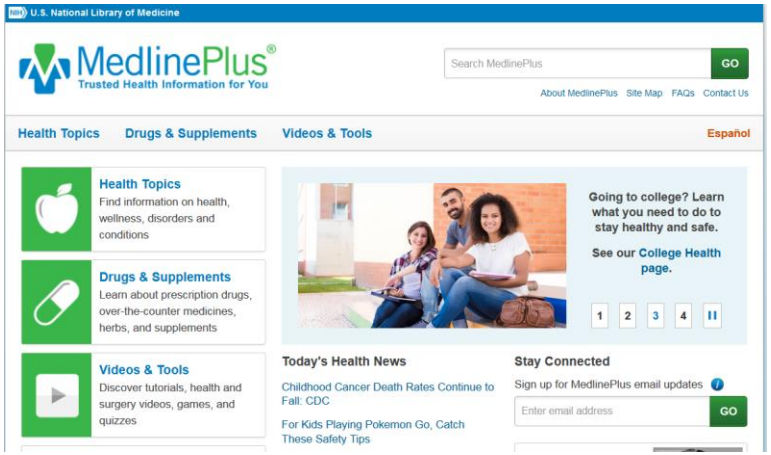
MedlinePlus®
Trusted Health Information for You

https://medlineplus.gov/



- MedlinePlus.gov – free, trusted, family-friendly
- Hosted by reputable government agency: The National Library of Medicine
- No sales
- Can search for many health conditions: 900+ Health Topics: including Diseases, Illnesses, Health Conditions and Wellness
- Available in multiple languages
- Easy-to-Read materials/how to write easy-to-read materials
  - http://www.nlm.nih.gov/medlineplus/etr.html
- Medical Dictionary
  - Understanding Medical Words tutorial
- Interactive tutorials/videos and Cool Tools
- Drugs and Supplements

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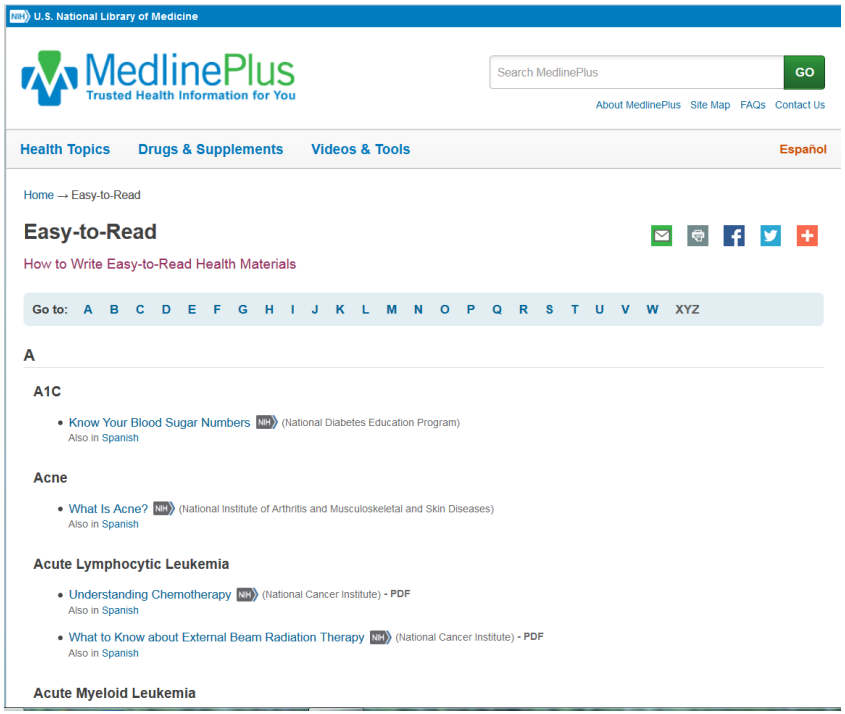
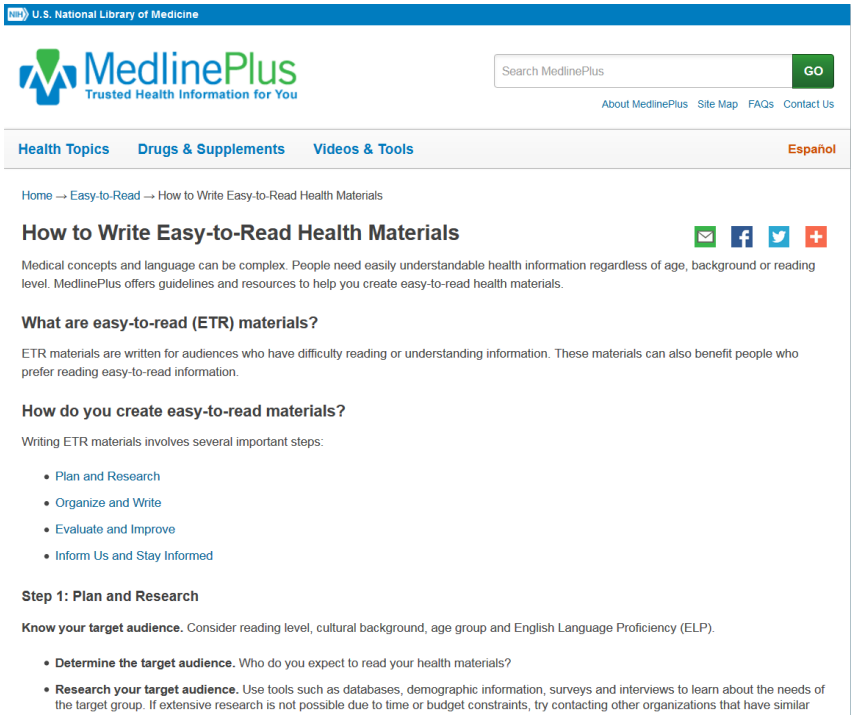
MedlinePlus: Easy to Read Materials

In general, easy to read materials found on MedlinePlus are usually written at a 5th to 8th grade reading level. The summaries on their health topic pages aim for a 5th to 8th grade reading level.





MedlinePlus: Multiple Languages

U.S. National Library of Medicine

MedlinePlus
Trusted Health Information for You

Search MedlinePlus GO

About MedlinePlus Site Map FAQs Contact Us

Health Topics Drugs & Supplements Videos & Tools Español

Home → Health Topics → Diabetes Type 2

Diabetes Type 2

Also called: Type 2 Diabetes

On this page

Basics
- Summary
- Start Here
- Latest News
- Symptoms
- Diagnosis and Tests
- Prevention and Risk Factors
- Treatments and Therapies

Learn More
- Living With
- Related Issues
- Specifics
- Genetics

See, Play and Learn
- Health Check Tools
- Videos and Tutorials

Research
- Statistics and Research
- Clinical Trials
- Journal Articles

Resources
- Find an Expert

For You
- Men
- Women
- Seniors
- Patient Handouts

Get Diabetes Type 2 updates email

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MEDICAL ENCYCLOPEDIA

A1C test

Diabetes - what to ask your doctor - type 2

Summary

Diabetes means your blood glucose, or blood sugar, levels are too high. With type 2 diabetes, the more common type, your body does not make or use insulin well. Insulin is a hormone that helps glucose get into your cells to give them energy. Without insulin, too much glucose stays in your blood. Over time, high blood glucose can lead to serious problems with your heart, eyes, kidneys, nerves, and gums and teeth.

Languages

Arabic (العربية)

Chinese - Simplified (简体中文)

French (français)

Russian (Русский)

Somali (af Soomaali)

Spanish (español)

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MedlinePlus: Multiple Languages

- Amharic (amarunya)
- Arabic ((العربية
- Armenian (Հայերեն)
- Bengali (Bangla)
- Bosnian (Bosanski)
- Burmese (myanmasa)
- Chamorro (chamoru)
- Chinese - Simplified (简体中文)
- Chinese - Traditional (繁體中文)
- Chuukese (Trukese)
- Croatian (Hrvatski)
- Farsi ((فارسی
- French (français)
- German (Deutsch)
- Gujarathi (ગુજરાતી)
- Haitian Creole (Kreyol)
- Hindi (हिन्दी)
- Hmong (Hmoob)
- Ilocano (ilokano)
- Italian (italiano)
- Japanese (日本語)
- Karen (Sgaw Karen)
- Khmer (Khmer)
- Korean (한국어)
- Kurdish ((کوردی
- Laotian (Lao)
- Marshallese (kajin Majöl)
- Nepali (नेपाली)
- Oromo (Afaan Oromo)
- Polish (polski)
- Portuguese (português)
- Punjabi (ਪੰਜਾਬੀ)
- Romanian (Română)
- Russian (Русский)
- Samoan (Gagana Samoa)
- Somali (af Soomaali)
- Spanish (español)
- Swahili (Kiswahili)
- Tagalog (Tagalog)
- Thai (ภาษาไทย)
- Tigrinya (tigrinya)
- Tongan (Lea Fakatonga)
- Turkish (Türkçe)
- Ukrainian (Українська)
- Urdu ((اردو
- Vietnamese (Tiếng Việt)

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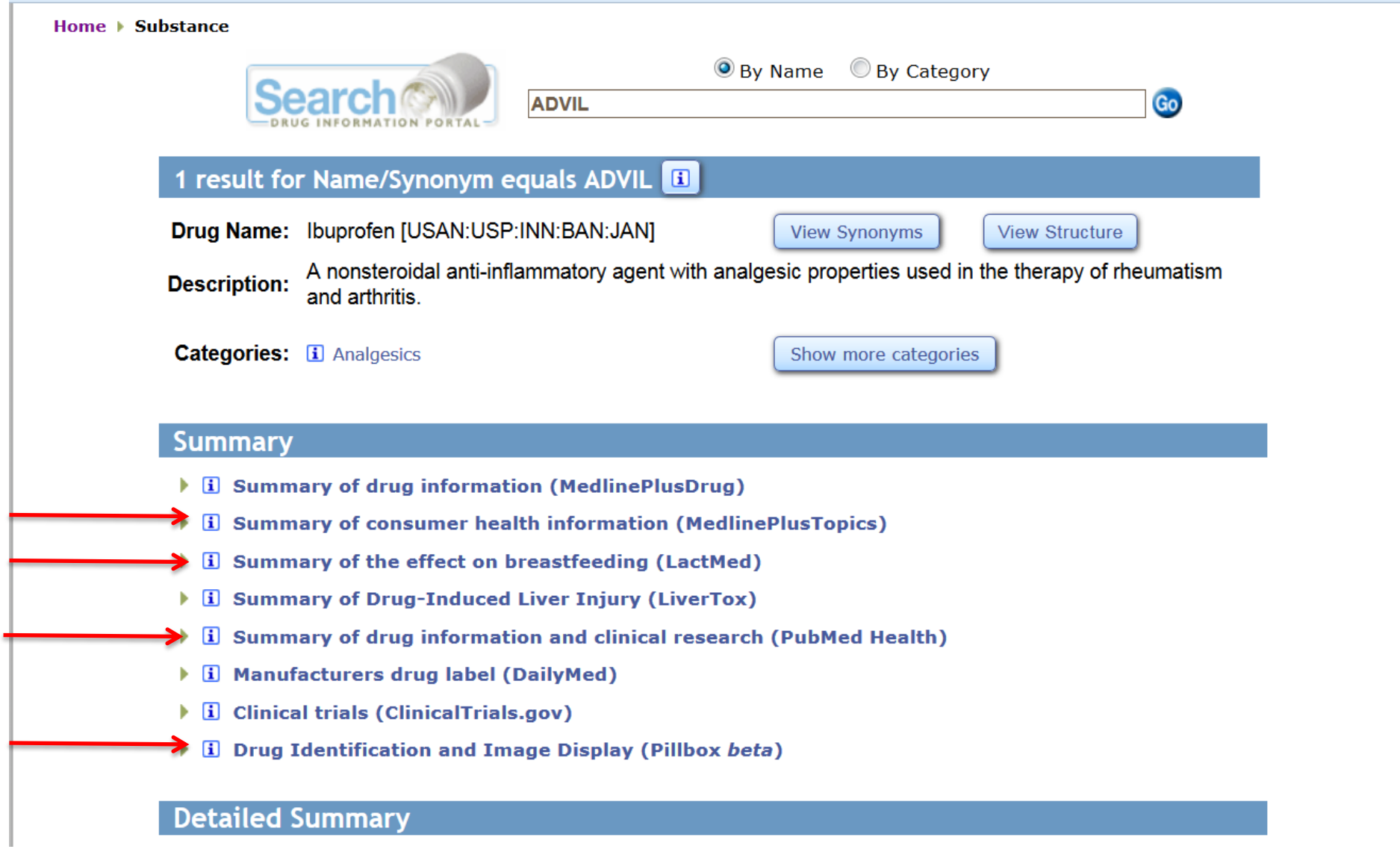
Drug Information Portal

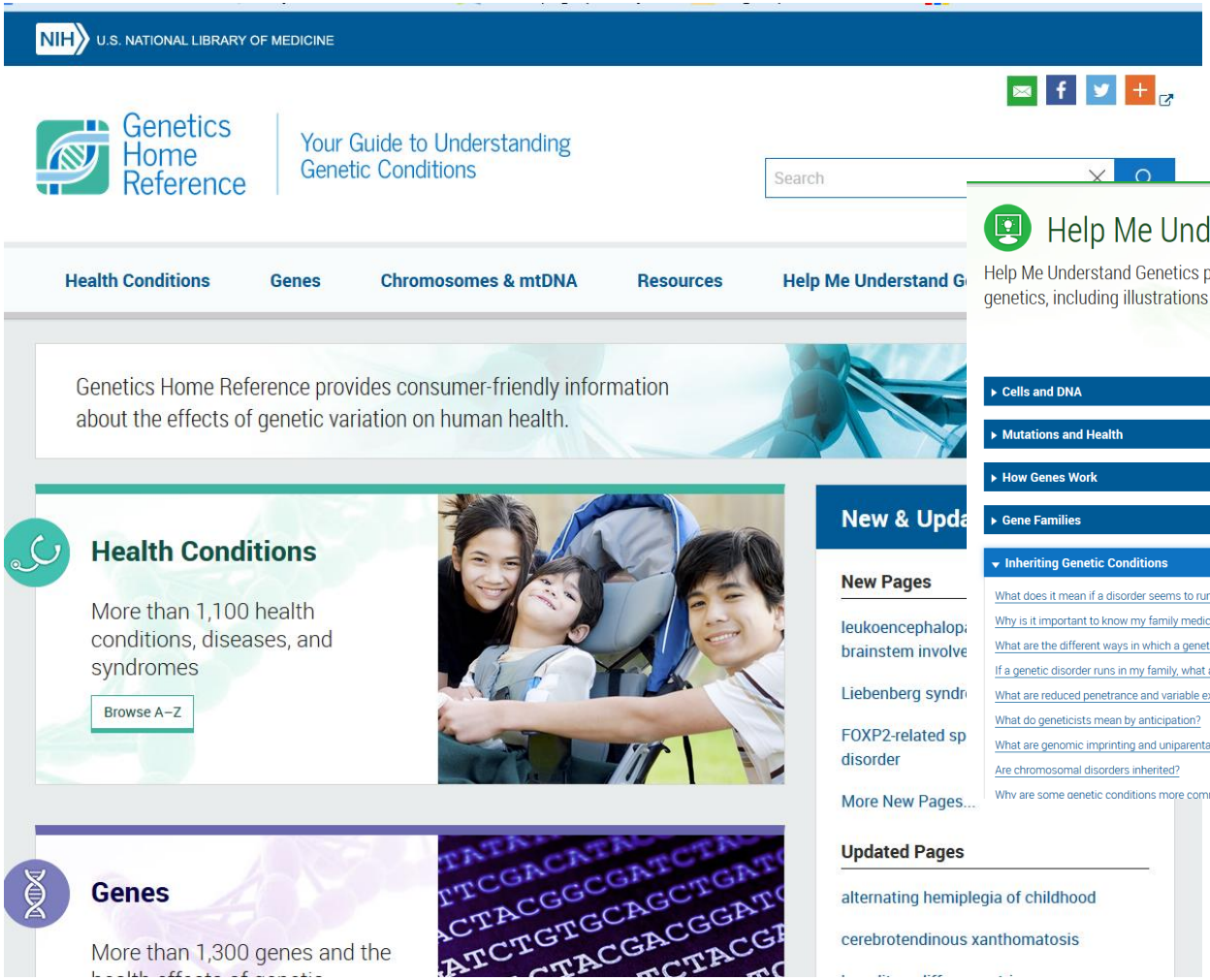
https://druginfo.nlm.nih.gov/drugportal/drugportal.jsp

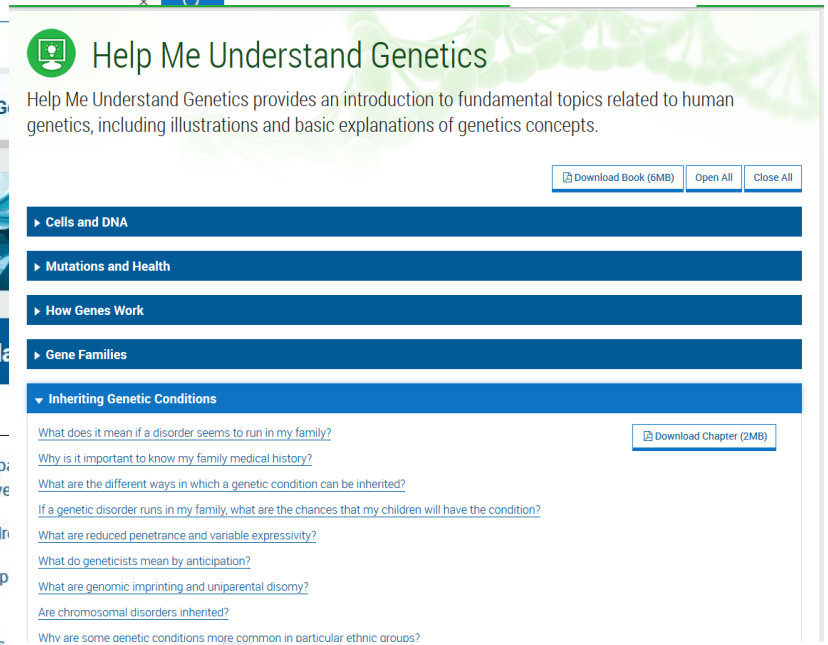
Drug Information Portal (cont.)



Genetics Home Reference

https://ghr.nlm.nih.gov/





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Lab Tests Online

https://labtestsonline.org/

Lab Tests Online®

Empower Your Health. Understand Your Tests.

AACC

Better health through laboratory medicine.

Home

Visit Global Sites

Learn more about ...

Genetics and genetic testing

About Lab Tests Online

Lab Tests Online is an award-winning health information web resource designed to help patients and caregivers understand the many lab tests that are a vital part of medical care. Laboratory and medical professionals, who are experts in the field, develop and review all content, including articles on lab tests, conditions/diseases, screening, clinical laboratory topics, and lab test news. The site is produced by AACC, a global scientific and medical professional organization dedicated to clinical laboratory science and its application to healthcare. Learn more.

Topics in the News

U.S. to Screen All Blood Donations for Zika Virus

September 7, 2016

The FDA has directed U.S. blood collection facilities to begin screening all donated blood for the Zika virus to reduce the risk of spreading the virus through blood transfusions. *Photo source: Vegasjon via Wikimedia Commons*

Screen All Adults for Hepatitis C, Say Researchers

August 29, 2016

According to Johns Hopkins researchers, universal screening for hepatitis C would identify up to 25% of adults with

Use the search box and menus below to quickly navigate Lab Tests Online

SEARCH

Tests

- List of all tests and synonyms
- Test not listed?
- 5-HIAA
- 17-Hydroxyprogesterone
- A/G Ratio
- A1c
- Absolute neutrophils

Conditions/Diseases

- List of all conditions/diseases
- Condition not listed?
- Acidosis/Alkalosis
- ACS
- Addison Disease
- Adrenal Insufficiency
- Alcoholism

Screening

- List of screening recommend
- Newborns
- Infants
- Children

Understanding Your Tests

Share this page:

Was this page helpful?

Index of Tests

Index of Conditions

The following articles are intended to help patients and providers better understand several areas of laboratory medicine.

Deciphering Your Lab Report

Learn how to read your lab report, including specimen source, specimen collection, laboratory accession number, abnormal test results, interpretation of results, and other important parts of a lab report.

Reference Ranges and What They Mean

Test results are often interpreted in relation to a reference range provided by the laboratory that performed the testing. This article explains what reference ranges are, how they are determined, and some of the common misconceptions about reference ranges.

Making Informed Decisions for Better Health

It's important to make informed decisions about medical tests and lab results for a healthy outcome through patient-centered care. We offer questions to ask your healthcare provider when testing is recommended.

Point-of-Care Testing

Learn about point-of-care testing (POCT), which encompasses any laboratory tests that are performed at or near a patient and at the site where care or treatment is provided. Point-of-care test results are typically available relatively quickly so that they can be acted upon without delay.

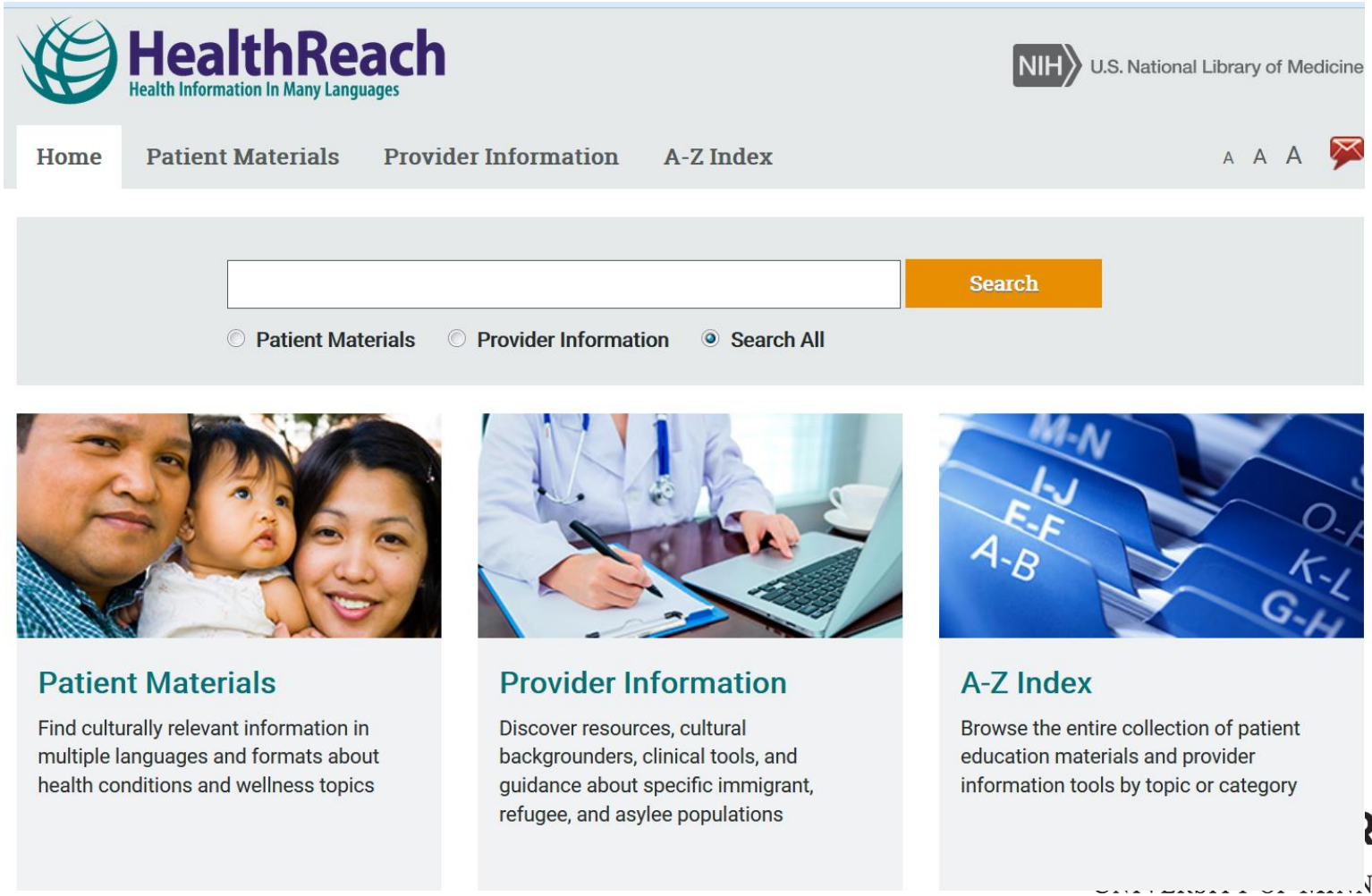
With Home Testing, Consumers Take Charge of Their Health

Home medical tests offer many benefits, including convenience and privacy, but it is important to be aware of the possibility of errors and bogus tests.

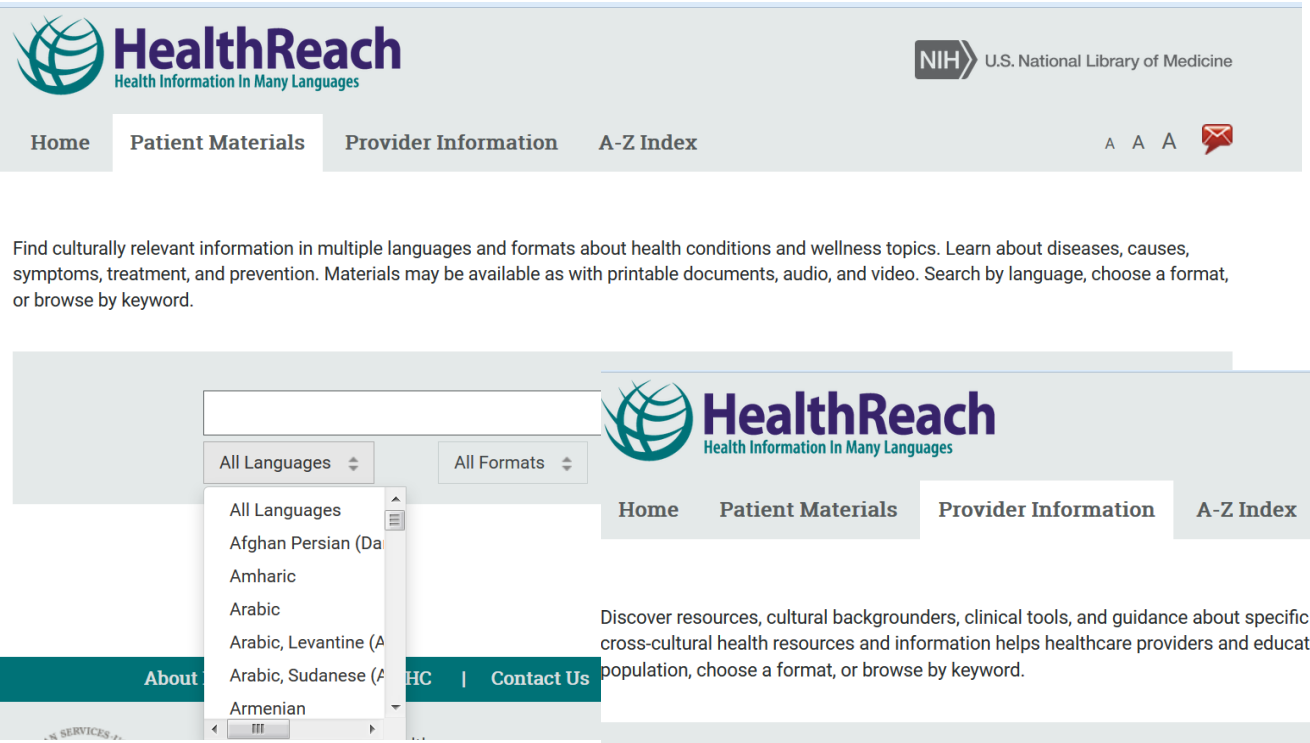
How Reliable is Laboratory Testing?

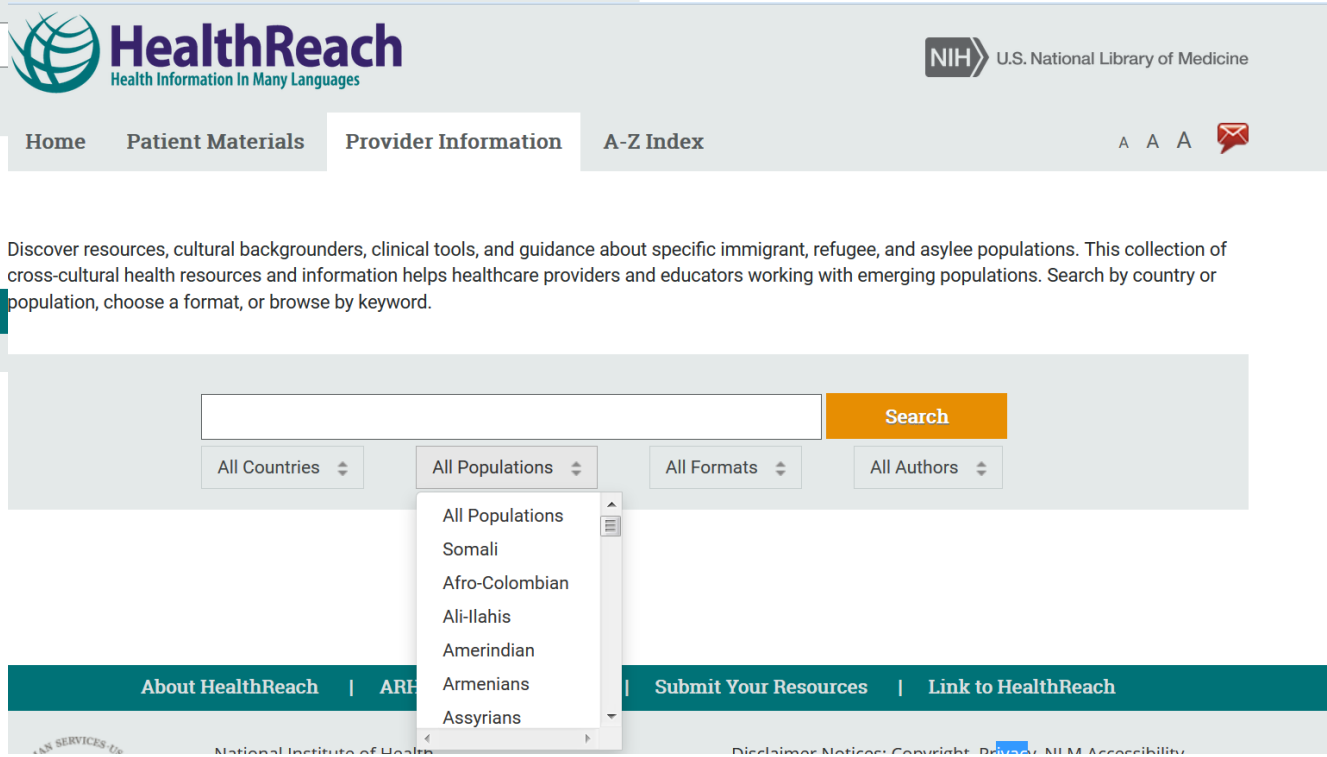
HealthReach

https://healthreach.nlm.nih.gov/



HealthReach (cont.)





HealthReach (cont.)

cancer

Search

All Languages | All Formats | All Authors

1-10 of 12 results

10 per page

Title	Format	Translation	Medical	Languages
Healthy Living Toolkit: What Is Breast Cancer?	Documen			
Breast Cancer	Documen			
Cervical Cancer	Documen			
Iraqi Health Outreach Project: Cervical Cancer	Documen			
Testicular Cancer	Documen			
Prostate Cancer	Documen			

Health and Well-Being 3 - Smoking

Resource Properties

Abstract:
This one-page handout educates people about the dangers of smoking. It identifies serious illnesses caused by smoking: cancer, lung disease, heart attack, stroke, and high blood pressure. It clarifies that smoking can also cause illnesses in non-smokers who are near the smoker.

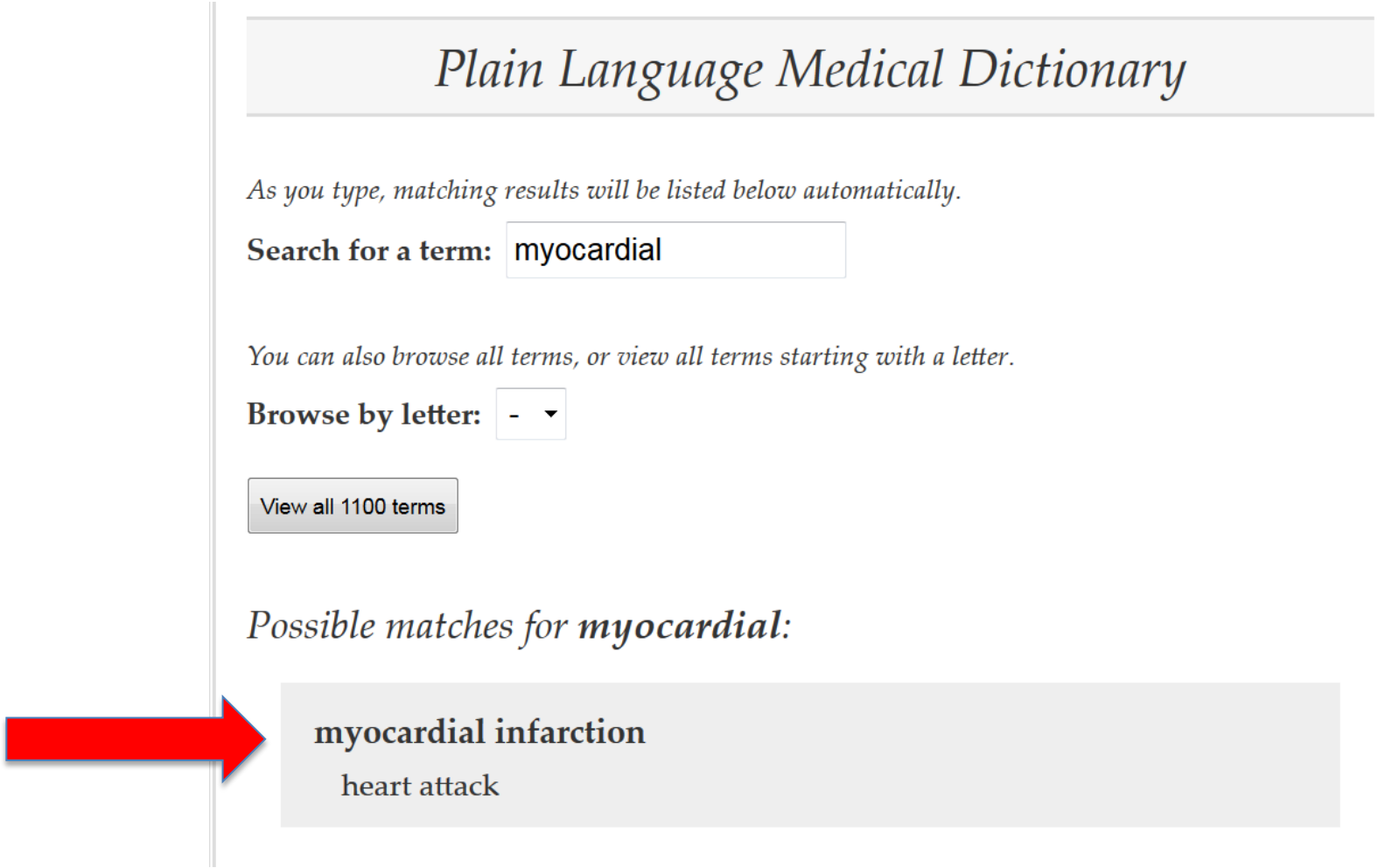
Author(s): Siloam Family Health Center
Medical Review: Yes
The English language resource was created or reviewed by a medical professional for quality and accuracy.
Development Method: Translation from English text
Translation Review: Company review
A qualified translation company performed an independent review by a second translator, and a client advocate.
Country: N/A
Population: N/A
Keywords: Hypertension, Lung diseases, Smoking, Stroke
Copyright: Licensed by Creative Commons
Date Last Reviewed: 1/1/2015
Reviewed By: Author/Agency

Access Resource

Language	Document	Video	Audio
English	Open (PDF, 99 KB)		
Amharic	Open (PDF, 244 KB) Split Screen (PDF, 244 KB)		Listen (MP3, 814 KB)
Arabic	Open (PDF, 238 KB) Split Screen (PDF, 238 KB)		
Arabic, Levantine (Arabic dialect)			Listen (MP3, 528 KB)
Arabic, Sudanese (Arabic dialect)			Listen (MP3, 700 KB)
Burmese	Open (PDF, 181 KB) Split Screen (PDF, 181 KB)		
Dari (Afghan Persian)	Open (PDF, 215 KB) Split Screen		Listen (MP3, 965 KB)

Plain Language Medical Dictionary

http://www.lib.umich.edu/taubman-health-sciences-library/plain-language-medical-dictionary



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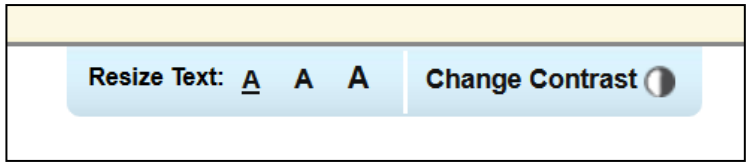
NIH Senior Health

http://nihseniorhealth.gov/



Health Videos

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PubMed Health

http://www.ncbi.nlm.nih.gov/pubmedhealth/

Home > Understanding research results

Understanding research results

Studies, numbers and health claims—we're flooded with them every day. Don't be misled or confused. Use the lively and interesting books on this page to make sense of it all.

One of these books has even been clinically proven to increase readers' data interpretation skills! See the Know Your Chances randomized trials.

The books are all complete and online free here.

Things you need to know

How to read health news

What to know about screening

Why randomization is important

Know your chances

Understanding health statistics

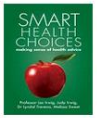
How to see through hype

Testing treatments

Better research for better healthcare

How we can know if a treatment works

Smart health choices



Making sense of health advice

Develop the skills fo informed decisions

Home > What is Clinical Effectiveness?

About Clinical Effectiveness Research

Clinical effectiveness research finds answers to the question "What works?" in medical and health care.

"Working" is a real health benefit - like symptom relief, quicker recovery, or longer life. To find out if something really works, all important effects need to be studied. That means possible harms as well as possible benefits.

Clinical or health effects are sometimes called patient-relevant outcomes.

clinical effectiveness?

here might be animal testing. Studies observing patients

a particular treatment works. Many other factors could be prove with or without treatment, too.

can single out the true effects of specific actions. That is ed to be studied in clinical trials.

sometimes confirm early results - and sometimes come alyze, all the trials that have studied particular questions. to look for studies other than trials as well, and address

ethods have been proven to work - and what remains ortant part of informed decision-making.

-based medicine or health care. And they are important

'comparative effectiveness reviews", and "health

Home > Behind the Headlines > How to read health news

How to read health news

By Dr Alicia White

From "Behind the Headlines", provided by NHS Choices (from England's National Health Service).

If you've just read a health-related headline that has caused you to spit out your morning coffee ("Coffee causes cancer" usually does the trick), it's always best to follow the Blitz slogan: "Keep Calm and Carry On". On reading further, you'll often find the headline has left out something important, such as, "Injecting five rats with really highly concentrated coffee solution caused some changes in cells that might lead to tumours eventually. (Study funded by The Association of Tea Marketing)".

The most important rule to remember is: don't automatically believe the headline. It is there to draw you into buying the paper and reading the story. Would you read an article called, "Coffee pretty unlikely to cause cancer, but you never know"? Probably not.

To avoid spraying your newspaper with coffee in the future, you need to analyse the article to see what it says about the research it is reporting on. Bazian (the company I work for) has appraised hundreds of articles for Behind The Headlines on NHS Choices, and we've developed the following questions to help you figure out which articles you're going to believe and which you're not.

Does the article support its claims with scientific research?

Your first concern should be the research behind the news article. If an article touts a treatment or some aspect of your lifestyle that is supposed to prevent or cause a disease, but doesn't give any information about the scientific research behind it, then treat it with

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In Summary, or . . .
Why Does it Matter?

"Literacy matters in healthcare because life-threatening or potentially harmful mistakes may happen when people cannot read or understand written information." *

Helen Osborne, author of **Health Literacy from A to Z: Practical Ways to Communicate Your Health Message** consultant and founder of Health Literacy Month, which is marked each October.

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Outreach Services

- The University of Minnesota Health Sciences Libraries (HSL) serves as one of the two Research Libraries for the National Network of Libraries of Medicine, Greater Midwest Region (NN/LM, GMR) under a 5-year contract with the National Library of Medicine.
- The HSL provides outreach services Provide access to biomedical information to unaffiliated health professionals, including behavioral and mental health professionals, the public health workforce, minority health workers and rural, underserved hospitals
- Improve health through access to reliable information for consumer groups, including soldiers, veterans and their families, senior citizens, caregivers, K-12 schools, community-based and faith-based organizations

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Questions?

Katherine Chew
chewx002@umn.edu
612-626-3017

Resources Link
http://z.umn.edu/doctorspeak

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