

Health Literacy and the Web: Is your health Web site easy to use?



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Agenda

- + Overview: online health information seeking
- + Plain Language 101
- + Introduction to user-centered design
- + Strategies for writing and designing easy-to-use health Web sites
 - Audience
 - Content
 - Display
 - Organization
 - Navigation
 - Evaluation



We are online...

- + 74% of American adults
- + 95% of teenagers

...looking for health information.

- + 8 in 10 Internet users (roughly 61% of adults)
- + 6 in 10 say their most recent search had an impact on their health or the way they care for someone else



We struggle with complex health information

- + As many as half of U.S. adults (40-50%) have limited literacy skills.
- + As many as 9 out of 10 American adults have limited health literacy skills.
- + The number of older adults using the Internet continues to grow. They are affected by age-related changes in vision, hearing, and cognition.



Usability:

How well users can learn and use a product to achieve their goals and how satisfied they are with that process.

Health Literacy:

The ability to understand and use health information in everyday life.



ALL users benefit from improved usability

Prototype Web site (designed to support users with limited literacy skills) as compared to original site

Time on Task (Mean)	Original Site	Prototype	Improvement
High literacy	14:19	5:05	+182%
Lower literacy	22:16	9:30	+134%
All users	17:50	6:45	+164%
Satisfaction (Mean)	Original Site	Prototype	Improvement
High literacy	3.73	4.58	+23%
Lower literacy	3.54	4.38	+24%
All users	3.67	4.51	+23%

High Literacy Users:
3x as fast with the revised site
93% success rate on revised site (compared to 68% with original)

Source: Summers, K., & Summers, M. (2005). Reading and navigational strategies of Web users with lower literacy skills.



Plain Language 101



The Plain Writing Act of 2010



All new publications and forms must be written in a “clear, concise, well-organized” manner that follows the best practices of plain language.



Using Plain Language

Plain language is a strategy for making written and oral communication easier to understand.

Key elements of plain language include:

- + Use simple language and define technical terms.
- + Use an active voice.
- + Break complex information into short chunks.
- + Put the most important information first.



Context first

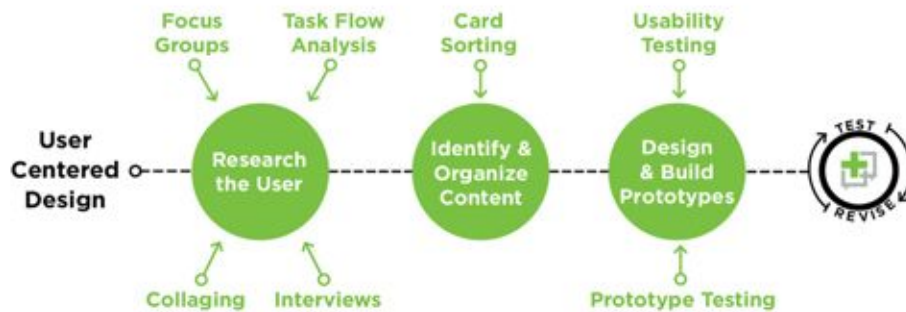
Reducing animal food products and substituting low-fat or nonfat for whole dairy products can lower the amount of cholesterol in your body.

Instead, try:

You can lower the amount of cholesterol in your body by reducing animal food products...



User-centered Design



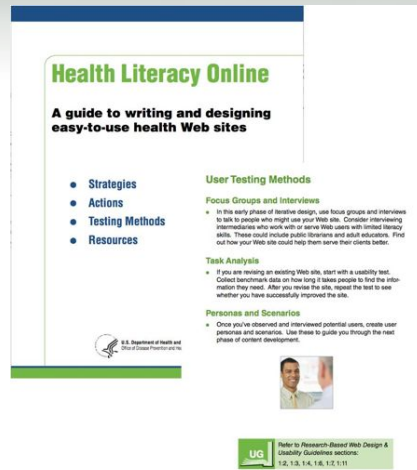
Strategies

For writing and designing easy-to-use
health Web sites



1. Audience
2. Content
3. Display
4. Organization
5. Navigation
6. Evaluation





- 15 studies
- 750+ users
- Recruited adults w/ limited literacy skills

Best practices in:

- Web design
- usability
- accessibility

<http://www.health.gov/healthliteracyonline/>



More often than not, it's poorly designed Web sites – more than limited literacy skills – that contribute to users' challenges online.



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Actions at a Glance

1. Identify your users:
Who are they?
2. Understand their motivations:
Why are they here?
3. Identify users' goals:
What are they trying to do?



User Testing Methods to Try

- + Individual interviews
- + Focus groups
- + Personas and scenarios
- + Collaging



Will

healthyhomes.gov
PERSONAS

Demographics:

- 43 years old
- A veteran, married to a smoker, has 2 kids (14 & 10) — 1 with allergies and 1 with asthma
- Long-time owner of a single-family, 2-level home in a rural area
- Healthy Home = Clean home.



Primary information needs:

- How-to projects to do around the house
- Finding low-cost ways to improve the house for health and safety
- Outdoor home improvement options—especially about the pool and yard

Also interested in:

- Safety information on tornadoes and floods
- Easy ways to prevent or reduce exposure to secondhand smoke for his children
- Special resources and programs to help veterans pay for or maintain a home

Somewhat tech savvy:

- Uses a desktop computer at work and sometimes at home, but doesn't have a lot of time to spend on the Internet

"I don't really trust a lot of the information out there, but if I need to fix something and my friends and neighbors haven't done it before, I would go to a website to find out how to do it the right way."



Keira

healthyhomes.gov
PERSONAS

Demographics:

- 36 years old
- Community Health Worker
- 7 years of experience
- Healthy Home = The 7 Principles of a Healthy Home, Grant topic areas (Lead, Asthma, Home Maintenance, etc.)

Primary information needs:

- One-stop "shopping" for resources, funding, and programs that can help her clients
- Simple home-improvement action steps that she can teach people to do
- An easy-to-use site that she can tell her clients to visit and feel confident that the information they get will be accurate

Also interested in:

- Networking with other healthy homes professionals (sharing tools and best practices)
- Learning about different cultural beliefs about housing and practices that can increase hazards in the home
- How to talk about "going green" in a way that keeps her clients interested—most of them think green means more money and less effective

Very tech savvy:

- Regularly uses the Internet and smart phone for work

"The national Web sites are okay and give me information, but they don't help me give information to my clients. I really need a site that's consumer-oriented, how can I help people change their behaviors?"



Craig - County Health Professional

- + 42 years old
- + 18 years of experience
- + Advanced Healthy People user



Goals:

- + Wants to align local with national objectives
- + Looking for implementation guidelines
- + Interested in building partnerships
- + Wants to use as a tool to set spending priorities
- + Willing to share best practices if there was a tool

Communicate Health



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Web users want to...

...quickly and easily:

- + Understand the health problem or behavior
- + Find out how to take action

27 seconds



November 14, 2011

Home | Blog | Newsroom | Videos | FAQs | Glossary | Text Size A A A | En Español

HealthCare.gov
Take health care into your own hands

Find Insurance Options | Get Help Using Insurance | The Health Care Law & You | Comparing Care Providers | Prevention & Wellness

Explore your coverage & pricing options

Find out which private insurance plans, public programs and community services are available to you.

Pick Your State

Your Health Care, Explained

Need help? Get **consumer assistance** in your state

[Learn More](#)

Good News for People with Medicare

Thanks to the Affordable Care Act, in less than one year over 22.6 million people with Medicare have received free preventive care benefits such as screenings and vaccinations. Another 2.2 million have saved over \$1.2 billion on their prescription drugs – saving an average of \$550 per person.

[Read the news release.](#)
[Learn more about Medicare preventive benefits.](#)

Actions at a Glance

1. Put the most important info first.
2. Describe the health behavior. Just the basics.
3. Provide specific action steps.
4. Write in plain language.
5. Check content for accuracy.

Engage users with Interactive Content

+ Invite users to customize content and provide feedback.

- Email information to a friend.
- Print out a recipe.
- Take a poll or rate the information on the site.
- Use a calorie or BMI calculator.
- Enter personal data like age or weight to get tailored tips.

+ Interactive tools increase engagement.



The screenshot shows the WebMD website interface. At the top, there is a navigation bar with categories like Home & News, Health A-Z, Drugs & Supplements, Healthy Living, Eating & Diet, Parenting & Pregnancy, and Teen Health. Below the navigation bar is the WebMD logo and a search bar. A date indicator shows 'March 14, 2011'. On the left side, there is a 'Health Conditions & Communities' sidebar with a list of conditions including ADHD, Allergies, Anxiety Disorders, Arthritis, Asthma, Back Pain, Bipolar Disorder, Breast Cancer, Cancer, Cholesterol, Cold & Flu, COPD, Depression, Diabetes, Fibromyalgia, Heart Disease, Heartburn/GERD, and Hypertension. The main content area features a large article titled 'Get to Know Fibro' with a 'View Slideshow' button. To the right of this article is a 'Sleep Myths & Facts' poll with the question 'If you cut back on the sleep you need by just one hour, your body will adjust.' and radio buttons for 'True' and 'False', along with a 'Get Answer' button. Below the poll is a Gerber advertisement. At the bottom of the main content area, there are three small promotional boxes: 'Don't Look Old', 'Adult ADHD', and 'Fibromyalgia'.



The screenshot shows the myhealthfinder website interface. On the left is a search form with the following fields: "Who are you trying to help today?" (radio buttons for Me, Someone Else, My Child), "Age" (input field with "yrs" label), "Sex" (radio buttons for Female, Male), and "Pregnant?" (checkbox). A red circle highlights the "Get Started" button at the bottom of the form. A red arrow points from this button to the "myhealthfinder Results" section on the right. The results section displays the text: "You said you want to help a child aged 4. Talk with your child's doctor about these important ways to stay healthy:" followed by a list of four recommendations from the U.S. Preventive Services Task Force.

www.healthfinder.gov

myhealthfinder Results

The following recommendations come from the U.S. Preventive Services Task Force.

You said you want to help a **child aged 4**. Talk with your child's doctor about these important ways to stay healthy:

- **Get a Flu Shot**
After age 6 months, your child needs a flu shot every year.
- **Get Your Child's Shots on Schedule**
Check with your doctor to find out which shots your child needs.
- **Get Your Child's Vision Checked**
Have your child's vision checked by age 5.
- **Take Care of Your Child's Teeth**
Talk to a doctor or dentist about fluoride starting at age 6 months.

Communicate Health

User Testing Methods to Try

- + Use card sorting to find out how users rank content by most useful/least useful or most likely to do/least likely to do.
- + Build a paper prototype to find out what content users are most likely to "click" on.
- + Test user comprehension using content in a paper prototype.

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Typical F pattern



Skip instead of Scan

Users with limited literacy skills...

- + Skip over entire chunks of dense text
 - > 3 lines of text triggered skipping
 - Numbers, %, big words triggered skipping
- + Start clicking on links instead of reading the content
- + Land in the middle of the page

Whenever possible, use bulleted lists and short sentences. Limit text to 3 lines.



Focus on the Center of the Screen

Users with limited literacy skills...

- + Have a narrow field of vision
- + Rarely scroll
- + Mistake content in the right margin for ads

Keep key text above the fold.

Use left and center navigation elements.



The screenshot shows the Kaiser Permanente website interface. At the top, there is a navigation bar with links for 'My health manager', 'Health & wellness', 'Health plans & services', and 'Locate our services'. Below this is a 'Members sign on' section with fields for 'User ID' and 'Password', and a 'Sign on' button. A 'thrive' logo is visible in the bottom right of the sign-on area. Below the sign-on section, there are several content blocks: 'Important notices', 'Health and wellness' (with sub-sections like 'Healthy moves', 'Patient safety', and 'Featured health topics'), 'Health plans and services' (with sub-sections like 'Plans for peace of mind' and 'Now that we've found each other'), and 'My health manager' (with a sub-section 'Ready for a new you?'). A 'News Center' link is also present. Red arrows point to the 'My health manager' and 'News Center' sections at the bottom of the page.

Easily Overwhelmed

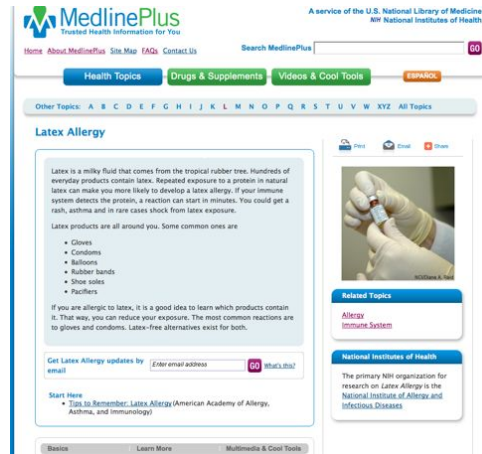
- + Even content written in plain language can be overwhelming if too much text is together in one paragraph or there is not enough white space on the page.

Bulleted lists minimize the amount of text on the screen.

White space makes text easy to read.

Layout:

- Limit paragraph size. Use bullets and lists.
- Use familiar font in at least 12 points.
- Use white space and avoid clutter.

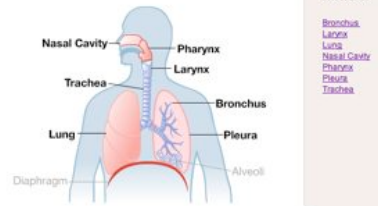


Use Images

- Use simple, realistic line drawings to illustrate medical concepts
- Use photos of “real” people rather than models or illustrations
- Include a caption

Lungs and Breathing

[See All Topics](#)



www.nlm.nih.gov/medlineplus/lungsandbreathing.html

Links

4 rules to follow when using links:

1. Make links obvious (underline them)
2. Make links long enough to “grab” easily
3. Use descriptive link labels
4. Limit the number of links on the page



Good

Online Resources for Purchasing and Preparing Healthy Meals

In the fall of 2009 Governor Deval Patrick signed an Executive Order requiring state agencies to follow the [Massachusetts State Food Standards](#), ensuring that healthy meals and snacks will be provided to their clients and patients. The standards encourage healthy food options such as: whole grains, fruits and vegetables (preferably locally grown), lean cuts of meat and poultry, alternative protein sources and non-fat dairy.

Although developed for state agencies, the Standards and the accompanying tools will help any company provide healthier foods for their employees or the individuals they serve. [Audio and Video Clips for Preparing Healthy Meals](#) is a collection of audio and video podcasts, some in Spanish, providing quick tips for making changes, learning new ways to approach the basics and easy-to-do substitutions for your food service. [Healthy Eating and Nutrition Resources Online](#) is a comprehensive library of links to a variety of resources including federal and state agencies, nonprofit organizations, along with academic and culinary institutions.

Not So Good

To lose weight, you must use up more calories than you take in. Since one pound equals 3,500 calories, you need to reduce your caloric intake by 500–1000 calories per day to lose about 1 to 2 pounds per week.¹

Once you've achieved a healthy weight, by relying on healthful eating and physical activity most days of the week (about 60–90 minutes, moderate intensity), you are more likely to be successful at keeping the weight off over the long term.

Losing weight is not easy, and it takes commitment. But if you're ready to [get started](#), we've got a step-by-step guide to help get you on the road to weight loss and better health.



Attractive things work better.

Donald Norman, *Emotional Design*, 2004



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The Basics

- + Information architecture is the way information is categorized on a Web site.
- + It typically involves a category structure and labels.
- + Good content organization enables users to find information quickly.

Tip: Use labels that reflect the language of your users.



The screenshot displays the Yahoo! Health website interface. A red arrow points to the 'HEALTHY LIVING' navigation tab in the top menu. Another red arrow points to the 'Healthy Living' sidebar menu, which is circled in red. The sidebar menu includes the following topics: Healthy Living Home, Topics, Aging & Longevity, Beauty & Skin Care, Exercise & Fitness, Health Care, Men's Health, Mental Health, Nutrition, Oral Care, Parenting, Pregnancy, Relationships & Sex, Sleep, Weight Loss, and Women's Health. The main content area features a 'Green Up Your Spring Cleaning' article, a 'Health Expert' section with three experts (Dr. Mao's Secrets of Longevity, David Zirczenko, and Day in Health), and a 'Related Videos' section. A 'SPONSORED LINKS' section is also visible at the bottom right.

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Create a simple and engaging **homepage**





Weight Control: MedlinePlus

Home [about MedlinePlus](#) [Site Map](#) [FAQs](#) [Contact Us](#) Search MedlinePlus GO

[Health Topics](#) [Drugs & Supplements](#) [Videos & Cool Tools](#) [ESPAÑOL](#)

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


Weight Control

If you are overweight, you are not alone. Sixty-six percent of adults in the U.S. are overweight or obese. Achieving a healthy weight can help you control your cholesterol, blood pressure and blood sugar. It might also help you prevent weight-related diseases, such as heart disease, diabetes, arthritis and some cancers.

Eating too much or not being physically active enough will make you overweight. To maintain your weight, the calories you eat must equal the energy you burn. To lose weight, you must use more calories than you eat. A weight-control strategy might include

- Choosing low-fat, low-calorie foods
- Eating smaller portions

Print Email Share

Communicate Health 

Easy access to **home** and **menu** pages
Make sure the “**Back**” button works

Difficulty Searching

Users with limited literacy skills...

- + Avoid searching
- + Prefer to browse topics using an alphabetical or topic list (even if the list is long)


Include both a search function and other ways to browse content (topic or A-Z list).

Be sure to compensate for misspellings in the search box and limit the number of results.

Simple Search and Browse

Find a health topic by:

First letter
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Categories	Featured Topic
<ul style="list-style-type: none"> • Bones and Joints • Cancer • Diseases and Conditions • Healthy Aging • Heart and Lungs 	<ul style="list-style-type: none"> • Memory and Mental Health • Treatments and Therapies • Vision and Hearing • All Topics A-Z  <p>Medicare Basics for Caregivers</p>













<http://nihseniorhealth.gov/>



Quick Guide to Healthy Living

Welcome to the Quick Guide to Healthy Living. Find information and tools to help you and those you care about stay healthy.

Choose a topic area below to get started.

 <p>Nutrition and Fitness Get nutrition and fitness tips for the whole family.</p>	 <p>HIV and STDs Protect yourself from HIV and other STDs.</p>
 <p>Important Screening Tests Find out which screening tests you need.</p>	 <p>Cancer Screening and Prevention Worried about cancer? Get answers.</p>
 <p>Pregnancy Get tips for a healthy pregnancy.</p>	 <p>Everyday Health and Wellness Are you doing enough to stay healthy?</p>
 <p>For Parents Help your kids grow up healthy.</p>	 <p>Diabetes Do you have diabetes or pre-diabetes?</p>
 <p>Heart Health Do you have heart disease? Are you at risk?</p>	 <p>For Women Health tips for women.</p>
 <p>Public Health and Safety Help keep your family and community safe.</p>	 <p>For Older Adults Health tips for older adults.</p>

www.healthfinder.gov/prevention



Limited Working Memory

Users with limited literacy skills...

- + Reach information overload quickly – it takes concentration and effort to read text on the screen
- + Are less likely to remember content from previous pages
- + Rarely look ahead or back on a page

Use clear stand-alone headings and sections that function independently.

Include plenty of visual cues to orient users on the site.



myhealthfinder

Find health advice for you or someone you care about.

Who are you trying to help today?

Me

Someone Else

My Child

Age: yrs Sex: Female Male

Pregnant?

[Get Started](#)

(previous page)


myhealthfinder Results e-Mail Print

The following recommendations come from the U.S. Preventive Services Task Force.

You said you are a **woman aged 49**. Here are important ways you can stay healthy:

Doctors recommend that all women aged 49:

- **Get Adult Booster Shots**
Get important adult shots (vaccinations).
- **Get Enough Folic Acid**
Learn why women your age need folic acid.
- **Get Tested for Breast Cancer**
Get a mammogram every 1 to 2 years starting at age 40.
- **Get Tested for Cervical Cancer**
Get a Pap test every 1-3 years to test for cervical cancer.
- **Get Your Blood Pressure Checked**
Get your blood pressure checked at least every 2 years.



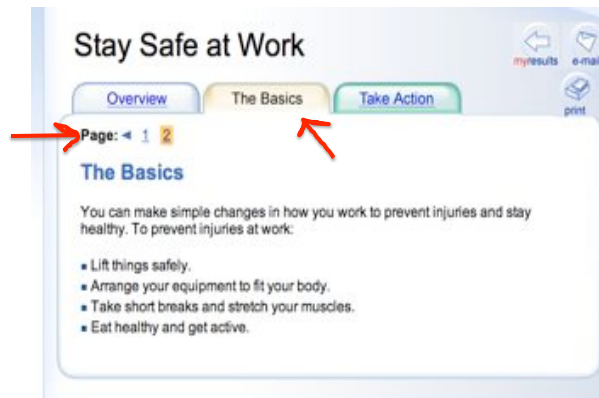
Simple Navigation

Users with limited literacy skills...

- + Are unfamiliar with – and often ignore – common navigational elements (like drop-down menus, breadcrumbs).
- + Users shown how to return to a homepage had difficulty repeating the task from a different page on the site.

Use step-by-step navigation, such as “back” and “next” buttons and numbered pages.

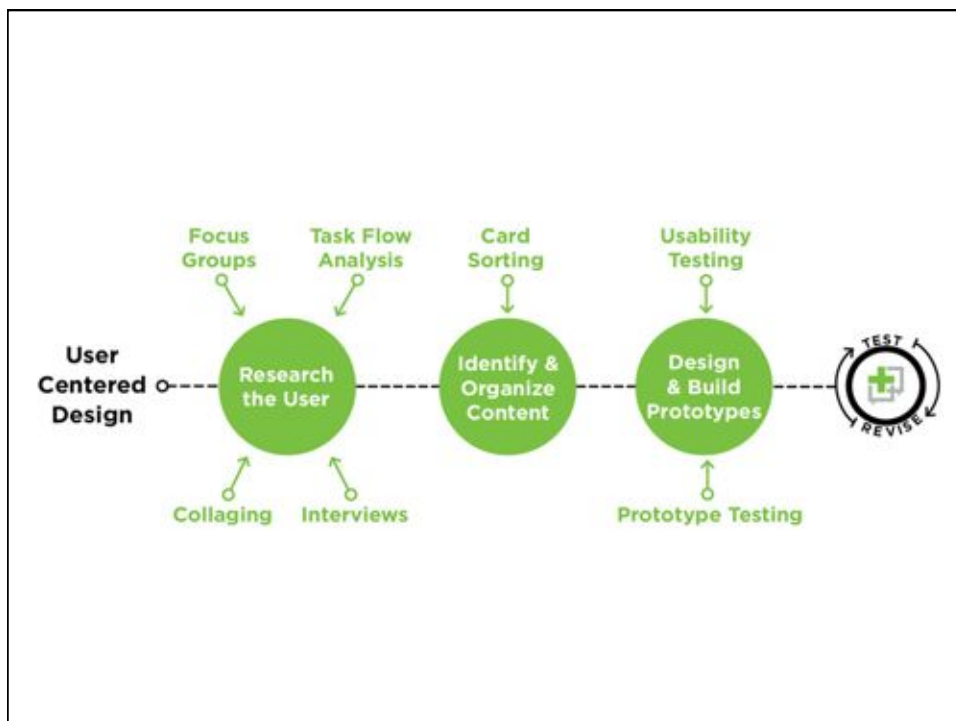
Let users know where they are in the content using tabs and strong left-hand navigation.



www.healthfinder.gov/prevention



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Categories created through the card sorting exercise. Formative research indicated the need for special sections for families and renters

Based on the feedback that consumers wanted information that is personalized and actionable

Focus group and card sort participants were interested in getting to How-To content (tips and video) quickly

Focus Group participants asked for local contacts

The screenshot shows the healthyhomes.gov website interface. The main navigation bar includes 'Health Topics', 'A to Z', 'Ask the Experts', and 'How-To'. A 'Health Topics' dropdown menu is open, listing categories like Home Maintenance, Baby & Child Safety, and Home Safety. The main content area features a 'Welcome to HealthyHomes' banner, a 'Stay Safe and Healthy at Home' section with a checklist, a 'Tip of the Day' section, and a 'Find Local Resources' section with a map of the United States. The footer includes social media links and logos for CDC, USDA, and ENERGY.

It's co-creation

- + Work with your target audience to develop or improve your site.
- + If you are evaluating an existing site, think of it as quality assurance.
- + Field testing is an evaluation of your Web site – NOT your users.

Why should I test my site?

- + All Web sites have problems. (Some more than others.)
- + They may not be obvious to you. But your users will almost always find them.
- + Watching people use your site makes you a better Web manager.



Who do I test with?

- + Almost anyone.
- + Try to find users who reflect your audience (a.k.a. "real users")
 - + Demographics
 - + Knowledge and context
 - + Culture and language



How many people do I need to test?

- + It depends.
- + 1 is better than none.
- + Between 3 and 8 is great.



Iterative Design

- + Test. Revise. Repeat.
- + Don't wait until you have already launched your site/redesign to test it with your target audience. You can test a prototype!
- + Periodically test existing pages/sections to improve them.



Paper Prototype Testing



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Forum One

If you are building a new feature, start with a paper prototype and test it with users.



Usability Testing



So... where do I start?

- + Watch people use your Web site (start with family, friends, and volunteers).
- + Clean up your content!
- + Re-think your homepage.
- + Look at your search options (and how the results are displayed).
- + Be strategic: get it in the budget.



Thank You!!

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www.communicatehealth.com

