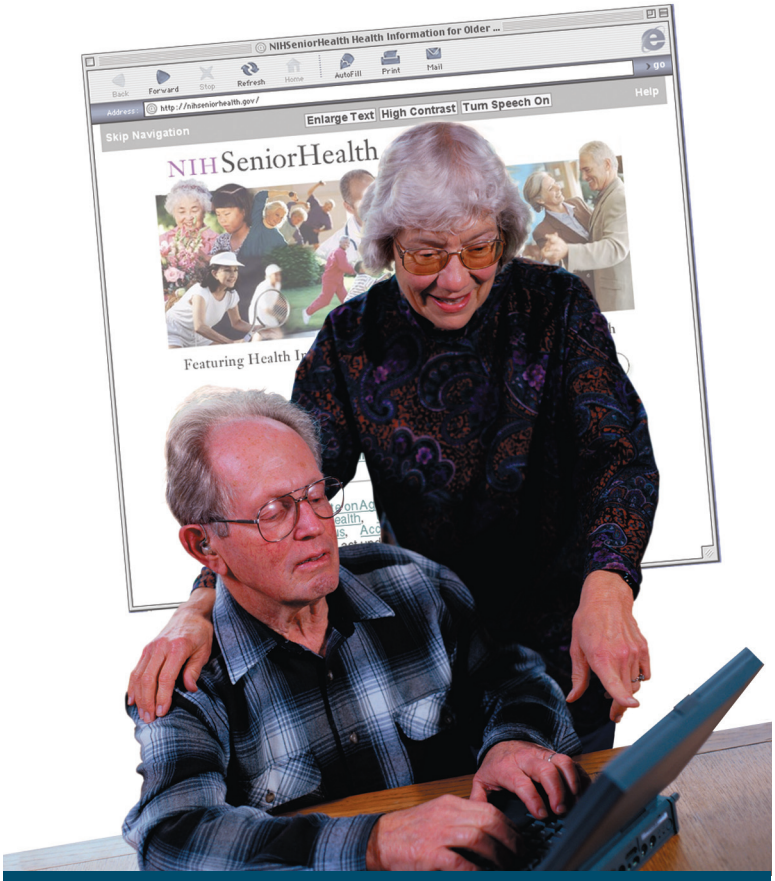
Making Your Web Site Senior Friendly



A Checklist

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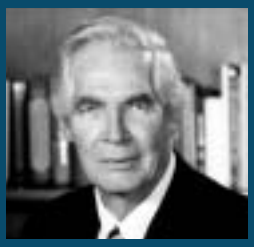
National Institute on Aging

NATIONAL LIBRARY OF MEDICINE

By implementing this Checklist, web designers can help open the Internet to great numbers of people over 60 who want to know more about their health and aging.

Richard J. Hodes, M.D.
Director
National Institute on Aging



"Good information is the best medicine for older adults. Web site designers can help seniors find answers to their medical questions from the comfort of their own home thanks to this Checklist and the Internet."

Donald A.B. Lindberg, M.D.
Director
National Library of Medicine

The goal of this Checklist is to provide research-based guidelines for web site design that, when implemented, will make web sites more accessible to all adults.

People age 60 and older now constitute the fastest growing group of computer users and information seekers on the World Wide Web.[1] They go on line principally to find health information, to plan personal travel and for e-mail.[2] While advanced age is not a hindrance to computer or Internet use, there are normal, gradual age-associated declines in vision and certain cognitive abilities that may limit the use of electronic technology. In the last two decades, the National Institute on Aging has funded a number of basic and applied cognitive aging studies, focus groups and usability tests, and survey research on how age-associated changes affect computer use.[3]

[1] U.S. Department of Commerce, 1999

[2] Morrell, Mayhorn & Bennett, 2000

[3] Research conducted by Elizabeth A. Bosman, Neil Charness, Sara J. Czaja, Katherine V. Echt, Arthur D. Fisk, Catherine L. Kelley, Sherry E. Mead, Roger W. Morrell, Denise C. Park, Wendy A. Rogers, and Joseph Sharit

Web Site Checklist

Designing Readable Text for Older Adults

Changes in vision that occur with age can make it more difficult to read a computer screen. These include reductions in the amount of light that reaches the retina, loss of contrast sensitivity, and loss of the ability to detect fine details.[1] Following the guidelines will improve readability of online text.[2]

Typeface

Use a sans serif typeface, such as Helvetica, that is not condensed. Avoid the use of serif, novelty, and display typefaces.

Sans Serif: Helvetica
Arial
Univers
News Gothic

Serif: ~~Times New Roman~~

Novelty: ~~Old English Text~~

Display: ~~Bodoni Poster~~

Type Size

Use 12 point or 14 point type size for body text.

12 point: The quick brown fox jumped over the lazy dog.

14 point: The quick brown fox jumped over the lazy dog.

[1] Echt, 2002

[2] Hartley, 1999

Type Weight

Use medium or bold face type.

Helvetica Medium
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Helvetica Bold
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Capital and Lowercase Letters

Present body text in upper and lowercase letters. Use all capital letters and italics in headlines only. Reserve underlining for links.

Physical Spacing

Double space all body text.

Justification

There are three ways to justify type: left, full, or center justified. Left justified text is optimal for older adults.

This is an example of left justification. Left justification allows an even left margin and an uneven right margin. This is an example of left justification. Left justification allows an even left margin and an uneven right margin. This is an example of left justification.

This is an example of full justification. Full justification refers to text lines that are spaced so that the margins on either side are equal. This is an example of full justification. Full justification refers to text lines that are spaced so that the margins on either side are equal. This is an example of full justification.

This is an example of center justification.
Center justification balances text around a central axis. This is an example of center justification. Center justification balances text around a central axis. This is an example of center justification.

Color

Avoid yellow and blue and green in close proximity. These colors and juxtapositions are difficult for some older adults to discriminate. Ensure that text and graphics are understandable when viewed on a black and white monitor.

Backgrounds

Use dark type or graphics against a light background, or white lettering on a black or dark-colored background. Avoid patterned backgrounds.

Research shows that the ability to perform some mental operations decreases with age. These operations include the ability to simultaneously remember and process new information, to perform complex cognitive tasks, and to comprehend text.[1] Although these changes are not usually dramatic, their presence can interfere with the performance of some daily tasks such as using a computer.[2]

Older adults also process information more slowly than younger adults. There are effective ways to present text to mediate these age-related changes.[2]

Writing the Text

Style

Present information in a clear and familiar way to reduce the number of inferences that must be made. Use positive statements.

Phrasing

Use the active voice.

Simplicity

Write the text in simple language. Provide an online glossary of technical terms.

Organization

Organize the content in a standard format. Break lengthy documents into short sections.

[1] Craik & Salthouse, 2000
[2] Czaja & Sharit, 1998; Morrell, 1997

Illustrations and Photographs

Use text-relevant images only.

Animation, Video and Audio

Use short segments to reduce download time on older computers.

Text Alternatives

Provide text alternatives such as open-captioning or access to a static version of the text for all animation, video, and audio.

Also consider these navigational features when designing a web site for older adults.[1]

Navigation

The organization of the web site should be simple and straightforward. Use explicit step-by-step navigation procedures whenever possible to ensure that people understand what follows next. Carefully label links.

The Mouse

Use single mouse clicks to access information.

Consistent Layout

Use a standard page design and the same symbols and icons throughout. Use the same set of navigation buttons in the same place on each page to move from one web page or section of the web site to another. Label each page in the same location with the name of the web site.

Style and Size of Icons and Buttons

Incorporate text with the icon if possible, and use large buttons that do not require precise mouse movements for activation.

Menus

Use pull down menus sparingly.

[1] Charness, Kelley, Bosman & Mottram, 2001; Rogers & Fisk, 2000; Mead, Batsakes, Fisk, & Mykityshyn, 1999

Increasing the Ease of Navigation

Scrolling

Avoid automatically scrolling text. If manual scrolling is required, incorporate specific scrolling icons on each page.

Backward / Forward Navigation

Incorporate buttons such as Previous Page and Next Page to allow the reader to review or move forward.

Site Maps

Provide a site map to show how the site is organized.

Hyperlinks

Use icons with text as hyperlinks.

Help and Information

Offer a telephone number for those who would prefer to talk to a person or provide an e-mail address for questions or comments.

Solicit unbiased comments from older adults through focus groups, usability testing or other means, to evaluate the accessibility and friendliness of the web site.

NIH Senior Health.gov

For an example of a senior friendly web site that was developed in accordance with these guidelines, log on to **www.nihseniorhealth.gov**. This web site was jointly developed by the National Institute on Aging and the National Library of Medicine.

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