



## A Few Practical Tips for: Print Legibility and Low Vision

How can text be made more legible for people who have vision loss that cannot be corrected with conventional spectacles? A complete answer is still unavailable — though researchers at The Lighthouse and at other vision research centers are seeking to understand how specific types of visual impairment interfere with complex visual tasks such as reading.

### What Happens

“Generally, the visual defects that make reading difficult do so in three ways,” says Dr. Aries Ardit, The Lighthouse’s director of vision research. “They dim the image of the text that appears on the retina; blur the image; and damage the central portion of the retina, which is best suited to reading.

“Dimming and blurring reduce the effective contrast of the text, while central retinal damage impairs ability to see small print and to make the eye movements that are crucial to reading. Several rough principles that emerge from this analysis can be followed to present text optimally for older, partially-sighted readers.”

### Practical Tips

1. Text should be printed with the highest possible contrast. There is good evidence that, for many older and partially-sighted readers, light (white or light yellow) letters on a dark (black) background are more readable than dark letters on a light background. However, the traditional dark on light may be aesthetically preferable.

2. Very high contrasts are difficult to achieve with color combinations other than black and white. Thus, printed material generally is most readable in black and white. Different colors may be important for aesthetic or other reasons; but it is better to use such combinations only for larger or highlighted text, such as headlines and titles, and, where possible, to maintain as high a contrast of light and dark (as opposed to color) as possible.

3. Type should be large, preferably at least 16 to 18 point, though the relationship between readability

and point size varies somewhat with typefaces.

4. Leading, or spacing between lines of text, should be greater than that used in small-print text — at least 25 to 30 percent of the point size. This is because many partially-sighted people have particular difficulty finding the beginning of the next line while reading.

5. While there is little reliable information on the comparative legibility of typefaces, there is some evidence that an ordinary typeface, using upper and lower case, is more readable than are some less frequently used styles, such as *italic*, *slanted*, SMALL CAPS, or ALL CAPS.

*6. It is prudent to avoid complicated, decorative fonts, and to reserve such styles, as usually is done, for emphasis within roman type.* Standard roman or sans serif fonts, with familiar, easily recognized characters, are best. **Note that bold versions of any typeface often are more legible, since the letters are thicker.**

7. Text with close letter-spacing often is particularly difficult for partially-sighted readers, especially those who have central visual-field defects. Where possible, spacing should be wide. In addition, mono-spaced fonts seem to be more legible for such readers than are proportional-spaced fonts.

8. An extra-wide binding margin is especially helpful in books and other bound material, because it makes it easier to hold the volume flat. Many visual aids, such as stand- and video-magnifiers, are easiest to use on a flat surface.

9. Paper with a glossy finish can lessen legibility, because many older and partially-sighted people have problems with glare.

10. Visual impairment often makes it difficult to find a book or other document that is buried among similar publications, especially for sets whose members differ only in title or volume number. Use of distinctive colors, sizes, and formats on the covers of such series can be especially helpful to older and partially-sighted individuals. ■