

# JAN

Job Accommodation Network

Practical Solutions • Workplace Success

## Accommodation and Compliance Series

# Employees with Vision Impairments

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A service of the U.S. Department of Labor's Office of Disability Employment Policy

## Preface

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Authored by Beth Loy, Ph.D. Updated 03/23/10.

# JAN'S ACCOMMODATION AND COMPLIANCE SERIES

## Introduction

JAN's Accommodation and Compliance Series is designed to help employers determine effective accommodations and comply with Title I of the Americans with Disabilities Act (ADA). Each publication in the series addresses a specific medical condition and provides information about the condition, ADA information, accommodation ideas, and resources for additional information.

The Accommodation and Compliance Series is a starting point in the accommodation process and may not address every situation. Accommodations should be made on a case by case basis, considering each employee's individual limitations and accommodation needs. Employers are encouraged to contact JAN to discuss specific situations in more detail.

For information on assistive technology and other accommodation ideas, visit JAN's Searchable Online Accommodation Resource (SOAR) at <http://askjan.org/soar>.

## Information about Vision Impairments

### How many people have vision impairments?

There are an estimated 10 million blind and visually impaired people in the United States, 1.3 million of which are considered legally blind (American Foundation for the Blind, 2008a). Of this number, approximately 109,000 people use long canes for assistance, while about 7,000 individuals use service dogs (American Foundation for the Blind, 2008a).

### What types of vision impairments are there?

Vision impairments result from conditions that range from the presence of some usable vision, low vision, to the absence of any vision, total blindness. Low vision is a term that describes a person with a vision impairment that cannot be improved by correction but has some usable vision remaining. Legal blindness is defined as 20/200 or less in the better eye with the best possible correction. Errors of refraction, diseases of the eye, and other vision-related conditions are usually the cause of vision loss. Each of these categories includes more specific disorders, which are described below (American Foundation for the Blind, 2008b).

- Common Errors of Refraction

Myopia (Nearsightedness): Close objects look clear while distant objects appear blurred.

Hyperopia (Farsightedness): The ability to see objects clearly at a distance while close objects appear blurry.

Astigmatism: Due to the irregular curvature of the cornea, vision is blurry for both near and far objects.

Presbyopia: The eye lens becomes less elastic (associated with aging) and produces blurred vision when focusing on near objects.

- Common Diseases of the Eye

Cataracts: Clouding of the eye's lens that causes loss of vision.

Glaucoma: Pressure inside the eye is elevated and can cause damage to the optic nerve, which results in damage to peripheral vision.

Macular Degeneration: There is a disturbance of blood vessels in the eye resulting in progressive loss of central vision.

Retinitis Pigmentosa: There is a degeneration of pigment in the eye that is needed to absorb light and create visual images, leading to "tunnel vision" and night blindness.

Retinopathy (due to Diabetes): Retinopathy typically affects the blood circulation of the retina, which causes blotchy vision.

- Other Vision Related Conditions

Night Blindness: Night blindness results from pigmentary degeneration of the retina, which leads to difficulty seeing in low light.

Color Vision Deficiency: A color vision deficiency occurs when cone cells of the retina, which provide daylight and color vision, are affected and there is difficulty distinguishing among colors. Typically this only involves certain hues, for example a red-green deficiency; total color blindness (achromatic vision) is rare.

Lack of Depth Perception: A lack of depth perception is often caused by the loss of sight in one eye, resulting in difficulty with foreground/background discrimination.

Floaters: Floaters are small specks or clouds moving in the field of vision.

## **Vision Impairments and the Americans with Disabilities Act**

### **Do people with vision impairments have disabilities under the ADA?**

The ADA does not contain a list of medical conditions that constitute disabilities. Instead, the ADA has a general definition of disability that each person must meet (EEOC, 1992). Therefore, some people with vision impairments will have a disability under the ADA and some will not.

A person has a disability if he/she has a physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or is regarded as having such an impairment (EEOC, 1992). For more information about how to determine whether a person has a disability under the ADA, visit <http://askjan.org/corner/vol02iss04.htm>.

### **Accommodating Employees with Vision Impairments**

(Note: People with vision impairments may develop some of the limitations discussed below, but seldom develop all of them. Also, the degree of limitation will vary among individuals. Be aware that not all people with vision impairments will need accommodations to perform their jobs and many others may only need a few accommodations. The following is only a sample of the possibilities available. Numerous other accommodation solutions may exist.)

#### **Questions to Consider:**

1. What limitations is the employee with the vision impairment experiencing?
2. How do these limitations affect the employee and the employee's job performance?
3. What specific job tasks are problematic as a result of these limitations?
4. What accommodations are available to reduce or eliminate these problems? Are all possible resources being used to determine possible accommodations?
5. Has the employee who has the vision impairment been consulted regarding possible accommodations?
6. Once accommodations are in place, would it be useful to meet with the employee who has a vision impairment to evaluate the effectiveness of the accommodations and to determine whether additional accommodations are needed?
7. Do supervisory personnel and employees need training regarding employees who have vision impairments?

Depending on the individual's limitations and job functions, additional questions may need to be asked to determine what accommodations can be effective. For example:

No vision considerations:

- Does the individual read Braille?
- Does the individual use a cane, navigational aid, or animal to assist with mobility?

Low vision considerations:

- Is the individual's condition progressive or stable?
- Does the individual benefit from magnification?
- Does the individual use corrective lenses or assistive devices?
- Does the individual use a cane, navigational aid, or animal to assist with mobility?

Color vision deficiency considerations:

- What colors does the individual have difficulty distinguishing?
- Would the individual benefit from special red contact lens worn on one eye or prescription glasses?
- Do the individual's job functions lend themselves to the use of talking products that scan a color and announce a description of the color?

### **Accommodation Ideas:**

Reading Printed Materials:

Low Vision:

- Closed circuit television (CCTV) system, which is sometimes referred to as an electronic or video magnifier
- Hand, stand, or portable magnifier
- Information in large print  
Note: The American Foundation for the Blind (2008c) recommends that the font size be at least 16 point but preferably 18 point.
- Photo copier enlarged paper material
- Color paper, acetate sheet, or overlay to increase color contrast between printed text and document background
- Optical devices such as monoculars or binocular systems, loupes, or prism spectacles
- Frequent breaks to rest eyes when fatigue is a factor

No Vision (individuals with low vision may find the following helpful also):

- Auditory versions of printed document
- Braille formatted document
- Reformatted document that displays as accessible Web page
- The Kurzweil-National Federation of the Blind Reader, which takes a picture of a text document and reads the contents of the printed document in clear synthetic speech
- Optical character recognition (OCR), which scans printed text and provides a synthetic speech output or text-based computer file

- Qualified reader, which may be used to “be the eyes” for a person with a vision impairment  
Note: There currently is not a standard for providing or hiring readers, and no certification requirements exist.
- Tactile graphic document

#### Accessing Computer Information:

##### Low Vision:

- Increased operating system font size with large-size computer monitors  
Note: Computer users can modify their computer display so that text is shown in large print
- Screen magnification software
- Locator dots and/or large print keyboard labels for keyboard navigation
- External computer screen magnifier
- Flicker-free monitor
- Anti-glare guard and computer glasses to reduce glare
- Frequent breaks to rest eyes when fatigue is a factor

##### No Vision (individuals with low vision may find the following helpful also):

- Screen reading software
- Computer Braille display
- Qualified reader

#### Writing Notes and Completing Forms:

##### Low Vision:

- Closed circuit television (CCTV) system, which is sometimes referred to as an electronic or video magnifier
- Pens that include a bold felt tip or lighted pen
- Paper with tactile lines, bold print, or low glare
- Form/line guide

##### No Vision (individuals with low vision may find the following helpful also):

- Personal data assistants, notetakers, and laptops with speech output or Braille display
- Cassette or digital recorder
- Braille stylus/Braille slate
- Braille printer or embosser
- Scribe

#### Accessing a Telephone:

##### Low Vision:

- Large print/color labels or tactile markings on telephone to identify keys and lines
- Hand/stand magnifier or optical magnifier

No Vision (individuals with low vision may find the following helpful also):

- Telephone light sensor, which is held over a phone line to indicate if a line is lit steady or blinking  
Note: Line status is indicated by audible or vibrating signal
- Talking telephone console indicators and message displays

Working with Money:

Low Vision:

- Hand/stand magnifier or optical magnifier
- Task lighting or headlamp

No Vision (individuals with low vision may find the following helpful also):

- Talking money identifier, cash register, coin counter/sorter, calculator
- Training on how to fold money for identification purposes

Reading from Instrument or Control Board:

Low Vision:

- Hand/stand magnifier or optical magnifier
- Large print/color labels or tactile markings on telephone to identify keys and lines
- Task lighting
- Glare reduction

No Vision (individuals with low vision may find the following helpful also):

- Braille/tactile labels or indicators
- Qualified reader
- Instrument modification by manufacturer, rehabilitation engineer, or employer

Repairing, Constructing, Assembling Pieces/Parts:

Low Vision:

- Hand/stand magnifier or optical magnifier
- Task lighting
- CCTV

No Vision (individuals with low vision may find the following helpful also):

- Braille/tactile labels or indicators
- Talking multimeter, micrometer, caliper, stud finder, level, tape measure
- Tactile ratchet-action wrench

#### Mobility:

- Service animal and/or mobility aid (e.g., cane, electronic aid)
- Mobility and orientation training
- Detectable warning surfaces
- Colored and/or textured edges on stairs
- Improved area lighting
- Traveling/evacuation partner
- Tactile map of evacuation and common routes
- Talking landmark or global positioning system

#### Driving:

- Shift change to daylight hours
- Driver (e.g., hired driver, volunteer, coworker)
- Public transportation or carpool
- Modified or flexible work schedule to meet public transportation needs
- Reassignment
- Telework

#### Working with Light Sensitivity:

- Lower wattage of overhead lights
- Task or alternative lighting
- Full spectrum lighting and/or filters
- Flicker free lighting
- Tinted optical wear
- Workstation relocation
- Window treatments

#### Distinguishing Colors:

- Labels
- X-Chrome lens
- Prescribed glasses for color discrimination
- Colored acetate sheets
- Assistant to identify colors such as a volunteer or co-worker

#### Other Accommodation Considerations:

- Training materials or company correspondence in alternate format (e.g., large print, Braille, CD-ROM, audiotape)
- Time off for training on adaptive technology, mobility training, and/or service animal training
- Additional training beyond what is typically given to others

- Accessible versions of employee related Web sites or Intranet material  
Note: See Tips for Designing Accessible Web Pages at <http://askjan.org/media/webpages.html>

### **Situations and Solutions:**

A custodian with low vision in a public school setting was having difficulty viewing the carpeted area he was vacuuming. A lighting system was mounted on the custodian's industrial vacuum cleaner and the custodian was provided a headlamp.

A typist with low vision was having some difficulty distinguishing among certain character keys. She was provided with a glare guard for the computer monitor and large print keyboard labels, which significantly enhanced accuracy.

An assistant for a disability program had complete loss of vision in one eye and low vision in the other. The assistant was having problems reading printed paper copies. A portable magnifier and a CCTV were used to magnify materials.

An individual with no vision was placed in a switchboard operator position for a large service complex building. The person needed to be aware of what telephone lines were on hold, in use, or ringing. She was provided with a light sensor to assist in determining the console buttons that were lit, blinking, and/or steady. The telephone console was also modified to provide the employee with ring differentiation for external versus internal calls.

A customer service representative for a financial institution lost his vision and could no longer read his computer screen. The employer provided screen reading software for his computer so that all information present on the screen and all information inputted into the system would be read back to him.

### **Products:**

There are numerous products that can be used to accommodate people with limitations. JAN's Searchable Online Accommodation Resource at <http://askjan.org/soar> is designed to let users explore various accommodation options. Many product vendor lists are accessible through this system; however, JAN provides these lists and many more that are not available on the Web site upon request. Contact JAN directly if you have specific accommodation situations, are looking for products, need vendor information, or are seeking a referral.

## Resources

### **Job Accommodation Network**

West Virginia University  
PO Box 6080  
Morgantown, WV 26506-6080  
Toll Free: (800)526-7234  
TTY: (877)781-9403  
Fax: (304)293-5407  
jan@askjan.org  
<http://askjan.org>

The Job Accommodation Network (JAN) is a free consulting service that provides information about job accommodations, the Americans with Disabilities Act (ADA), and the employability of people with disabilities.

### **Office of Disability Employment Policy**

200 Constitution Avenue, NW, Room S-1303  
Washington, DC 20210  
Toll Free: (866)633-7635  
TTY: (877)889-5627  
Fax: (202)693-7888  
<http://www.dol.gov/odep/>

The Office of Disability Employment Policy (ODEP) is an agency within the U.S. Department of Labor. ODEP provides national leadership to increase employment opportunities for adults and youth with disabilities while striving to eliminate barriers to employment.

### **American Council of the Blind**

1155 15th Street NW, Suite 1400  
Washington, DC 20005  
Toll Free: (800)424-8666  
Direct: (202)467-5081  
info@acb.org  
<http://www.acb.org>

ACB strives to improve the well-being of all blind and visually impaired people by serving as a representative national organization of blind people; elevating the social, economic and cultural levels of blind people; improving educational and rehabilitation facilities and opportunities; cooperating with the public and private institutions and organizations concerned with blind services; encouraging and assisting all blind persons to develop their abilities and conducting a public education program to promote greater understanding of blindness and the capabilities of blind people.

**American Foundation for the Blind**

11 Penn Plaza, Suite 300  
New York, NY 10001  
Toll Free: (800)232-5463  
Direct: (212)502-7600  
Fax: (212)502-7777  
afbinfo@afb.net  
<http://www.afb.org>

The American Foundation for the Blind addresses the most critical issues facing the growing population of people who are blind or visually impaired: independent living, literacy, employment, and technology.

**Helen Keller National Center for Deaf-Blind Youths and Adults**

141 Middle Neck Road  
Sands Point, NY 11050  
Direct: (516)944-8900  
TTY: (516)944-8900  
hkncinfo@hknc.org  
<http://www.hknc.org>

The Helen Keller National Center provides comprehensive vocational rehabilitation training and assistance with job and residential placements.

**National Braille Press**

88 St. Stephen Street  
Boston, MA 02115-4302  
Toll Free: (888)965-8965  
Direct: (617)266-6160  
<http://www.nbp.org>

The National Braille Press is a nonprofit Braille printer and publisher offering Braille books, magazines, textbooks, tests, and customized embossing services.

**National Federation of the Blind**

1800 Johnson Street  
Baltimore, MD 21230  
Direct: (410)659-9314  
Fax: (410)685-5653  
pmaurer@nfb.org  
<http://www.nfb.org>

With more than 50,000 members, the National Federation of the Blind (NFB) is the largest and most influential membership organization of blind people in the United States. The NFB improves blind people's lives through advocacy, education, research, technology, and programs encouraging independence and self-confidence.

**Recording for the Blind and Dyslexic**

20 Roszel Road  
Princeton, NJ 08540  
Toll Free: (866)732-3585  
Direct: (609)520-8044  
Fax: (609)987-8116  
custserv@rxbd.org  
<http://www.rxbd.org>

The Recording for the Blind and Dyslexic is a nonprofit volunteer organization, the nation's educational library serves people who cannot effectively read standard print because of visual impairment, dyslexia, or other physical disability.

**Rehabilitation Research and Training Center on Blindness and Low Vision**

PO Drawer 6189  
Mississippi State University  
Mississippi State, MS 39762  
Direct: (662)325-2001  
TTY: (662)325-8693  
Fax: (662)325-8989  
rrtc@ra.msstate.edu  
<http://www.blind.msstate.edu>

The mission of the Rehabilitation Research and Training Center on Blindness and Low Vision is to prevent or alleviate the vocational, economic, and personal effects of blindness and severe visual impairments.

**Trace Research & Development Center**

University of Wisconsin - Madison  
2107 Engineering Centers Bldg.  
1550 Engineering Dr.  
Madison, WI 53706  
Direct: (608)262-6966  
TTY: (608)263-5408  
Fax: (608)262-8848  
info@trace.wisc.edu  
<http://trace.wisc.edu>

The Trace Research & Development Center's mission is to prevent the barriers and capitalize on the opportunities presented by current and emerging information and telecommunication technologies, in order to create a world that is as accessible and usable as possible for as many people as possible.

## References

American Foundation for the Blind. (2008a). *Blindness statistics*. Retrieved September 5, 2008, from <http://www.afb.org/Section.asp?SectionID=15>

American Foundation for the Blind. (2008b). *Glossary of eye conditions*. Retrieved September 3, 2008, from <http://www.afb.org/Section.asp?DocumentID=2139>

American Foundation for the Blind. (2008c). *Tips for making print more readable*. Retrieved September 3, 2008, from <http://www.afb.org/Section.asp?SectionID=26&TopicID=144&DocumentID=210>

Equal Employment Opportunity Commission. (1992). *A technical assistance manual on the employment provisions (title I) of the Americans with Disabilities Act*. Retrieved September 3, 2008, from <http://askjan.org/links/ADAтам1.html>

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