Welcome!

If you have received a copy of this Guide, chances are you or someone you know has low vision. Perhaps you’ve been diagnosed by an eye care professional or you just suspect that you have this condition. Low vision means that you have trouble seeing and your eyesight cannot be corrected with regular glasses, contact lenses, surgery or medication.

Sometimes people who have low vision can feel alone, but nothing could be further from the truth. One in every 20 Americans has low vision and the number is growing. There is a huge array of resources, strategies and products available to help people with low vision live active, full and independent lives.

This Guide is designed to answer some of your most immediate questions and point you toward resources and approaches that, we hope quite literally, will expand your horizons.

Table of Contents

Low Vision Conditions............................................................1
Frequently Asked Questions ...................................................3
Recognizing and Living with Low Vision.................................5
Vision Rehabilitation is the Key...............................................6
Vision Enhancement Products to Fit Your Needs......................8
Support Resources ...............................................................11
Low Vision Conditions

Low vision may be caused by a wide range of eye disorders and conditions. Some of these include:

**Age-related Macular Degeneration (AMD):**

AMD is a degenerative disease of the retina that causes progressive loss of vision in the center of the eye. *People describe it as having a spot or blurry space in the middle of their vision that interferes with daily tasks like reading and driving.* There are two types of macular degeneration, dry and wet.

Dry AMD results when yellow-white deposits called drusen accumulate under the macula, which is the central portion of the retina. Scientists don’t know exactly why this occurs. In wet AMD, abnormal blood vessel growth forms under the macula and leaks fluid damaging photoreceptor cells. Wet AMD can progress rapidly and cause serious damage. If it’s caught early, however, laser surgery may be able to prevent extensive vision loss. The risk of developing macular degeneration increases with age and the disease is the most common cause of vision loss in people over the age of 55, particularly women. *While it significantly reduces vision, AMD does not cause total blindness.*
**Glaucoma:**

Glaucoma is a serious eye disease caused by a build-up of pressure in the eye that damages the optic nerve which transmits impulses to the brain that create sight. *It affects side vision causing the edges of the visual field to fade, although it may also cause blank areas at the center of the eye.* Symptoms of glaucoma include blurred vision, seeing colored rings around lights, loss of side vision, pain and redness in the eye. Often, however, the disease may happen slowly with no symptoms until damage is done. Once damage occurs it can’t be reversed, but fast treatment with eye drops and/or laser surgery can prevent the disease from progressing. *Lifelong management of the disease is required to prevent eye damage.*

**Diabetic Retinopathy:**

Although diabetes does not necessarily lead to sight loss, people with the disease may experience a condition in which their diabetes causes blood vessels that feed the retina of the eye to break. *The resulting damage may appear as spots or blanks in the field of vision.* This condition is called Diabetic Retinopathy. In more severe cases, blood clots and scar tissue can develop on the retina, which can lead to complete vision loss. All people with diabetes should have regular eye exams and maintain good diabetic management. If the disease is detected, leaking vessels may sometimes be closed using a laser.
Retinitis Pigmentosa (RP):
Retinitis Pigmentosa is actually a group of inherited diseases that affect the retina of the eye causing a degeneration of photoreceptor cells. These cells are what capture light enabling us to see. *When these cells degenerate, patients experience loss of night vision, color vision and peripheral vision. Eventually tunnel vision may occur.* While inherited, Retinitis Pigmentosa may skip generations and therefore is difficult to track. Any person who has a family member with a retinal disease should immediately be tested by an eye care professional.

Cataracts:
*Cataracts are a clouding of the eye’s lens that causes blurriness and loss of vision.* The word cataract literally means waterfall and when a cataract is severe it’s like trying to see through a waterfall. Cataracts occur when the protein that makes up the eye’s lens becomes clumped. Scientists believe that cataracts may be brought on by smoking and diabetes as well as the impact of ultraviolet light and general wear and tear on the protein of the lens over the years. *Fortunately, cataracts are highly treatable.* Cataract surgery, in which the clouded lens is removed and replaced with a clear plastic one, is both a relatively simple procedure and very successful in restoring sight.

### Frequently Asked Questions

**Q. I have low vision. Does it mean I will go blind?**
A. While some eye diseases can cause total loss of sight, most, such as macular degeneration, generally do not. Even those diseases that can cause blindness, with proper management, can usually be controlled. *Most people with low vision have a great deal of usable sight.*
Some may be considered legally blind meaning they have less than 20/200 vision or their field of vision is restricted to a 20-degree diameter, but even then they often have a lot of available vision that can be used with proper instruction and vision enhancement. With training, you can learn to adapt to the changes in your vision.

**Q. Will I be totally dependent on others?**

A. Not at all. With the help of vision rehabilitation, you can learn to adapt to the vision changes that your eye condition causes (such as loss of central vision) and continue to see and live a very full, active and independent life.

**Q. Will I always have low vision?**

A. Some causes of low vision such as cataracts are very treatable and good vision can be restored. When caught early, other conditions, like wet macular degeneration and glaucoma, can be stopped or slowed although damage already done is not reversible. A lot of research is underway on both the prevention and treatment of eye diseases. Even nutritional strategies may be able to slow the development of some conditions. Consult the web sites of the support organizations and resources listed in this guide (page 11) to stay abreast of current developments.

**Q. Will treatment for my low vision be covered by insurance?**

A. Fortunately, many aspects of vision rehabilitation are now covered by Medicare as well as some private insurance companies. With that said, many of the adaptive devices you might require to increase your personal freedom are not covered by most insurers and must be paid for personally. Consult with your Vision Rehabilitation Specialist to determine what kind of low vision products and systems would be best for you. Some may be available at little or no cost through vision support organizations listed in this Guide. You may also be able to finance your purchase of low vision devices, with little or no interest, through resources like CareCredit.
Recognizing and Living with Low Vision

If you are experiencing any changes in your vision it’s important that you go to an eye care professional immediately. Notice if you’re having trouble performing tasks that require you to see up close, or are having difficulty picking out colors, seeing signs, or doing work in light that used to be sufficient. These may be early signs of eye disease. Many eye conditions, if caught early enough, can be controlled and damage limited, therefore an annual eye exam is essential.

If you have suffered vision loss due to eye disease your doctor will probably refer you to a low vision specialist. This dedicated eye care professional will be able to evaluate your available vision and refer you to other specialists who can assist with rehabilitation and resources.

Most of all, realize that you are not alone. Millions of Americans experience low vision and there are many organizations, professionals and resources (some listed in this Guide) available to you. You will also find many ways to make daily life easier to navigate. You’ll find that your state has at least one library offering Talking Books and large print publications. Many banks offer large-print checks. Services, like the utility or phone companies, may offer large-type billing, and you’ll find large-print newspapers, reading services or special TV video services for people with low vision. There are also many discounts and exemptions offered for people who are legally blind such as those from the IRS, the Post Office and many public transit systems. As you work with your low-vision eye care professional and Vision Rehabilitation Specialist, you’ll learn many more tips for enhancing your daily life.
Vision Rehabilitation is the Key

At the center of an active, independent life with low vision is vision rehabilitation. Fortunately, the U.S. government has recognized the importance of such rehabilitation to a growing percentage of the population and Medicare now covers many aspects of vision rehabilitation. Vision rehabilitation is usually provided by a Vision Rehabilitation Specialist in conjunction with your eye care professional who is a specialist in low vision. The main steps of the rehabilitation are:

• Identification of the low vision condition and underlying disorder

• An analysis of your current refraction, meaning what strength glasses do you require and what, if any, special filters or other additions should be used with the glasses

• An analysis and tracking of the exact position of your scotoma (i.e., the areas of vision that are blurred or missing). This analysis will help determine your Preferred Retina Location or PRL which is the area of vision from which you see best.

• *Training in eccentric viewing which teaches you to see “around” the areas of vision that are damaged.* This will involve a series of training sessions with your Vision Rehabilitation Specialist using special teaching tools and cards.
• Activity of Daily Living training that gives you new and better ways to do the activities you most value in daily life. This will include issues like:

* Lighting
* Adaptive devices like large-print telephone keypads, talking clocks, magnifying mirrors, etc.
* Safety issues
* Computer use requirements
* Driving and transportation requirements
* Special requirements for work or school
* Support groups
* Psychological counseling
* Identification of needed vision-enhancing devices and training in their use. This may involve everything from using a simple magnifying glass to selection of an electronic magnifier that enhances vision close-up, midrange and at a distance.

Remarkably, a huge change in a person’s ability to see with low vision can be made in just a few Vision Rehabilitation sessions. It really is your key to independence.
There is a large selection of devices to help people with low vision. Some are “optical,” meaning that they are glass lenses such as magnifying glasses and telescopes. Others are “electronic,” meaning they use video and projection type principles to expand and clarify vision. Some are portable while others sit on a desk or table. All of these types of devices are not usually covered by insurance, but some of the simple ones may be available at little or no cost through public and private support institutions. Optical devices have limited magnification, are sensitive to lighting conditions and have a small field of view, making them more suitable for lower levels of impairment.

Electronic devices have integral lighting, greater magnification and field of view, are capable of greater contrast, and are suitable for lower to significant levels of impairment.

One way to categorize low vision devices is by their ability to enhance your vision through near, intermediate and distance magnification. Sometimes one device is appropriate for all three. Your selection will be based on your needs and goals. If you only want help with reading then near vision devices will be appropriate, but if you want to see the television or a classroom teacher, a whole different product might be required.
Near Vision Aids:

• Hand-held optical magnifiers for reading are available both illuminated and non-illuminated. They generally provide a lower magnification range of 2X to 10X with a reduced field of view. They are often portable and can be carried in a pocket or purse.

• Stand optical magnifiers, both illuminated and non-illuminated, can be used for both reading and writing. They provide a lower magnification range of 2X to 10X with a reduced field of view. They are portable and can be carried from place to place but are not pocket-size.

• Electronic Desktop HD CCTV with Text-to-Speech (OCR) systems are like television or computer systems that sit on a desk or table and can be used for reading, writing and hobbies. They provide magnification up to 70X with a wide field of view, high-contrast viewing modes and read any printed text aloud with the push of a button. A high resolution HD LCD monitor provides beautiful crystal clear pictures and vibrant colors.
• Electronic hand-held systems for reading and writing provide magnification up to 20X with a wide field of view and high contrast viewing modes. These small systems are portable and can be carried from place to place in a purse or backpack.

**Intermediate and Distance Vision Aids:**

• Optical telemicroscopes (prescription and non-prescription) attach to your glasses in order to improve viewing of computers and other intermediate range objects and some objects at a distance. They provide low magnification up to 4X with a reduced field of view.

• Hand-held optical monoculars and telescopes provide magnification up to 10X with a reduced field of view.

• Flexible 3-in-1 electronic desktop HD CCTV devices with text-to-speech (OCR) provide adjustable magnification up to 77X with a wide field of view and high contrast viewing modes. A rotating camera allows you the flexibility to see near, distance and anywhere in between. Give tired eyes a rest and have your favorite article or book read aloud to you with the simple push of a button. Many different languages are available to choose from.
Support Resources

The list of support organizations and companies that concern themselves with some aspect of low vision is enormous — far greater than we have space for in this Guide. But included below are a few of the principal resources that will be of use to you. Each of these will probably lead you to many more.

Consumer Resources

• American Foundation for the Blind
  Toll Free: 800-AFB-LINE (800-232-5463)        www.afb.org
  Wide range of information, advice and resource links

• American Macular Degeneration Foundation
  Toll Free: 888-MACULAR (888-622-8527)        www.amdf.org
  Wide range of information, advice and resources specifically relating to macular degeneration.

• Audio-Reader (Radio and Audio Service for Blind and Print-Disabled Persons)
  Toll Free: 800-772-8898        www.reader.ku.edu
  Radio and reading service from University of Kansas for people within their listening area

• Enhanced Vision
  Toll Free: 888-811-3161        www.enhancedvision.com
  Portable and desktop electronic magnifiers

• Foundation Fighting Blindness
  Toll Free: 800-683-5555        www.blindness.org
  Wide range of information and references on all types of retinal disorders

• Lions Clubs
  www.lionsclubs.org
  Go to web site to find phone numbers for clubs near you and to learn more about Lions Clubs Vision Programs
• **Macular Degeneration Partnership**
Tel: 888-430-9898       www.amd.org
Wide range of information and resources related to macular degeneration

• **Lighthouse International**
Toll free: 800-284-4422  
www.lighthouse.org       www.shop.lighthouse.org  
Lighthouse International is dedicated to fighting vision loss through prevention, treatment and empowerment.

• **National Eye Institute**
Tel: 301-496-5248       www.nei.nih.gov  
Research and current studies

• **National Federation of the Blind**
Tel: 410-659-9314       www.nfb.org  
Information, advice, resources and links

• **Association of Blind Citizens Assistive Technology**
If the person qualifies the ATF will provide funds to pay for 50% of the MSRP of the adaptive device. The applicant must be legally blind and a resident of the USA. Applications are submitted by email (atf@blindcitizens.org) only. Go to www.blindcitizens.org for more details (look for Assistive Technology Fund in the left column), and to see the qualifications and the application.  
Tel: 781-961-1023       www.blindcitizens.org

• **Veterans Administration**
Toll Free: 800-827-1000
Website for location of your nearest VA office and information on low vision services: www.va.gov
VA Health Resource Center: 877-222-8387
Professional Resources

• American Academy of Ophthalmology (AAO)
Tel: 415-561-8500 www.aao.org
Research, medical information and assistance in finding a physician

• American Academy of Optometry (AAO)
Tel: 321-710-3937 www.aaopt.org
Wide range of information, advice and resource links

• American Optometric Association
Toll Free: 800-365-2219 www.aoa.org
Research and clinical information
We hope this Guide will help to open a new world of possibilities to you and your loved ones. Contact these web sites, call the eye care professionals, ask questions and keep asking until you get the answers you’re seeking. Be bold. Millions of people live full, active, independent lives with low vision. You can be one of those. There are people waiting to help you. Just take the first steps. If we can provide you with any additional information please contact Enhanced Vision at 888-811-3161.

Sponsored by:

www.enhancedvision.com

For a FREE no-obligation demonstration of Enhanced Vision products call: (888) 811-3161

Sponsored by:

enhanced vision

A VISPERO® BRAND

www.enhancedvision.com

Copyright ©2009 by Enhanced Vision. All rights reserved.