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Understanding Low Vision

What is low vision?
Low vision refers to moderate-to-severe visual impairment that doesn’t improve with eyeglasses, contact lenses, medicine, or surgery. As a result, reading, recognizing faces, watching TV, driving, and seeing at night may be difficult.

Adjusting to life with low vision
It’s normal to feel sad, frustrated, and overwhelmed after learning that your vision loss is irreversible.

Support groups may help you develop strategies for coping with the emotional challenges.

Vision rehabilitation experts will help you maximize the use of your remaining vision so that you regain or retain your ability to work, go out on your own, and perform your normal daily activities.
Understanding Vision Rehabilitation

What is vision rehabilitation?
If you have difficulty performing normal daily activities because of vision loss that cannot be corrected, your doctor may refer you to a vision rehabilitation service.

Most services offer:
1. An assessment of your visual function
2. An evaluation of your skills
3. Instruction on how to maximize your vision with a variety of devices, techniques, and tips
4. Counseling and personal support as you adjust to life with low vision

Low-vision exam
This type of exam is designed to assess the functional needs, capabilities, and limitations of your visual system. It typically takes a little longer than a routine eye exam, and dilation is not usually required.
A vision rehabilitation specialist (typically a Doctor of Optometry with advance training in optics and visual assistive technologies) will assess your visual acuity, depth perception, color vision, contrast sensitivity, peripheral vision, and refraction.

The doctor will also ask how your vision affects your life in areas such as: reading, driving, home safety, mobility, and other daily activities.

Based on your needs, interests, and aptitudes, an individualized plan is created.

Maximize the use of your remaining vision
During rehabilitation, you will learn about the latest low-vision devices and technology and how to effectively use them. You will also learn new techniques to improve your safety and independence. These may include cooking and kitchen organization tips, appliance use, contrast and tactile markings for appliances and household items, self-care tips, and more.
Types of optical low-vision aids
(Make objects look larger and easier to see)

1. **Magnifying spectacles** are worn like eyeglasses to keep your hands free. They can be used for close-up tasks like reading or threading a needle.

2. **Stand magnifiers** rest above the object you are looking at. Some have built-in lights.

3. **Hand magnifiers** are designed to help with varying amounts of vision. Some models have built-in lights.

4. **Telescopes** are used to see objects that are far away. Some telescopes can be attached to eyeglasses, while others are held like binoculars.

5. **Video magnifiers** are electronic devices that make printed pages, pictures, or other small objects look bigger. They are often adjustable for your specific needs. For instance, some magnifiers add contrast to make printed words darker.

6. **Lens filters** are eyeglasses that have a custom tint. Standard sunglasses maybe either be too dark or not dark enough if you have low vision.
Types of low-vision devices and materials
(Designed to help with everyday tasks)
1. Audio books and electronic books can make reading easier. With e-book readers, like Kindle®, you can increase word size and contrast.

2. Smartphones and tablets have accessibility features that allow you to increase the word size, adjust lighting, and use voice commands.

4. Mobile apps. Researchers at Mass. Eye and Ear developed SuperVision+, a magnifying and telescopic app that has an image stabilizer and can increase contrast. They also developed Supervision+ Goggle, which can be used with virtual reality goggles.

3. Computers have accessibility features and can read aloud or magnify what is on the screen.

4. Talking devices are available in the form of watches, timers, blood-pressure cuffs, and blood sugar monitoring systems, to name a few.

5. Large-print products, including books, newspapers, magazines, playing cards, bank checks, telephones, watches, and remote controls are available.
10 Helpful Techniques

1. **Use contrasting colors whenever possible.** For example, use a dark tablecloth with white dishware or mark the edges of steps and ramps with paint or tape to make them easier to see.

2. **Eliminate common hazards.** Remove electrical cords from pathways or tape them down. Use non-skid, non-glare cleaning products on floors, and use gripper pads under rugs.

3. **Enhance lighting.** Add extra lamps, especially near stairs and in areas where you read. Place mirrors in areas that do not create glare. Install blinds or sheer curtains that can be adjusted to let in natural light.

4. **Reduce glare.** When outdoors, wear a brimmed hat and wraparound sunglasses or filtered lenses.

5. **Make it bigger.** Many products, including telephones, watches, remote controls, scales, and appliances are available with large display screens.
6. **Label everything.** Bold labels or textured markings (like stickers or puff paint) can help you identify items, such as power buttons on appliances.

7. **Get organized.** Categorize your items (like medications, spices, canned goods) from small to large or place them in alphabetical order. When items are in their proper places, they will be easy to locate quickly.

8. **Ask for help.** Many people are trained to help people with low vision. Even strangers are often happy to help if you ask. There are also many support groups available.

9. **Practice.** Once you have your methods in place, they will become easier with practice.

10. **Be patient.** Adjusting to low vision takes time. Eventually, you’ll develop your own tricks and techniques to help with your specific visual impairment.
Resources

There are many resources and devices to help you enjoy a wide range of activities and hobbies. Please also check with your ophthalmologist. Additional resources are available at masseyeandear.org/visionrehab

National Federation of the Blind
www.nfb.org
T: 866-504-7300

National Association for Visually Handicapped
www.navh.org
T: 212-889-3141

National Eye Health Education Program of the National Eye Institute
www.nei.nih.gov/lowvision
T: 301-496-5248

American Occupational Therapy Association, Inc.
www.aota.org
T: 800-SAY-AOTA
Mass. Eye and Ear—home to the nation’s first hospital-based vision rehabilitation service—follows the Comprehensive Vision Rehabilitation model of care. This multidisciplinary approach was adopted by the American Academy of Ophthalmology and the Massachusetts Commission on Blindness and includes evaluation, rehabilitation training, and psychosocial support services.

Each year, more than 500 patients with low vision are referred to the Vision Rehabilitation Service. According to Mass. Eye and Ear’s annual Quality and Outcomes Report, patients who receive vision rehabilitation have consistently reported improvements in their vision-related quality of life, mobility, and well-being.

Learn more at masseyeandear.org/visionrehab