

Living With Low Vision: How you can help



Mark E. Wilkinson, O.D.



Neyal J. Ammary-Risch, M.P.H., MCHES



National Eye Institute



*A program of the National
Institutes of Health*

Living With Low Vision: How you can help



Mark E. Wilkinson, O.D.

University of Iowa Carver College of Medicine
Department of Ophthalmology and Visual Sciences
Wynn Institute for Vision Research

Chair, Low Vision Subcommittee,
National Eye Health Education Program
National Eye Institute, NIH



Neyal J. Ammary-Risch, M.P.H., MCHES

Director, National Eye Health Education
Program
National Eye Institute, NIH



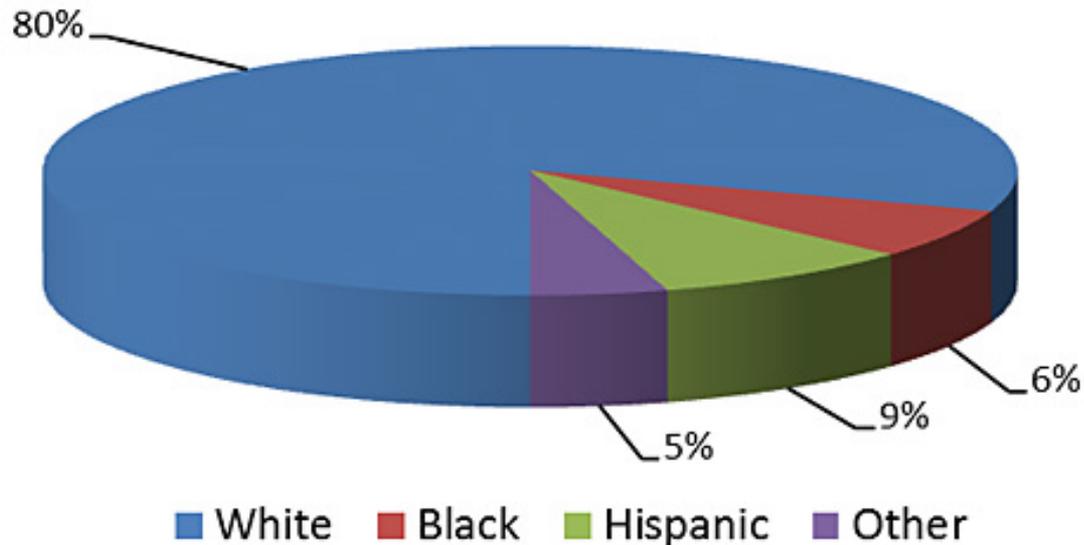
Overview

We will define low vision and discuss:

- Goals of vision rehabilitation
- Who should have a low vision evaluation
- Components of a structured examination
- Core principles of vision rehabilitation
- Resources

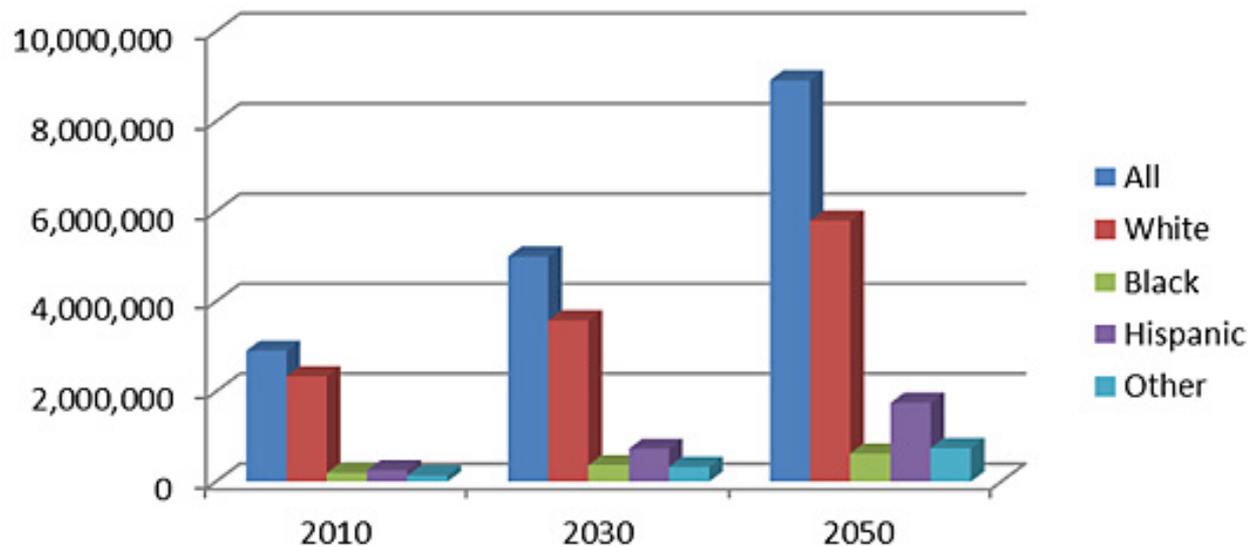
Prevalence Data

Number of low vision cases in the U.S.
by race/ethnicity, 2010



Prevalence Data

Projected number of low vision cases
in the U.S., 2010–2050



Poll Question

Some patients believe that low vision means having difficulty seeing objects below their waist.



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Poll Results

Some patients believe that low vision means having difficulty seeing objects below their waist.



Low Vision

A visual impairment, not correctable by standard glasses, contact lenses, medicine, or surgery, that interferes with a person's ability to perform everyday activities.

Information for *Healthy Vision*

[Glaucoma](#) [Diabetic Eye Disease](#) [Low Vision](#) [Healthy Eyes](#)

Promoting independence through vision rehabilitation.



RELATED TOPICS

- [Do You Have Low Vision?](#)
- [What You Should Know](#)
- [Living With Low Vision](#)
- [Low Vision FAQs](#)
- [Low Vision Glossary](#)
- [Helping a Loved One](#)
- [Medication Management](#)

 Listen

Low Vision FAQs

What is low vision?
Low vision is a visual impairment, not correctable by standard glasses, contact lenses, medicine, or surgery, that interferes with a person's ability to perform everyday activities.

More Low Vision FAQs

- ▶ [What is Low Vision](#)
- ▶ [Take Action](#)
- ▶ [Resources](#)

Low Vision Rehabilitation

- Is indicated if a visual impairment is serious enough to result in functional limitations or disability.
- Is available regardless of level of visual acuity or field loss.
- Is the only nonsurgical treatment for vision loss.

The goal of low vision rehabilitation:

Maximize daily functioning, increase independence, and improve quality of life.

Enhancing Functional Abilities

Accomplished by:

- Prescribing optical and electronic devices
- Educating patients
- Teaching strategies that enhance functioning
- Referring patients to other vision rehabilitation services:
 - Rehabilitation teaching
 - Orientation and mobility training
 - Counseling

Causes of Visual Impairment

- **Retinal diseases**
 - Macular degeneration
 - Diabetic retinopathy
 - Retinitis pigmentosa
- **Optic nerve diseases**
 - Glaucoma
 - Optic atrophy
 - Ischemic optic neuropathy
 - Leber's hereditary optic neuropathy
- **Media opacities**
 - Cataract
 - Keratoconus
- **Brain injury**
 - Stroke (hemianopsia)
 - Trauma
- **Congenital causes**
 - Albinism
 - Optic nerve hypoplasia

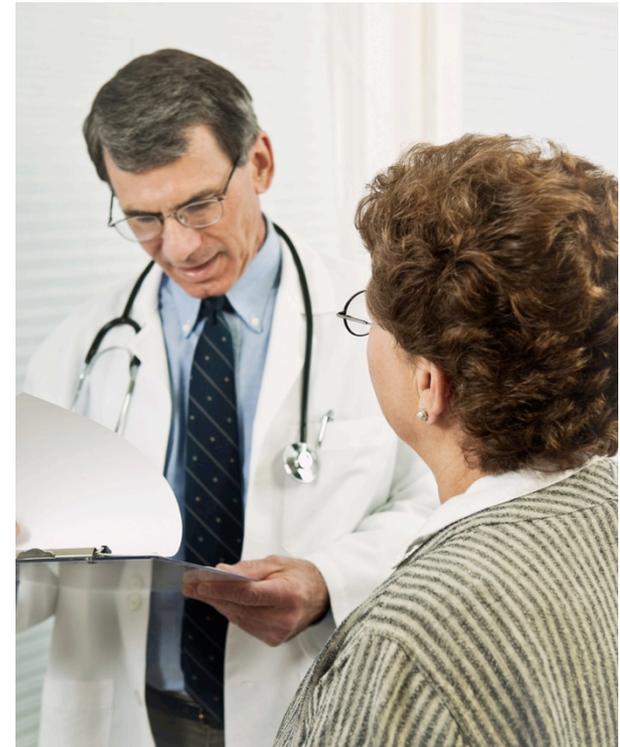
Who Needs Vision Rehabilitation Services?

Developed by Roy G. Cole, O.D.

Determining Who Needs Vision Rehabilitation Services

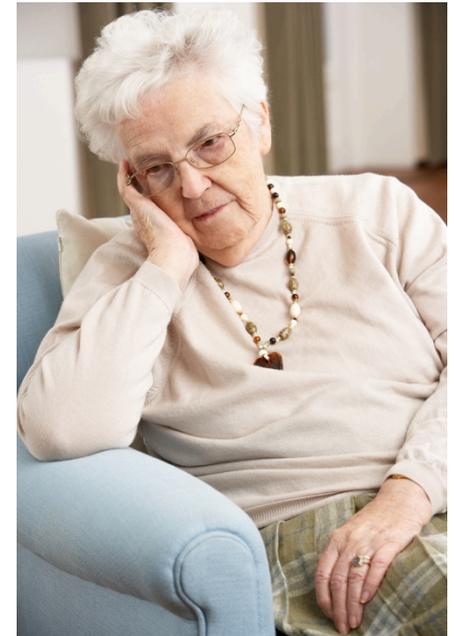
Screen patients in one minute.

- Does your vision make it hard to:
 - Read the mail?
 - Watch television?
 - Recognize people?
 - Pay bills?
 - Sign your name?
 - Climb stairs, walk down curbs, cross the street, or drive?



Determining Who Needs Vision Rehabilitation Services

- During the past month, have you felt:
 - Down, depressed, or hopeless?
 - Little interest or pleasure in doing things?
 - ~90% effective in detecting depression



40 - 20 - 1

- **Dr. Cole's take-home message:** Think about implementing vision rehabilitation strategies when—
 - Visual acuity is 20/40 or worse;
 - Visual field is 20 degrees or less; OR
 - One or more functional complaint(s) are related to decreased vision.

Vision Rehabilitation:

An Integral Part of the Continuum of Eye Care

The Vision Rehabilitation Team

- Low vision doctor
- Occupational therapist
- Orientation and mobility specialist
- Rehabilitation teacher
- Physical therapist
- Teacher of students with visual impairments (TVI)
- Social worker
- Speech and hearing
- Nurse/nurse educator
- Psychologist



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Stages of Adjusting to a Disability/Loss

- Shock
- Anxiety
- Bargaining
- Denial
- Mourning
- Depression
- Withdrawal
- Internalizing/externalizing anger
- Acknowledgment and acceptance
- Adjustment–adaptation

Vision Loss and Depression

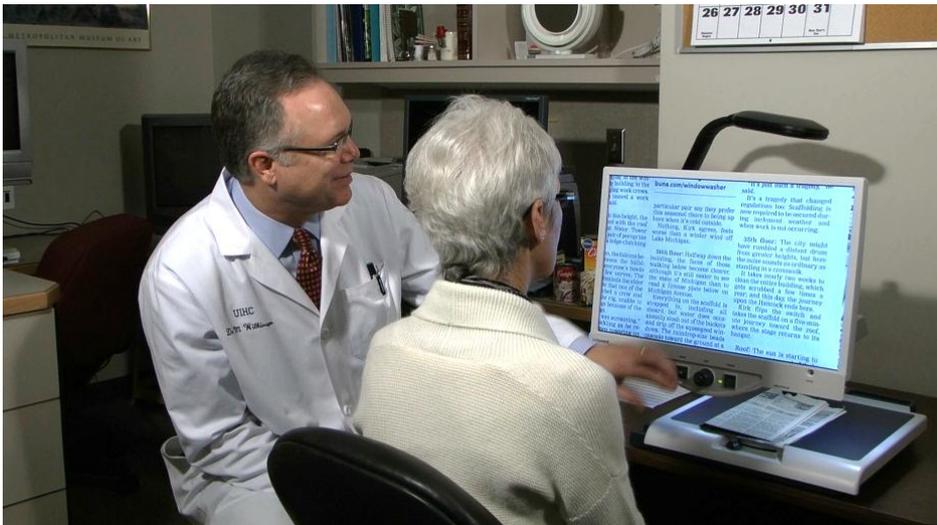
- Some older adults may experience depression (approximately 3%).
- Depression is more common in those with significant vision loss (approximately 30%).
- 64% of those with depression will not use vision rehabilitation services/devices.
- Treatment options include counseling, education, and problem-solving therapy.

Structured Low Vision Exam

- **Case history**
 - Ocular history
 - Medical history
 - Developmental history
 - Educational history
 - Visual difficulties
 - Functional task analysis
- **Examination**
 - Distance visual acuity
 - Near visual acuity
 - Glasses
 - Refraction
 - Predicted reading
- **Visual function tests**
 - Amsler grid
 - Contrast sensitivity function
 - Visual field
 - Color vision
- **Trial of low vision devices**
- **Ocular health assessment**

Structured Low Vision Exam

- A vision rehabilitation plan is developed based on the information gathered during the exam.
- The plan is guided by an individual's specific needs and functional abilities.



Types of Visual Impairments

Based on:

- Pathology of the visual system
 - Ocular media
 - Retina
 - Brain
- Pathology's effect on the visual field

Pathology's Effect on the Visual Field

- No field defect/overall blur
 - Refractive media
 - Macula
 - Impaired central resolution without scotoma
- Central vision loss/scotoma
 - Macula
- Peripheral field loss/constriction
 - Retina
 - Visual pathways

Poll Question

Do you know where to refer a patient for a low vision evaluation?



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Poll Results

Do you know where to refer a patient for a low vision evaluation?



Low Vision Devices

To Prescribe the Appropriate Device(s)

- Start with the patient's needs:
 - Distance
 - Intermediate
 - Near
- Determine the magnification required
- Review results of the visual function tests
- Understand the optical properties of the systems
- Discuss available lighting

To Prescribe the Appropriate Device(s)

- History
 - Cause of vision loss
 - Devices used in past
- Working distance requirements
 - Depth of field (object plane)
- Weight
- Trial of devices
- Cost
- Cosmesis

Conventional Spectacles/Bifocals

- Power is determined by a trial frame refraction:
 - For distance acuity improvement
 - For near/intermediate tasks
 - To use optical devices
- Electronic magnification devices need to be accommodated (or have a reading correction) for the working distance at which they will be used.

Optical Options

- Reading spectacles
- Magnifiers
 - Hand
 - Stand
- Telescopic systems
 - Hand held
 - Spectacle mounted
- Absorptive lenses



Electronic Options

- CCTV
 - Full size
 - Hand held
 - Transportable
- Head borne
- Tablets



Computer Accessibility

- Screen enlarging software
- Screen reading software
- Operating system software
- Voice recognition software
- Text to speech software



Non-Optical Devices

- Absorptive lenses
- Reading stands and clipboards
- Typoscopes and contrast enhancing options
- Lighting



Lighting

Illumination is the most important factor.

- Illumination
 - Incandescent
 - Fluorescent
- Light fixtures
 - Flexible
 - Angle of the light
 - Contrast



Core Principles of Low Vision Examination

- Individuals whose vision loss affects their functional abilities and quality of life should be referred for services.
- Visual needs and visual functioning cannot be predicted based on diagnosis or distance visual acuity alone.



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Patient Story



http://www.nei.nih.gov/lowvision/content/profiles/ruth_1.asp

NEHEP Resources

Living With
Low Vision:

What you should know



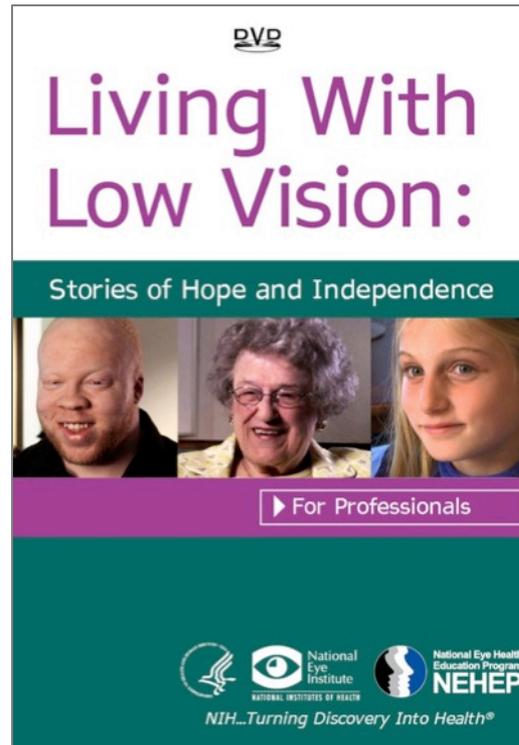
▶ Includes companion DVD



NIH...Turning Discovery Into Health®



NEHEP Resources



Living with low vision DVD for professionals

NEHEP Resources

The screenshot shows the National Eye Institute website page for Low Vision resources. The page is titled "Information for *Healthy Vision*" and features a navigation bar with tabs for Glaucoma, Diabetic Eye Disease, Low Vision, and Healthy Eyes. The main content area is titled "Low Vision" and includes a "Listen" button, a "What You Should Know" section, a "Living With Low Vision" section, and a "Medication Management" section. There are also "RELATED TOPICS" and "RESOURCES" sections. The page is designed to provide information and resources for people with low vision, including links to publications, databases, and video profiles.

National Eye Institute
Home » Low Vision

Information for *Healthy Vision*

Glaucoma | Diabetic Eye Disease | **Low Vision** | Healthy Eyes

Promoting independence through vision rehabilitation.

RELATED TOPICS

- Do You Have Low Vision?
- What You Should Know
- Living With Low Vision
- Low Vision FAQs
- Low Vision Glossary
- Helping a Loved One
- Medication Management
- Resources
- Español

RESOURCES

- What is a comprehensive dilated eye exam?
- Find an eye care professional
- Talking to your doctor
- Financial aid for eye care

How to use the Listen function.
Cómo utilizar la función de Escuchar.

Listen

Low Vision

Low vision means that even with regular glasses, contact lenses, medicine, or surgery, people find everyday tasks difficult to do. Reading the mail, shopping, cooking, seeing the TV, and writing can seem challenging. But, many people with low vision are taking charge.

What You Should Know
When you have low vision, eyeglasses, contact lenses, medicine, or surgery may not help. Activities like reading, shopping, cooking, writing, and watching TV may be hard to do. [Read more...](#)

Living With Low Vision
People of all ages and backgrounds can benefit from vision rehabilitation services. These profiles highlight individuals who have learned to make the most of their remaining vision and maintain their independence. [Read more...](#)

Medication Management
Safety and effectively managing your medications is critical to your overall health and well-being. Modern medicine has improved our quality of life and can help us live longer, healthier lives. However, people with low vision need to be careful when using medications, especially if they are taking several different drugs. [Read more...](#)

Many people living with low vision use devices and services to help them maintain their independence. [Watch these video profiles to learn more.](#)

Order the Living with Low Vision Booklet

OTHER RELATED RESOURCES

- Online NEI Publications Catalog
- Eye Health Organizations Database

E-mail Updates | NEI on Twitter | NEI on Flickr | NEI on YouTube | NEHEP on Facebook | NEHEP on Twitter

<http://www.nei.nih.gov/lowvision>

NEHEP Resources



National Eye Health Education Program
NEHEP

- **About NEHEP**
- **NEHEP Programs**
 - [Diabetic Eye Disease](#)
 - [Glaucoma](#)
 - [Low Vision](#)
 - [Patients and the Public](#)
 - [Community and Health Professionals](#)
 - [Audio Visuals and Graphics](#)
 - [For Health Professionals and Community Educators](#)
 - [¡Ojo con su vision!](#)
 - [Vision and Aging](#)
- **NEHEP Partnership**
- **Healthy Vision Program**
- **Outlook Newsletter**
- **Related Research**
- **Working with the Media**
- **Webinars**

 **Order Materials**

NEHEP Programs

Low Vision

This program is designed to create awareness among children and adults with vision impairment, their families and friends, and the general public about available vision rehabilitation services. This program seeks to inform eye healthcare providers who work with children and adults with vision impairments of the potential benefits of vision rehabilitation services.



Key Target Audiences: Children and adults with vision impairment, their families and friends, and the general public.

Key Program Message

- To promote independence through vision rehabilitation.

Outreach Opportunities

- [Educational Resources](#)
- [Community Activity Ideas](#)
- [People with Self-Report Vision Loss Focus Group Findings PDF*](#)
- [Health Observances](#)
- [Social Media Messages](#)

Additional Resources and Materials

Join health professionals, public health educators, and community organizations in raising awareness about low vision by using the resources below.

Resources Spotlight

Living With Low Vision: What You Should Know



<http://www.nei.nih.gov/nehep/programs/lowvision>

NEHEP Resources

Low Vision

See Well for a Lifetime

National Eye Health Education Program
NEHEP
www.nihep.org

Tips for Talking to Your Eye Care Professional

Today, patients take an active role in their health care. You and your doctor will work in partnership to achieve your best possible level of health. An important part of this relationship is good communication. Here are some questions you can ask your doctor to get your discussion started:

<p>About my disease or disorder...</p> <ul style="list-style-type: none"> • What is my diagnosis? • What caused my condition? • Can my condition be treated? • How will this condition affect my vision now and in the future? • Should I watch for any particular symptoms and notify you if they occur? • Should I make any lifestyle changes? 	<p>About my tests...</p> <ul style="list-style-type: none"> • What kinds of tests will I have? • What do you expect to find out from these tests? • When will I know the results? • Do I have to do anything special to prepare for any of the tests? • Do these tests have any side effects or risks? • Will I need more tests later?
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See Well for a Lifetime: An Educational Series on Vision and Aging

See Well for a Lifetime

PARTS OF THE EYE

To understand eye problems, it helps to know the different parts that make up the eye and the functions of these parts.

Please refer to the back of this handout for the descriptions of these main parts of the eye and their functions.

See Well for a Lifetime: An Educational Series on Vision and Aging

See Well for a Lifetime. Learn What You Can Do About Low Vision.

Everyone's vision can change with age. Some changes are normal and may be corrected with glasses, contact lenses, surgery, and improved lighting. Low vision means that—even with regular glasses, contact lenses, medicine, or surgery—people find everyday activities such as reading the mail, shopping, and watching TV difficult to do.

While vision that is lost usually cannot be restored, many people can make the most of the vision they have. Come and learn more about low vision and what is available to help you live life to its fullest.

— (Name of organization/sponsor)
— (date/time)
— (location)

For more information, contact (name) at (phone)/or e-mail /or website.

See Well for a Lifetime Toolkit module 3

VisionAware

The screenshot shows the VisionAware website homepage. At the top left is the VisionAware logo with the tagline "Resources for Independent Living with Vision Loss". Below this, it lists partner organizations: "American Foundation for the Blind" and "Reader's Digest Partners for Sight". On the top right, there are links for "Text Size", "Change Colors & More", and "About", along with a "Donate" button and a search bar.

The main navigation bar includes: "Your Eye Condition", "Emotional Support", "Everyday Living", "Working Life", "For Seniors", and "Get Involved".

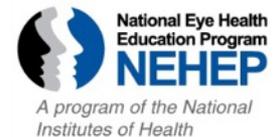
The featured article is titled "Everyday Living Section Offers an Amazing Array of Information about Living with Vision Loss". The sub-headline reads: "Everything from soup to nuts (the woodworking kind), this section has it all!". Below the headline is a link to the "Everyday Living" section. The article image shows a hand using a knife to cut an apple on a cutting board.

Below the article is a section titled "Is Vision Loss Making It Difficult to Cope? Let VisionAware Help". It includes a photo of a man smiling while working with colorful objects. The text says: "If you have just begun to deal with vision loss, you probably have many questions, frustrations and even fears. VisionAware was created to help you answer those questions, and cope with those frustrations. Start here to begin exploring all that VisionAware has to offer: [videos](#), helpful tips by [newsletter](#), information about [eye conditions](#), and more."

Below this is a section titled "Communicate and Connect". The text says: "VisionAware offers many ways for you to connect to people and information that you need to know. [Sign up](#) to participate in our message boards, receive e-mails, and engage with the VisionAware community." Below this is an "E-mail address:" field with a "SIGN UP >" button.

On the right side of the page, there are several utility sections: "Follow Us:" with Facebook and Twitter icons; "Looking for Help?" with a "Find Services Near You:" section containing a dropdown menu for "Select a state/province" and a "GO >" button, and a "Browse All Services" link; "Helpful eTips" with a "Quick Tips for Easier Reading on the Internet" link and a "Read more eTips" link; and "Join Our Mission" with the text "Help us expand our resources for people with vision loss." and a "Donate Now" button.

<http://www.visionaware.org>



Additional Resources

- <http://www.nei.nih.gov/nehep>
- <http://www.nei.nih.gov/lowvision>



- YouTube: **/NIHOD**
- Facebook: **/NationalEyeHealthEducationProgram**
- NEI Twitter: **@NatEyeInstitute**
- NEHEP Twitter: **@NEHEP**

Contacts

- **Mark E. Wilkinson, O.D.**
mark-wilkinson@uiowa.edu
- **Rosemary Janiszewski, M.S., CHES**
rjaniszewski@nei.nih.gov
- **Neyal J. Ammary-Risch, M.P.H., MCHES**
ammarn@nei.nih.gov
- **National Eye Institute, NIH**
Tel: 301-496-5248

**Thank you for participating
in today's webinar**



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