

# Basics & Overview of Low Vision Rehabilitation

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Prevent Blindness Ohio Aging Eye Summit -- July 25, 2024



THE OHIO STATE UNIVERSITY

COLLEGE OF OPTOMETRY

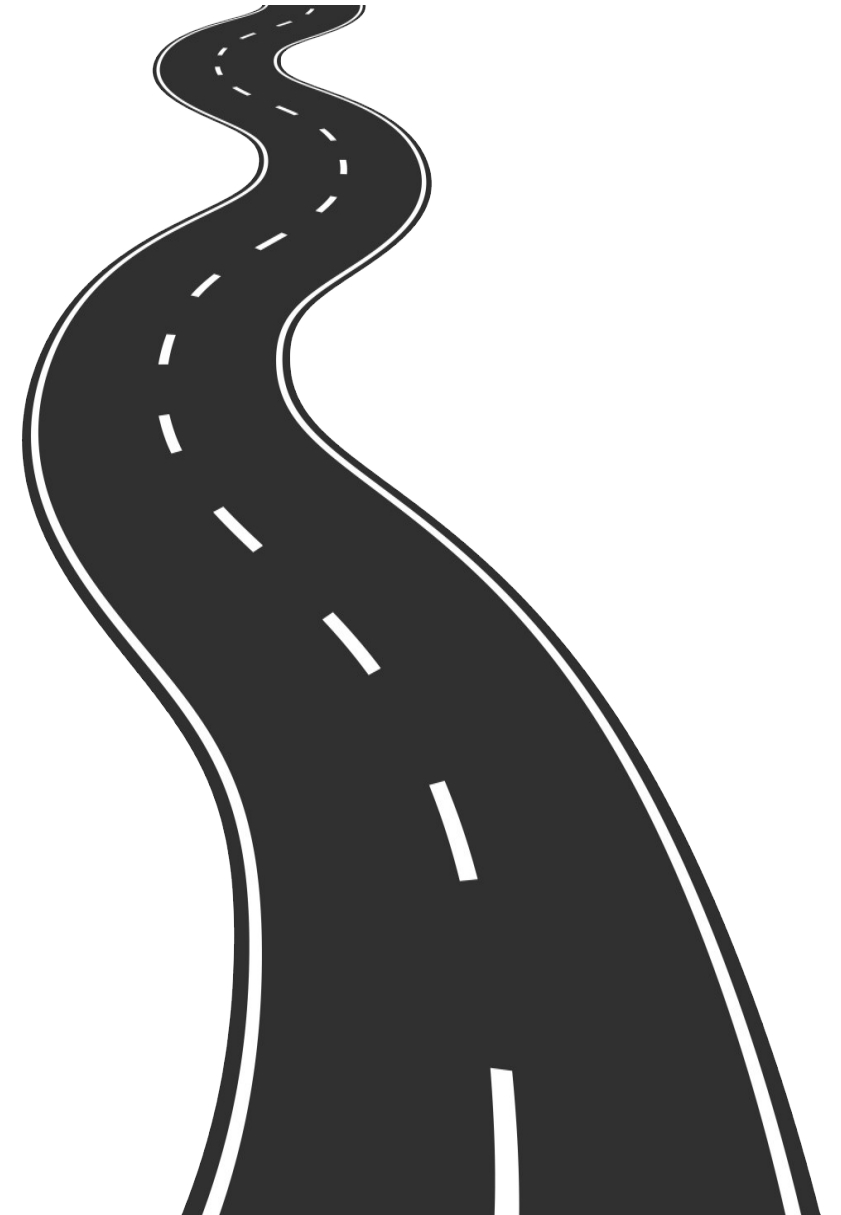
# Lecture roadmap

## Background

- Definitions
- Prevalence and common causes
- Importance

## Low Vision Rehabilitation as a specialty

- Who and when to refer
- The basics of a low vision assessment



# BACKGROUND

Definitions

Prevalence

Common causes



# Definitions vary based on source

## Low vision, vision impairment, or blindness



- World Health Organization
  - Mild: 20/40 to 20/60
  - Moderate: worse than 20/60 to 20/200
  - Severe: worse than 20/200 to 20/400
  - Blindness: worse than 20/400



- American Optometric Association
  - WHO definitions
  - Measured in better eye, with best correction



- American Academy of Ophthalmology
  - 20/40 or worse
  - In better eye, with best correction

# Vision loss in the United States

CDC: over 3.4 million Americans age 40+ are blind or visually impaired

## The Prevalence of Age-Related Macular Degeneration (AMD) in the United States in 2019

Among persons ages 80 and older, approximately **3 in 10** had early AMD,



and approximately **1 and 10** have the vision threatening late form.



**People with glaucoma slowly lose peripheral vision.**

**Don't let the "silent thief of sight" steal these moments.**

For more information about glaucoma, visit [PreventBlindness.org/glaucoma](http://PreventBlindness.org/glaucoma).

## Prevalence of Diabetic Retinopathy in the United States in 2021



**9.6 million people in the United States have diabetic retinopathy.**

Diabetic retinopathy is a complication of diabetes that can cause vision loss or blindness.



[PreventBlindness.org/amd-prevalence-vehss](http://PreventBlindness.org/amd-prevalence-vehss)  
This study was supported by funding from the U.S. Centers for Disease Control and Prevention vision Health Initiative (cooperative agreement U01DP006444, "Research to Enhance the US Vision and Eye Health Surveillance System for the Nation").  
Source: Rahn D, Wittensborn J, Burke-Corle Z, et al. Prevalence of Age-Related Macular Degeneration in the US in 2019. JAMA Ophthalmology. doi:10.1001/jamaophthol.2022.4401. Published online November 3, 2022.



Made possible by funding from:  
**GLAUKOS**  
TRANSFORMING VISION



[PreventBlindness.org/DR-prevalence-vehss](http://PreventBlindness.org/DR-prevalence-vehss)  
This study was supported by funding from the U.S. Centers for Disease Control and Prevention vision Health Initiative (cooperative agreement U01DP006444, "Research to Enhance the US Vision and Eye Health Surveillance System for the Nation").  
Source: Lundeen E, Burke-Corle Z, Rahn D, et al. Prevalence of Diabetic Retinopathy in the US in 2021. JAMA Ophthalmology. Published online June 16, 2023.

# The impact of vision impairment

- Reduced quality of life
  - Increased levels of depression
  - Higher levels of isolation
- Financial burden
  - Under- or unemployment
  - Estimated global productivity loss of 411 billion USD
- Poorer access to health care and possibly eye care

# LOW VISION REHABILITATION

The patients

The basics of an examination



# What is Low Vision Rehabilitation?

- Maximize visual functioning
  - Identification of goals
  - Introduction to assistive devices
  - Training



**Living Well  
With Low Vision**

Prevent Blindness

**Standard of care for people with vision loss**



AMERICAN ACADEMY  
OF OPHTHALMOLOGY®



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# Who comes to low vision rehab clinic?

- Goals or needs related to vision impairment
  - Especially if likely to benefit from magnification
  - Most common complaints in the low vision clinic are reading and driving
- Visual safety
  - Driving
  - Mobility
- Patients requesting (specific or general) additional assistance
  - Goal and task related
  - Disability determination

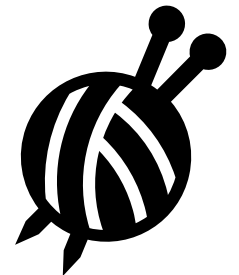
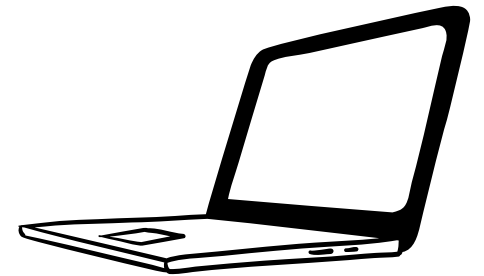
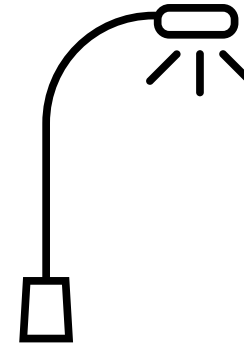
# The basics of a low vision examination

## 1. Case History

## 2. Vision Testing

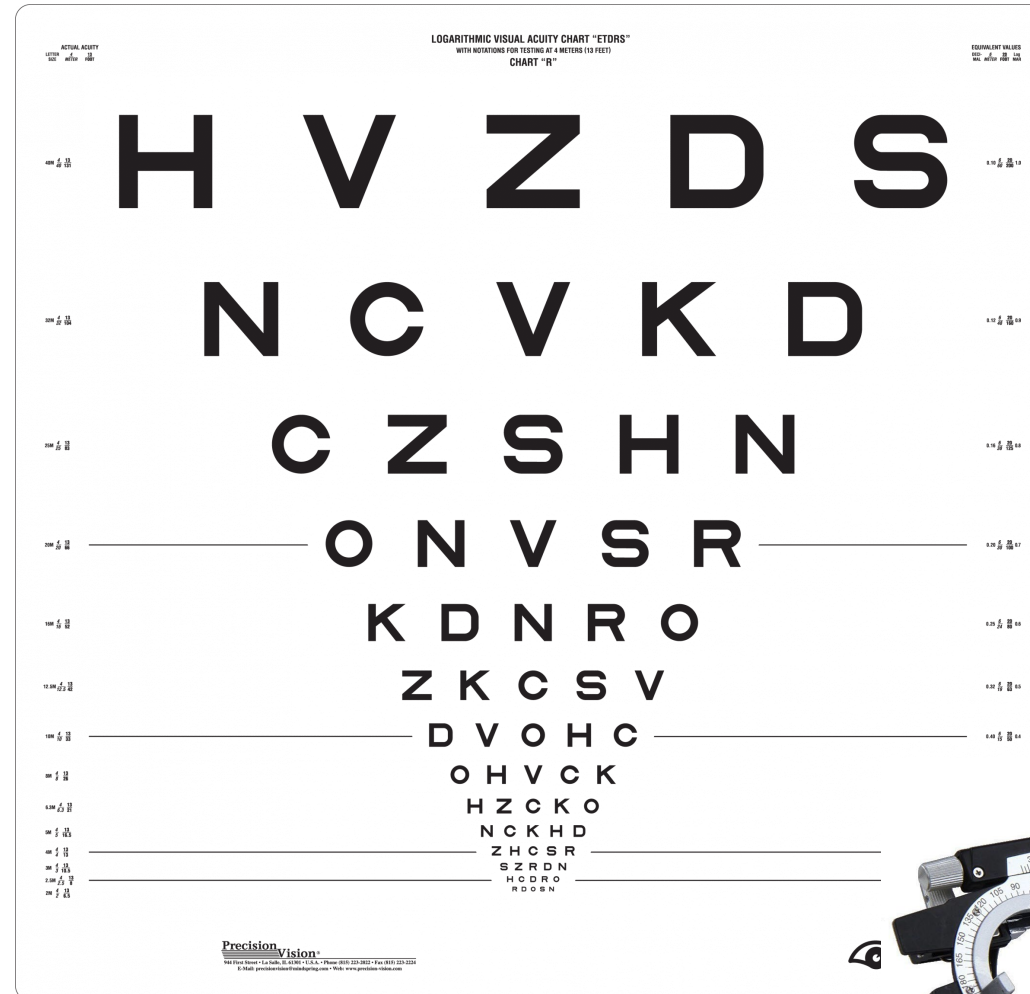
## 3. Device Demonstration

## 4. Extended Discussions



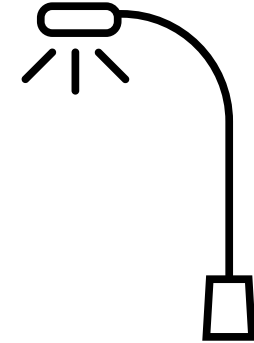
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# The basics of a low vision examination

1. Case History
- 2. Vision Testing**
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MNREAD Acuity Chart		CARD 1	
M size		Snellen at 40cm	logMAR at 40cm
4.0	My father asked me to help the two men carry the box inside	20/200	1.0
3.2	Three of my friends had never been to a circus before today	20/160	0.9
2.5	My grandfather has a large garden with fruit and vegetables	20/130	0.8
2.0	He told a long story about ducks before his son went to bed	20/100	0.7
1.6	My mother loves to hear the young girls sing in the morning	20/80	0.6
1.3	The young boy held his hand high to ask questions in school	20/63	0.5
1.0	My brother wanted a glass of milk with his cake after lunch	20/50	0.4
0.8	I do not understand why the man from the north for the job	20/40	0.3
0.6	Do you know the	20/32	0.2
0.5	Do you know the	20/25	0.1
0.4	Do you know the	20/20	0.0
0.3	Do you know the	20/16	-0.1
0.25	Do you know the	20/13	-0.2
0.2	Do you know the	20/10	-0.3
0.15	Do you know the	20/8	-0.4

Precision Vision®  
www.precisionvision.com

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Cat. No. C400

# The basics of a low vision examination

1. Case History

**2. Vision Testing**

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# The basics of a low vision examination

1. Case History
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*glasses*



# The basics of a low vision examination

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*optical magnifiers: hands  
and stands*





# The basics of a low vision examination

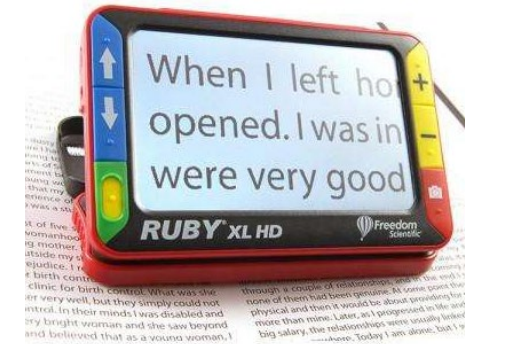
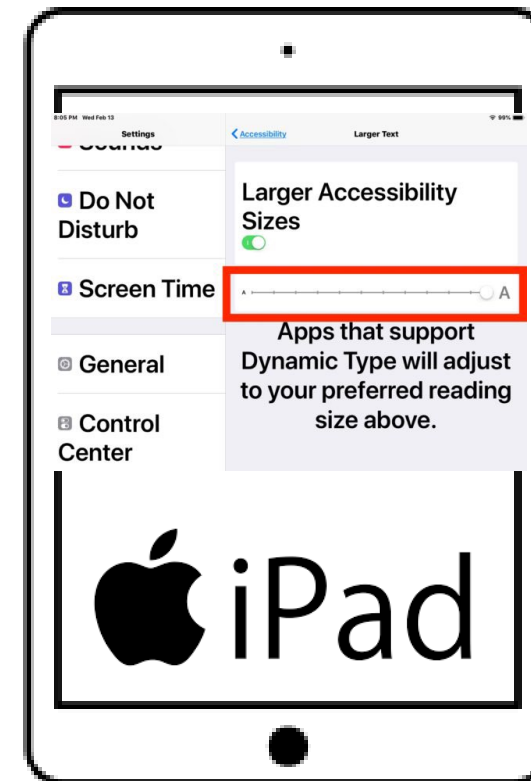
1. Case History

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*electronic magnifiers:  
portable and desktop*



# The basics of a low vision examination

*other / non-opticals*

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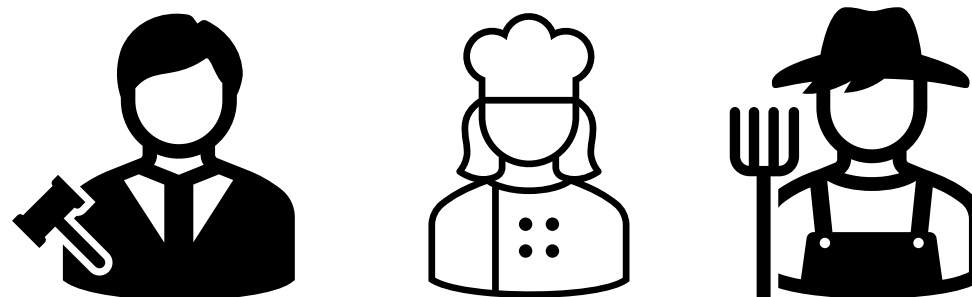
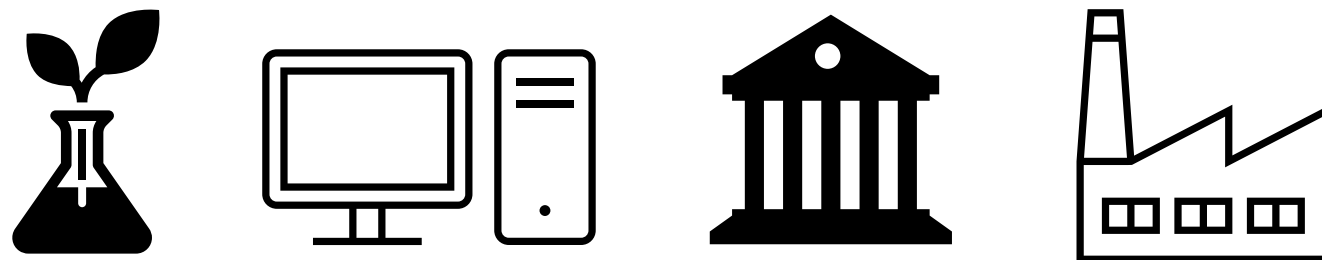
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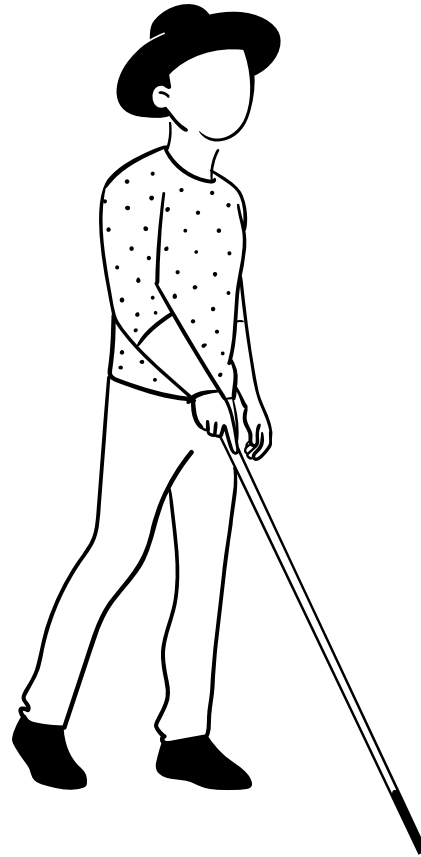
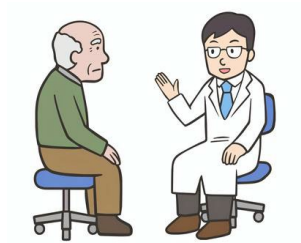
4. Extended Discussions



**Opportunities for Ohioans with Disabilities**

# The basics of a low vision examination

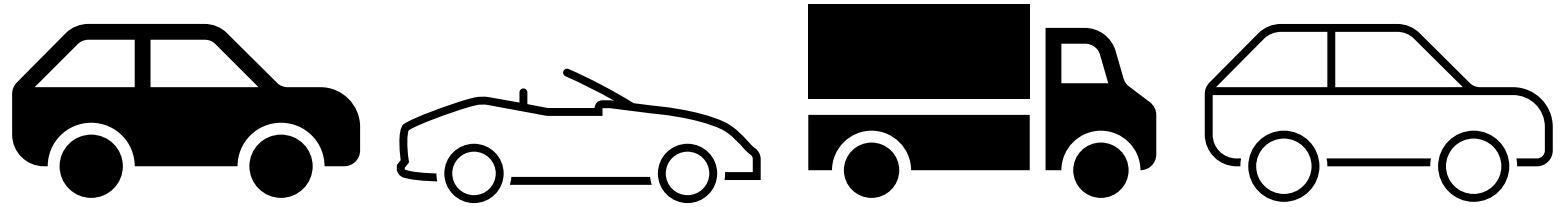
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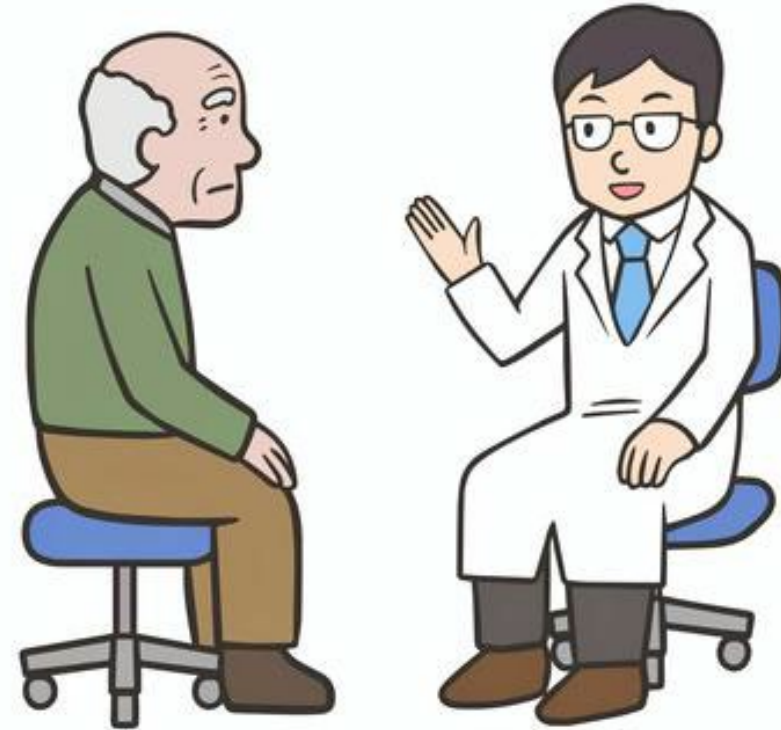
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# The basics of a low vision examination

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# Questions or Comments?

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**Thank you for your attention!**