# The Low Vision Exam

**What is it? Who Needs it? What Comes Next?**

Alexis G. Malkin, OD, FAAO

New England College of Optometry Vision Aware Webinar

March 2021

# What is Low Vision?

* Permanently impaired vision
* Vision loss that cannot be corrected by standard glasses, surgery, medications, or contact lenses
* No magic number to define “low vision”
* Instead based on how the person is functioning
* Most people with vision impairment have some usable vision

# What is Vision Impairment?

Visual Acuity

* + - The letters the patient can see on the eye chart
    - High Contrast/Detailed Vision Visual Function
    - How useful is the vision?
    - What tasks can the person perform with the vision that he has?

# What Causes Visual Impairment?

* Inherited eye diseases
* Acquired conditions:
  + Cataracts
  + Macular Degeneration
  + Diabetes
  + Glaucoma
* Trauma
* Other damage to the visual system (i.e. stroke/TBI)

# Overview of the Eye

# Cataracts

* Clouding of the lens inside the eye
* Symptoms: fogging of vision, glare sensitivity, blurred vision
* Usually treatable with surgery but not always

# Age-Related Macular Degeneration

* Affects the central vision
* More common as people get older
* Usually affects both eyes but may start in one
* Can be wet or dry
* Caucasian>Asian>Black
* Smoking is a big risk factor
* Family history is a risk factor
* Never leads to total blindness

# Diabetic Retinopathy

* Can cause central or peripheral vision loss
* Fluctuations in vision are common with fluctuating blood sugar
* New blood vessels grow leading to potential traction and retinal detachments
* Swelling can occur distorting vision
* Increased risk with increased time with diabetes
* Increased risk with more poorly controlled BS

# Glaucoma

* Group of diseases causing a progressive, irreversible optic neuropathy
* Most cases are caused by open-angle glaucoma (structural definition)
* Highest risk: age over 60, Black or Hispanic, family history
* Starts with NO symptoms even when damage has already occurred
* Leads to loss of peripheral vision first, then can cause total blindness

# What do the numbers mean?

* + - 20/20 “Normal”
    - 20/40 Drive without restrictions
    - 20/60 Read ordinary newsprint
    - 20/70 Eligible for Medicare coverage of low vision rehabilitation services– i.e. home occupational therapy
    - Worse than 20/100 Eligible for blindness-related benefits (legally blind)– i.e. transit services

# Who is affected?

* Older adults (median age is 75)
* More women than men (68% female) present for low vision services

# How are people affected?

* Difficulty seeing detail/reduced acuity
* Difficulty with peripheral vision
* Reduced contrast sensitivity

# How are people affected? Activities

* + - Driving
    - Reading
    - Activities of Daily Living
      * Cooking
      * Cleaning
      * Medication Management
    - General Seeing (i.e. seeing faces)
    - Mobility

# How are people affected? Social Emotional

* Reduced independence
* Increased rates of depression
* Increased social isolation

# What is Low Vision Rehabilitation?

* Terms vary across states, provinces and systems
* Helps the person make the most of his/her remaining vision
* Teaches Other Strategies to Achieve Goals
* Helps Restore and Maintain Independence
* Studies have shown that people who receive vision rehab services have a lower incidence of depression

# What is Low Vision Rehabilitation? continued

* Low Vision Examination including device assessment, glasses prescription and special testing (detailed visual fields, reading speed, scotoma identification)
  + Scotoma = central blind spot
* Independent Living Skills
* Orientation and Mobility Training
* Connection to community resources (talking books, support groups)
* Counseling/Patient Education

# What is a Low Vision Exam?

* Eye and medical history
* Detailed FUNCTIONAL history
* Functional testing
* Evaluation with low vision devices
* Prescription of devices
  + - Rarely insurers will cover the devices
    - LV providers can help you understand what is covered
* Training / Patient Education
* Referral for other services

# What are Low Vision Devices?

* Specific to each person and to each goal
* There is no “one size fits all” solution
* Can include hand magnifiers (both optical and digital)
* Computer technology
* Telescopes
* Binocular systems
* Many others including optical character recognition (text to speech)
* Talking Books
* Apps

# Do not be afraid to ask for help!

* Simple adaptations can make your life much easier
* Start with “common sense” adaptations to your living environment
* Examine your everyday environment carefully and make changes in your surroundings and activities that will help you feel safer, more comfortable, more organized, and more IN CONTROL – despite your vision loss.

Source: “Making Life More Livable,” edited by Maureen A. Duffy, M.S.

# Basic Principles for those with Impaired Vision

* Improve Visibility – Contrast is key!
* Get organized!
* Use Other Senses
* Use Labels
* Safety First
* Occupational Therapy and state blindness services can help

Source: “Making Life More Livable,” edited by Maureen A. Duffy, M.S.

# How do I find a LV specialist?

* State Services or CNIB
* VA Services
* Large ophthalmology hospitals
* Ask vendors/reps at senior center programs or health fairs
* Local chapters of NFB/ACB in the US
* Support Groups

# General Community Resources

* National Library Service/State Talking Books Library
* NFB Newsline
* CNIB in Canada
* Lions Clubs

# Conclusions

* Low vision exams
  + - look at how you use your vision and provide recommendations to make daily life (work, home, etc.) easier for you
    - is a wide range of tools available to help visually and using other senses
* Do not be afraid to ask for help/for a referral for low vision services if you are struggling with your vision