If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.

This handout is for reference only. It may not include content identical to the powerpoint. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.
By the end of this course, the participant will be able to:

- Recognize various visual impairments, and their impact on visual function.
- Recognize how to identify these conditions during a vision evaluation.
- Identify how to proceed with treatment to address functional deficits associated with vision impairments.
- Recognize how to implement appropriate environmental modifications to improve successful participation in various functional/vocational activities.
EYE DISEASES AND CONDITIONS

SOME CAUSES OF VISUAL IMPAIRMENT

- Cataract: Blurred vision, decreased color and brightness
- Macular Degeneration: Central vision blurring/ distortion
- Diabetic Retinopathy: Myriad of symptoms
- Glaucoma: Central and peripheral visual field defects
- Optic Neuropathy: sudden loss of vision
- Optic Neuritis: Sudden loss of vision
- Stroke: visual field defects affecting central and peripheral vision
- Trauma
NORMAL VISION

CATARACT
MACULAR DEGENERATION/
STARGARDT’s MACULAR DYSTROPHY

MACULAR DEGENERATION/
STARGARDT’S MACULAR DYSTROPHY
MACULAR DEGENERATION/STARGARDT’S MACULAR DYSTROPHY

DIABETIC RETINOPATHY
GLAUCOMA/RETINITIS PIGMENTOSA

VISUAL PATHWAY

Homonymous Hemianopsia  Homonymous Quadrantanopsia

Evaluate for presence of left neglect

Training strategies to increase awareness of left visual field/spatial awareness/body awareness.

www.interestingmedical.com

archpsyc.jamanetwork.com
OPTIC NEURITIS

- Often associated with Multiple Sclerosis
- Usually monocular but can be binocular
- Central vision loss: often resolves but can be permanent
- Can have repeated occurrences
- Treatment: Often none; IV steroids
PRESBYOPIA

- The inability to see clearly at near
  - Due to decreased accommodation
    - Lens of eye becomes harder, less resilient

- Corrected with reading lenses
  - The stronger the bifocal, the closer the material needs to be held

TRAUMA

- Ocular Trauma
  - Retinal Detachments
  - Blunt Eye Traumas
    - Various visual field defects with possible central vision loss

- Optic Neuropathies
  - Minimal to total vision loss
- Cerebral
  - Defects depend on area of brain affected as with stroke

- Treatment
  - Varies from surgical to none

www.edgarsnyder.com
www.eyedoctorguide.com
www.edgarsnyder.com
TRAUMA

- Oculomotor impairments
- Binocular Deficiencies
- Focusing Issues
- Neurological impact associated with open/closed head injury-
  Processing/Interpretation of visual input

CRANIAL NERVE PALSIES

- Occurs as a result of a Traumatic Head Injury or CVA.

- 3rd Cranial Nerve Palsy- causes eyelid ptosis (drooping of lid, which can obstruct vision); dilated pupil (creates increased glare sensitivity); paralysis of medial rectus muscle (eye turns outward).

- Functional Implications- causes horizontal diplopia (double vision) when looking towards intact side; glare sensitivity; difficulty with performing NV tasks such as reading and writing; computer issues, etc.
3rd Cranial Nerve Palsy

Right eye: Downward and outward gaze, dilated pupil, eyelid manually elevated due to ptosis

Left: Normal

CRANIAL NERVE PALSESIES

- 4th Cranial Nerve Palsy - paralysis of superior oblique muscle (eye is unable to look down and in)

- Functional Implications - causes vertical diplopia. Person tends to tilt their head opposite the palsied side to compensate/minimize the double vision. Causes challenges with safe mobility, and NV functional tasks.
4th Cranial Nerve Palsy

6th Cranial Nerve Palsy - paralysis of lateral rectus muscle (eye turns inward)

Functional Implications - lateral diplopia when looking towards the side of the paralyzed eye. Person has impairments with mobility issues and several other functional tasks.
6th Cranial Nerve Palsy

- Can be Congenital (i.e.- Strabismus) or Acquired

- Causes- Muscle imbalance or lack of coordination between extraocular muscles; paresis of muscles (neurological cause)

- Can mimic a cranial nerve palsy/paresis
PHORIAS/TROPIAS/CONVERGENCE INSUFFICIENCIES

- Causes mis-alignment of eyes and interferes with binocular vision; can impair depth perception

- Can have a subtle or more significant impact; subtle impact can manifest as fatigue/focusing/attentional deficits

www.eyecareprofessionals.com
CONVERGENCE INSUFFICIENCY

TROPIAS/PHORIAS

**Medical term** | **Definition of term** | **Common term**
--- | --- | ---
Esotropia | Eye turned in | Cross-eyed
Exotropia | Eye turned out
Hypertropia | Eye turned up
Hypotropia | Eye turned down

**IMPORTANT!**

- Patient must see an Ophthalmologist or Optometrist prior to OT Evaluation.
- There are several specialists: Neuro-Ophthalmologists; Neuro-Optometrists; Low Vision Specialists, etc.
VISION EVALUATION

The Most Important Aspects:

- Oculomotor Function
- Binocularity
- Acuity
- Contrast sensitivity function
- Visual field integrity
- Color vision
SECONDARY OBJECTIVES

Other changes in visual function: usually informally assessed by questioning

- Dark light adaptation
- Sensitivity to glare and light (photophobia)
- Presence of phantom vision in patient’s with low vision conditions (Charles Bonnet Syndrome)

COMPONENTS OF VISION

- **Resolution**—ability to see detail
- **Contrast**—ability to see foreground from background
- **Field**—ability to see all objects in front of a person (up to about 160º)
- **Color**—ability to differentiate colors
COMPONENTS OF VISION

- **Glare modulation** — the capacity to regulate light and control glare.

- **Interpretation** — correctly interpreting the information the brain receives from the eyes.

The eye conditions or diseases that cause low vision affect one or more of these 6 elements of vision.

VISION EVALUATION

- **Functional History**: ADL problem areas
- **Social History**:
  - Living situation, responsibilities, support, etc.
- **Vocational Status**:
  - Work responsibilities/tasks
- **Patient Goals**:
  - Reading, writing, financial management, mobility, community involvement, vocational/avocational pursuits, etc.
VISUAL IMPAIRMENT

- **Moderate:** 20/70 – 20/160 (<20/60)
  - Able to obtain state services
- **Severe:** 20/180 – 20/400 (<20/160)
  - Or 20 degrees of visual field
- **Profound:** 20/500 – 20/1000 (<20/400)
  - Or 10 degrees of visual field
- **Near total blindness:** <20/1000
  - 5 degrees of visual field

**LEGAL BLINDNESS:** 20/200 or worse in the better seeing eye with best correction or ≤ 20° VF
- Government term- entitles one to tax benefits

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**VISUAL ACUITY THE NUMBERS**

- **20/20** “Perfect Vision”
- **20/70** LP; day time license only
- **20/100** Can write; can’t read newspaper
- **20/400** Can function in familiar areas
- **20/1400** Hard to function without aid
- **NLP** Totally blind
- **LP** Can make out forms, objects, but no details

VA = Visual Acuity
VF = Visual Field
LP = Light Perception
NLP = No Light Perception

VA ≥ 20/200 w/correction or VF ≤ 20°
LEGAL BLINDNESS
LOW VISION CONDITIONS

The vision cannot be improved by regular glasses.

The person is not totally blind.

LOW VISION CONDITIONS
DECREASED RESOLUTION AND/OR CONTRAST

Cataract  Macular Degeneration  Diabetic Retinopathy

www.theinterpretersfriend.org
Central Scotoma (missing area in detail vision)

Difficulties are dependent on placement of scotoma.
- Decreased central detail: inability to read.
- Inability to gather appropriate environmental information.
- Decreased hand-eye coordination: inability to stay on line when writing; difficulty with pouring, cutting, measuring, etc.
- Lack of depth perception: difficulties with reaching, pouring and safe mobility.
Peripheral Scotoma
Difficulties dependent on the size and location.
- Inability to gather environmental information for safe mobility
  - Walking
  - Driving
  - Other mobility activities
- Inability to find beginning or end of line when reading or writing

Ocular Motility
- Movements of the eyes
  - Move together—yoked
  - Defects create
    - Diplopia (double vision)
    - Loss of depth perception
    - Inability to scan appropriately
    - Inability to achieve/maintain binocular fusion
    - Visual strain/fatigue/focusing issue
UNDERSTANDING HOW VISUAL IMPAIRMENTS AFFECT ADLS

- Ocular Motility restriction
  - Vertical
    - Inability to move the eyes when reading (bifocal)
    - Inability to move from one line to next line when reading
    - Mobility/safety issues
    - ADL Challenges
  - Horizontal
    - Inability to scan the environment
    - Inability to stay on line when reading
    - ADL Challenges

Oculomotor Assessment

www.medical-dictionary.thefreedictionary.com  www.opt.indiana.edu
Test for Phorias/Tropias

- Cover/Uncover Test
- Alternate Cover/Uncover Test

You Tube Video Link- (watch on your own)
https://www.youtube.com/watch?v=PRa7mPx2XVster

Important Consideration:

- If the dominant eye has the poor visual acuity, then the individual with tend to struggle in performing everyday functional tasks (i.e.- reading, writing tasks). Important consideration.

- Dominant eye- is the preferred eye an individual would historically use to look through viewfinder of a camera, view through a microscope or telescope, etc.
VISION ACUITY TESTING

This information should come from the ophthalmologist or optometrist.

Individual should wear corrective DV/NV spectacles if available.

- Visual Acuity
  - Near: Can be in 20/?? or Jaeger or M notation
  - The larger the number the larger the print
  - Distance: Will be in 20/?? notation

20/?? OD (right eye)
20/?? OS (left eye)

DISTANCE VISION ACUITY TESTING

Distance Vision:

Must be tested at a specified distance

Client can turn head, but not move closer to chart

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”
NEAR VISION ACUITY TESTING

Near Vision:

Check at 14 inches or 40 cm. Chart should indicate.

If you move chart closer then you must notate the distance.

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”

Mn Read Test

My father takes me to school every day in his big green car

Everyone wanted to go outside when the rain finally stopped

They were not able to finish playing the game before dinner

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”
LOW VISION EVALUATION

Contrast Sensitivity Testing

- Patient may have good acuity but marked difficulties with activities due to decreased contrast

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”

To download a small version free
http://www.psych.nyu.edu/pelli/pellirobson/

Vision Sciences Research Corporation
http://contrastsensitivity.net

Contrast Sensitivity Function

Contrast Sensitivity Function
Peripheral Visual Field

The part of the vision that occurs outside of central gaze.

Peripheral Visual Field Awareness

Informal Testing

www.clicktocurecancer.info

www.webmd.com

Formal Testing

www.clampoptometrists.com
Gray Scale Diagram

- Sensitivity of field is described using different shades of gray
- Light shading = high threshold, can detect small target
- Black shading = no response to target

www.retinavitreous.com.au
Gray scale showing a right hemianopsia in the right eye

Absolute Scale Diagram

- Uses symbols to describe sensitivity of field
- One symbol indicates loss
- Another symbol indicates decreased sensitivity
  - Each perimeter will have its own legend

Black squares represent points where the target was not seen; the client in this example has a left hemianopsia
DEPTH PERCEPTION

The visual ability to see the world in 3 dimensions.

Note: Takes about 6 months to adapt to monocular depth cues.

www.psy.ritsumei.ac.jp
www.bernell.com

Depth Perception

www.psy.ritsumei.ac.jp
Color Perception

Color Perception - Color test - usually red/green are tested so a dichromatic loss would be recorded.

If acquired color vision loss, could be blue/yellow such as in glaucoma - causing different challenges.
Questions to Consider

- What limitations is the employee with the vision impairment experiencing?
- How do these limitations affect the employee and the employee’s job performance?
- What specific job tasks are problematic as a result of these limitations?
- What accommodations are available to reduce or eliminate these problems?

Questions to Consider

- Are all possible resources being used to determine possible accommodations?
- Has the employee who has the vision impairment been consulted regarding possible accommodations?
- Do supervisory personnel require training with regards to employees who have vision impairments?
Questions to Consider

- Once accommodations are in place, would it be useful to meet with the employee who has a vision impairment to evaluate the effectiveness of the accommodations and to determine whether additional accommodations are needed?

- Does individual require referral to a Rehab or Vocational Counselor for career exploration or vocational training skills?

ENVIRONMENTAL MODIFICATIONS

- LIGHTING

- CONTRAST

- GLARE MANAGEMENT

- ORGANIZATION
**LIGHTING IN THE WORKPLACE**

- Adjusting wattage of overhead ambient lights
- Task or alternative lighting
- Full spectrum lighting
- Flicker free lighting
- Tinted optical wear/glare filters
- Relocation of workstation
- Window treatments

**LIGHTING**

Ambient: Illuminates the room
- Ceiling lights
- Table lamps

Task: Illuminates your task
- Opaque shades
- Adjustable
- Shines directly on your work

The challenge is to improve/alter illumination without increasing glare.
LIGHTING IN THE WORKPLACE

Use of Overhead & Tabletop Lighting

Insufficient Lighting

LIGHTING in the workplace

buildingservice.com

www.electriciansblog.co.uk

Pendant Style Lighting - LED Bulbs

www.pinterest.com
**LIGHTING IN THE WORKPLACE**

Augmentative Indoor Lighting

Use of Hat with Visor & Sunglasses to Manage Glare

LED Underhood Light Bar - Best Way to Light Up Your Car - Eastwood

www.thorzt.com

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**ENVIRONMENTAL CHANGES LIGHTING**

- **Incandescent**
  - Least expensive, most common, phased out now; yellowish light;
  - Full Spectrum, “true” light

- **Halogen**
  - More expensive, common, white light, very hot, least cost efficient

- **Fluorescent**
  - More affordable and common now, ranges from soft to daylight to bright (yellow to white) light, cost efficient

- **LED**
  - Light emitting diode, most expensive, white light, no heat, most cost efficient

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**ENVIROMENTAL CHANGES**

**LIGHTING**

- **Positioning critical:**
  - Over the shoulder
    - Can reflect off the back of glasses and create glare
    - Otherwise good position
  - In front of you
    - Shines directly on paper
  - Shade needs to be opaque
  - Shade needs to cover bulb

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**CONTRAST**

- Can be poor...
- Can be good...
- Can be poor...
- Can be good...
- Can be poor...
- Can be good...
ENVIRONMENTAL CHANGES

CONTRAST

Poor Contrast

Good Contrast

The difference in colors of objects that are side by side.

The larger the difference, the easier to see.

GLARE ISSUES

www.greenlightwf.com
GLARE MANAGEMENT IN THE WORKPLACE

Significant Glare Issues

MOTORIZED SOLAR SHADES

www.spec-net.com.au

www.archdaily.com

GLARE MANAGEMENT IN THE WORKPLACE

Window Tinting

www.windowfilmkansascity.com
GLARE MANAGEMENT OF COMPUTER

www.shop3m.com

www.newegg.com

ENVIRONMENTAL CHANGES
GLARE CONTROL

- Glare issues are very individual
  - Wrap around glasses are best
  - Eyeglass tinting
  - Corning lenses
  - Visors
ORGANIZATION

- Create systems that work for the client.
- Identify consistent placements.
- Group like items.
- Conserve visual energy.

www.listaintl.com

ORGANIZATION IS KEY

Before

After

anchorsawayorganizers.com
To help you deal with this problem, the 20-20-20 rule suggests that after every 20 minutes, the computer user should take a break for at least 20 seconds and look at objects that are 20 feet away.

www.guptaranjan.com

www.webmd.com

ORIENTATION & MOBILITY
ORIENTATION & MOBILITY

- Service animal and/or mobility aid if appropriate (e.g., cane, electronic aid)
- Mobility and orientation training
- Detectable warning surfaces
- Colored and/or textured edges on stairs
- Improved area lighting
- Traveling/evacuation partner
- Tactile map of evacuation and common routes
- Talking landmark or Pedestrian GPS (smart phone)

IDEAL FEATURES:

- Even illumination
- Contrasting colors
- Remove tripping hazards
- Non-reflective floor surface
- Well marked at eye level (Braille)

www.usconstructionanddesign.net
SOMETIMES YOU CAN’T EASILY ALTER AN ENVIRONMENT....

Hallway of the White House
www.presleyspantry.com

ORIENTATION & MOBILITY STAIRS

Low Contrast  High Contrast  Low Contrast  Good Contrast

**ORIENTATION & MOBILITY**

**STAIRS**

- Install grab bars where they may be needed.
- Light stairwells clearly.
- Make certain that stairway railings extend beyond the top and bottom steps.
- Mark landings in a highly contrasting color.

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**ORIENTATION & MOBILITY**

**TACTILE FLOORING**

[Image of a floor with tactile flooring]

www.constructionreviewonline.com
Trailing Techniques with back of hand touching surfaces
Perimeter & Grid Orientation
Squaring Off

The Trailing Technique can help you locate a door, walk in a straight line, or detect the position of objects in front of you on the same side of your body as your extended arm.

This technique can provide you with useful information about everyday objects, obstacles, and potential hazards that you may encounter as you move within your environment.
INDOOR ORIENTATION & MOBILITY
Trailing Technique

- It can also provide you with a feeling of security while you walk, by allowing you to remain in contact with walls, countertops, desks, tables, or other types of stationary surfaces.

- Not a reliable method to assist with detecting surface drop-offs.

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INDOOR ORIENTATION & MOBILITY
Trailing Technique Method

- Begin along a straight stretch of wall in an uncluttered area. Stand with the side of your body about 6 inches from the wall.

- Extend your hand in front of you at approximately hip level and angled downward toward the floor, about 12 inches from your body.

- The back of your hand should be in contact with the wall, with your fingers slightly cupped toward your palm.

- This will prevent you from injuring your fingers if they make contact with an object. Your fingers will also act as "bumpers" to warn you about objects that you may encounter.
Walk forward slowly while holding your arm in this position, keeping the backs of your fingers, especially the knuckles of your ring and "pinky" fingers, in contact with the wall.

Make sure that the back of your hand is always in contact with a surface while you are moving.
ORIENTATION & MOBILITY TRAINING

www.career.iresearchnet.com

TREATMENT FOR VARIOUS BINOCULAR FOCUSING DEFICIENCIES

www.haysisd.net

continued
PARTIAL/TOTAL OCCLUSION

Possible Reasons:

- Trauma/Injury
- Strabismus or Cranial Nerve Palsies
- Binocular Deficiencies - Diplopia (double vision)
- Treatment of Retinal Rivalry issues to strengthen non-dominant eye (better seeing eye)

TOTAL OCCLUSION

Used in mgmt. of amblyopia, diplopia, retinal rivalry, etc.

www.en.wikipedia.org
PARTIAL OCCLUSION

MGMT. OF LATERAL DIPLOPIA

ALLOWS FOR FOCUS OF CENTRAL VISION FOR READING TASKS, ETC.

MGMT. OF MEDIAL DIPLOPIA

ALLOWS FOR SAFE FUNCTIONAL MOBILITY TASKS

Treatment for Convergence Insufficiency/Binocularity Impairments (Exophorias)

www.optometricmanagement.com

homevisiontherapy.com
Convergence Exercises
Pencil Push-Ups

www.youtube.com

Marsden Ball

www.oepf.org

contests.nppa.org

www.visiontherapystudio.com
ECCENTRIC VIEWING TECHNIQUES

ECCENTRIC VIEWING (EV) TRAINING

- Used when patient has central visual field defect.
- Can also be used for hemianopia defects.
ECCENTRIC VIEWING (EV) TRAINING

- Teaching the patient to obtain visual information using peripheral vision.
- Visual acuity decreases as you move away from the macula (central vision).
- Use subjective feedback from the patient. No subjective improvement means less/or no motivation from patient.
- 20/80 or better, usually no subjective improvement with EV.
- EV position in direction of visual field defect.

SCANNING TECHNIQUES
SCANNING

• Techniques used to train and enhance eccentric viewing and prepare the patient for reading.

• Used for other visual field cuts.

SCANNING TASKS- SCAN IN DIRECTION OF VISUAL IMPAIRMENT

RIGHT HEMIANOPSIA

LEFT HEMIANOPSIA

www.sightscience.com
**READING TASKS WITH HEMIANOPSIA**

- Step back for larger field of view.
- Teach scanning techniques.
- Demonstrate reverse telescopes.

**THERAPEUTIC APPROACH for reduced visual field**

- Step back for larger field of view.
- Teach scanning techniques.
- Demonstrate reverse telescopes.
LOW TECHNOLOGY ADAPTATIONS

LOW VISION TECHNOLOGY SOLUTIONS

www.caretect.at
www.aliexpress.com
www.viziflex.com
www.visionaware.org
www.muchbuy.com
www.cclc.vic.gov.au
LOW TECHNOLOGY ADAPTATIONS MARKING SYSTEMS

There are endless possibilities

- Increase contrast and texture
- Can be applied anywhere
- Important to perform in conjunction with client

www.alamy.com

www.maxiaids.com

OPTICAL DEVICES

www.afb.org
WORKING DISTANCE

- The stronger the lens, the shorter the working distance.
- The weaker the lens, the greater the working distance.
- The best working distance is what works for your patient, as prescribed by their eye care professional.

OPTICAL DEVICES

Devices with a lens
- Magnification Glasses
- Non-illuminated and Illuminated Magnifiers
  - Hand-held
  - Stand
- Telescopes
- Electronic devices

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”
OPTICAL DEVICES

Half eyes
Prismatic half-eyes
Microscopic glasses

PRISMS - How They Work

Optically, the prism bends light rays towards the base causing an apparent shift of the image towards the apex from the viewpoint of the observer. This provides a mismatch between the information received via the visual pathways and the information from the vestibular and proprioceptive pathways.

Prism causes an object to appear at a different location in respect to its actual placement. The patient must attend to these sensory inputs simultaneously and make adjustments to perform the therapy tasks.
Base-in prisms can be used to artificially align the eyes for reading, by artificially bringing the image centrally, in patients who have convergence insufficiency issues, etc.
OPTICAL DEVICES

- **Telescopes**
  - For near or distance viewing
  - Dependent on external lighting
  - Difficult to use
    - for object location
    - head movements are magnified
    - Cannot walk while wearing them

HIGH TECHNOLOGY ADAPTATIONS

Covered in detail in “Low Vision Rehabilitation: Assessment & Treatment Strategies in Older Adults”
Desktop Video Magnifier

Nu Eyes  E-Sight

continued
Auditory/Optical Character Recognition Devices

Text to Speech Scanners
Microsoft/Apple built-in modifications under Control Panel
  - Increase font size of print/magnifier feature
  - Adjust mouse/cursor symbols size and speed
  - Reverse contrast to improve visibility

Microsoft Accessibility: [www.microsoft.com/enable/](http://www.microsoft.com/enable/)

COMPUTER ACCESSIBILITY

Products on the Market:

- Various illuminated/large size/high contrast keyboards available
- Larger monitor screens 22” and beyond
- Mouse magnifiers- very inexpensive

Little tip- Hit “Control” and roll wheel on mouse simultaneously to temporarily enlarge print on monitor on some computers.

--Zoom Text- Ai Squared- screen magnification software- www.aisquared.com (free download of 60 day trial software available on website)

- Magic- Freedom Scientific- screen magnification software- www.freedomscientific.com

- Jaws- Freedom Scientific screen reading software www.freedomscientific.com
COMPUTER ACCESSIBILITY

ZoomText ImageReader 1.0
ZoomText ImageReader is a software and camera solution that makes printed text accessible to people who are visually impaired, including books, magazines, business documents and more. Put the printed item under the included document camera, snap a picture, and a few seconds later the text appears in large, high-contrast.

www.viewfinderlowvision.com

COMPUTER ACCESSIBILITY

www.afb.org

www.indiamart.com
**DRIVING**

- Shift change to daylight hours
- Driver (e.g., hired driver, volunteer, coworker)
- Public transportation or carpool
- Para-transit services
- Modified or flexible work schedule to meet transportation needs
- Reassignment
- Telework

**REFERRALS**

- State Division of Vocational Rehabilitation
- State Commission for the Blind
- Transportation Resources

* As appropriate
A custodian with low vision in a public school setting was having difficulty viewing the carpeted area he was vacuuming. A lighting system was mounted on the custodian's industrial vacuum cleaner and the custodian was provided a headlamp.
**2nd EXAMPLE**

A typist with low vision was having some difficulty distinguishing among certain character keys. She was provided with a glare guard for the computer monitor and large print keyboard labels, which significantly enhanced accuracy.

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**3rd EXAMPLE**

A carpenter is having difficulty in performing his daily work activities, and is unable to access his tools.

- Braille/tactile labels or indicators
- Talking meter, caliper, stud finder, level, tape measure
- Tactile ratchet-action wrench
- Lighted tools
- Head lamp/additional lighting sources
- Contrast techniques

(continued)
CASE STUDY

• JR is a 51 y/o male with diagnosis of Retinal Detachment OU from a childhood trauma before the age of 10.

• His left eye (OS) was able to be re-attached, however his right eye (OD) was not.

• DVA is NLP OD; and 10/63 OS

• NVA is 20/60 uncorrected OS
CASE STUDY

- He lives with his wife in a raised ranch and works full time for Verizon as a Customer Service Representative, sitting in front of a computer 8-10 hours per day.

- He has been having increasing issues with eye strain issues, and fearful to approach his employers to discuss adjustments to his schedule or workstation.

CASE STUDY

- OD prescribed: 5X HH LED magnifier and a pair of +8D aspheric OS spectacles for NV tasks.

- Referred for Low Vision Occupational Therapy services- attended 5 sessions total.
Recommendations made:

- Glare Filter for Computer Screen
- Large Size Illuminated Keyboard
- Alter Light at WorkStation
- Obtain Computer Enlargement Software
- Adjust Work Schedule/Hours
- Build in short “eye rest breaks” during day (20/20/20)

Recommendations sent to patient’s employer

Follow Up - 3 Months Later -

- JR reported employers had made accommodations on his behalf
- JR is able to complete his work functions with greater ease.
Thank you for your Time!

Questions???

E-mail: Elsa.Zavoda@gmail.com