Fourteen Tips To Help Maintain Independence Despite Visual Impairment

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What is Low Vision?

- Any chronic uncorrectable visual impairment that limits daily functioning
  - Vision cannot be corrected with medication, surgery, contact lenses or "regular eyeglasses"
Independence Despite Visual Impairment

- Once diagnosed with an uncorrectable vision problem, it is hard to get on with your life and continue your daily activities if you do not have the correct tools and know the tricks involved in dealing with visual impairment.
Independence Despite Visual Impairment

- Decreased visual acuity does not have to lead to a loss of independence.
- Never assume that you cannot perform a task because of vision loss.
- Often simple changes in the home along with the use of special low vision glasses and products and proper organization can allow the person with visual impairment to live as they had been living.
Start Low Vision Rehabilitation
When Vision is Still Relatively Good

- It is much easier to use low vision aids and continue to use them if you start using them when you don’t need a lot of magnification.
- You may not want to wait until your eyes are “stable”.
  - Your eyes may stabilize in a month or 5 years.
    - What will you do if you cannot read or take care of your daily tasks during that time?
  - There are many inexpensive solutions to help you perform your daily tasks while you are waiting for your vision to stabilize.
Common Myths

- Myth: Losing vision is just part of getting older
  - Some normal changes in vision occur as we get older, however, these changes do not lead to low vision
  - Low vision or visual impairment results from eye diseases such as macular degeneration, glaucoma and diabetic retinopathy

- Myth: You can damage your vision by using your eyes

- Myth: You can preserve your vision by not using your eyes.
  - You cannot make your vision better or worse by reading or performing other visual tasks.
COMMON MYTHS

Myth: Reading glasses cannot be made for my eyes
- If you can read with a magnifier, eyeglasses can be made for reading
- Most eye doctors do not prescribe these glasses and tell patients that glasses cannot be made. These doctors are talking about “regular eyeglasses”
- You must see a doctor who specializes in low vision rehabilitation for special low vision glasses
Definition of Legal Blindness

- The term “legally blind individual" means an individual whose
  - (1) central visual acuity cannot read any letter on the 20/200 line in the better eye with best correction, or
  - (2) that the widest diameter of the visual field subtends on angle no greater than 20 degrees.

- Don’t let the term legal blindness scare you into thinking you are blind

- Legal definition, not a functional definition
  - Most people who are classified as legally blind have a lot of remaining vision and will benefit from a low vision evaluation.
You do not need 20/20 vision to function

- Menu at McDonald’s requires 20/80 vision
- Microwave controls require approximately 20/100 vision
- Newsprint requires 20/50 vision
- Grooming requires 20/50 – 20/100 vision
- Independence is threatened when vision falls below 20/60
  Most people will need special eye glasses or some form of magnification at this point
TIP NUMBER 1

MAKE WHAT YOU WANT TO SEE LARGER

There are 3 ways to make things larger
Relative Distance Magnification

- **Relative Distance Magnification:**
  - Object is brought closer to the eye
  - Reading glasses: the object must be brought closer to the eye to be in focus.
  - Move closer to the television
    - Myth: Sitting close to the television will damage your eyes. This is an “old wives tale”. Sit as close as you need to see the picture.
Television Viewed at 14 Feet
Television Viewed at 3 Feet
Relative Size Magnification

- **Relative Size Magnification**: Object is made larger.
  - Large print books
  - Kindle or Nook
  - Large print checks
  - Larger Television
  - Write larger
Relative Size Magnification

- Bold lined paper
- Felt tip pen with black ink is much easier to see
Relative Size Magnification

- Bold print on white label attached to medicine bottle
- Put bold labels on groceries before they are put away
Relative Size Magnification
Relative Size Magnification
Relative Size Magnification
Relative Size Magnification
Relative Size Magnification
Computer Technology

- With the correct technology, all visually impaired people can use a computer
- Use a larger monitor
- Both Windows and Apple operating systems have settings for people with decreased vision
- Windows Mouse with magnifier
- Large Print (LP) Software with or without speech output
Relative Size Magnification
Angular Magnification

- **Angular Magnification**
- Object is not changed in position or size, but an optical system is placed between the object and the eye making the object appear larger
  - Hand magnifier for near vision
  - Telescope for distance vision
  - Electronic Magnification for distance and near vision
Angular Magnification
Hand Magnifiers

- The stronger the magnifier, the smaller the lens
- Always use an illuminated magnifier
  - LED Illumination
Angular Magnification
Stand Magnifiers
Angular Magnification
Telescopes
Magnification at Distance

- Spectacle mounted: permanent mount or clip-on
- Hand held with either neck cord or finger ring
- Used for computer, music, TV - distance or intermediate tasks
Magnification Through a Telescope
Angular Magnification
MultiLens Vidi Telescopic System

What do you want to do?
Angular Magnification
DFV Telemicroscope

- Telemicroscopes are used for near tasks
- Similar to the telescopes that a surgeon or dentist uses
- They give a greater working distance than the comparable power of reading glasses
Angular Magnification
Eschenbach Max TV

- Pre-made
- Very popular product
- Great for TV viewing
Bioptic telescopes allow many visually impaired individuals to drive. In Arizona, a person may have up to 20/200 vision and be legally drive when using bioptic telescopes.
Angular Magnification
Ocutech 3X Mini Bioptic Telescope
Angular Magnification
Video Magnification (CCTV)
Advantages of a Video Magnifier

- Magnification up to 84X
  - Special low vision glasses and magnifiers magnify up to 20X (+80 diopters)
  - Standard bifocals or drug store readers go up to +3 diopters (less than 1X)
- Allows sufficient reading speed to make continuous text meaningful at high levels of magnification
- Image polarity can be reversed increasing contrast and decreasing glare
- Easily and instantly converts any material to large print
Angular Magnification
EVS Acrobat
Angular Magnification
EVS Max Camera
Angular Magnification
Portable Video Magnifiers
TIP NUMBER 2

INCREASE TASK ILLUMINATION
Lighting

- An elderly person requires nearly three times as much light as a 20 year old.
- A person who is visually impaired will need even more lighting.
- Use gooseneck lamps, flashlights and illuminated magnifiers.
  - Task lamps will provide the needed light without causing glare.
Increase Task Illumination
Day Light Bulbs

Standard Light  OttLite

Meeting @ 10:30
Bring Lighting within 1 Foot of Print

- Top photo ... 100 watt can flood lights 12 feet above counter top

- Bottom photo ... same flood lights with 75 watt task lamp 12 inches from page
Bring Lighting within 1 Foot of Print
Increase Task Illumination
Desk Lamp with Magnifier
Increase Task Illumination
Portable Task Lamps

- Take portable, rechargeable lighting to the restaurant so that you can see your food.
- Take to card game, bingo, or crafts class to add light to your task.
Portable Task Lighting
Task Lighting
Task Lighting
Task Lighting
TIP NUMBER 3

DECREASE GLARE
Decrease Glare

- Glare can further reduce vision and cause eye fatigue
- Decrease glare
  - Lighting
  - Windows
  - Sun
Decrease Glare

- Sun tints
- Amber lens tints
- Transitions
- Drive Wear Lenses
- Fitovers
- Polaroid Lenses
- UV Coatings
- Anti-reflection coatings
- Pin-hole contact lens for aniridia patients
- Hats, caps, visors
- Yellow acetate filters over shiny pages
- Lighting from behind
- Frames with sideshields
Amber or Yellow Tints Cut Glare & Enhance Contrast
Fitover Style Eyewear with Side Shields
TIP NUMBER 4

ENHANCE CONTRAST BETWEEN WHAT YOU WANT TO SEE AND ITS SURROUNDINGS
Contrast

- Most people with visual impairment see better if objects are black and white.
Enhance Contrast

- A white coffee cup offers more contrast to the coffee than the darker cup.
  - This will make seeing the liquid level easier.
Enhance Contrast
Enhance Contrast & Cut Glare
Enhance Contrast
Label Appliances
Enhance Contrast
Enhance Contrast

- Do not use heavily decorated plates as food becomes difficult to identify
- Do not use clear glasses or dishes as they become invisible
TIP NUMBER 5

MAKE SURE YOU ARE USING THE CORRECT MAGNIFICATION PRODUCT AND PRODUCT POWER FOR THE TASK
Use the Correct Product

- Not all magnifiers are the same
  - Using the wrong power magnifier will result in failure
    - Similar to wearing a friend’s eyeglasses – you cannot see with eyeglasses in the wrong prescription or a magnifier in the wrong prescription
  - Do not buy your magnifiers or reading glasses at the drug store or Wal-Mart
  - Have your eye doctor prescribe the correct magnifier, eyeglasses or telescope for reading or for a specific task
TIP NUMBER 6

LEARN TO USE YOUR MAGNIFICATION PRODUCTS CORRECTLY
Always Use the Proper Lighting
Reading with a Microscope
Strong Reading Glasses

- The stronger a pair of reading glasses, the closer the reading material must be held to the eye
- If you can read with a magnifier, you can read with eyeglasses
- Eye glasses can be made up to +80 diopters
  - Standard drugstore or the standard bifocal power is +2.50 to +3.50
By holding the magnifier close to your eye, you will obtain a larger field of view and see more of what you want to read.

- This will increase reading speed.
TIP NUMBER 7

LOW VISION GLASSES OR PRODUCTS ARE OFTEN TASK SPECIFIC
You may need more than one low vision aid to accomplish all tasks

- Low vision products can become very task specific
  - Normally sighted individuals may need one or two pairs of glasses to accomplish all tasks – sunglasses, bifocals or reading glasses
  - A carpenter needs more than one tool to build a house (hammer, saw, screwdriver).
    - A person with a visual impairment will also need more than one tool
You may need more than one low vision aid to accomplish all tasks

- Reading glasses may help for reading as long as you use a good light. They may not work well in a dark restaurant. They may not work for reading at a greater distance, such as seeing the stove dials.
- A magnifier with light will help for reading in a dark restaurant and for seeing stove dials, but will not help for distance viewing.
- A goose neck lamp is usually needed for reading.
- A telescope will help for distance viewing but not for near.
- Sunglasses with side shields will be needed to cut glare outdoors.
- A lighter tinted pair of glasses may be needed to cut glare indoors and outdoors on a cloudy day.
TIP NUMBER 8

LEARN TO USE YOUR EYES MORE EFFICIENTLY
Eccentric Viewing
Maximizing Existing Vision

- A person with a normal healthy retina uses the macula, the very center of the retina, to view an object or print
  - A healthy macula has the highest density of cone cells allowing clear vision and color perception
  - The macula is the only place in the retina that has the potential to see 20/20
- A person with an unhealthy macula can learn to use a more peripheral part of the retina in order to see more clearly
Eccentric Viewing

- Do not move your head when trying to find the clearest peripheral retinal loci
  - Move eye only
- Identify the distorted or blind areas in the retina.
  - An Amsler Grid may help
- By using the “Clock Technique” identify the clearest part of the peripheral retina.
  - Don’t look at what you want to see!
  - Look slightly above, below or to the side of the object that you wish to see in order to see it more clearly
  - This area may differ for different tasks such as reading and watching TV
Eccentric Viewing
Maximizing Existing Vision

- Exercises that involve tracing and identification will help to learn to use this clearest part of the retina.
- Detail vision will not be fully regained by eccentric viewing training, but vision can be greatly improved when coupled with enlargement, enhanced contrast, and appropriate magnification devices.
SUBSTITUTE EARS FOR EYES
SUBSTITUTE EARS FOR EYES

- Get books and magazines on tape free from the talking book library
- Also use talking watches, clocks, calculators, scale, glucometers and computer software
TIP NUMBER 10

BE FLEXIBLE
Be Flexible

- If you view your vision problem as a challenge and are willing to be flexible and learn new ways to do your daily living tasks, you will live productively and independently.
- The only significant barrier to your independence is YOUR resistance to change and learning something new.
TIP NUMBER 11

BE YOUR OWN ADVOCATE
Become Knowledgeable
Ask Your Eye Doctor

- What changes can I expect in my vision?
- Will my vision loss get worse? How much of my vision will I lose?
- Will regular eyeglasses improve my vision?
- What medical/surgical treatments are available for my condition?
- What can I do to protect or prolong my vision?
- Will diet, exercise, or other lifestyle changes help?
- If my vision cannot be corrected, can you refer me to an eye doctor who specializes in low vision rehabilitation?
What to Ask Your Eye Doctor Who Specializes in Low Vision Rehabilitation

- How can I continue my normal, routine activities?
- Are there resources to help me in my job?
- Will any special devices help me with daily activities like reading, sewing, cooking or fixing things around the house?
- What training and services are available to help me live better and more safely with low vision?
- Where can I find an individual or support group to help me cope with my vision loss?
Become Familiar with Community Resources

You are not alone

- Support Groups
- Counseling
- Transportation services
- Aging services
- Community resources
  - Talking book program
  - Large print books
  - Various agencies that service the blind and visually impaired
  - DES Independent Living Services and Vocational Rehabilitation
  - Free telephone directory services
  - Descriptive video services
Be You Own Advocate

- Tell friends you are visually impaired and ask that they introduce themselves
- Ask for large print menus in restaurants or your residence dining room
- Ask for large print activity guides
- Get large print checks from your bank
- Ask your church to provide large print church bulletin
  - Black text on a white background
  - Use clean font such as Arial or Verdana
TIP NUMBER 12

STAY ORGANIZED
Stay Organized

- Everything has a place and must be put in that place
- Organize closets and cupboard
  - Add large print labels to groceries and put in proper place in closet
- Put matching clothes together in the closet
- Put shoes away so that you don’t trip
- Have a system for putting food on the plate: meat at 12 o’clock, vegetables at 3 o’clock and potatoes at 9 o’clock
  - Use bread as a “pusher” to place food on a fork or spoon
  - Eat from the inside out to avoid pushing food on the table
  - Use rimmed plates
Tip Number 13

DO NOT BECOME DEPENDENT ON OTHERS
Staying Independent

- Your family can be very helpful in helping you to adjust to your vision loss
  - Don’t fall into this trap of becoming dependent on family members
  - Becoming dependent on others can be more disabling than the disease itself
  - You need to learn to use low vision aids and learn to do things differently in order to become independent
  - Your family needs to support your independence
TIP NUMBER 14

DO NOT DEFINE YOURSELF BY YOUR EYES OR YOUR VISION
Do Not Define Yourself by Your Vision

- For most people, your ego or your concept of yourself develops on the things that you can do.
- With decreased vision, you may feel that you can no longer do what you did in the past.  
  - And are therefore, less worthy.
- You may start to define yourself by your vision
- You may not feel that you are the same person that you were before your vision problem.
Do Not Define Yourself by Your Vision

- You are the same person that you were prior to your vision loss,
- You are loved because you are you, not for your eyes.
  - Don’t isolate yourself.
- Keep your social group or volunteer job. You might require special lighting, large print cards, a magnifier or a ride.
  - Keep playing golf; your friends will watch your ball.
Independence

- If you view your vision problem as a challenge and are willing to be flexible and learn new ways to do your daily living tasks, you will live productively and independently.
- The only significant barrier to your independence is **YOUR** resistance to change and learning something new.
- By using the tools that we discussed today everyone with a visual impairment will be able to accomplish more than they thought they could.
Thank You