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Modern Low Vision Aids can help minimize the Impact of Visual Impairment on One's Life

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Whether we were born with a visual impairment or developed vision loss later in life, not seeing well in our very 'visually oriented world' can impact one's life in many ways.

For seniors, who likely experienced normal vision most of their lives, difficulty reading small print may be the first challenge they notice and they assume that stronger reading glasses will do the trick. Sometimes though, as a result of disorders such as macular degeneration, diabetes or glaucoma, the seeing issues become more complicated, and conventional eyeglasses, contact lenses, medication or surgery don't offer effective solutions.

For children, who were born with a visual impairment from disorders such as Albinism, Nystagmus, Achromatopsia, or developmental issues, 'seeing' was never 'normal' to begin with. Some young adults may have had normal vision in their early years and then may develop changes in their vision from Stargardt's Disease (similar to macular degeneration but in younger individuals), Retinitis Pigmentosa and Choroideremia (both of which reduce night vision and create tunnel vision).

It is reasonable to assume that the major challenge that individuals with reduced vision may have relates to reading. Low vision aids including conventional optical magnifiers, special high-powered eyeglasses, computer software and newer digital technologies, some of them even accessible from smart phones, offer many excellent ways to magnify print to make it easier to read. In addition, there are many ways to access text without reading it ourselves—there are books on tape, MP3 players, text to speech apps, listening to the radio and TV, not to mention others who can read to us.

However, vision does more than help us read and see things. Our vision is an important social sense. Not only do we use it to walk and travel, we use vision to make eye contact, read body language and feel

connected to the world around us. There is a growing body of research¹ that shows that loss of distance vision can create feelings of isolation and can lead to depression. Other studies show that a lack of visual engagement in social settings and in visually-guided activities can even contribute to cognitive decline².

When one can't recognize faces, read signs, or feel secure in one's environment, the general inclination is to not engage in such challenging activities and to avoid potentially uncomfortable situations. We won't go to church because we can't recognize people and don't want to miscall their name, or worry that a friend may think we don't like them anymore because we can't see them to say hello. If we can't read signs it's easy to mistake the men's room sign for the women's. Or the frustration of being unable to read the menu on the wall at a fast food restaurant can make the visit stressful. Also, when we're unable to stay connected in social settings, we can start to feel ignored.

Children learn much of their social behaviors by getting non-verbal feedback from their friends, family and classmates. If they do something silly, visually impaired kids won't see their companions rolling their eyes, smirking, or making fun of them, and hence they won't learn that their action wasn't well received. Nor can they engage in the social activities that their friends enjoy such as watching TV, sports, video games, movies, or even bowling and miniature golf.

Thankfully modern low vision technology can help to alleviate many of the social and day-to-day seeing challenges that many individuals with reduced vision may face. For example eyeglasses that contain miniature telescopes, called bioptics, work similar to binoculars. They enlarge the image making it easier for the user to see further away. If the individual can only recognize someone's face no further than 4 feet away, a 4 power bioptic will let them see the face 16 feet away. In most states in the US individuals who were previously ineligible to drive due to their reduced vision may now be allowed to drive with a state-issued special bioptic telescope driver's license.

Children with a visual impairment wearing a bioptic will be able to see their teacher writing on the board, see sports scores on TV, the pins at the end of the bowling alley, not to mention seeing their classmate acting silly that everyone was laughing about, but that they previously couldn't see or know about.

New smart glasses (also called Head-Mounted Displays [HMDs]) containing digital displays offer image processing software that allows the wearer to zoom, change brightness and contrast, and make other modifications to increase visibility.

The American Academy of Ophthalmology, in their Preferred Practice Patterns³publication, states that referrals for low vision care should be recommended to all individuals with reduced vision. While legal blindness is defined as having one's best vision with glasses or contact lenses (if helpful) of 20/200 or worse, or a visual field narrowing of 20 degrees diameter or less (about 2 hands width at arm's length), many individuals with reduced vision are not legally blind but are said to have low vision. These individuals, whose best vision is 20/40 or less, may still be hampered by their reduced vision and can often benefit dramatically from low vision care.

The Vision Council's Low Vision Division website⁴ states that all individuals with a permanent reduction in vision require two eye doctors—their medical eye doctor, usually an ophthalmologist, who will manage the visual disorder with medical or surgical treatments when indicated, and a low vision doctor, either an optometrist or an ophthalmologist, who will help to maximize the individual's vision by prescribing low vision aids. The Vision Council's Low Vision website also includes a Low Vision Prescriber Network listing where individuals can search for low vision specialists most convenient to them.

The incidence of reduced vision is increasing, largely due to the increasing numbers of seniors.⁵ While Schools of Optometry and residencies in low vision care are training more low vision specialists, unfortunately there remain many areas in the country where there are no convenient providers of these very valuable services. In addition the frequent lack of insurance coverage for low vision aids makes the costs of such equipment fall to the individual making them unaffordable for some individuals. However, low vision services and vision aids are available through the Veteran's Administration, so veterans should request referrals from their VAMC eye care providers.

A coalition⁶ has formed by organizations and agencies that support the needs of the visually impaired to lobby Congress and Medicare for coverage of low vision aids. In the meantime, as those efforts continue, individuals who are visually impaired or parents of children who are visually impaired should consider the acquisition of low vision aids to be an investment to enhance one's life-- not simply a cost. Low vision aids can dramatically impact an individual at all stages of their lives-- from schooling, to careers, to their social life and retirement years. A frequently heard refrain from individuals who have received low vision care and low vision aids is "They've changed my life!"

References:

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