

HELP WHEN YOU NEED IT

SUNY College of Optometry is located at 33 West 42nd Street in New York City directly across from Bryant Park. The college is part of the State University of New York. The University Eye Center is the clinical facility of SUNY College of Optometry. The Eye Center clinic sees about 75,000 patient visits a year. One of the clinics within the University Eye Center is the “Low Vision Rehabilitation Service” which Dr. Richard Soden focussed on.

What exactly is “low vision?” and how does one really define legal blindness? The bottom line is that although there are definitions of these that were probably created many decades ago, there is little correlation with these definitions and how a patient with reduced vision functions when it comes to activities of daily living. People suddenly faced with low-vision problems want answers to such questions as: “Can I do what I need to do with the sight I have? And if this is not possible, where can I get the help I need? The measurement of your level of vision will not make an iota of difference if you cannot do your required daily living needs (e.g. reading mail, seeing medication bottles, signing checks, etc.)

Dr. Richard Soden, Vice President Clinical Affairs and Executive Director of University Eye Center at SUNY College of Optometry spoke to the Group on November 17th, He came to speak to us about “Low Vision Rehabilitation” and concentrated on how patients can use this service to perform activities of daily living such as reading, seeing your medication bottles, watching television, reading your mail, paying bills, etc.

There are a number of conditions that cause low vision. Among them, Macular Degeneration is probably the leading cause of blindness in the United States today. Both the wet and dry forms can cause vision loss, but the wet form is more devastating although there are now medications that may halt the progression and in some cases, restore some of the lost vision. It is challenging, however, to determine when to prescribe low-vision devices for these patients who require ongoing injections of a medication into the eye. The wet form of macular degeneration accounts for approximately 10% of all patients who have Macular Degeneration, and while there is no medical or surgical

treatment for the other 90% who have the the dry form, low-vision rehabilitation can significantly help people with both types of this disease.

The other common eye conditions that can cause vision loss are, of course, cataract, diabetes, retinitis pigmentosa, and glaucoma. Probably over 2/3 of the patients with low vision are over the age of 65. And over the next couple of years the projection is that about 50 million people in this country will have some kind of low-vision issues.

Today the focus is on glaucoma. The statistics currently available estimate that 3 million people in this country have glaucoma, 2 million of which are diagnosed with the disease. Since glaucoma is a silent disease, there are about one million who don't know that they have it. Elevated pressure is associated with the most common form, open-angle glaucoma. Many cases of glaucoma are diagnosed when the patient receives an examination for new glasses. The eye doctor will then perform testing to further investigate if there is glaucoma. This will include assessing the optic nerve through a dilated pupil, a visual field, various eye pressure checks and imaging. Treatment usually starts with eye drops, but may also include laser treatment and in advanced cases, surgery,

There is still no cure for glaucoma although there is a considerable amount of research being conducted in this area. In the next five years, there may be major breakthroughs in the treatment of glaucoma.

The disease is more prevalent among African-Americans and Hispanics and tends to run in families. It is a slow-developing disease, mainly without symptoms.

With early diagnosis and the array of medications now available, ocular pressure can be quite well controlled, but even so, many patients with glaucoma suffer visual loss and an inability to perform activities of daily living. It's not only visual acuity that gets affected. People may have difficulty recognizing faces, reading, understanding what's going on. Macular degeneration and glaucoma can cause isolated scotomas. This results in seeing items that appears to be missing and distorted. Many people with macular degeneration or glaucoma are forced to read specific words and try to derive their meaning through context. With these isolated areas of visual field loss, everything looks hazy and washed out.

Dr. Soden thinks the most important thing is that it's not necessarily what you can read on a Snellen eye chart that counts, but it's also the ability to see contrast. When examining a low-vision patient,

eye doctors should administer a contrast sensitivity test where lines of letters or words become lighter and lighter and the patient is asked when he/she can no longer see the figure. People with reduced contrast may have difficulty walking in streets, reading, climbing chairs, etc. It may be impossible for the visually impaired to fulfill this simple task. Dr. Soden said jokingly we should throw out most of our standard eye charts and incorporate contrast sensitivity testing because it tells us more about the function of seeing. If you can't see contrast, you can't recognize faces or differentiate black and white, or read easily, walk down steps, identify different types of food especially those that have been cooked. Different eye diseases also cause difficulty with contrast sensitivity.

Glare is another problem that many patients with glaucoma have. Someone who can't tolerate glare may not be able to walk outdoors or tolerate indoor activities well.

In a low-vision examination the doctor assesses what you are able to see, the specific problem you have, and to establish a goal. This does not mean that low-vision devices and rehabilitation will solve all the problems a patient may have, but it will address the critical issues and hopefully find a solution to enable the person to function better.

When a person has difficulty with either contrast sensitivity, we try to use various filters to enhance performance. Sometimes it only takes a particular filter. Yellow tends to increase the contrast for some people, but others do better with varying shades of orange. One should avoid very dark filters if possible as they tend to reduce the amount of light coming into the eye and people with low vision need light. Keep in mind how much light is allowed in when purchasing a pair of sunglasses. Eighty percent filtered blocks out 80% of light. For visual impairment, the filter should increase contrast but not block out a lot of the light.

Wrap-around types of frames are better because they block out light that comes on the side. But with an individual who has a very small field of vision, wraparounds are contraindicated. It is necessary to balance contrast sensitivity with the level of visual acuity.

TOOLS THAT YOU CAN USE.

High-powered spectacle glasses will magnify objects and may enable patients to read, write, identify pictures, etc. You need to hold objects close to your face. Although most people don't like to hold things close to their face, these high-powered glasses will be useful. The problem

with magnification is the stronger you make it, the closer you have to bring it to your eyes, which may be a troublesome activity to some people. But many patients with glaucoma are able to function better with high-powered spectacle glasses. There are many different versions of these available and your eye doctor needs to determine if you should use these for one or both eyes.

PRISMS are designed to help coordinate the two eyes and are often used to help align the eyes in children and adults who have eye turns. Expanding the visual field is the other use of prisms. Some stroke victims who ultimately become low-vision patients because the stroke resulted in damage to the brain may benefit from prism therapy. In this and other such cases, prisms can be used to displace or move the field to a “seeing area.” Therefore, should a particular section of the field be missing, the image can be moved to a different area. But the process is not a cakewalk, and for the procedure to be successful, training is involved for patients not accustomed to the use of prisms. Once trained successfully, however, patients can benefit from prism correction.

BINOCULARS/TELESCOPES: There is a binocular telescope which you can actually use to watch television as one of its features. Once you focus on the screen you can watch TV and under certain conditions, drive a car. Based on your level of vision and your specific needs, there are many telescopes available.

MAGNIFIERS: Traditionally, magnifiers have always been the first device that patients use when they first notice that they need help to see print. Initially a magnifier purchased at a local drug store may be sufficient, but as glaucoma advances, stronger magnifiers become necessary. There is one caveat, however, that you need to remember. The stronger the magnifier, the less you see at one time. If you get a magnifier that magnifies five times, it provides a certain field of vision; a stronger magnifier will reduce the number of letters or words you can see at a time. The lighted magnifiers are best as they also serve to enhance contrast. The appropriate magnifier should provide both the right power and the best field of vision. Dr. Soden recommends stand magnifiers for patients with low vision. These magnifiers rest directly on the page and can slide across the page as you continue to read. These are available in many different types and powers. Many of the stronger

magnifiers have built-in lights. It's also possible to see the print on a curved bottle with this magnifier.

Portable electronic magnifiers are really becoming popular, also. With increasing new technology, we can now do away with the cumbersome, expensive reading machines and opt for a portable magnifier that can actually provide the magnification to read newspapers, magazines, letters, etc., up to 15-20 times. The background colors can also be changed from black to white, white to black and even to colors. These magnifiers are all designed so that you can just slide the instrument across whatever you choose to read. There are many different manufacturers that now make these kinds of devices. Dr. Soden showed the Group one made by Freedom Scientific. Unlike the reading machines that cost a couple of thousand dollars, these instruments cost around the \$500-\$600. Cheaper ones are also being imported from other countries. Since the instrument is portable, you can take it with you when you leave the house.

Dr. Soden displayed a device to be used with your television set and serves as a reading device and not a device to watch a TV program. An object comparable to a computer mouse possessing a built-in magnifier is connected to the back of your television set. By sliding the mouse across reading material, you can actually see the printed material on the TV screen. You use your television set to help with the reading material and presto, you have a closed-circuit television set.

Many libraries may have reading machines. So if any of you don't have access to some of this new technology, you can go to a public library, provided they have a low-vision section. Dr. Soden has seen them in some libraries in New York City but is not sure they're in all public libraries. If your neighborhood library does not have one, you may request that they get one.

LIGHTING: There are a variety of options for magnifiers and lamps. At present, different incandescent bulbs are still available in various wattages. High-power halogen bulbs are also available, but perhaps the most comfortable lamps for glaucoma patients are the full spectrum light bulbs that provide crisp glare-free lighting. Lighting one's home properly with the variety of lamps available including filtered lights is essential. Many patients are bothered by the glare

caused by the lighting in public spaces. Dr. Soden said that lighting engineers are capable of assessing the best lighting for glaucoma patients, but obviously, as witnessed in our conference room, standards have not been set.

Dr. Soden asked how many of the Group use iPhones and demonstrated how the app with a magnifier can be downloaded to the unit. There is also an app to increase lighting called the “ Torch.” What could be more convenient? This bright light is good because it’s not coming directly into your eyes and its lights can help you to see.

Forget the adage about light coming from over your shoulder to light the page you’re reading. It is an absurd admonition. Lighting needs to be designed to illuminate what you’re reading, Overhead lighting does not provide the proper illumination for close work. In other words, light needs to be concentrated on the task before you. A filtered light will also create greater contrast sensitivity and reduce glare. For filters, you try the filters on the market, but a low-vision specialist can help you to choose the right one for you.

There are also other ways of enhancing contrast. You can enhance contrast buy using writing guides that you place over your check, and all you need to do is fill in the cut out spaces. If you have trouble seeing food on your plate, you should try to enhance contrast by placing food with light colors on dark plates and food with dark color on white plates.

If you haven’t already done so, go to ACCESSIBILITY programs on your computer, and depending upon the age of the computer, you can actually download free or purchase for nominal amounts contrast enhancement and change fonts (thereby increasing magnification) and background colors. Again if your computer is not equipped with speech activation or magnification, you can download or purchase these programs. Microsoft and AI Squared both sell a variety of programs that increase the magnification. You can magnify and even incorporate voice recognition—magnification can reach as high as 50 times.

Computer Glare: If you want to be creative, you can cut out a box and put it on the screen. That will cut out a tremendous amount of glare. You can also get anti-glare filters for the screen that attach right

on the computer. Be careful with some of these because some may inhibit contrast. Choose anti-reflective tints that don't degrade the image too much.

Outside illumination. Window light which is wonderful natural light can cause glare problems especially when using a computer. Situate the computer away from the window.

Position at the computer. There is no standard position contrary to what you may have been told. Person preference counts. If you prefer head on, looking down, gazing up a bit, or at an angle and this is your comfort level, stay with it. Much depends on your field of vision. Be sure that your monitor is high contrast and that the background is comfortable for your visual ability.

THE LOW VISION EXAMINATION will help you understand exactly what can be done to improve your daily functioning in all walks of life. Medicare should cover a significant portion of an examination. Community resources may help cover the cost of devices. There are also some non-profit agencies that offer vision rehabilitation services such as VISIONS. Many of these agencies may provide devices.

SUNY College of Optometry has a "Low Vision" Clinic and has indigent funds for patients who need financial assistances.

The entire field of rehabilitation usually does not enter into the lexicon of patient care. Many physicians and eye doctors are typically interested in medical and surgical treatments of eye diseases and while they are aware of a patient's sight losses and work diligently to slow glaucoma progression, they seldom suggest that the patient seek low-vision aids. This is an oversight that we have worked to remedy, but, alas, we have made little headway. It, therefore, becomes necessary for the Group to invite organizations such as SUNY to explain what services are available so that can keep us optimally functioning.

In addition to the low-vision services SUNY has two full-time social workers who are especially aware of visual implications. They also run some support programs. You can check out the website for further information at "universityeyecenter.org". You'll find a calendar of events and on a monthly basis, several support groups are offered.

Usually the groups meet around lunch time. Their low-vision doctors are also aware of the available community sources.

SUNY is located at 33 West 42nd Street accessible by public transportation (near the D, F, 2, 3, and 4 trains), and is a handicapped facility. Telephone, 212-938-4001.

We want to thank Dr. Soden for his excellent overview of the services available to the patients experiencing low-vision problems. He provided a wealth of information and helped fill the gap between treatment and function. We are most appreciative.