

A Discussion About Low-Vision Aids
Between the People of MDList
and
Dr. Jennifer Hensil, O.D., M.S.

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Dr. Jennifer Hensil is on the staff of Rebman Eye Care in Elizabethtown, Pennsylvania. She is a Pennsylvania native, having graduated from Greater Latrobe High School. She earned her B.S. degree Cum laude at Westminster College in New Wilmington PA. Dr. Hensil is also a 2000 honors graduate of Pennsylvania College of Optometry, where she earned dual degrees of Doctor of Optometry and Masters of Science in Low Vision Rehabilitation.

Her formal clinical training includes externships at The Eye Institute In Philadelphia and Morrison Associates in Harrisburg. She completed a clinical externship in ocular pathology at Stoken Ophthalmology in Carlisle, and her clinical low vision experience includes the William Feinbloom Vision Rehabilitation Center in Philadelphia and the Eastern Blind Rehabilitation Center at the West Haven, CT Veterans Administration Hospital.

In addition to her clinical training in low vision, Dr. Hensil has been active in vision impairment research and lectures and actively participates in online vision forums such as the American Nystagmus Network, the Neuro-Optometric Rehabilitation Association Public Forum, the AAPOS Public Forum, and writes a monthly column for the New Vision web site.

Dr. Hensil is a member of many honor and professional societies, including Association for the Education and Rehabilitation of the Visually Impaired, American Optometric Association, Pennsylvania Optometric Association, Lancaster County Optometric Society, and Beta Sigma Kappa (optometric honor society). She is also an active community volunteer and a regular contributor to MDList.

(Edited for clarity and length)

DONNA: Please discuss what is involved in the cost and procedures for training in low vision aids for better use of my peripheral vision.

DR. HENSIL: [Regarding costs], Medicare will cover the low vision evaluation itself (usually costs about \$200 for the eval). They will not cover the low vision refraction or any aids, but these are not all that costly. The refraction range varies

from doctor to doctor, we charge \$80, but I've seen it as high as \$150. If you bring your own aids to the eval, it is unlikely that you will need to purchase more. If you make an appointment, stress that you want eccentric viewing training.

For eccentric viewing, the doctor first needs to help you determine your 'sweet spot' or that area of vision in your periphery that sees the best. Everybody is different on this. Then they help teach you to use this eccentric view. I always use the same scenario for my patients... First, I have them look straight at my face, making it disappear...then I remind them that there is a definite advantage to macular degeneration...you can make people you don't like disappear!! They always laugh, this reduces the stress level and makes training go far more smoothly. We then proceed to practice in-office and I give a home exercise to every patient to take home with them (This costs the patient nothing at all) and have them practice 5 minutes every day.

With regard to the aids that you do have, do you mind if I offer a couple handy tips for using them? Some of the biggest problems when folks go out and get their own aids is that they use them wrong. For your magnifiers, hold the lens up close to your eye and the paper you are reading at the focal distance of the lens..this increases your field of view.

When reading anything, use a piece of black construction paper to underline the text you are reading (I recommend scrap booking paper, it is very inexpensive, but durable). This keeps you from losing your place.

Have your light be a good gooseneck lamp with a lamp shade that does not allow diffuse light all over the place, this cuts down glare. Point the lamp over your shoulder on the side with the better eye, so the light falls only on what you are doing. Use pink lightbulbs to further reduce glare.

Low vision specialists can help you with a lot more... things like sewing, marking your stove or microwave or dryer for easy usability (home visits are probably the most important thing I do), ensuring your lighting is correct, that you are using your glasses right, that you are using an eccentric view, helping with computer programs (like windows accessibility options which magnify 2X and ZoomText which goes up to 16X), and making sure you are not overmagnified with your present magnifiers (a big problem I often see..too much magnification is as bad as not enough).

DONNA: Rehabilitation, I thought, was so you could work again. I've not worked for many, many years because I was passing out with my other medical troubles, heart etc.

DR. HENSIL: Rehab can be for working, but is for other things too. For example,

I do home visits where I teach folks how to cook safely, mark their stove or other appliances, teach how to use power tools safely, teach eccentric viewing, how to use aids properly, help with lighting and other home modifications as needed, etc. There are a lot of different aspects to rehab, not just vocational rehabilitation (though that is certainly a subset of low vision rehab). Sewing, playing cards, reading music, painting, gardening, birdwatching, attending sporting events, and reading the paper are probably the other most common factors addressed during rehab...of course depending on the individual's hobbies, job, and desires.

MARTHA: at what point is it a good idea to contact a low vision specialist?

DR. HENSIL: There is no visual acuity cut off or requirement to see a low vision specialist. This is because to one person 20/100 vision does not affect their life at all, while to someone else 20/40 vision may be debilitating...it all depends on adaptations the person has, individual needs and lifestyle.

It is time to see a low vision specialist when your vision is negatively impacting your life in some way, when you can no longer do the things you want to do comfortably. You may still be reading the newspaper, for example, but if it is a long and tortuous process just to make out two paragraphs and you want to be able to read the entire paper, then set up an appointment.

It is usually best if you wait until your vision is stable. My rule of thumb for patients is wait until vision hasn't changed in the last month...that way you don't have help, then turn around and need to go back for more assistance right away.

MARTHA: I've been in the same career since I was 16 and absolutely love my work. I do typing, etc. for the general public. It would be nice if all of my customers brought me original material that I could read, but they don't. I know I can get visual aids to help with the size, but I still have a LOT of trouble when there's not a good contrast (like dark black on white). Do you know of aids that help the "contrast" problem? Or perhaps it's time to find another career.

DR. HENSIL: To enhance contrast, the best solutions are the simplest. A very good gooseneck lamp with 60 watt pink lightbulb works marvels in helping with contrast. Corning 450 yellow clip ons can enhance contrast as well.

For higher tech options, a CCTV enhances contrast plus gives the option of reverse contrast. Computers with windows can enhance or reverse contrast as well (check out the accessibility options that come with windows).

DONNA: Does 6/30 [as in England] mean 20/30?

DR. HENSIL: 6/whatever number is how they do it in Canada and England and other places...6 meters is 20 feet. If you play with the fractions, it is pretty easy to get equivalents.

6/6 is 20/20

6/12 is 20/40

6/30 is 20/100

MARY ANN: Is there any type of pink plastic cover that could be used to filter the light from the florescent bulbs?

DR. HENSIL: To my knowledge, fluorescent and halogen lights will not do any damage for MD. A lot of people find fluorescent lights disconcerting because of the flicker, which can be more noticable with MD.

There are filters that can be placed over a fluorescent light..they are round plastic filters and I believe they can be ordered from theater companies (these companies make the colored filters used over the lights for stage shows). McManus is one such company, but I don't have the contact information with me. A better, and less expensive option, would be to buy some pink acetate and line the plastic cover that is on a lot of ceiling fluorescent lights with it. The best bet is still to switch to pink incandescent. Directed light is better for glare than diffuse light.

NANCY: I think it is time I look for a new low vision specialist. The one I went to said he could do nothing for me except possibly hand held magnifiers. My insurance does not cover the cost of any of this including the evaluation therefore I have been reluctant to chase rainbows I can't afford.

DR. HENSIL: Contact your state blind association, your local lions club, and a good low vision specialist ... you'd be surprised how much funding there is available for low vision care. The problem is finding a good low vision specialist. Too many have a couple of magnifiers and that is yet, yet they call themselves low vision.

Interview the offices you are considering...

Ask:

How much training you receive with the device (in time and number of visits)?

At least 1/2 hour should be given for each aid that you will receive. Even hand held magnifiers have 'good' and 'not so good' ways to use them...you need to be afforded that time one on one with a doctor or low vision rehabilitation specialist to learn to use these aids. You should never be rushed through this process.

What is the office's end point of success?

It should be when you have reached your personal visual goals and can comfortably achieve them at home independently.

How many visits are included in the low vision evaluation fee?

At least one follow up visit, usually at the time the low vision aids are dispensed, should be included, or be a relatively low additional fee.

What kind of information is given to you and your doctors regarding the low vision examination?

Be sure that you, your eye doctors, and your general doctor all get comprehensive letters regarding your evaluation. Make sure the letter to you is in lay terms, not medical terms.

What low vision aids are available?

At least one CCTV, several hand held mags, illuminated mags, stand mags, full field microscopes, hand held and spectacle mounted telescopes, and tinted lenses should be available.

Are home visits included in the evaluation fee or even an option with that particular office?

This varies from office to office, but home visits should at least be available if needed.

What non-optical aids will they help you use?

At least typoscopes, lighting instruction, and availability of needle threaders, large print playing cards, syringe measuring devices should be available should these be your goals.

How long is their low vision evaluation?

Any less than 1.5 hours is not a full evaluation.

Is eccentric viewing training a part of their low vision evaluation?

This is a crucial tool for those with MD. It should be stressed during an eval.

Exactly what are the components of their low vision evaluation?

The history is the most important part...you should be questioned in detail about your life and activities, and distinct goals should be formulated.

What qualifications does the doctor have?

At least a fellow in the academy for low vision or a MS degree in low vision (preferably the MS degree) is helpful, though many years of experience in the field can do just as much.

Is there a low vision rehab specialist on staff?

There should be someone, or if the Dr. has his/her MS degree, this is about the same.

Can you be taught to use computer assistive technology?

This is the new wave of low vision rehabilitation, and among the most useful (and versatile, and least expensive) tools available to those with any vision impairment. The office should either offer it directly or be able to direct you to someone who does.

Unfortunately, there are no standards for low vision care, and it is a shame. Just in my area, there are 3-4 very good low vision practitioners, and about 10 that give those who know what they are doing a bad name. It is a shame, really, because low vision rehab is so successful when done well. By arming yourself with questions, and interviewing each office before making an appointment, you are better able to ensure yourself quality care. Going through the state blind association will also be a huge help for you.

JOYCE: I've looked through our low vision pages. I'm looking for the sort of thing that some doctors wear i.e., a headband with a small light in the center of it. Lamps don't work for my purposes (visual art expressions). I need my hands free.

DR. HENSIL: In addition to the head lamps, try using a gooseneck lamp with a shade that directs light only in one direction. Point this light over the shoulder of your better eye and directly onto your work materials. Standard lamps cause diffuse light and glare, and do not provide enough light onto your reading materials. Gooseneck lamps solve this problem, and you can pick them up at any Kmart, Ames or related store for \$20-\$30. Using pink lightbulbs will also help.

BRIAN: This I suppose comes into the realm of ergonomics, but my wife has Stargart's and cannot get it through to her management that the glare is bothering her. They even sent someone with a light meter, who said that that there was not

enough light where her workstation was. Her job is a 100% screen based. How much external light do you need? What aids can be provided to reduce the glare in a badly lit office, and how can you explain to management in one syllable or less the glare problem?

DR. HENSIL: The best way to demonstrate to the office what a glare problem is would be to get 'cataract simulators' from you wife's low vision optometrist to borrow, and make management wear them for a while. They will see for themselves what a glare problems is. I know you wife does not have cataracts, but this particular simulator demonstrates glare better than the MD simulator. Ask the low vision optometrist to phone your wife's employers. Part of a low vision doctor's job is to advocate for their patients, to ensure that they are getting the accommodations they need in the workplace. Also contact the blindness association for the state, they will also assist your wife in getting the modifications that she needs.

To reduce glare, the best option is to see a low vision specialist for corning lenses. These lenses darken in bright light, and are made specifically to cut glare for those with low vision. The yellow lens works very well both indoors and outdoors to reduce glare.

Other options...if your wife can reach the lights in her office, or perhaps you can do this, is to get pink theater light acetate. It is something like \$2.00 a very large sheet, and you can cut this material to fit inside the flurescent light casing and reduce glare this way.

Glare screens for the computer are an option, but this also reduces the amount of light and contrast on the monitor, so may do more harm than good.

Also, light meters don't tell anything about glare. Glare has nothing to do with the amount of light, but how that light is positioned relative to the eyes, the types of lights, the distance of the light from the person or computer screen, and other factors.

SHARON N: I hope I haven't asked this question already. Why do I have to take off my glasses to read if, as my optometrist says, my eyes are preferring this prescription? It seems logical to me that if I can read with the book close up then there must be a "best" prescription that would permit me to read at a normal distance. I will see him again this week. Is there an adjustment or something I could ask him to modify or??

Incidentally, with reference to computer glasses, this prescription is usually ok for computer distance, when I am able to read the screen. As you said it varies from day to day.

As to low vision rehab. I am putting together a list of whom to speak with and where to go in Ontario for low vision services. I will forward the completed information as soon as I correlate the info.

DR. HENSIL: The question you ask is one I have to answer almost every day, but haven't quite figured out a good way to explain it. I'll make my best stab at it though :-)

Every optical system has a focal point... a distance at which the object is clear. Take a magnifying glass. If you hold the magnifier too close or too far away from the object, that object will be blurry. It has to be held at just the right distance. The stronger the power magnifier, the closer that 'right' distance will be.

To your eye...it too, is an optical system. You are probably nearsighted given that you are reading more comfortably without your glasses. People who are nearsighted have eyes that optically are built like a magnifier, so has a focal point relatively close to the face. The more nearsighted you are, the closer to you that focal point is.

When you take advantage of this system with your own eyes, you are using your own built in magnification. Holding the book close makes it clear. It also induces something called 'relative distance magnification.' This just means that the closer something is, the bigger it appears to be. Imagine the date on a penny. Held at arms length, no one could read it, but bring it in close, and you can see it since the numbers appear bigger. By holding the book closer, you are essentially enlarging the print, making it easier to see.

So, there is a perfect prescription for every working distance. But the farther the working distance, the smaller things will appear to be. You are lucky in that your eyes have their own built in perfect prescription for a close reading distance that enables you sufficient magnification to read.

Stronger power bifocals in your glasses may help you get a slightly greater working distance without compromising your vision, so ask your eye doctor about trying it with loose lenses in the office.

About asking for help from rehab people... I certainly would like a copy of your list when you have it finished, for future reference. Also, don't think of it as asking for help...that really isn't what it is. It is more like taking a class to learn a new skill. You would not feel like a victim because you sign up for scuba class or a class in a foreign language. Rehab specialists are teachers, you are taking their class. Nothing more. It is not a sign of helplessness, but instead a sign of curiosity and quest to learn a new way of doing things.

ALIA: I'm looking for something that tones down the lights from other cars.

Overall, I am looking for something that will help me read, see the computer which I am in front of 100% of the work day, and something that brings up my confidence in driving. Is there anything that will help me? Are there any devices that are not hideous and obvious as gluing a telescope to one eye and nothing on the other. I don't want to look like a freak. I'm also frustrated that I live 2 miles outside of Manhattan (NYC) where there are specialists of all kinds and I get stuck with useless doctors. Any advice or navigation in the right direction would be very appreciated.

DR. HENSIL: Your frustration is completely understandable.

There are an infinite number of aids out there, but it sounds like you are looking for perfection...a cosmetically perfect telescope, a way to enlarge print so that only you can see that it is enlarged. Unfortunately, there is no such thing as perfect. There is no such thing as returning your vision to 20/20, and no way to prevent it from eventually going to 20/200 or so. I'm sorry to be so blunt, but it is the truth.

There are telescopes that are not so obvious as the one you mentioned. It is called the Ocutech autofocus or Ocutech manual focus (I prefer the manual focus, as the autofocus costs more and does some really strange things sometimes, but it depends on your needs, not my preference). It is a small black box that sits on the top of the pair of glasses. It does not protrude 2 inches from the eye, and is easier to fit and use than the type you were describing.

The reason that your doctor focused on the good eye is simple...the brain only attends to the better eye when presented with one good and one blurry eye. If your right eye is the better eye now, that is the one your brain will attend to the most. If down the road, your left becomes the better eye, then your brain will switch over and concentrate more on that eye. For distance, you use the peripheral vision of both eyes, it is more for reading that your brain will pick one or the other, since it is more detailed work and fusing a clearer image with a blurrier image degrades what you see.

Low vision DOES work. As I said in the last letter, it sounds like your low vision doc didn't really listen to you or your needs. She certainly did not answer your questions. At the same time, you need to be open to trying new aids, new computer programs (ZoomText, Jaws), new techniques for using your vision.

About your computer screen...have you considered a screen reader? A program such as Jaws could be installed into your computer which would read aloud everything on the screen. Just wear a pair of earphones and no one would have any idea that you were really listening to your computer, not a radio.

Since glare is such a problem, have you tried the Corning lenses? These reduce

glare indoors and out with a yellow, orange, or reddish tint to the glasses. It may make your vision more comfortable, particularly in areas of bright lights and watching the TV. They also enhance contrast.

There is no such thing as being a lost cause. Blindness/low vision is a hurdle...it is midset that is really the disability.

Take your family with you to a low vision doctor. Part of the job of the low vision doctor is to explain to the family what is going on. In my office, I use simulators to show each person roughly what you see....why you can get around a room with no problem, but can not read small print. This is certainly NOT in your head.

MARIAN: I read the frustrations of so many of our friends who cannot find a competent low vision specialist in their area and I am wondering---do you have a web page or literature on your services that we can use and get? You obviously know what you are talking about and really care about our concerns and it seems to me to make sense that those of our friends who need a low vision specialist would save money in the long run by flying in to see you. You have never tried to use our list to promote your services. You have always used it to help us. I appreciate that so much.

DR. HENSIL: I don't join mailing lists to get patients, so I don't really want to send any advertising or office info over the mailing list..that is not what this (or any other) mailing list was designed for.

If anyone does want my practice information, I'd be happy to send some literature on it. Just email me at hensil@gateway.net

MARTHA: What's the general opinion about when to seek low vision rehab?

DR. HENSIL: What all of you need to realize is that it is not up to your retina specialists when you need a low vision specialist...it is up to YOU! Only you know your visual needs, your lifestyle, and whether or not you have given up visual tasks due to your vision. Retina specialists generally don't know much about low vision rehab, so don't know who qualifies and who does not (I have gotten a LOT of inappropriate referrals from retina specialists).

I like to see people get help early. The sooner you learn a new way of doing things, the better off you are if/when your vision takes a turn for the worse...this means more time practicing these new skills, more familiarity with them, so if your vision changes it is not all that big of a deal.

Retina specialists know retinas, they don't know low vision rehab (that is why they don't provide the services themselves :-)

GIDEON: Could you please tell with which Ocutech [visually-impaired people] can and are allowed to drive. I understand that only the self focusing one fits. What is the price of it? (Since I can find only a Japanese site on the web, do you know their English site of Ocutech?) Is there any other binocular adapted for bioptic driving that you know?

DR. HENSIL: Actually, the autofocus Ocutech is lousy for driving as it has a tendency to focus on the windshield instead of at distance. I prescribe either the manual focus or if the person needs an autofocus for other things, have them turn off the focus mechanism while driving.

There are a LOT of other telescopic aids used for driving. Bioptics are the most common, and are made by designs for vision. There is also the ocutech mini, and several other brands of spectacle mounted telescopes.

The aid chosen is less critical than getting the training you need to use the aid.

KARINE: I have heard from some people that contact lenses could be better than glasses in the case of Stargardt's. Has anybody ever heard about that, and do you think [that my son], Gaetan, could wear contact lenses? My opt. can't tell me more about it so I need personal experiences or US doctor to tell me.

DR. HENSIL: Here's my perspective as a low vision optometrist and someone who regularly fits contacts.

Some people with Stargardt's have nystagmus, if so, contacts will dampen nystagmus and improve vision.

Contacts allow for eccentric viewing far more readily than glasses.

The optical center of a contact lens is always aligned with the eye, no matter where the eye points, whereas with glasses, if the eye moves away from optical center, there can be some induced astigmatism or induced prism and these can cause distortions or double vision.

Contacts are a wonderful option in the right hands (and eyes). I will not fit patients with only one eye with contacts unless they also wear protective glasses. I will not fit people with contacts if they are not responsible enough to remove and clean them every night. I will never fit contacts for sleeping in, due to the dramatic increase in corneal ulcers and other problems.

This is really something that you need to discuss with Gaetan's optometrist, who can be more helpful than a 'net doctor and be more specific.

ANDY: Just thought of another benefit that is often overlooked. Most contact lenses offer UV protection, so if you should go out and forget your sunglasses, you have protection. I presume it may not be as good as a good pair of sunglasses. As I said, they take a bit of getting used to, but they are worth the effort.

DR. HENSIL: Only a handful of lenses offer UV protection, but it certainly is not complete and should not be mistaken for the UV protection offered by sunglasses or regular lenses with a UV coat. This is because a contact covers only a small part of your eye (RGPs cover a small part of the cornea, soft lenses cover the entire cornea) and UV protection is not 100%. Light is still hitting the whites of your eyes and encouraging pinguecula formation, some may still enter the inside of the eye from there depending on your individual eye internal pigmentation.

Contacts should not be relied on as a sole source of UV protection.

GIDEON: Thanks for your instructive and constructive lines. I remember well that auto focusing on train windows instead on the scenery, from the video cameras, and understand well what you mean. I bought recently the Beecher Mirage 4x20, which is very good for TV, performances etc. However inconvenient to pull out for signs, house and bus number and alike. I thought of a pocket size monocular, tried the German Eschenbac 4.2x12 which seems ok. I might go for that but wonder if for recognizing faces in meeting and so it might also be helpful. I tried the Beecher to dive with. It was awful. A car 300 meters away, turning to the center, appeared so close, I thought it kills me on the spot...

DR. HENSIL: It sounds like you are trying to wing things on your own instead of seeing a low vision doctor. The beecher mirage absolutely under no circumstances ever should be used for driving. This is a full field telescope, not a bioptic type mount. For driving you should spend 99.9% of your time looking through your regular glasses Rx, and just using the scope to glance into (much like you would for a rear view mirror) to check street signs, etc. Using a mirage keeps everything magnified all the time, and cuts out a large chunk of your field of view. You will get into an accident driving this way.

For you, and others on the list, never, ever hit the road without instruction from a driving instructor qualified to help with teaching telescope driving, without a fitting from a low vision optometrist, without spending at least several months using the scope as a passenger in the car, without training in spotting and tracking with a low vision rehab therapist, and without being sure of your state driving laws.

These kinds of telescopic aids really should be tried in an office and prescribed by a doctor since there are so many to choose from, and clearly misunderstandings are easy to have (like driving with a mirage).

GEORGE: Am I right in assuming that your advice to Gideon about the Beecher Mirage 4X and 5.5X system also applies to the Ocutech Vision Enhancement System (Manual Focus) in that, as far as driving is concerned, it is only useful for checking street signs etc.

DR. HENSIL: I recently received an email from Dr. Windsor regarding the Beecher. What they do at his center is modify the Beecher so that it does sit superiorly the way a bioptic does. They angle the lenses, move the nose piece and mount it to the top of a pair of glasses, so it is NOT the Mirage that comes right out of the box, but has quite a bit of modification to it.

Any bioptic or telescope driving system is meant for quick detail checks only...street signs, exits signs, the name of a landmark, etc. You look through your regular glasses a vast majority of the time.

MICHELLE: My daughter Micah seems to enjoy watching tv on our 9 in tv/vcr we had bought for our van...She gets 4-6 inches away...The school system finally got in the dome magnifier we've been waiting for. It is about 4 in. in diameter...I'm wondering if there is one any bigger, or does that increase distortion?

DR. HENSIL: Kids really do like those dome magnifiers! They are like crystal balls. Most of them are about 2.2x magnification...to make it bigger would decrease the magnification, and any lower would be pointless to use. With any magnification lens, the bigger the lens, the lower the power...a great frustration among folks who need the higher power lenses, but hate the reduced field of view and increased peripheral distortion (one way to eliminate this problem is to hold the magnifier right up to your eye).

GEORGE: As I didn't need distance glasses (only reading glasses) before the onset of macular pucker, now that I could do with them (to overcome the problem of blurred faces, etc) am I right in assuming that the only kind that would meet my need are the manual or auto-focus telescopic ones?

DR. HENSIL: Most people have some degree of refractive error...with those with vision loss, I make sure that their prescription, no matter how weak or strong, is up to date. It is tough to function if there is any uncorrected astigmatism or near or farsightedness. This is true whether it is for reading or distance needs.

There are a couple things you need to address before jumping into scopes. First, get a good refraction from a low vision specialist. I do my refractions with a trial frame and loose lenses and with a special lowvision chart. I use a few tricks that most ODs or MDs don't...things geared to getting a good accurate low vision refraction.

Second, you should get very good eccentric viewing training. Get that eccentric

view to be stable and habitual.

Steps one and two, in many cases of macular disease, are all that is needed to achieve distance goals. If not, a small spotting telescope can make up the difference. Exceptions being for driving or long term scope use, like going to the theater or a baseball game, then a spec mounted scope may be better, but either way, the first two steps are absolutely the most important (and far too often overlooked).

VICKI: Unfortunately the binocular glasses no longer work for my father, nor does the CCTV, hand magnifiers...We tried the Ocutech system, and he did not like it. It made him dizzy, and he was looking for more help for reading. Money has really never been a stumbling block, but his vision has decreased to about 20/400 in both eyes. Telescopes helped some in the office, so I thought I might give a=20 high power binocular a try. (Eye doc thought it might help too).

DR. HENSIL: Please see my previous response to George. NO telescope will be sufficient (and most times docs who are not low vision specialists do not give enough training with a scope and give waaaaaaay too much magnification for folks) until a good refraction and eccentric viewing training are completed first.

The hurdle with MD is a blind spot. That blind spot will always be smack in the middle of usable vision UNLESS, you learn to use a different part of the visual field. Once a person is consistently using an eccentric view, then there is no more problem with the blind spot and they are more successful with everything visual..with or without aids.

DAVE: Vickie, I stumbled across a pair of binocular glasses that do not require me to hold them in place. They are 2.8X power and are able to be focused for each eye independently. If you will go to the Low Vision Aids section on the MD Support site, you can view these glasses on the site for Bossert Specialties. The cost is \$100.00, and they have really made it much easier for me to watch sports and all types of shows on the TV. While these glasses are terrific for watching TV, DO NOT let your father try to walk around with these on. There is no depth perception and I know that this would lead to certain disaster.

I also have the Ocutech manual focus telescopic glasses that I use for driving during daylight hours. I can also watch TV with these glasses, but they are much more expensive than the binocular glasses. The cost for the Ocutech glasses, including the testing, fitting and training was approximately \$1,700.00. I have had my Ocutech glasses for over two years now and cannot imagine what my life would be without them...I now am able to lead a very active and productive life again.

JANE: If computer glasses are just another pair of prescription glasses, why does the doc pay so much attention to the colors, and how clear you see each color on

the device that simulates the computer screen?

DR. HENSIL: The doctor is paying so much attention to the colors and how clearly you see them because your eyes have to focus very hard to keep them in focus, as well as the characters, as you work on the computer. This adds to eye strain, discomfort, and headaches. By setting your prescription at the distance of your computer screen, using a computer tint that reduces glare and decreases focusing, and adding an anti-reflective coating to further cut down glare, your eyes can stay relaxed and focus just enough to keep things in focus and clear for the entire length of time you work on the computer.

Just to keep you guys posted, there is a new therapy being tried (I'm not sure what a good idea this is, but we will find out) where a tiny 3x telescope is implanted into the eye, just in front of the retina, so that the person does not have to use any low vision aids. They are just recruiting subjects for the procedure at this time, but I will keep you posted as things progress.

DAN: The implanted telescope, which is currently being tested, is called an IMT (Implantable Miniaturized Telescope), a visual aid which is promoted by an Israeli Company as "the solution" to central vision loss. Here are some comments from Dr. Bill Takeshita (The Center For The Visually-Impaired) on the subject:

"I have known about the implanted micro telescope. This is NOT recommended because it is permanent. Patients who have this device implanted will most likely complain of dizziness and have problems with walking. The visual processing areas of the brain will not know how to judge depth and this will affect their daily living skills.

The best way of explaining this to patients is to tell them to hold up a pair of binoculars in front of their eyes and keep it there as they walk. They will experience the dizziness.

Low vision optometrists can develop a similar situation with a contact lens. This will be a very good "trial" for those patients who are really interested in the procedure. By wearing the special contact lens along with a pair of glasses, we can simulate what the IMT does. I believe that this is a reversible solution that has much less risk.

The second reason why I do not recommend this procedure is that Galilean telescopes only provide a low level of magnification. 3x magnification is often not sufficient, especially for those with wet ARMD."

DR. HENSIL: I do agree with Dr. Bill's concerns regarding the implantable telescope to a point. A person can learn to suppress that eye while walking though, so this is the least of my criticisms...the problem with the TS is that it is only used

for central vision, whereas anyone with MD gets their best vision with their peripheral view. All of my patients use their telescopes and eccentric view point together to maximize their vision, and this system does not account for that. Also 3x is the only TS used at this time, what if the person needs more or less magnification?

The biggest risk is of infection...endophthalmitis from this kind of invasive surgery could easily cause permanent vision loss in that eye, risking the intact peripheral vision.

I think the surgery is interesting, but would not recommend anyone be signing up for guinea pigs for this one. I'm keeping an open mind on it though...I've been known to be wrong before :-)

PAT: I would like to investigate a more portable form of the CCTV for my Dad.

DR. HENSIL: Your best bet is to take your dad to a low vision specialist (probably the one he got the CCTV from) and check out the more portable models in person. There are so many good ones on the market right now, most of them in a reasonable price range..it is really a personal preference thing. The Prizm is very good, and costs about \$900, the Max is a mousccam type device and goes for about \$350 or \$400 but you can't do any writing with it...both plug into regular TVs. Then there is the Aladdin Companion, a small self contained CCTV unit, I think about \$2000, disadvantage is the small screen. The Jordy is the most versatile of the CCTVs, as it is used for both distance and near, and can input to either a TV or a pair of virtual reality glasses, and runs on a battery for several hours at a time. It runs somewhere in the ballpark of \$4000.

PAT: What are "virtual reality glasses"?

DR. HENSIL: Jordy is a headset with a camera mounted above a pair of virtual reality "screens" (one screen for each eye). You can input the camera directly to the glasses, or take the glasses off and input the camera to a TV set and use it as a CCTV. You can read with the camera in either position, or use it as a distance magnifier.

Nadine: Do you have personal experience with the Jordy? At one point during my testing I had the LVES put on me and it was really a remarkable experience, because I could see fairly normally with it. But it's not practical as it encompasses your entire head. I wonder if this is similar technology.

DR. HENSIL: Yes, Jordy is a relative of the LVES, but a lot better. The versatility is absolutely amazing, it is a lot lighter weight than LVES was, and is not nearly as bulky. The optics are better as well. You can also do reverse contrast with the Jordy, if that is easier for you to read (white letters on black background).

You could read lying in bed...the only problem is that the camera is mounted above your eyes, so the difference in position takes a little getting used to.

Yes, I do have personal experience with the Jordy. I have had several patients try the device, one has it, a few are considering it. He's a 45 year old salesman, and just loves it, especially being able to use the battery pack.

NADINE: Is there much scrolling of the eyes back and forth with the Jody? I've been told you can train yourself not to get nauseated in scrolling back and forth, but I'm not convinced.

DR. HENSIL: The degree of nausea is related to the magnification. The higher the mag, the lower your field of view, the more scrolling you have to do. I really can't predict how you would do with it, you just ought to find a low vision clinic near you and give it a whirl. The vision is only straight ahead, but that is what the device is made for. It is not meant for walking around, rather it is meant for stationary tasks, such as watching a movie, reading a book, or going to a ballgame.