

This paper was published in *The Journal of Optometric Vision Development*. Volume 34 Number Two, Summer 2003, pages 64 to 70.

Nearsightedness:

Seeing Beyond The Obvious - Part 2 by Roberto M. Kaplan, O.D., M.Ed., FCOVD.,

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Key Words: nearsightedness, myopia, lenses, vision therapy, integration, binocular vision.

Introduction

In part 1 of this paper, I examined the alarming increase in nearsightedness in the world today. (1) A distinction was made between nearsightedness, the dioptric changes that takes place in the physical eye, and deeper myopic behavior of the patient. A strong case was made for an integrated approach to vision therapy in dealing with the current out of control epidemic of nearsightedness. Integrated vision therapy provides a way to correctively disassemble the myopic behavior of the human being. Ultimately, this whole-person approach is the complete treatment for the nearsighted eye.

The visual system is more inclusive than the physical eye alone. Treatment for nearsightedness demands an expansion of the conventional primary care model. Treatment for nearsightedness in the eye must include therapies that deal with the myopic behavior, a deeper brain/mind phenomenon. Nearsightedness in the eye is secondary to myopic behavior. The mystery of the myopia behind the eye was named 'the not-so-obvious.'

A technique of observing the retinal reflex while having the patient

respond to specific questions was described. In this way the practitioner can retinoscopically view the myopic behavior as the patient contemplates provocative questions.

Three types of myopic patients who exhibit characteristic behaviors and needs were discussed. The logical thinker, is an inflexible rigid patient entrenched in their thinking behavior. They tend to be fixed on compensating their vision symptoms of lowered visual acuity with maximum compensating lenses. This patient probably hides behind deep fear. The fitness thinker is a patient with less fixed myopic behavior, who through experience, realizes they have some control over their bodily process. They are open to try new ideas to help their eyes and vision. The transformer has been through personal development experiences and is ready to modify their lens prescription wearing habits and see more deeply into themselves and life by engaging in integrated vision therapy.

Compensating minus lenses do not correct nearsightedness or myopic behavior. The evidence suggests the opposite. Minus lenses increase the probability of over-use of the foveal mechanisms of vision. While the strong minus lens prescription provides maximum acuity of vision for the patient one also increases the probability of myopic behavior. Modified lens prescriptions can be prescribed for the fitness thinker by usually lowering the spherical component by 1:00 diopter. In the case of the transformer, bigger changes in spheres can be made as well as beginning modifications to the cylindrical component. This form of lens prescribing is a step towards using lenses as a penetrating therapy. Clinical experience and research evidence suggests that therapeutic lens prescribing is probably one of the most potent forms of medicine available to optometrists. Utilizing this technology allows us to step beyond the outmoded and limited compensating mode of lens prescribing into a new paradigm of vision care.

In Part 2 of this paper the integration process of vision will be more deeply explored for nearsightedness. Why is it necessary for vision care providers to examine the binocular status of myopic patients more

thoroughly? What can we learn about the complex world of stereoscopic vision that provides a glimpse into the depth of the myopic patient's personality?

Through an analysis of the development of monocular to binocular vision it will become apparent that there is a lot more to nearsightedness than just the obvious. With a deeper understanding of how myopic behavior develops practitioners will have a developmental approach to write lens prescriptions that alter the function of vision in the nearsighted eye as well as the myopic behavior behind the eye.

It is the purpose of this paper is to offer therapeutic ways for the retinal and foveal driven light to be more fully integrated. In this way a more comprehensive construction of visual reality can be made by the patient. It is essential for 21st century vision care to include integrated forms of vision therapy. Behavioral vision care is a healing discipline that helps in transforming the way people see and live on this planet.

The Nearsighted Eye -The Window to the Mind

As vision clinicians interested in wellness of the eye we must look beyond the visual measurements, and continue seeing into the whole person. The eye is the window to myopic behavior. This means that when we measure diopters in the eye it is the glimpse into the deeper myopic behavior of the patient. Granted, the prescribing of compensating lenses for nearsightedness optically increases the focus of light in the eye. Many patients are happy with this arrangement. The depth of their seeing is their increased visual acuity.

In part 1 of this paper I reported that full minus lens prescription disrupts the integration process for a significant of myopic patients. A modified (usually reduced) lens prescription increase the binocular response. When the right and left eye inputs are integrated a more meaningful rearrangement in 'the not-so-obvious' is happening to the transformed light. It is important to remember that the integration of right and left eye inputs is more than the foveal connections. For optimal human functioning and performance the right eye fovea and retinal light must

fully join the left eye fovea and retinal light. (Reference 2) This meeting is a highly complex process that we tend to take for granted. In vision therapy we realize how fragile this integration process can be. When the testing conditions are correctly set up we can observe how the binocular visual system is prone to breaking down under the slightest of provocations.

For example, when examining fixation disparity at far, I often pose leading questions while conducting a binocular assessment. With the final lens prescription before the patient's eyes, I ask a question like, was there any difficulty in your family life when you were first given glasses? While contemplating the question the patient comments if the appearance of the cross grid and the central black spot on the fixation disparity target changes.

It is quite common to see a disruption of binocular vision when the patient is confronted with an incomplete emotional aspect to their life. This binocular disturbance can vary from subtle central foveal or retinal suppressions to deeper conditions of complete one eye blockage. (Reference 3)

The evidence suggests that what we measure in the binocular response is direct feedback of deeper levels of integration or disintegration in 'the not-so-obvious.' (Reference 4) The more the patient has successfully dealt with the difficult parts of their lives, the higher the possibility for deeper levels of binocular vision and clear uncompensated distance vision. The patient then behaves in a more integrated and happy way in their personal life.

The high incidence of binocular disturbances in myopic and other patients in clinical practice invites an inquiry into the deeper causes. Over 60 percent of myopic patients demonstrate varying degrees of binocular disintegration. These visual findings are revealed as lowered convergence ability, binocular accommodative insufficiency or forms of foveal or retinal suppression. (Reference 5) What do these 'obvious' findings tell us about the 'the not-so-obvious?' If the myopic behavior is

more deeply understood could lens prescriptions and integrated vision therapies be designed that affected a corrective change in the cause of these findings?

Development of the Myopic Personality

Entering into the eye of the person during a vision examination is like reaching into the deeper realms of their true nature. Each variation of diopter from one eye to another reveals the mystery of how the patient has adjusted their inner and outer views of their world. One myopic patient has equal diopters between the eyes. Another exhibits anisometropia. The next patient has a high degree of astigmatism in one eye. These nearsighted eye measurements are a print-out of the accumulation of many moments of life experiences of light striking the retina and fovea. As a clinician interested in how vision develops I began questioning why each patient makes a different myopic visual adaptation? Is there a 'not-so-obvious' mechanism that can explain this clinical phenomenon?

Through experience, the human being is able to develop a reality map of consciousness from the light impressions striking the retina. In the optimum scenario, the person is able to respond well to life, by maintaining an integrated and clear perspective of themselves and surroundings. The patient is able to function according to their deeper nature free of survival perceptions. It is quite rare to find such a well-rounded person.

In the case of myopia, the person is adjusting their inner behavior in order to survive seeing their distant world. This shrinking of visual space can result from a single event or an accumulation of many experiences. (Reference 6) The first survival mechanism of myopic behavior can be from the family genetic programming. The second direct experience is living in connection to family members and part of culture and schooling experiences. Surviving in fear is a reactive form of behavior that promotes a myopic way of seeing reality. In survival, we shrink our perceptions and create illusionary and unclear way of behaving. This is why a myopic patient demonstrates a characteristic personality of being

more thought orientated. The patient uses logical (foveal) ways of perceiving in order to bury their feelings safely away. (Reference 7)

In the first 7 years of life there is a development of brain/body/eye coordination. The foveal perceptions of each eye are bilaterally represented while particular retinal stimulation is unilaterally represented. I have often wondered what exactly does the right and left eye inputs contribute at the level of the mind. In part 1 of this paper, I asserted that the foveal perceptions contribute to the development of precise and logical reasoning, while the retinal perceptions were to do with feeling and sensing. It appears that the foveal and retinal light contribution is much more profound and life changing than just thinking or feeling processes. The integration of light from the eye through the brain and into the mind of the patient involves a complex mingling of family genetics and history combined with the full life experiences of the patient.

The Right and Left Eye Personality

Clinical experience in vision therapy reveals that each eye input carries a particular energetic charge that is needed for the development of high level integration. I began tracking which eye the myopic patient was more prone to suppress and correlated this to the preferred eye and information gathered during the case history. From these, and other patching experiments, it appears that each eye carries its own family history and story about the survival personality. (Reference 3).

For many years I have viewed the integration of the right and left eye inputs to be like a human relationship. Man meets woman and woman meets man. The issues of man meeting the issues of woman occur in both directions. There are many influences that can interfere in the successful union of man and woman. When we carry emotionally laden experiences from our genetics as well as from our childhood, these memories can taint our current view of reality (Reference 8, 9). These buried messages can contribute to myopic behavior. When exposed, new perceptions of the past experiences forms the therapeutic basis for generating less myopic behavior. The fresh seeing of what was

problematic from the past eventually leads to a change in the measured nearsightedness of the eye.

It is my experience that how we integrate or not integrate the left and right eye channels tells us about the 'not-so-obvious' breakdowns in male and female integration in the mind. (Reference 10) The genetic influences can affect the development of myopic ways of perceiving. (In part 3 of this paper, I will discuss this in more detail and how we can interpret the iris of nearsighted persons to gain insights about the genetic component of myopic behavior.)

Conscious Prescribing -The New Role of a Minus or Cylindrical Lens

The process of vision therapy emphasizes building a strong binocular vision system. Yet in primary care the tendency to prescribe full compensating lenses in most cases leads to a break-down in binocularity resulting in foveal suppressions. (Reference 3)

A full minus lens prescription stimulates too much looking and the sense of retinal feeling is lost. Sociologist, Barry Glassner, in his book *The Culture of Fear*, (Reference 11) suggests that our minds are programmed with a heightened sense of fear by the 'bad news' and the distortion of facts presented by the news media and from the conditioning of the culture and family. In the same way a full minus lens interferes in the foveal/retinal relationship. A full minus lens prescription has the potential of distorting the reality created in the 'not-so-obvious.' Routinely prescribed compensating eyeglasses do increase the foveal capacity to look clearly but at the same time may promote a deeper fear of seeing.

Inform your patients about their advancing nearsightedness and that you can design a 'fitness' or a 'therapeutic lens' prescription. For the logical thinker, a full compensating lens prescription may be a partial solution to their increases in nearsightedness. When they leave the office let them be aware of the possibility of a deeper therapeutic solution to their

problem. When they are ready to embrace such an integrative therapeutic approach, they will return. In most cases the fitness thinker can embrace the idea of owning two pairs of glasses. A compensating pair of glasses for driving and a second pair of 'vision fitness' eyeglasses. They will wear their new modified eye glasses lessening their fear that their 'eyes are becoming worse.' This is the first step to opening the patient to the possibility of integrated vision therapy.

The Profound Medicine of Optometry

Seeing beyond the obvious is stepping out of our limited and unconscious way of lens prescribing. A lens must be seen as more than an acuity altering device. The lens is a powerful medicine for altering the programming of perceptual conditioning of the person through their eyes into the brain and mind. We realize that the nearsighted patient is more than a deformed eyeball. They are myopic in their behavior. It takes a conscious shift in broadening our thinking about the therapeutic effects of lens prescriptions. When we do, the lenses we prescribe can make a dramatic impact in the way the patient sees through their eyes. It helps bring their life more into balance. This is a big step beyond the idea of just improving visual acuity.

In the long term, when the patient is helped in rearranging perceptions, they are restructuring and organizing the development of perceptual consciousness. The patient's self awareness is restructured by the varying degrees of lens altered light input. Their perceptions, their point of view, their sense of reality is changed. They can safely deal with their myopic fear perceptions. Their mind interpretation is changed when they look through a modified lens prescription. A binocularly balanced lens prescription for the appropriate myopic patient in the long run makes the patient more aware and conscious of how they look through their eyes.

A minus lens being a medicine for developing consciousness offers the fitness thinker and transformer patients a deeper approach to 'correction' of nearsightedness. The minus lens that precisely focuses light onto the fovea usually promotes a consciousness of over-focused myopic behavior. This can deepen their inner feelings of fear. In a similar way a

more precisely focused minus or cylindrical lens before one eye can be used therapeutically to bring light into particularly blurred areas of the patient's consciousness.

On the-other-hand, a less powerful binocular presented minus lens prescription can assist the person to be less foveal in their myopic behavior. This means that with an appropriate reduced minus lens power the person can receive less focused light. This 'soft' focused light acts like a medicine over time. The less focused light leads to a softer thinking approach for the patient. They have to feel more and ultimately face their fearful behavior. This weaker minus lens prescription acts therapeutically in guiding the patient to be aware of other aspects of their visual function, that is to 'see' what they are 'looking' at, to have feeling about what they are looking at. This linking of what is looked at with how we feel about what is seen is another form of integration.

Now we can consider the how to interpret the different nearsighted adaptations and design lens prescription approaches to bring about changes in myopic behavior.

Equal minus spherical diopters in each eye

The patient who exhibits equal nearsightedness in each eye places a premium on integration in the brain and mind. Their survival adaptation is to sacrifice equal loss of acuity in each eye. This patient is treated with equal spherical lenses before each eye, however, consideration to less diopters should be give when the person has moved from the logical thinker to the fitness thinker.

Examine the flexibility of the patient's positive fusional abilities. In sixty-five percent of myopic patients it appears that a lowered performance in 'convergence free of accommodation' is part of the cause of the nearsightedness. The patient simply over-converges to compensate for their tendency to place themselves under excessive accommodative demand. (In part 3 of this paper, I will correlate this eye finding to the inherited personality tendencies of the patient, as seen in particular physical characteristics on the iris of the eye.)

For the fitness thinker and the transformer vision therapy practices for increasing fusional convergence and divergence can be emphasized at this level. The increases of fusional reserves while maintaining central focus and clearness appears to be an effective way to approach 'myopia control' and 'reversal.'

Equal minus spherical diopters and with astigmatism in each eye

The presence of astigmatism indicates that in the 'not-so-obvious' the patient has further contracted space in one orientation or point of view than others. Consider an astigmatic adaptation to be a more focused form of survival. In the case of 'with-the-rule' astigmatism, the most unclear orientation of viewing for the patient is the vertical. This defined area of visual space represents a particular survival strategy for the patient. Analysis of the iris can be very helpful in determining what is the origin of these survival strategies. (To be discussed in more detail in Part 3 of this paper) With an appropriate lens prescription and integrated vision therapy process, the patient can be guided to slowly wake up these survival perceptions.

Functional astigmatism

Each orientation of the astigmatic axis speaks of potential areas of woundedness and restrictions. For the fitness thinker, consider, eliminating all cylinder that is under one diopter for the 'fitness' lens prescription. For homework have the patient move the astigmatic eye along the orientation of the most unclear meridian, that is for 'with-the-rule', vertical movements, and 'against-the-rule', horizontal etc. These eye movements can be coordinated with breathing and looking at different distances from their eyes. For the transformer, I have successfully used 'slit patching', where I place a one millimeter wide slit along the most unclear meridian. The patient spends 20 minute periods at home looking through this slit with the other eye covered. They monitor changes in perception and visual acuity and write down their realisations.

This becomes a rewarding experience for the patient. They suddenly

start seeing more details along the former unclear meridian. This clearing up of perceptions suggests that a certain portion of the astigmatism is functional in nature. When we measure astigmatism in the eye it means that the patient is seeing from their mind in an astigmatic way, projecting survival perceptions. Part of this astigmatism may not be firmly conditioned into the structure of the eye. When this is true, there is no need to include the functional astigmatism into the lens prescription. As long as the patient is using integrated vision therapy, the astigmatism will be unproblematic and will eventually be trained away.

The combination of movement, breathing and looking through less minus will give a therapeutic advantage for the fitness thinker to slowly open up to the reasons for the myopic and astigmatic behavior. When the astigmatism is greater than one diopter, for the fitness thinker, leave the cylinder in the lens prescription and only reduce the spherical components for the first lens change. For the committed transformer the astigmatism is treated with a 'therapeutic' lens prescription discussed below.

More minus sphere in one eye

First notice which eye is the more myopic channel. In a humorous way, I call the right channel “Harry” and the left eye channel “Sally.” I inform the patient that Harry needs to meet Sally. In the context of relationships, they quickly appreciate my point. For the fitness thinker and the transformer, I demonstrate how they use the greater nearsighted eye less at certain distances. I explain that this suppression of the “Harry” or “Sally” channel is a reflection of their inner perceptions. Then I give them a patching experience. For about 10 minutes, I have them cover their less nearsighted eye and look exclusively through the more nearsighted eye. This can be done with and without eyeglasses. Each patient has different experiences from this patching activity. Invariably, the patching will bring about a realization for the patient. I invite the patient to consider memories from the past as they look through one eye. It is quite common for the patient to resolve more letters on the acuity chart when they discover and face confusing issues in their past that led to survival perceptions. The patient is encouraged to write a diary of

their experiences. The fitness thinker and transformer patients, under our care, are ready to look deeper into the reasons behind their myopic behavior.

Deeper adaptations

When using integrated vision therapy it useful to make a further discernment between the ‘obvious’ and ‘not-so-obvious.’ The recording of visual acuity findings can be thought of as moments of perceptions from the myopic patient's mind. These visual acuity findings can rapidly change from moment to moment. It appears that as the myopic patient shifts their perceptual state, from less thinking to more feeling, this leads to measurable changes in visual acuity. Sometimes I patch the patients least nearsighted eye and let them experience the acuity fluctuations as part of their therapeutic process.

The measurement of diopters in the eye represents the structural adaptation to what the patient’s mind is directing. It is helpful to remember that by modifying lens prescriptions before the patient's eyes helps restructure their perceptions in the mind. Also, just because the patient subjectively demands the need for a certain dioptric amount for sharp eyesight doesn’t mean the recorded diopter is the ‘best medicine’. The more diopters you measure in the eye, the higher the probability of perceptual wounded states there are in the mind. When there is anisometropia, larger astigmatic differences between the eyes and amblyopia, the lens prescription can be modified to therapeutically awaken these perceptual states in the mind.

Therapeutic lens prescriptions

This form of lens prescription made up in eyeglasses is very different than the conventional compensating form. Compensating lens prescriptions can be worn while driving, bicycling, for sports and for most life situations. On the other hand, therapeutic lens prescriptions are customarily used by the patient in the comfort of their home while engaging in integrated vision therapy.

Anisometropia, antimetropia and astigmatism

For the fitness thinker and transformer, consider a full compensating lens before the lesser perceiving eye which has the greater dioptric measurement. Before the other eye weaken the spherical amount by between +1.00 and +1.50 to create a form of lens patching. This encourages the patient to look more through the usually lesser perceiving eye. This 'biocular' form of training can be done in addition to monocular activities.

For the transformer, who has larger amounts of astigmatism in both eyes, consider reducing the sphere in both eyes by about +0.50 and INCREASE the cylinder by between -0.50 and -0.75 before both eyes. This lens prescription will encourage the patient to look through the lens induced clearness through their normally unclear astigmatic meridian. The focused light awakens the perceptions of their astigmatic adaptation. This therapeutic approach has the advantage of penetrating the deeper levels of the patient's survival mind. Over time, the cylinder can again be reduced when the patient has successfully dealt with the underlying issues behind their myopic and astigmatic perceptions.

The same approach can be used when there is more astigmatism in one eye than the other. In this case the clearer eye is fogged by using less minus sphere and the cylinder before the opposite eye is increased.

Summary

The measurement of nearsightedness in the eye represents a myopic survival state of behavior in the patient's mind as a way of protecting them from fearful states of seeing. The myopic behavior can include a breakdown of higher levels of integration that is measured at the level of the eye as unstable patterns of binocularity. The interference of the foveal and retinal integration in nearsighted eyes provocatively implicates deeper disturbances between the integration of male and female perceptual integration in the mind of the patient.

Binocular integrated vision therapy assists the patient in resolving perceptual conflicts in their mind. The therapy provides the safety for the

patient to see from their survival myopic personality. Interested Fitness thinkers and transformer patients answer questions about the origins of their myopic behavior while being examined binocular vision examinations. In this way the patient observes how survival perceptions affect the integration process of their eyes.

Suggestions and steps for conscious lens prescribing, beyond the compensating lens prescriptions, have been offered. By reducing and increasing spherical and cylindrical lens components for fitness thinker and transformer myopic patients offers a curative opportunity for nearsightedness.

With the ever increasing presence of nearsightedness on our planet it is necessary for the profession of optometry to offer myopic patients more than compensating lenses. The process of integrated vision therapy is a viable clinical tool that will help the millions of myopic patients that have stepped beyond the logical thinking into seeking transformation in their lives. In the long term this will provide a truly corrective approach for survival myopic conditioning. A balanced and conscious way of seeing is the right of all human beings.

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