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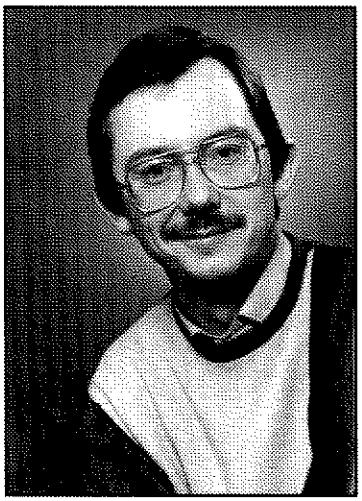

There always has been a «fatalistic post factum» approach towards Myopia among visual practitioners. The fact that individuals with Myopia often show some typical behavioral signs is not accepted as a causative factor, but explained as a behavioral adaptation towards Myopia. In the Center for Visual Training in Antwerp, many myopic and pre-myopic individuals have been followed during a period of five to ten years. A summary will be given of the used behavioral exam routine, specific data, effects of behavioral visual training, visual hygiene and lenses on myopic progress and behavior.

MYOPIA, A BEHAVIORAL PROBLEM ?

I'm greatly honored to be allowed to address you at this First International Congress of Behavioral Optometry. When twelve years ago, after a clinical externship in the States, I took the first shy steps in the direction of a behavioral optometry practice, an event like this congress was a distant, unrealistic and unattainable dream.

Twelve years ago behavioral optometry was totally unknown in my country. What started as a hobby for me, and often met withs cornful laughter and distrust, assumed big proportions in a fairly short space of time; so much that today I am proud to manage a Centre for Visual Therapy in Antwerp where five optometrists are working and where more than 150 patients are attended individually every week. We had to fight and still are fighting to make our profession accepted in our country. At present some 25 behavioral optometrists are rendering services in private practices in little Belgium and 8 students are in their graduation year of Behavioral Optometry. Several times we got into the news and the interest in what we are doing is growing every day. Unfortunately, all this takes place in a very hostile atmosphere, since ophtalmology, and therefore medicine in general, states that behavioral optometry is either quackery or illegal medical practice. Add to this the fact that in Belgium all medical care is rendered at almost no cost, because of the National Health Insurance Plans and that Optometry is not refunded in any way. From those who practise the profession a great deal of courage and perseverance is nowadays asked to stand behind their choice. However, once you have experienced the efficacy of behavioral optometry and once you notice how rewarding this profession is, for the patient as well as for the optometrist, who also becomes another and a better person through it, there is no way back. An event like today's proves to ourselves and to the world that we are not standing alone and that behavioral optometry is a science which wins more and more territory. To us, European behavioral optometrists, this congress is very important, it takes us away from our isolated and marginal position. It must bring us together and give us the energy to carry on, through all opposition.

As a subject for my lecture I have chosen: «Myopia, a behavioral problem?» because from the very beginning myopia has occupied an important place in our practice and because all of us optometrists, even those who are not yet in a behavioral practice, are concerned with it. In the Center for Visual Therapy in Antwerp myopes represent about 35% of all patients, besides 30% with learning problems, 20% strabismus and amblyopia, 10% sport-vision and 5% with various problems such as presbyopia, astenopia, visual skills, VDT and so on. My contribution has no scientific pretentions, it is only meant to share some clinical experiences. I count on your understanding for the fact that I have to speak in a language that isn't mine, which has forced me to make many concessions on the level of nuances in linguistic usage that are otherwise very important to me.

The etiology of myopia has always been subject to passionate discussions. The most current theory today still is that myopia is genetically determined. Some time ago the Professional Association of Belgian Ophtalmologists wrote in a Medical Magazine that visual training for myopes is a fraud, since «the lenght of the eyes is genetically pre-programmed». This shortsighted theory, of course, accounts for the compensating post catastrophic approach by ophtalmology and the total lack of prevention. And yet we are not in want of scientific material showing that environmental stress, nutritive and psychological factors may play a prominent part in the development of myopia. To us, the Near Stress

Theory, advanced by Skeffington, some 50 years ago, remains fundamental for our present-day working method. Both evaluation and treatment are mainly based on the knowledge that near stress can lead to physiological and even physical changes. Nowadays, even in medicine, the idea that stress induces physiological changes is more and more accepted, especially since Dr.Sperry received the Nobel price for medecine in 1981 for his study, in which he proved that stress leads to physical adaptation in 1/3 of the population. Also the fact that a declining capability or even a rejection of the stress-causing activity occurs was proven. This idea is applied for many years already in behavioral optometry, especially with visually related learning problems. There are several optometric publications dealing with the impact of stress on the visual system. In 1984 Dr. Martin Birnbaum wrote an article entitled «Nearpoint Visual Stress a Physiological Model». In this article a very useful physiological theoretical master model is put forward, which explains how physiological changes arise from stressful situations. Simplified this model starts from an imbalance, caused by environmental stress, in the sympathetic-parasympathetic interaction in our neurological system. Stress brings about the so called fight or flight response, or emergency response, consisting of generalised activation of the sympathetic nervous system, with widespread physiological effect throughout the body. As to the visual aspect among others, it is explained how this response, caused by stress, attention and information processing has a cyclopegic effect on accommodation, resulting in a compensating overaccommodating effort, followed by overconvergence. This model explains many measurements with incipient myopes, as well as the possible physical adaptation in the shape of myopic progression. This physiological theoretical model allows us to communicate with medical and para medical professionals about our way of thinking and working. It has shown to be very useful on many occasions. The scientific work done by Francis Young and others, has largely contributed to prove that spatial reduction can play a prominent part in the origine and development of myopia. What engages my attention very much, however, is why this «nearpoint visual pattern of behavior» occurs so frequently in myopes. I'm convinced that it is not because of their myopia that myopes tend to like nearpoint activities, like ophtalmology often suggest. A preference for or a forcing to nearpoint activities is often showing long before myopia occurs. So, why do myopes like this near centered behavior? Is psychological and emotional stress also involved in the development of myopia? It has been demonstrated that persisting psychological stress can lead to altered physiology. There exists some literature on the phychological characteristics of myopes. In 1912 Dr.Bates already finds a connection between myopia and emotional factors. Even Freud connects the psyche to myopia. Other researchers, especially in the fifties and sixties, such as Kelley, Van Alphen, Rosannes... publish comparative studies about the psychological factors in myopes versus non-myopes. In essence all these studies support the so-called psychodynamic theory which postulates that, on the psychic level, myopes take to a reduction of stimulus input, in order to decrease the contact with the environment. This would explain the near centered behavior and together with the building up of psychological and emotional stress cause physiological changes leading to a physical adaptation such as myopia.

In the Centre for Visual Training in Antwerp we have made a habit of going further into some of these psychological factors during the first consultation of myopic and pre-myopic individuals. Besides the classical observations of posture, habits and hobbies we also go into observations of general behavior, thinking strategy and digestion of emotionality. Afterwards we use these observations in therapy, because we believe that a change in the myope's psychological attitude may produce more lasting results on the level of myopia control.

I would now like to show a summary of a number of observations we made over a period of ten years on a few hundred myopic individuals. Percentages were used to approximate the occurence of certain types of observations.

1. PHYSICAL TYPOLOGY POSTURE VISUOPOSTURATION

Most myopes, incipient or stabilised, show a very short working distance, shorter than Harmon distance, when reading or writing. Many myopes, who acquired myopia at a fairly young age, show a dorsal kyphosis and a lumbal lordosis with the typical bend in the neck, this posture is also referred to as the asthenic posture. On the sensorimotor level many myopes, having developped myopia at early age, are described or describe themselves as being stiff and clumsy.

2. READING HABITS

95% of the tested myopes are keen readers, although some don't like reading for pleasure, but are forced to because of their studies or work. 75% of them don't hear when reading. 75% show a real appetite for reading, they often just read for the sake of reading, they read for example labels during meals, read in the car, etc. 50% say that they cannot fall asleep when they can't read in bed. Adequate lighting is often overlooked. For some young myopes, the suggestion is sometimes made that reading would be a kind of escape from reality in order to feel safe in a world of phantasy.

3. SCHOOL

Most myopic children show clear ambition and assertiveness on school level. About 70% of these children are good students. The majority finds they have to work hard for school. School results are considered to be very important. Exams imply for most, even the very bright students, much stress and even fear. The majority, though often rather shy, prove to have a very good command of the language.

4. HOBBIES

- reading clearly emerges as hobby number one for 80%
- computer occupies the second place - 50%
- drawing and model making score high - 40%
- many myopes are collectors - 50%
- few like sports for recreation - 30%
- most prefer indoor to outdoor activities - 60%
- striking is the dislike of group games and ball sports
- artistic activities rarely appear on the list - 20%

5. NUTRITION

- 65% of myopes admit that they eat very sweet

- eating too quickly and inconsiderately is also often mentioned

6. PERSONALITY-DIGESTION OF EMOTIONS

- many myopes describes themselves as being introvert
- adolescent myopes often tell us how frustrated they feel in social contact, they do want, but don't dare to make contact, some define this feeling «freezing»
- quite often the oppressing incapability to show affectivity and tenderness is mentioned
- also striking is the inhibition of motor responses to fear; fear is dealt with rather passively, inwardly
- parents of myopic children often recognise the inhibitive behavior of their child

7. THINKING STRATEGY

- most myopes have an analytic mind, focus on details, are cerebral types
- rectolinear, sequential thinking prevails
- dogmatic thinking occurs pretty often
- accessibility to new ideas proves to be very difficult

8. GENERAL HEALTH

- a significant high percentage of adult myopes periodically suffer from a psycho-somatic illness, such as gastro-intestinal problems

9. OTHER OBSERVATIONS

- myopic children often feel a great pressure from the parents, frequently achievement prevails
- some myopes mention that they feel protected behind their spectacles, the phenomenon is described as looking at the world without being touched by it; others describe the world as artificial, because of the glasses, and would very much like to get rid of them

Concluding from these observations and questionnaires I think we can say that individuals with myopia often show some typical patterns of behavior, especially when myopia starts to develop during childhood. This typical myopic behavioral patterns shows postural characteristics on one side and psycho-emotional characteristics on the other side. «Myopic behavior» can be translated as narrowed, constricted, supressed and inhibited behavior in many shortsighted individuals. A so-called «left hemispheric» cerebral cognitive strategy is also often seen with myopes.

I get more and more convinced of the fact that this pattern of behavior is not the consequence of myopia, but already exists before the shortsightedness really comes through. In a number of cases we have to take into consideration that myopia partially may be a psycho-biological adaptation to inhibitive and too central behavior. Many myopes play the ostrich: «What I don't see can't see me..». This inhibitive behavior is also frequently ascertained in premyopic children. By premyopic I understand the stade in which the visual acuity is still excellent, but signs of approaching myopia can be perceived. In fact it is not really important whether psychological factors play a causal part in the genesis of myopia, but we have experienced that for a successful long term treatment of myopia a deeper understanding and change of the myopic pattern of behavior, including near-stress and psychological or emotional stress can be very important.
Colleagues sometimes tell me they have a feeling of being little successful in the treatment of myopes. I think this has to do with our dioptric thinking and also with the fact that too little allowance is made for the myopic behavioral pattern. Furthermore, I find that after training many myopes testify that they see better, although this cannot always be measured dioptrically. Indeed objective refraction is a very narrow criterion to assess the visual function. To see more, to recognize more quickly, to have a better peripheral awareness, to see in a more relaxed way, to understand more of what is seen, are often worth more that a dioptric reduction of the refractive error. How often don't we find that two individuals with the same refractive error not only have a very different visual acuity, but also a totally different perception? Dioptric changes can be reached in a number of cases after visual training and appropriate lenses, especially in incipient myopia, but this needn't be a goal in itself. That is a possible endpoint of a modified visual strategy.

Now I would like to share with you some of the test results of the behavioral optometric evaluation that we find typical for myopia and premyopia.
The kernel of the evaluation is of course the 21 point evaluation. Apart from these tests there are a number which have shown their usefulness in the assessment of myopia at an early stade. First of all, the habitual visual acuity is important, especially how this acuity develops after a short waiting period. It is not exceptional that we reach a better visual acuity up to 30% after some time of encouragement and relaxation. This often explains low visual acuity in schoolscreenings. By avoiding evaluation stress, a better acuity can be achieved. This clearly shows the impact of stress on the visual function.

As for the objective refraction-data we may suppose that, if at the age of 7 a +0.50 diopter hyperopia cannot be measured, the chance of a future development of myopia is very real, the more so when other measurements affirm the tendency for myopia, or when myopia occurs in the family and/or when the child shows characteristics of myopic behavior. At that moment one should take preventive steps, with a good visual hygiene and stress relieving lenses for near if indicated.

Other typical characteristics of incipient myopia are :
- minusprojection and decline of plus acceptance
- big lag at dynamic retinoscopy
- esophoria-tendency, especially near, which increases when measured again
- low BI limits, high BO limits, low recoveries everywhere, frequent absence of blurs
- accommodative inertia on +/- 1.50 flipper test, increasing after a few cycles
- moments of blurred vision when looking up from nearwork
- low PRA, NRA and accommodation amplitude
- typical undershoots in saccadic eye movements, overall rigid oculomotor skills
- esoprojection on Van Orden Star
- low stress astigmatism against the rule
- slow stereopsis far and near
- inhibition of peripheral awareness
- low blur-interpretation
- regular SOLI perception instead of SILO perception pointing to reasoned instead of an intuitive visual pattern. A persistent SOLI pattern may be a serious impediment to lasting results after visual training.

The more of this test-observations are found, the more

functional and therefore controllable or reversible the myopia is. The more structural myopia becomes, the more the expected values of the 21 points are approximated, or even tip to the other side. We think among others of high exophoria for near, but often without the esoprojective attitude changing. Although in structural myopia results of treatment are often less dramatic than in incipient myopia,many important and lasting changes can be induced.

In our functional optometric treatment of myopia a threefold approach is used: first a change of visual hygiene and myopic attitude, secondly appropriate lenses and in the third place visual therapy. The final goal is relieving the stressing factors on all levels, if possible.

First of all a good and understandable explanation must be given to the patient and/or the parents about how myopia develops and what external and internal factors may be involved.
A change of visual hygiene with children requires more supervision than for adults. When working with children the school and the parents are also implicated in the process. The teacher receives a letter explaining what shortsightedness is, what factors promote it and what can be done to prevent further deterioration of the visual function. We give advice with regard to posture, working distance, the need of working on a slanting desk, breaks during near work, place in the classroom, and so on. The fact that the building up of stress is to be avoided is also pointed out. Sometimes schools are surprised and I am called for further information. This has frequently been the motive to deliver a lecture on functional vision for the entire teaching staff and the parents. It has happened that schools reacted very positively by re-arranging schoolfurniture, lighting conditions, etc.
The parents are advised on reading- and learning habits, television, hobbies, posture, nutrition... The need of bodily exercice is underlined. By also stimulating creative activities we appeal to a side of their personality which is often not very developed in myopes. Reading is reduced to reasonable quantities, bookmarkers are introduced which remind to stop in good time, look up, and relax the eyes. Creative toys are recommended. Sometimes it is necessary to tell the parents diplomatically that, unintentionally, they add to the myopic climate for their child. They are told that the imbalance should be broken, that besides intellectual development there are other important aspects.
Somewhat older children and adolescents are alerted to the irresponsibility in the matter of their myopia. They are taught that: «Not only my eyes are shortsighted, but I am behaving shortsighted». The importance of good visual hygiene is also explained as well as studying with insight instead of always relying on memory.
With adolescent and adult myopes we go, if required, further into the matter of how really relax, some are advised to go into autogenic training, to reduce a high stress level. Also how they digest emotions is discussed. In a few cases it seems necessary to refer the patient for psychological help, when there clearly exists an obstruction in this field. It is explained to the patient that in order to be successful in the treatment of their myopia, relaxation is very important and all stressing factors must be controlled as much as possible. A general behavioral modification to a more relaxed, open-minded, less inhibitive attitude is put forward.

In order to break the focal, optically dependent pattern of the myope we apply optical undercorrection from the start, up to a maximum binocular acuity of 0.7 to 0.8. Thus we make room for an improvement of the visual acuity and the patient is encouraged to interprete the blur. Cylindric corrections against the rule are avoided, experience teaches us that these often diminish or disappear after training. The subjective feeling of seeing sufficiently is different for everyone. It happens frequently that a myopic child shows a very low visual acuity, but is subjectively not much troubled by it. So here it is possible to compensate even lower, on condition that the child doesn't get stuck in his nearworld by doing so. On the other hand you meet people with a myopia of -0.50 diopter who pretend to be totally helpless without their glasses. Those are in need of visual imagery training, to get less optically dependent.
Plus-lenses determined with dynamic retinoscopy techniques will provide a good «buffer» against visual stress for incipient myopes. I personally prefer a modified # 5 retinoscopy using the M.E.M. card for this purpose. For myopes who already need a correction for far, we recommend bifocals with high placed straight top segments, taking account to the O.E.P. lens rules,the actual plus acceptance at near, the AC/A Ratio, # 14B, PRAN-RA balance. Overplussing has a very negative influence on the visuoposturation and causes a hypotone visual function together with a decrease of the quality of the visual information processing. Plus lenses or additions must be determined very carefully. Sometimes I get help from the myope himself going in search of the right «feeling tone». When plus lenses are rejected by the visual system, we first will build plus acceptance in visual therapy, before prescribing appropriate lenses. We have been able to follow incipient myopes who decided at first not to go into therapy and to use the stress-relieving lenses alone. When prescribed at the right time and in the right amount plus-lenses can have an almost «magic» effect on the myopic progression. I have seen several of these cases going back to hyperopia. I have also seen behavioral changes.

In visual therapy the mere training of visual-technical skills, even when done very thoroughly and with a lot of motivation, mostly results in an only temporary improvement of visual acuity. To achieve lasting and internalised results, a lot of attention must go to visual relaxation, visualisation and peripheral awareness as well. In the Center for Visual Therapy myopic children and adults only go into training if their motivation is strong enough. The waiting list for consultation serves here as a first motivation filter. The myope must be the inquiring part, not the optometrist.
The first training period consists of six months of intensive training with one 45 minute individual office-training session every fortnight plus twenty minutes of controlled daily home-training. In this first six months much emphasis is put on the behavioral aspects of the myopic patient. Every training session begins with a talk about changes the patient has experienced or tried to make in his or her myopic behavior. In our Center the therapists are optometrists. This is essential to be able to meet with the needs of the myope in the right way and at the right moment.

The therapy itself covers three large areas :

1. visuo-motor and accommodative
2. perceptuo-motor and perceptual
3. visualisation and visual relaxation

I won't give an enumeration of procedures we apply, but I will try to reflect the quintessence.

On oculomotor level we try to obtain a flexible and targeted eye-movement control, with emphasis on the

«feeling» of the eye movements. The feeling of the eyes will remain of great importance further on in therapy.
On accommodation level the main goal is to obtain conscious control trough accommodative relaxation and inhibition exercices as well as accommodative flexibility exercices. Accommodative inhibition is trained via consciously not focalising through ever weaker minuslenses, mono and binocular, until inhibition can also be obtained without lenses when requested.
Accommodative relaxation is first taught through physical means. Patients learn how physical effort negatively influences vision, and how relaxation improves acuity. Taking physical distance from lettercharts using these techniques shows results in a quantitative way, and that is something myope like. Flexibility is trained with flippers and in real space. During accommodative techniques the SILO phenomenon is carefully monitored.

On the vergence level we try above all to balance the binocularity, increase BI limits with incipient myopes, teach them to perceive blurs and bring the recoveries as near as possible to the breaks. Patients are instructed how to look through things. Accommodative controls are build in. Flexibility from BO to BI, thus from near to far, is trained. Stereopsis is improved qualitatively, as far as speed goes. A greater freedom between accommodation and convergence is obtained via «tromboning» activities or the so-called Base In Minus/Base Out Plus activities. SILO perception is constantly put to the test, because we feel that it is very important that myopes learn to see in a more intuitive manner. Attention is also paid to Just Noticeable Differences.

Perceptuo-motor and perceptual procedures cover all activities at which motor output should be adjusted to a modified visual input, using yoked prisms for example. Especially the putting into words of what is felt and perceived is very important. Many myopes encounter much difficulty here.

On the perceptual level «blur» interpretation exercices are done with slides of well-known objects and shapes, which are deliberately projected farther and farther out of focus. The purpose here is to learn to get a maximum of identification and understanding with a minimum of information. The ability to perform visual closure also proves to be a skill that can very easily be trained with favorable effect on visual acuity. Peripheral awareness is improved via «look easy» exercices, during which the patient should see as relaxed and as «wide» as possible. Through a number of periphery-stimulating exercices we aim systematically at keeping the periphery open permanently during all VT activities and also in daily life. Visual relaxation is achieved through basic-autogenic training activities during which real relaxation is attained via «visual imagery» techniques. The use of phosphenes or after-images is often very helpful. Palming, at one time introduced by Dr. Bates in the twenties, is also applied, be it in a modified way. Visualisation exercices are meant to learn to project farther than where the objects stand. Looking «through» things doesn't only result in relaxation, it also has an immediate effect on visual acuity. Using visual imagery techniques in which one has to look as far as possible in his mind are very useful.
Indeed, visual imagery exercices have a measurable effect on the binocular balance and the visual acuity as well. The rotating Plateau Spiral (a Belgian invention by the way) is also used, first to show the magnification effect that the spiral produces in a dramatic way, afterwards to use this phenomenon in visual imagery with the same magnification effect as a result. Through visualisation patients are taught to make use of other sensory inputs from auditive and tactile origin to support vision. Visualisation exercices aim at converting a central focal visual strategy into a more peripheral intuitive global visual strategy.

It is not possible to mention all procedures used in the treatment of myopia. There is no such things as a cookbook approach. The therapist has to use his professional behavioral optometric know-how to know when which procedure has to be applied. The procedures are not that important, the change in visual behavior is.

After the first six months of intensive training, during which much attention is paid to daily home-training, for which at each visit clearly specified tasks and materials are provided, a re-evaluation is made. We go very much into how the patient experiences the results of the vision training program and whether the myopic attitude is gradually changing. In my opinion, the long term effect of training will very much rely on this.

For the evaluation of training results I have only taken into account the patients who carried out their entire VT programm. The ones who stopped VT, or were stopped because of lack of motivation are not counted. With more or less 70% of incipient myopes we notice an improvement of visual acuity after six months training. 60% up to 0.2 and 10% even up to 0.3 improvement. Generally, the optical under-correction is completely regained in terms of acuity, not necessarily in terms of dioptric changes. In 20% we cannot find a real acuity improvement, although subjectively patients often report improved vision. In 10% we see a further deterioration of acuity with myopic progression. The group mostly represents the atypical non-functional myopia, atypical in the sense that the typical observations in incipient myopia mentioned before are not found, and/or that there is a strong hereditary factor or pathological type of myopia. It also sometimes has to do with the strong physical growth some children go trough in a short period of time. In most cases, after the first training period, next to acuity improvement, either stabilisation of, or effective dioptric reduction of myopia is measured. Not uncommonly we notice a restoration of a small hyperopic buffer in incipient myopes. It is striking that the earlier myopia is treated, the better results can be obtained. With more structural myopes, higher that 2 diopters, we notice during the re-evaluation that with less dioptric compensation the same or even higher acuity can be gained, which points to an improved «cortical» vision. It has struck me that fairly often myopes, even in high grades, reported moments of very sharp vision after training, without any optical correction. I'm not sure of what is happening then. Is it a moment of negative accommodation, a corneal flattening or a perceptual phenomenon? In one case I have been able to measure objective corneal changes during such clear moments. Is this maybe a voluntary corneal flattening through an action of the extra ocular muscles? I do not know, anyhow the phenomenon occurs quite often and deserves further investigation. If, before training started, no positive correction or addition could be prescribed, the moment has probably arrived now. Even with excellent results I shall nevertheless prescribe pluslenses for protection. When this works out well a further progression of myopia is often definitively avoided, providing there is not too much of a myopic attitude left.

After these very important first six months of training a very concrete home-training schedule is given. In this home-training program, that is adapted to the personal needs of the patients and the test results of the re-evaluation, exercices are prescribed in all levels of training.

In some cases we allow for an every two days home-training session. Self-discipline is very important here. We suggest to the patients that if there is a progression of myopia or a loss of acuity at the next re-evaluation, six months later, they should come in once a month for renewal of exercices and remotivation. All myopes are also free to take part in monthly group training sessions we organise, in small groups of 5 myopes of the same age at the most. In these groups emphasis is put on the change of myopic attitude and the training-outline for home. The secret of success is not to let go of the myopic patient and always to agree and schedule the next step in advance. Right now we have treated a few hundreds of myopes over a period of almost ten years. Many of them stay into the programm until definite stabilisation or reduction is achieved and/or they themselves find that they have reached the upper limit. In those cases that proved to be successful after the first six months of therapy, this success is often prolonged during several years. If no good result is obtained after six months, it proves to be more difficult to get good long term effects. The later in life myopia develops, the easier it is to get it under control.

In those cases where functional optometric care doesn't lead to satisfactory results, the patients are advised to switch to hard contact lenses and/or orthokeratology, even at a young age. Combined with visual therapy this may often lead to good results. I have chosen to keep this approach outside the scope of this lecture.

I would like to come to a conclusion now. We consider myopia as the result of an imbalance in the entire organism. Next to hereditary factors, environmental factors, psychological and emotional stress are involved. Successful treatment of myopia also calls for knowledge of an insight in these factors. Adding this dimension to the optometric examination and visual therapy changes the approach into a behavioral one. Because this approach is much more holistic it brings about a more profound change. In optometry we see only the tip of the iceberg, in behavioral optometry we look under the surface.

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