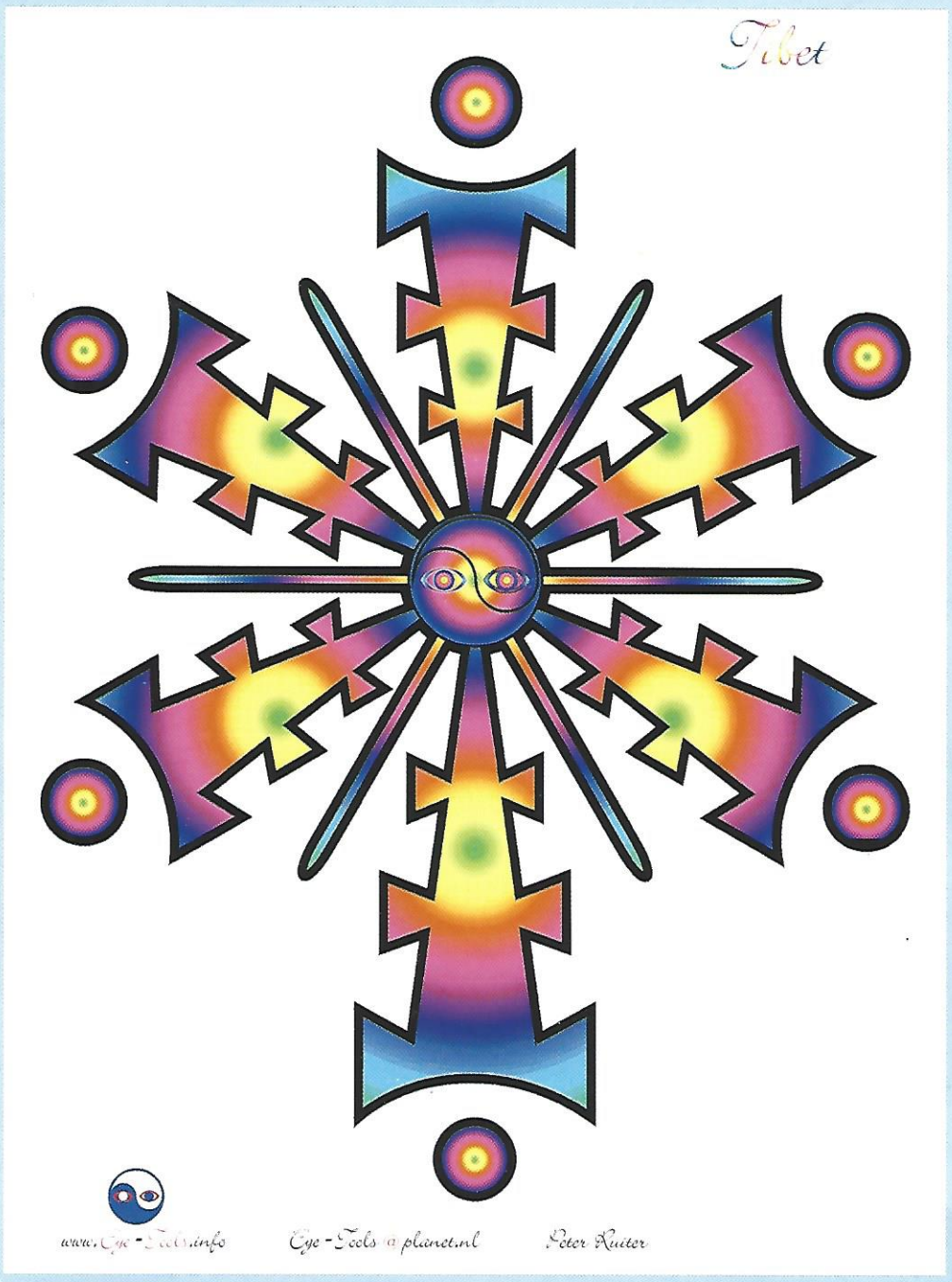
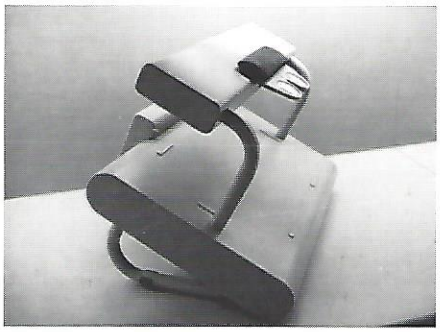
Journal of Optometric Phototherapy

Best of…



December 2006

OPTOMATTERS – SYNTONICS – EQUIPMENT 2006



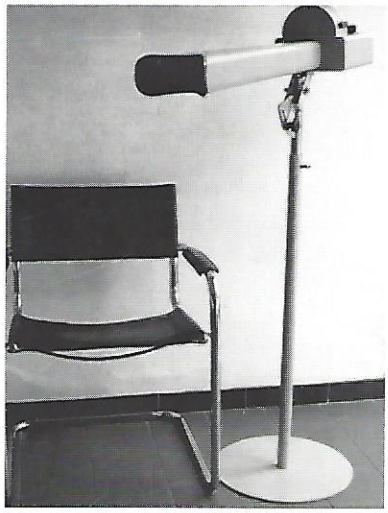
COFMA (Colorfield Machine)

A new colorfield tester with 2 build-in cameras and 1 LCD screen for a better Test observation and a correct charting of fields.

Incl: 1 COFMA, 1 case teststicks, 50 charts for the left eye, and 50 charts for the right eye, one 12 volt adapter, CE & URL Norm.

Price: 2.580,00 Euro excl. shipping

For more details just contact us!



COC (Color Coach)

A new Syntonizer for office Training. This instrument has the following integrated filters: alpha, delta, theta, mu, pi, omega, upsilon, lambda, D, S, N.

The COC has also the possibility to go in a stroboscopic performance and speed adjustable with a potency measurer.
The COC has also a removable binocular to improve binocular disorders.

Incl: 1 COFMA, one 12 volt adapter, CE & URL Norm.

Price: 2.995,00 Euro excl. shipping

For more details just contact us!

COB (Color Boy)

This instrument is a more simplified version of the Color Coach, adequate for hometraining. For some patients daily training with syntonics is advisable.
The Color Boy, a handy portable kit is perfectly suitable for hometraining.

Incl: 1 COB, one 12 volt adapter, CE & URL Norm.

Price: 365,00 Euro excl. Shipping

Thanks to the carton goggles which you can order in different filter combinations, a perfect home training is possible with the Color Boy.

Price: 16,00 Euro (6 pack) excl shipping

For more details just contact us!

You can find our other VT-Equipment in our big catalog.
Just call and it's on the way!

OPTOMATTERS cvba
Dr. Van de Perrelei, 106
2140 Borgerhout – Belgium

Tel: /32/ 3 271 19 51
Fax: /32/ 3 271 05 78
Email: optomatters@scarlet.be

College of Syntonic Optometry

A NONPROFIT CORPORATION DEDICATED TO RESEARCH IN PHOTORETINOLOGY, THE THERAPEUTIC APPLICATION OF LIGHT TO THE VISUAL SYSTEM

December 2, 2006

Dear Colleagues,

This retrospective journal was the result of the membership voting for their favorite articles over the past six years. This is the brainchild of your editor Sarah Cobb whose labor of love for Syntonics has created these wonderful journals. Upon renewal of your membership you will receive a CD of all the past journals for your library as well as a chance to read many of your favorite past articles. Many of the greatest thought leaders in phototherapy have been contributors.

The field of light and color therapy continues to make quantum leaps in theory and applications. This was evident at the recent International Light Association Conference in Heidelberg Germany this past October. The six day conference included monochromatic color therapy, color driven psychotherapy , visual fields, biology of emotions, colopuncture, the biological effects of color and light in the environment, biophoton research from it's original scientist, Dr. Popp, and of course Syntonics among the many lectures given. Both Ray Gottlieb and I presented lectures and did a joint workshop with Denise Hadden and Don Barneski. Also in attendance was our editor Sarah Cobb. IlA's hospitality was superb.

The ILA is a close relative to CSO and deserves your support and membership. They are driving the field in Europe and here as well. Several of their presenters will again be with us in Kansas City.

This will be CSO's 75th annual conference and will be special in many ways. We will have an international array of speakers, researchers on light and color from US universities, a basic course for new optometric and non-optometric attendees and a wonderful venue for the event. Kansas city has historical meaning as many of the early conferences were held there with the heart of the membership living in the mid west. The city has grown into a major conference and tourist destination. It will serve as an ideal location for this historical event.

Your Board is continuing to have regular conference calls to support the structure and growth of your organization. We need you help to allow our committees to meet their goals. Please contact me if you can help. And of course we want to see all you in Kansas City, May 3rd to 6th. It gets better every year !

My warmest regards to you all,

Larry Wallace, O.D., FCSO

President of CSO

The College of Syntonic Optometry is a nonprofit corporation dedicated to research in photoretinology - the therapeutic application of light to the visual system.

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Charles Butts	(573) 374-6326
Ray Gottlieb	(585) 461-3716
Betsy Hancock	(570) 784-2131
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Ellis Edelman	(610) 356-1889
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RESOURCES:

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Submissions: Please submit articles as email attachments or on disk in PC format or MS Word. Hard copies are also accepted. Please send copy and artwork no later than September for inclusion in the next issue.

Contact: Sarah Cobb, The College of Syntonic Optometry, 641 Scott St, Port Townsend, WA 98368
Email: **eyeamsarah@hotmail.com** Phone: (360) 385-2823

Membership: Optometrists $150/yr., non-optometric professionals $85, affiliate members $100, sponsors $250, students, no fee. A member may attend all educational sessions, appear in the directory, listing on the web site, and receive published materials. Request information from contact at CSO in Resources Box above.

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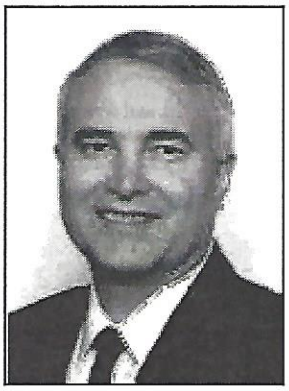

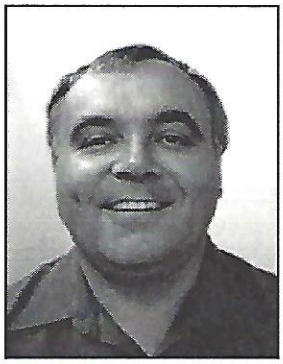

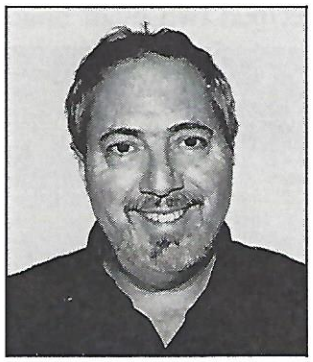

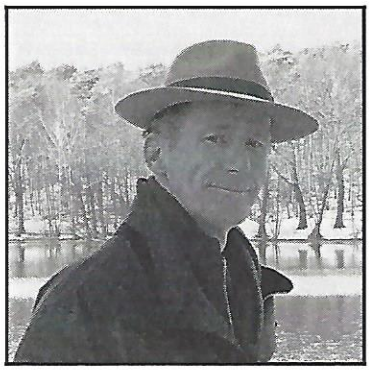

ATTENTIONAL ASPECTS OF LIGHT AND VISION TRAINING

by
John Searfoss, O.D.

An explanation for part of light's effect may be through the pathways of the attentional mechanism. Attention is found to be a controlling factor in most behaviors. Performance can be directly influenced by attention. Attention to the autonomic nervous system has been shown to regulate the heart and blood flow.

Focusing attention to desired effects can alleviate pain and change body temperature. Balances in biochemistry are also modulated by attention. Science is describing consciousness in terms of attention. The importance of attention is made known by the voluminous literature and research that has increased five fold in the last 20 years.

The premise that light effects attention that modulates most behavior is basic. The idea that light enhances what controls attention is far-reaching and exciting to light workers. Science has described two main branches of attention. One is that physical stimulus captures attention and the other controls from above and is immune to physical capture. There appears to be something within us that controls attention. We believe that light training assists us to be aware and develop that something.

Where attention is focused energy follows. When attention is withdrawn so does energy. Thus energy and its many patterns are modified by attention. Focusing attention creates excitation. Dropping an energy pattern from consciousness assists inhibition. Inhibition acts as a buffer to the demands on attention. An individual cannot "pay attention" to everything. Learning the process of dropping and filtering out, frees up more attentional resources to direct available energy.

Different tools can be applied to bring the controller and its skills of attention into awareness. When we use an instructional set in the light training as part of vision training, we ask the patient to become aware of where their attention goes. This brings awareness of attention into the patient's consciousness. They become aware that something that they possess allows them to direct and allocate attention. The instructional set guides the patient to become aware of the act of focusing attention. They can become aware of what they dropped. They can be aware of the ability to control and change attention from within the mind to things perceived outside.

By example, if one simply listens to the sounds around them, attention appears to have the skill to reach-grasp-release anything we chose to intensify in our awareness. This includes aspects of the mind-body-emotion-spirit.

Another advantage in working through the attentional mechanisms is that patterns are easier to change when they are brought into our consciousness. (When we pay attention to them. Technically called attention allocation.) If we have denied, suppressed, or the pattern is beyond our sensitivity, it is likely not available to alteration. Patterns can consist of beliefs, thinking, behavior and motor performance. Even disease can be considered as dysfunctional and disorganizing pattern.

This is essentially how traditional visual therapy is done. We isolate a pattern or skill so we can put attention on it, bringing it into conscious awareness so we can change it. This is generally a motor pattern or a sequence of thinking directed toward a motor pattern.

In light work we go above the motor and most motor thinking processes. In this place or state above, we can re-examine experiences, attitudes, judgments and assessments that control our functions, behaviors and thinking. To do this, the first developmental step in our light work is to learn how to control attention.

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SYNTONIC ADVANCED FILTERS

Compiled and summarized from syntonics literature
By
Dr. Ray Gottlieb, Dean, CSO

The following syntonic filter prescriptions were compiled from the *Syntonogram* and other syntonic writing beyond the basic course in order to preserve and present a review of advanced techniques of using syntonics phototherapy for various visual conditions and pathologies. These prescriptions were suggested by practicing optometrists based on their personal clinical experiences. This explains why there may be several different, possibly contradictory, prescriptions for the same ocular condition. In spite of the very specific and often complex nature of the prescriptions, there is no suggestion here, nor in the original articles, of scientific reasons why these should necessarily work nor any attempt to statistically prove their efficacy.

There is much in the earlier practice of syntonics that has fallen by the wayside. For example, most practicing syntonists today would not think of treating Argyle Robinson pupil, astigmatism or blepharitis with syntonics. In addition, most of today's syntonists don't 'nascentize' before treatments and tend to minimize or ignore morphological analysis (body typing) in prescribing.

In the past, syntonics treatments included three to five minutes of nascentization before each phototherapy session in order to increase the effectiveness of light therapy. The idea was that a static physiology was less easily influenced than one already put into motion by nascentizing. Until the early 1960's 'syntonizers' came with two external filter sets called scopes that were the size and shape of the syntonizer's viewing aperture. These were attached to the top of the instrument. The scopes were swiveled down to hang in front of the patient's eyes for nascentation and then moved up to rest on top during treatment. Patients looked through one or both of these filters at steady (non-flashing) white light (no therapeutic filters inserted).

The 'not-local' (N/L) nascentizing scope, deep red glass on one side and violet on the other, filtered out all but the extreme ends of the visible spectrum. The N/L scope could be placed with red over the right eye and violet over the left or turned around the other way. Red was used on the non-dominant eye. The N/L scope was to prepare to treat ocular problems resulting from systemic imbalance ("ocular deviations from normal due to deeper seated trouble"). Newer syntonizers don't have attached nascentizing scopes but come with a reversible welder's goggle with red and violet filters.

The local nascentization (L) scope was of green glass and could be swiveled to cover the N/L scope in order to cut down the extreme spread of the frequency transmitted and the amount of illumination reaching the retina. Patients looked through both scopes at white light for three to five minutes. L was used for conditions related just to the eye such as retinal detachment or contact lens abrasion ("the ocular departure from normal lies solely within the eye or its appendages"). Notice that both L or N/L were sometimes suggested for the same condition and that several, such as asthenopia were broken down into subtypes like 'nervous' asthenopia that called for (N/L) and those presumed due to local, eye-based causes, such as 'retinal', 'muscular' or 'accommodative' asthenopia, where (L) was used. There is no L filter manufactured these days, but the green filter *'mu'* in combination with the N/L glasses might work. Perhaps one of these days we will be able to generate clinical data to determine the usefulness of nascentization.

In the past, patients of definite morphological types, pyknic (P), syntonic, (S) and asthenic (A) were prescribed different filter combinations for the same visual condition. In the early days, patients were syntonized according to their morphological classification plus consideration of the underlying cause of their manifest ocular symptoms. Generally rounded, easygoing pyknic types (parasympathetic predominating) being physically slow and sluggish, required mental and nervous stimulation so low frequency (red end) of the spectrum were used. Slender, nervous asthenic individuals (sympathetic predominating) required depressing or slowing down and so required high frequency light (violet end of the spectrum). *The Syntonic Principle* describes this in depth.

Syntonics as it is practiced today will evolve to incorporate more of its past into its future. The goal of this summary is to encourage an awareness of practices and procedures lost in the current phase of syntonic phototherapy. Perhaps some of you will use the information below and find that it stimulates significant and reliable healing to your patients.

SYNTONIZATION

P=pyknic type, **S**=syntonic type, **A**=asthenic type

Accommodation

Spasm of – **P** - Tonic L-Upsilon or Omega - Clonic - Theta Upsilon. **S** - Tonic L- Omega - Clonic – Omega. **A** - Tonic L-Omega & D or Upsilon or Omega - Clonic - Delta Omega

Lack of Accommodation –
P - Functional – L-Theta. For Paretic - N/L-Alpha Theta, Mu Theta, on alternate days.
S L-Functional - Delta D, N/L-Paretic - Alpha Delta, Mu alone, on alternate days
A L-Functional - Delta, Alternate with Upsilon Delta on 1-1 basis.
N/L-Paretic - Delta, Mu Delta, on alternate days.

Myopes with low accommodation (usually type **P)** - Seem to respond best to Mu Pi.

Low Accommodation (in general) - L-Delta and N/L-Alpha Omega.

Push-up Blur-out Low - Male- N/L-Alpha Delta altenated with N/L-Mu. Female N/L-Alpha Upsilon alternated with N/L-Mu

Amblyopia

Congenital
P N/L-Mu Theta, **S** N/L-Mu, **A** N/L-Mu Delta
If nerve head is very pale, use the above on first appt then alt with below on alt days:
P L Alpha Theta - flashing, **S** L Alpha - flashing, **A** L Alpha Delta-flashing

Toxic (usually affects one eye), effecting indirect and direct vision
P N/L-Mu Theta (flashing may be used), **S** N/L-Mu (flashing may be used), **A** N/L Delta (flashing may be used)

Exanopsia - P L Alpha or Alpha Theta- flashing, **S** L Alpha -flashing, **A** L Alpha Delta -flashing
Also listed are: Mu Upsilon and Omega, L-Alpha Delta and L-Mu, N/L-Mu Delta; L/Mu Upsilon on 1-2 basis, Mu Delta & Delta Omega, Low acuity with irritability. Delta - flashing followed by rotary exercise, Amblyopia with low reserves - L-Mu Upsilon

Diminished visual acuity without interference of lenticular opacity and no visible extra ocular or intra ocular pathology: Delta, Mu-Delta, Mu-Theta Correct general health conditions, including vitamin and mineral efficiency. Immediate improvement in vision, which will continue if indicated physical conditions have been corrected.

ANTIMETROPIA - L-N

ARGYLE ROBINSON PUPIL N/L Mu Delta

Asthenopia

1). Asthenopia - Delta or Mu Upsilon
2) Accommodative Asthenopia - **P** L-Theta, **S** L-Omega, **A** L-Delta D
3) Muscular asthenopia - **P** L-Theta Omega, **S** L-N, **A** L-N or Delta Omega It is difficult to determine what frequency in Asthenopia, be governed by the clinical results
4) Nervous Asthenopia -**P** - N/L-N or Theta Omega, **S** - N/L-N or Omega N, **A** - N/L-Delta Omega or Omega N
5) PUPILLARY ASTHENOPIA - N/L-Alpha Omega or N/L-Alpha Lambda Delta or N/L-Mu Delta or Omega N or N/L-Alpha Lamda (Alpha Omega Pupil)
6) Retinal asthenopia – L-Mu^{10} alternated with –Alpha $Theta^{10}$ 1-1 Basis.

OCULAR DISCOMFORT - 1) Upsilon, Mu Upsilon, Alpha Upsilon. 2) N/L-Delta Omega and N/L-N. 3) Mu Upsilon and N/L-Upsilon, Mu Delta. 4) N/L-Alpha Delta, N/L-Omega N, Alpha Delta. 5) N/L-Omega N, Mu upsilon, Alpha Delta alternated with Mu Upsilon.

ASTHMA - N/L-Alpha or **P**-Mu Delta – maybe Alpha Omega

ASTIGMATISM - L-Mu Upsilon, Alpha Omega – to slightly reduce the M

BLOOD PRESSURE (low) - 1) N/L-Alpha Upsilon, 2) N/L-Alpha Kelta (kidney involvment. 3) N/L-Alpha Upsilon works best or Alpha Lambda and sometimes N/L-Alpha Omega.

BLOOD PRESSURE (high) - 1) N/L-Delta Omega, 2) Delta Omega or N/L-Theta if high diastolic pressure with N/L-Delta alternately on the 1-1 basis (muscle invlovement)

BLEPHRO SPASM - N/L^3 – Omega N^8 – Mu $Upsilon^5$ – $Upsilon^5$ – Upsilon $Omega^8$
N/L^3 – Mu Theta or Mu $Delta^{10}$ – Theta or $Delta^{10}$

BLEPHARITIS Possible causes: some illumination malfunction, infection of mucous membranes, glare, wind dust, smog, chemical fumes, uncorrected ametropia, muscle imbalance, vitamin and mineral deficiency, anemia other metabolic disturbances.
N/L^3 – Mu Theta or Mu $Delta^{10}$ followed by Theta or $Delta^{10}$

BUZZING - Delta Omega or Upsilon Omega – flashing

CHALAZION - L-Mu Delta or N/L-Mu Upsilon alternated with N/L-Mu Omega on 1-4 basis

CHOROIDITIS AND CHORIORETINITIS - L-Mu^6 followed by Delta or $Theta^6$, also remember L-Upsilon Omega
CHORIORETINITIS AND YELLOW EXUDATES IN RETINA - N/L^3-Mu $Delta^{10}$ or Mu $Theta^{10}$ (according to type) Theta or $Delta^{10}$ (according to type) for heavier kick, use Delta Theta
If luetic – N/L-Mu $Delta^6$, Mu^6, followed by Delta or $Theta^6$ (also remember Upsilon Omega)

COLDS – N/L-Upsilon Deep seated cold Alternate – Upsilon, Upsilon Delta 1-1

COLOR FIELD - L-Mu Upsilon and R/G-Mu Delta, G/F-Mu Delta and Mu Theta, Las few followed by Alpha $Delta^5$, Expanded R/G-Mu Delta and L/Mu Upsilon, 2-1 basis

COLOR FIELD CONSTRICTED BLUE – a blue field constriction indicates an organic condition and is generally the most difficult to handle. Proceed as follows: **P** N/L-Alpha Upsilon or Alpha Omega or Alpha Delta, **S** N/L-Alpha Omega, **A** N/L-Alha Omega or Alpha Lambda.

Blue Field Contraction – Look for bluish or purple lips or for swollen ankles, if either is present, N/L-Alpha Omega. An occasional pyknic patient will show blue lips and wheeze considerably but will not exhibit swollen ankles. In such a case eyes can best be normalized by N/L-Alpha Delta. If sclera is yellowish, N/L-Mu Delta

COLOR FIELD CONSTRICTED GREEN - It is often possible to enlarge a constricted green field through specific Syntonization. **P** N/L-Mu Theta, **S** N/L-Mu, **A** N/L-Mu Delta. Special nascentizing R/G^3 followed by Mu Delta G/R^3. (Get a piece of green that will make ruby glass look yellow.)

COLOR FIELD CONSTRICTED RED - Constriction of the red field, being systemic, will require careful consideration. **P** N/L-Mu Theta, **S** N/L-Mu, **A** N/L-Mu Delta.

COLOR VISION – Alpha Delta – Mu Delta

CONTACT LENS ABRASION – Mu $Upsilon^{13}$-Delta N^6-Upsilon Omega N^{10}

CONJUNCTIVITIS (chronic red) - L-Mu Pi, if painful vision. Also L-Mu Upsilon, if red field contraction use N/L-Mu Delta. Allergic causes: hair worker, hair dye, face power containing orris root, mascara, lip stick colored with analine, eyelas treatment, dandruff, oranges, tomatoes, chocolate, gasoline fumes, sweet milk and chicken. MG-Mu Theta, R/G-Mu Delta and L-Mu Upsilon on 2-1 basis.

CONSTIPATION AND INDIGESTION WITH OCULAR DISTURBANCE - N/L Delta

CONVERVENGE INSUFFICIENCY For low 'Push Up' break (8'+): Try 3 degree base out prism OU (total 6) = +1.25 OU in trial frame before your syntonizer. Flash - Mu Delta 5, rest 3 minutes, then 5 min. more, rest 3 and 5 more. In addition to the syntonic application, convergence is brought in and accommodation is pushed out. We widen the area of compensation, we create a new situation.
Corneal Scars – L-Mu Upsilon

DARK CIRCLES UNDER EYES – Mu Pi

DEPRESSION WITH LOW BLUR, BREAK AND RECOVEY - Female - N/L-Alpha Pi or N/L-Alpha Upsilon, Male - N/L-alpha Delta, sometimes N is all that is necessary.

DISK FUZZY – N/L-Delta or L-N or N/L-Mu Delta (with fetid or rank breath) Occasionally N/L-Delta Omega

DIZZINESS (eyes blurry, HA) – N/L-Alpha Upsilon, or N/L-Alpha Upsilon or N/L-N (if associated with thumping headache) (caution using N/L-Mu Delta). Ocular Vertigo – N/L-Mu Theta N/L-Alpha Upsilon N Alpha Upsilon - Alpha Omega

DUCTION RESERVES LOW – 1) N/L-Alpha Upsilon - Female and N/L-Alpha Delta – Male.
2) N/L-Alpha Pi or N/L-Delta; N/L-Alpha Lambda; If female under 45 with vertical lines on upper lip.
3) N/L-Alpha Upsilon; N/L-Alpha Lambda; If dark circles under eyes, Female, or N/L-Mu Upsilon if lower lid droops.
4) N/L-Alpha Omega or N/L-Delta, occasionally N/L-Alpha Delta, most Males respond.
(Avoid Alpha Upsilon and Alpha Lambda in women.)
5) N/L-Alpha $Omega^{3}$
6) Also do not forget the value of Mu to balance departure of normal whether hypertonic or hypotonic.
7) Low Reserves during menopause – Delta Omega with occasional headache Rx.
Functional – Alpha Theta alternatated with Alpha.
8) Low Recovery Adduction - L-Delta

GLAUCOMA - (for pain in glaucoma) - Upsilon or L/Upsilon Omega or L-Delta Omega (some secondary types may be aided by L-Alpha Delta, also N/L-Mu $Upsilon^{10}$- Upsilon $Omega\ N^{10}$

HAY FEVER (with red eyes) N/L-Mu Upsilon before attempts at wave optics adaptation, If of piknic type eye can be made comfortable by N/L-Alpha Delta. Also Upsilon Omega D or Alpha Delta, if chronic then Mu Upsilon or Upsilon Omega D

HYPEROPIA - L-Omega (tends to stabilize ciliary activity), N/L-Mu is of value in about 50% of these cases, also N/L-Alpha Upsilon

HYPERTENSION - N/L-Delta Omega N/L-N

INFLAMMATION - Between outer canthus and cornea - N/L^{3} - Mu Upsilon
between inner canthus and cornea - N/L^{3} - Theta Omega

LACHRYMATION AND SWELLING - Mu Upsilon alternated with Mu Delta on 2-1 basis, L^{5}-Mu $Upsilon^{10}$ - $Upsilon^{5}$

MYOPIA - L-Mu Upsilon - 2 treatments and alternate L-Mu Omega - 1 treatment.
L-Alpha Omega - try in progressive myopia. Mu Upsilon - Mu Pi alt L-Omega
L-Mu Upsilon - if with Exotropia or Exophoria
L-Mu Upsilon - can sometimes help materially. Of static type - some pink type of filter lenses will enable the prescription of lower minus powers. Try N/L-alpha Omega, if Mu Upsilon fails in progressive myopia.
L-Omega d or Delta Omega with good accommodation, N/L-Mu - Monocular flashing, Exo - Mu Upsilon or Alpha Upsilon alternated with Mu 1-1 basis. If no change use cruxite A1 or AX.

NERVOUSNESS - N/L-Delta N and N/L-Alpha Omega. Nervous Irritability of Ocular Origin - Upsilon D and N. Hyperexcitability with Exhaustion - N/L-Mu Upsilon - 4 days, then N/L-Alpha Delta - 26 days.

NYSTAGMUS - L-Omega, L-N or L-Mu Upsilon, N/L Delta Omega or Theta Omega, Upsilon Omega, Omega N, Traumatic - N/L-Delta Omega or Theta Omega

OCULOMOTOR PARALYSIS - Treatment #1 - N/L-Delta **S** Refer, #2 - N/L-Alpha Delta

PAIN - 1) N-Delta if from constriction or congestion. 2) L-Alpha Omega, 3) L-Upsilon Omega if this makes worse switch to L-Delta Omega. 4) L-Mu Upsilon. 5) L-Upsilon Omega or L-Delta Omega. Refer if no relief after two treatments. 6) L-Mu Upsilon - use if pain is releived to finish up case before final lenses prescribed. 7) Mu Upsilon - Mu Delta 1-1 basis for pain in head. 8) L-Upsilon Omega N until pain stops, then L-Mu Upsilon D. Finish off with 2' L-Alpha Lambda, then Mu Upsilon D.

PHORIA – Proceed as below (not flashing):
Esophoria – **P** L-Upsilon or Omega, **S** L-Pi or Upsilon, **A** L-Omega or Omega N
Exophoria – **P** L-Theta, **S** L-Delta, **A** Mu Delta or Delta
Hyperphoria – Mu Delta – Alpha Omega – Mu Delta in one treatment
Post Climateric exophoria – N/L-Alpha Lambda 5 days, rest, then repeat.
Exophoria with Amblyopia – L-alpha Theta followed by Mu Upsilon.
High Exophoria – Delta, alternated with Mu Delta, occasionally Delta Omega or Mu Upsilon.

PHOTOPHOBIA - Dialated pupils - 1) N/L-alpha Omega. 2) Exopthalamus, with dilated upils - N/L-Mu8 followed by N/L-Alpha Omega for 6 minutes. 3) Contracted pupils - L-Upsilon. 4) Normal pupils - Pi Upsilon. 5) Mu Pi. 6) L-Mu Upsilon.

PRESBYOPIA – 1) Early presbyopia and /or unequal accommodation to retard the need for near lenses - 3 treatments in one day: L-Mu Upsilon, L-Upsilon Omega D, L-Omega D. Add push-up exercises on small print. Correct general health conditions and add B complex and minerals. 2) L-Delta Omega to relieve distress, or Theta Omega.

PTREGIUM – L-Mu Upsilon. Or N/L-Delta Omega$^{5 \text{ to } 10}$. Mu Upsilon^{15,} with pain.

PTOSIS-TRAUMATIC – N/L-Alpha Lambda

PUPIL ARGILE ROBINSON – N/L-Mu Delta

RETINAL HEMORRHAGE - L-Upsilon Omega (use in emergency and refer)

RETINITIS – L-Mu Pi as local aid. A) N/L-Delta Omega; N/L-Alpha Omega; N/L-Alpha N also high blood pressure. B) N/L-Mu Delta or N/L-Mu Theta (Diabetic)

RETINAL DETACHMENT – L – Mu Upsilon (If improvement after ten sessions, alternate with L-Alpha Theta (this should not be used longer than 4 minutes in the beginning to prevent fatigue.

SCOTOMA – L-Mu Delta – Alternate (gas or menthol alcohol), L-Alpha Delta on 1-1 basis.

SINUS – 1) Acute – N/L-Mu Upsilon – until free drainage, then followed by Mu Delta to clear out sinus.
2) Chronic – N/L-Delta Omega – until free drainage, then shift to Mu Delta until clears up.
3) Ocular in origin – N/L^3, Upsilon^6, follow with Mu Upsilon^{10,} (one application) Repeat for total of 4.; Follow next with N/L^3-Mu Delta $^{10\text{-}12}$, if pain comes back repeat the first part for 4 treatments. The applications are daily. A total of 8 should do the trick.

SORE THROAT – Mu Pi

STYE - 1) L-Alpha (after cone comes to point) 2) L-Mu Upsilon (beginning styes) 3) N/L-Pi Omega D, to relieve headache, then L-Mu Pi. 4) N/L^3-Mu Upsilon, when comes to point use Alpha which will bring it to head.
BEGINNING STYE- N/L^3-Alpha Omega^5-Mu Upsilon^5, N/L^3-Delta Omega^5 – Upsilon^5-Upsilon Omega D^5 (Two applications, If pain persists, repeat the Upsilon Omega D) If inflamed eyes or painful vision N/L^3-Upsilon or Pi

TICS –Involving eyes – L-Omega or L-Omega N

TOXIC (to lessen) 1) N/L-Mu Delta. 2) L-Mu Upsilon, alternated with L-Mu Delta

TRACOMA L-Upsilon^8, followed by L-Mu or L-Mu Upsilon^6

TROPIA – 1) **P** L-Omega, **S** L-Omega N, **A** L-Omega D. 2) Low Adduction L-Delta or Mu Upsilon or may require N/L-Alpha Omega, if pupils dilated. 3) Eso: **P** Omega (N/L-Theta Omega), **S** Omega N, **A** L-Omega D (N/L-Delta Omega. 4) Toxic eso: N/L-Mu Delta Mu Theta. 5) Delta Omega or Theta Omega.

YELLOW SCLERA – Muddy yellow, N/L-Mu Delta, Jaundiced N/L-Delta.

ENDOCRINE

THYROID Stimulate (Alpha Delta - Male) (Alpha Lambda - Female)
PITUITARY Stimulate (Mu Delta or Mu Theta)
Suppress (Mu or Omega D)
ADRENALS Stimulate (Alpha Omega) Supress (Mu)
PINEAL Stimulate (Alpha Omega) Suppress (Alpha Delta or Alpha Upsilon)
THYMUS Stimulate (Mu) Suppress (Alpha Omega or Alpha Upsilon)
GONADS Stimulate (Alpha Delta Male, also Alpha Omega) Alpha Upsilon, Alpha Lambda, Alpha Omega - Female)
Suppress (Upsilon Omega D or Mu to stimulate Thymus in Child)
PARA THYROID Under active (Mu Theta)

Bp + Pr_ -111 = BMR+/- 4% (If falls within + 15 mill - 15 is within physiological limits)

OPACITIES

PERIPHERAL

1) L-Mu Upsilon and N/L-Alpha Omega – alternate 4-1 basis.
2) L-Mu Upsilon and Alpha Delta for 1 minute after treatments and Mu Delta once in a while.
3) L-Mu Delta in Diabetic.

CENTRAL

1) L-Mu Upsilon and N/L-Alpha Omega – alternate 4-1 basis.
2) N/L^3, Alpha Omega^{10}, Mu Upsilon^5, Mu Delta^5
3) N/L^3-Delta Omega^8 (flashing), Mu Upsilon^{10}, Mu Delta^8 (flashing)
4) N/L^3-Alpha Omega^{10} (flashing), Mu Upsilon^5, Mu Delta^5

5) N/L[3]-Mu Delta[5], Delta Theta[5], Mu Theta[5], Theta Alpha[5]. Use 20-30 mg. Vit. C, 50 mg. Riboflavin daily plus calcium, phosphorus and iodine. (Also used for relieving headaches due to 'hang-over'.
6) N/L[3]-Alpha Omega, Mu Upsilon[5], Mu Delta[5] (flash the stimulative or long wave high frequencies)
7) N/L[3]-Mu Delta[5], Delta Theta[5], Mu Theta[5], Theta Alpha[5], Mu[5]. Alternate with N/L[3]-Alpha Omega[5], Mu Upsilon[5], Alpha Omega[5], Mu Upsilon[5]. Use 30 mg. Vit. G, 100 Mg. Vit. C, 25,000 Vit A, 100 units Vit. E, increase intake of fluids 8-10 glasses of juice or water.

SENILE

1) L-Mu Pi or L-Mu Upsilon
2) L-Omega or N. Sometimes can be stopped by using Mu Delta.
3) **P** – L-Mu Pi (Mu Upsilon, if advanced)
   S – L-Mu Upsilon
   A – L-Mu Upsilon or Omega or Alpha Delta 1 min., Mu Upsilon for 4 treatments, Mu Upsilon D if advanced.

Note: if after 8 syntonizations no improvement in vision is apparent, try L-Alpha Delta for 1 minute and then Mu Upsilon for 4 more syntonizations. If after this there is no improvement, the case will likely not respond to syntonics.

DIABETIC

1) L-Mu Delta in Diabetic. Prognosis not good. Should be guarded. May try N/L-SD.
2) **P** – N/L-Mu Theta S or N/L-SD
   S – N/L-Mu Delta
   A – N/L-Mu Delta

OCCUPATIONAL

1) L-Mu Delta S Heat – Prognosis not good.
2) **P** – L-Mu Theta
   S – L-Mu or Mu Delta
   A – L-Mu Delta (Omega or N)

ACCOMMODATIVE

P – L-Upsilon for 8', finish with Delta for 2'
S – L-Omega for 8', finish with Delta for 2'
A – L-Omega D for 8', finish with Delta for 2' and Alpha Delta

Note: Longer time of treatment may be used but maintain proportion.

HEADACHE

SUPRA-ORBITAL OR FRONTAL - not flashing - **P** L-Pi or Pi-N, **S** L-N, **A** L-Upsilon or Upsilon N
OCCIPITAL (usually thumping) - flashing - **P** N/L-Mu Theta, **S** N/L-Mu, **A** N/L-Mu Delta (Note, this usually makes the headache worse for a short time.)
VERTICAL (usually woman) - Not Flashing: **P** N/L-Mu - Mu Pi, **S** N/L-Mu, **A** N/L-Mu Upsilon.
PERIODIC - The migraine type - Not Flashing: **P** N/L-N or Omega or N Delta, **S** N/L-N or Omega or N Upsilon Omega, **A** N/L-Delta N. Syntonize daily for twenty days as a minimum.
MIGRAINE OF OCULAR ORIGIN - Regularly recurring sick headaches with ocular disturbances, use N/L-Omega or N/L-Delta N. (Treat for not less than 21 days and treat daily. Very difficult cases. Can use prism technique using 'Infinity Abduction' -1.5 prism base-in in each eye.
ALLERGY (causes: Calf brains, sweet breads, sweet mile, eggs, beef, wheat products and fresh pork.
Syndrome: Twitching extra ocular muscles, scintillating scotoma, a moving scotoma usually up and toward the temple, photophobia, headache nausea, vomiting, sleep when headache gone: N/L-Mu Upsilon
Special with heart complications - N/L-Omega N
NERVOUS HEADACHE - N/L-Omega, N/L-Alpha Omega, N/L-N.
BRAIN TUMOR THROBBING HEADACHE - Mu Delta

HYPEROPIC MIGRAINE HEADACHE - N/L^{3}-Delta N^{8}-Delta Omega^{8} for 21 days

HEADACHE CHART

HEAD AREA – side view	USUAL Rx	AUXILLARY SYNTONIC Rx
1Center of forehead high up -	N/L-DeltaN/L-N	N/L-Delta Omega
2 Top of head -	N/L-N	N/L-Alpha Upsilon or N/L-Delta Omega or Mu Pi
3 Mid-ear bet eyes and tip of ear -	If esophoria - L –Upsilon L-Omega, if exophoria - L-Theta L-Delta	N/L-N or N/L-Alpha Delta Pain may increase for a short time better eventually.
4 Directly above ear or ears	N/L-Delta N	N/L-N or N/L-delta Omega D
5 Band-like above eyes	N/L-N	N/L-Pi D.
6 Back of head level of ears	N/L-Delta Omega	N/L-Mu Upsilon.
7 Base of brain	N/L-Delta Omega	Theta Omega D or N/L-N makes pain worse for a short time.
8 Mastoid Area -	Not generally amenable to Syntonics – refer to aurist.	

HEAD AREA – front view	USUAL Rx	AUXILLARY SYNTONIC Rx
a. Center of forehead	N/L-Delta or Theta	N/L-Mu Delta, May increase pain for a time
b. About 1' above supraorbital ridge	N/L-Mu	N/L-Alpha Omega.
c. Directly over eyes	N/L-Mu Upsilon	Upsilon Omega D
d. Both sides above root of nose	N/L-Mu Pi or Mu Upsilon until free from pain, then use N/L-Mu Delta	

Vertical and occipital - N/L-alpha Omega; N/L-Alpha Omega^{8}
Frontal - L-Upsilon
Near Point - N/L-Omega
With high exophoria N/L-Delta Omega
Throbbing headache - Mu Delta.

O.E.P. 21 Point Visual Analysis

The following Syntonic prescriptions have been determined by experience as being the best one to be used in conjunction with other orthoptic measures in the six case types below. (Syntonists will not overlook the value of Mu.)
A - N/L-Delta: N/L-Mu Delta; G/F-Mu Delta
B1 - Alpha Omega; L-Alpha Delta
B2 - Alpha Delta alternated with Mu on a 1-1 basis for Male, Alpha Upsilon alternated with Mu on a 1-1 basis for female.
B3 - N/L-alpha Omega; N/L-Mu
C1 - With + lens, L-Omega; L-Delta Omega. Without + lens, L-Delta; N/L-Alpha Upsilon.
C2 - N/L-Mu Delta; G/F-Mu Delta

Syntonic prescriptions to stabilize or neutralize high or low analytic findings of the O.E.P. 21 Point Visual Analysis. As a result of several years experience with syntonics and the work of the graduate clinic foundation, members of the College have adduced the following syntonic prescriptions for the purpose of lowering high findings or raising low findings of the several analytic findings required for case typing.

Syntonists who are students of both techniques have found that cases heretofore hard to type due to difficulty in interpretation or placement of some one or more of the findings, are so stabilized that the typing is easily done.

Prescriptions shown above the line are to lower high findings and those below the line are to raise low findings.
3. Delta or Alpha Upsilon / Omega or Delta Omega
4. Omega or Delta Omega
5-6. Omega or Delta Omega / Alpha Delta alternated with Mu on a 1-1 basis for the male and Alpha Upsilon alternated with Mu on a 1-1 basis for the female.
8. Delta / Omega or Delta Omega.
9. /Alpha Delta alternated with Mu on a 1-1 basis for Male and Alpha Upsilon alternated with Mu on a 1-1 basis for female.
10. /Break - Alpha Delta alternated with Mu on a 1-1 basis for Male and Alpha Upsilon alternated with Mu on a 1-1 basis for female or try Delta, Alpha Upsilon, Alpha Omega.
11. /Delta or Theta S or Alpha Omega or Mu Delta or Delta Theta.
13B. Omega or Delta Omega / Mu Delta or Mu Theta or Alpha Delta alternated with Mu on a 1-1 basis for Male. Alpha alternated with Mu on a 1-1 basis for Female.
14A/14B - Alpha Delta alternated with Mu on a 1-1 basis for the Male
15A. Alpha Upsilon alternated with Mu on a 1-1 basis for the Female / Omega or Delta Omega - Omega N
16B/17B. Omega or Omega N or N / Delta or Mu Delta or Alpha Upsilon (Note N/L-Alpha Omega is often all that is needed.
4 - 11 - 13 - 17 - Delta or Mu Delta or Mu S

Syntonics, Vitamins and Age Related Macular Degeneration A Case History

By
Julius Liubinas, MscOptom, FCOVD, FACBO

My introduction to syntonics was like many things in life, a chance affair. I had heard of an unusual therapy being conducted by one of my peers. To say that the comments were uncomplimentary is a minor understatement. Yet the practitioner was someone that I had come to admire and trust for his lateral thinking and insight into optometric therapies. So I took the chance and attended a weekend seminar on syntonics that he was presenting. While I found the concepts rather baffling, I was very impressed by the caliber of some of the other attendees and the case histories being presented.

And so it was that I ventured down the path of no return. My initial interest was to use syntonics with learning delayed children but I was amazed by the improvements reported in patients with age-related macular degeneration (ARMD). So when my patient LL first presented I was willing to have a go. It is interesting to note that ophthalmology has now discovered the value of low level light stimulation in the management of this condition with the introduction of sub-threshold laser therapy for the management of dry ARMD.

The syntonic treatment chosen for the management of an ARMD case is dependent on the nature of the condition itself. The two commonly recognised forms of ARMD are referred to casually as "dry" and "wet". The primary difference is the exudative nature of the latter and the associated edema, visual loss and distortion of images. The wet form is also far more aggressive (active inflammation) with its end stage being loss of central vision.

Vitamin therapy for the condition requires the application of high dosages of vitamins, in particular anti-oxidants viamins E and C, zinc, luteine, cysteine) and anti-coagulation agents, Bilberry. However any intensive application of such agents should be done with care as it is possible to induce systemic complications. My current preferred mode for introducing the aforementioned nutrients is via dietary modification. Spinach and parsley are Nature's vitamin pill and I advise patients to consume between 2-3 cups per week, preferably raw. It allows proactive therapy with minimal complications.

Optometric assessment of the progression or otherwise of the disease is typically limited to visual acuity, fundus appearance and visual fields, invariably Amsler grid.

The LogMAR system was used to determine visual acuity. It has been designed for use with low vision patients and is easily calibrated over a range of working distances.

A 90D lens was used to assess the condition of the macular as required. At times the patient was also referred for ophthalmological review, especially when changes in function were noted.

Amsler grid can be used in a number of ways. The most common and quickest application is to identify distortion of the lines and the presence of central scotomata. When LL was assessed the depth and position of the scotomata were mapped on most occasions. This was initially for my benefit to see if syntonics actually worked. A grid of black lines (one of these has to be white!) printed on black paper was used. The grid was 12cm by 12cm and viewed from around 30cm. Two targets were used; a 3mm White and a 3mm Red. The depth of the scotoma was assessed by asking the patient to describe the relative brightness (bright - normal, dull - relative loss or not visible - absolute scotoma) and colour (colour red - normal, dull colour - relative loss or no colour absolute loss).

So let us now return to patient LL. I initially saw LL on 30th January 1997. A female, aged 75 years, who presented with best corrected acuity in her LE at 6/12. An associated central metamorphopsia was noted with Amsler grid. Vision in the RE was 6/6 and remained stable throughout her therapy.

Subsequent ophthalmological assessment revealed: "Left exudative ARMD with occult choroidal neovascularization. Unfortunately there is no treatment..." And furthermore, "Ultimately her left central vision will continue to deteriorate as she develops more florid signs of 'wet' ARMD."

At that stage I chose to simply prescribe Eyevite as a preventative measure for the RE.

LL next presented on the 16th December 1997. Best corrected vision in her LE was now 6/38+. A marked central scotoma was observed with Amsler grid. The size and depth of the loss was plotted and is presented in Figure 1.

There was quite a large central scotoma encroaching onto fixation along with a marked loss of colour perception. Syntonics and intensive vitamin therapy commenced. The colours chosen were Violet and then Turquoise. Both were applied for 10 minutes with a total of 20 minutes each day. Therapy was administered using one of Simon Grbevski's home syntonic units. Violet and Turquoise were chosen for their anti inflammatory and healing effects. Intensive antioxidants, as discussed earlier, were also administered.

LL returned after one week of syntonics. Incredibly best corrected acuity was now between 6/24- and 6/19=. LL also reported that vision felt better after using the "light." Furthermore there were improvements in her Amsler fields with a significant reduction in the size of the central scotoma and an increased field of colour awareness (Figure 2).

LL's next visit was on 15th January 1998. Visual acuity was 6/24-. LL was very excited that she could now see people's faces again with that eye. However she also reported being a bit run down after all the Christmas festivities. Amsler findings now indicated variable changes with her white field being possibly better while the colour field was worse (Figure 3).

LL's next visit was 6 weeks after commencing syntonics. Vision was still between 6/24- to 6/19+. However the Amsler fields continued to show further improvement (Figure 4). Over the following months visual acuity did not change significantly and always fell between 6/24 to 6/15=. However visual fields continued to improve (Figures 5 to 7). Of interest is the gradual reduction in the dull zone as the absolute scotoma stabilised suggesting healing of the partially damaged retinal tissue. Therapy ceased once stabilisation was achieved in the visual fields after 4 months.

So the question that needs to be raised is whether syntonics was responsible for the improvement? Or was it rather a spontaneous resolution? Remember the ophthalmological diagnosis of progressive with no treatment. The spontaneous resolution is highly unlikely given the underlying pathology. How much improvement was vitamin based? These are unanswered questions.

Three months following discharge LL presented again now complaining of funny vision in the LE once more. She had been treated by her general practioner with an intravenous anti chelating drip over the past 8 weeks. Visual acuity was still stable around 6/24- to 6/15=. Amsler grid revealed an increase in the central field loss (Figure 8). A subretinal haemorrhage was observed inferior to the left fovea. Ophthalmological evaluation indicated that no treatment was possible.

Syntonics was reintroduced using the same colours but now twice daily, namely in the morning and the evening. After 2 months of syntonics LL felt that vision was stable. Vision acuity was poorer (6/48 to 6/38). There was no distortion apparent on Amsler suggesting no oedema. Amsler field plots were largely unaltered with a possible improvement with the white target and a reduction with the red (Figure 9). LL purchased a home syntonics unit having decided to perform the treatment everyday.

With the benefit of hindsight, this crisis may have been avoidable. The disease is chronic. Treatment should therefore also be chronic. LL was discharged with provision to return if any change was noted

One year later (9th October 1999) LL presented once more complaining of poor vision this time following a retinal angiogram 5 days earlier. Visual acuity in the LE was below 6/75. TheAmsler grid was completely missing apart from the small section in the top R corner. LL was referred back to ophthalmologist who advised that no action or treatment was warranted with the diagnosis being "Fairly large pigment epithelial detachment associated with a macular haemorrhage."

The syntonic therapy was intensified to 15 minutes of Violet followed by 5 minutes of Turquoise. The Violet component was increased to minimise the eodema. Visual Acuity using a LogMAR chart was 1.8/24.

One month later with 90D lens the left macular looked like a "blister," a large retinal bubble at the fovea surrounded by haemorrhages and now some hard exudates.. But LL could now identify Amsler lines even though they were very distorted. Visual acuity had worsened and was now LogMAR 1.8/60. LL was still aware of the very poor vision and the central scotoma in the left eye. Spinach was introduced into the diet: two to three cups per week.

Three months later there had been an improvement in vision now LogMAR 1.8/24. LL had maintained the syntonics over this period as per the instructions given. She had also started eating spinach daily as discussed at the last visit.
The Amsler grid was dull but the lines were now visible and straight! A ring of raised retinal tissue at the border of the initial detachment was revealed with the 90D lens. But the centre was flat and looked to be back in contact with the choroid.

Five months later vision had improved to LogMAR 1.8/9.5=. LL had continued syntonics as before and was still eating spinach daily. The Amsler grid lines were now just hazy and straight. Retinal evaluation revealed as before: raised surround but foveal area flat.

Seven months following the vision loss, vision had improved to 6/19=, as good as her best acuity prior to the central detachment. LL continued the syntonics as before and maintained the daily diet of spinach. Amsler grid lines were still hazy and straight. The appearance with 90D was unaltered.

Lemon colored filter for 20 minutes was now introduced in the morning only to try to stimulate the retinal tissue and remove any toxins. The Violet and Turquoise combination was retained for night therapy to try to prevent significant oedema recurring. After another month vision had improved even further to 6/15=. However 90D showed some central thickening so Lemon was removed and the Violet and Turquoise combination was resumed for both morning and night.

LL continued with the syntonics, twice daily, and ate the spinach daily. Her vision remained at this level until mid 2002 when she experienced a massive central retinal haemorrhage resulting in loss of all central function.

So what is the moral of the story if after all the work vision was ultimately lost?
Personally I found the eventual loss of vision in her left eye every disappointing, but if I had done nothing then LL would not have had the vision that she had for the duration of the therapy. LL was always extremely excited about the improvements in the left eye, especially when given the prognosis that nothing could be done with more traditional treatments.

ARMD is typically a bilateral disease. LL is also pleased to think that if the therapy was able to help the weaker eye as much as it did then it surely must have reduced the risk of a similar event in her good eye. LL continues with the syntonics twice daily and continues to eat her spinach.

Figure 1: Initial Amsler findings 16th Dec 1997

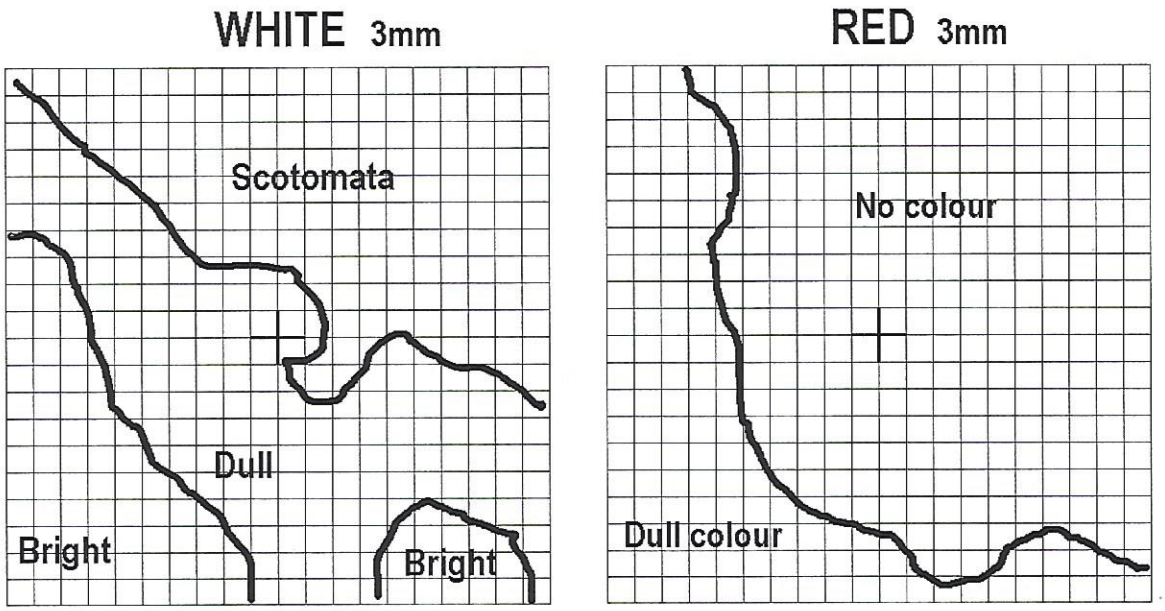


Figure 2: Amsler fields after 1 week of syntonics

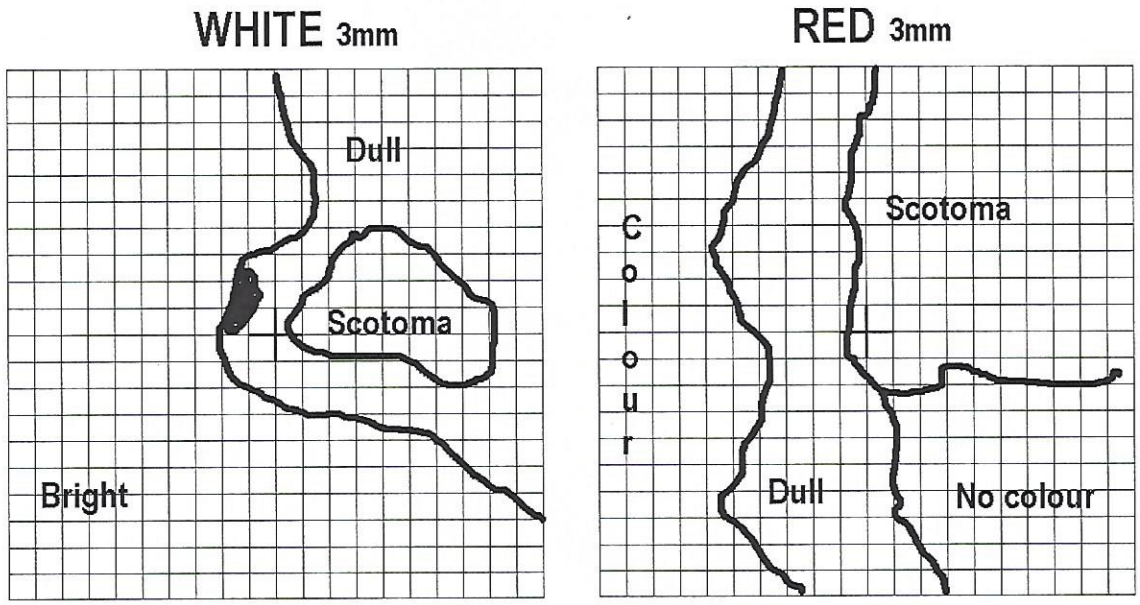


Figure 3: Amsler fields after 4 weeks of syntonics

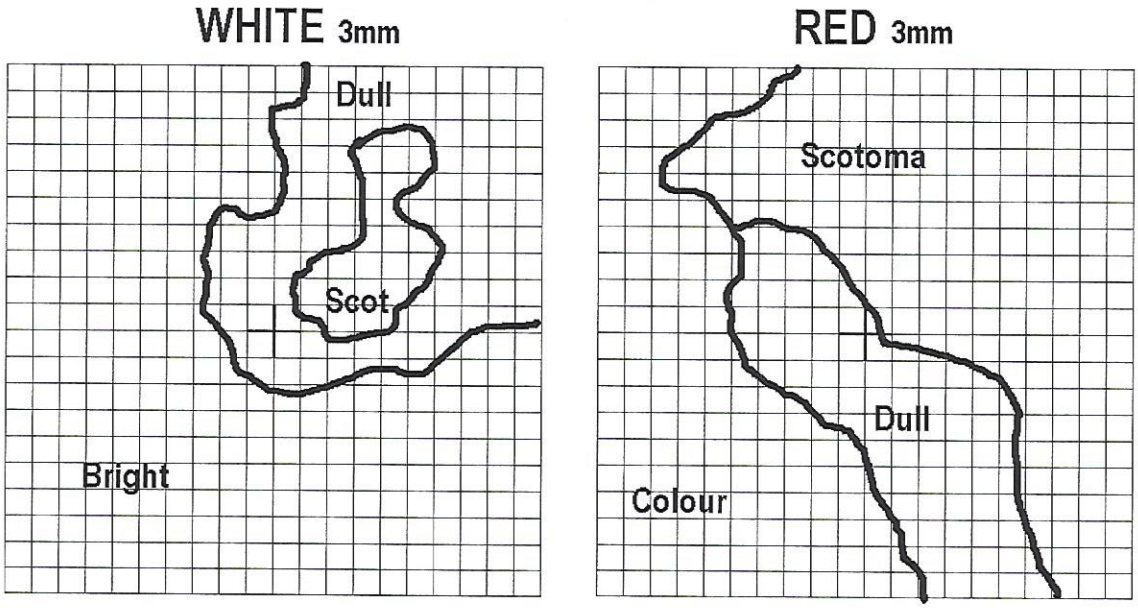


Figure 4: Amsler fields after 6 weeks of syntonics

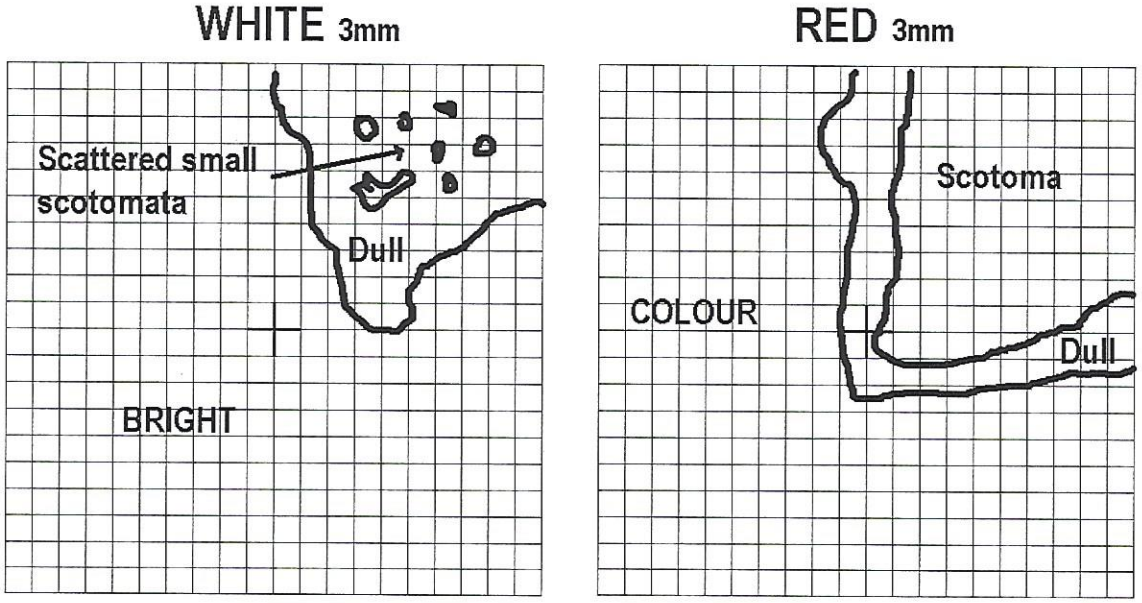


Figure 5 Amsler fields as at 19th February 1998

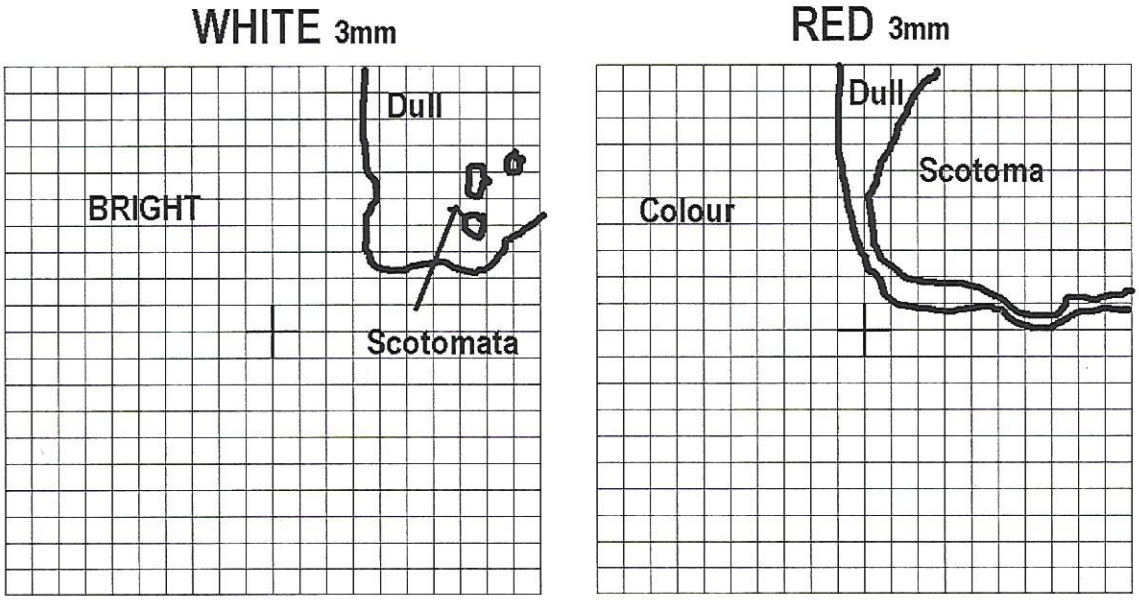


Figure 6: Amsler fields as at 19th March 1998

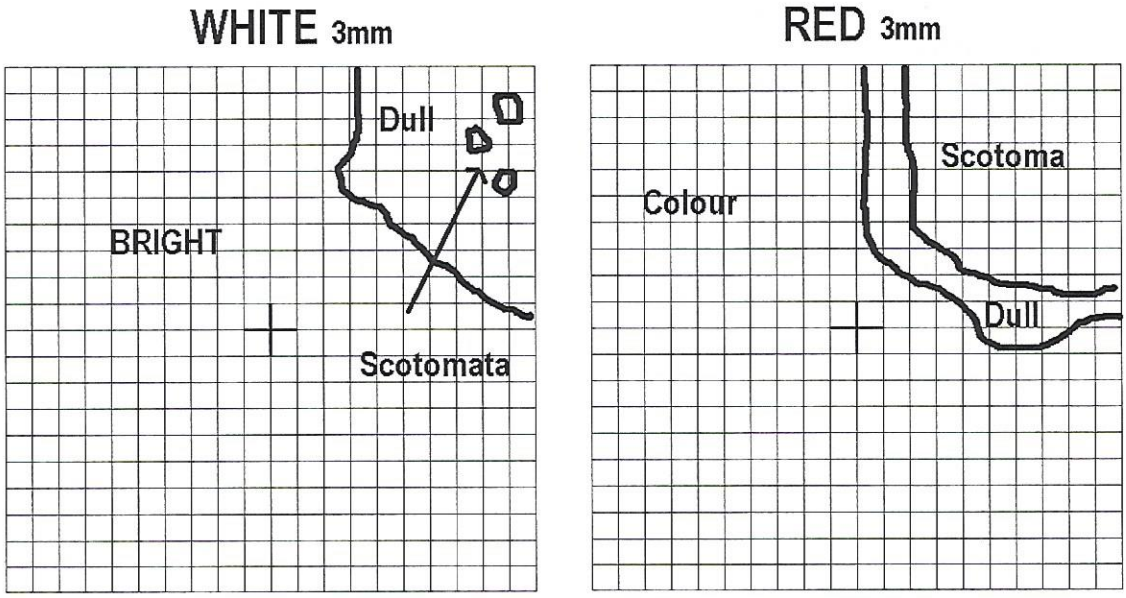


Figure 7: Amsler fields as at 18th April 1998. Syntonics stopped

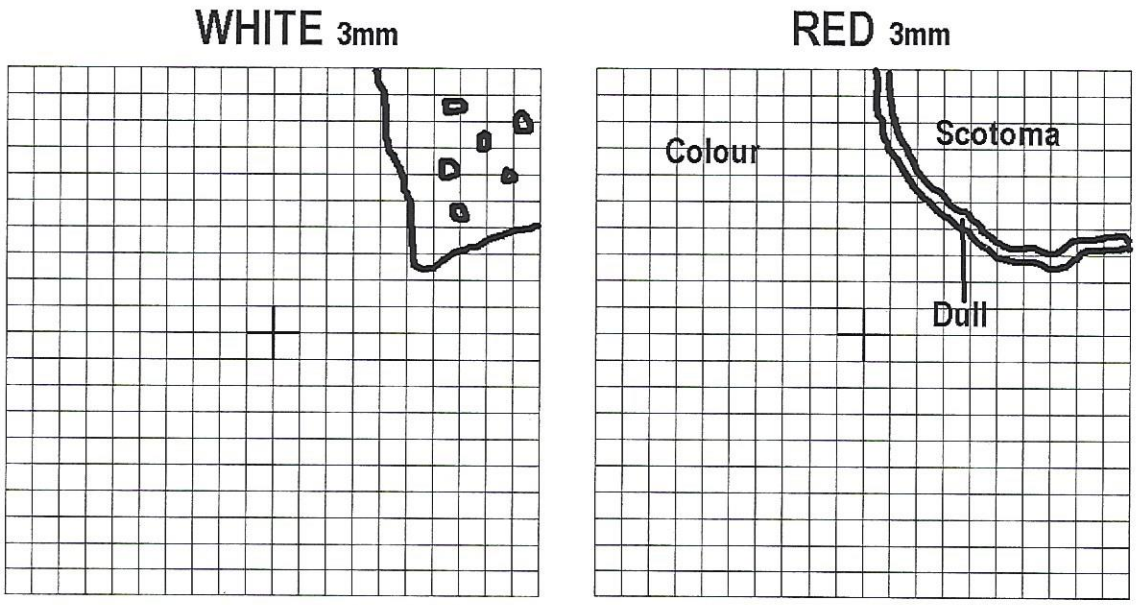


Figure 8: Amsler fields as at 16th July 1998 – a new crisis

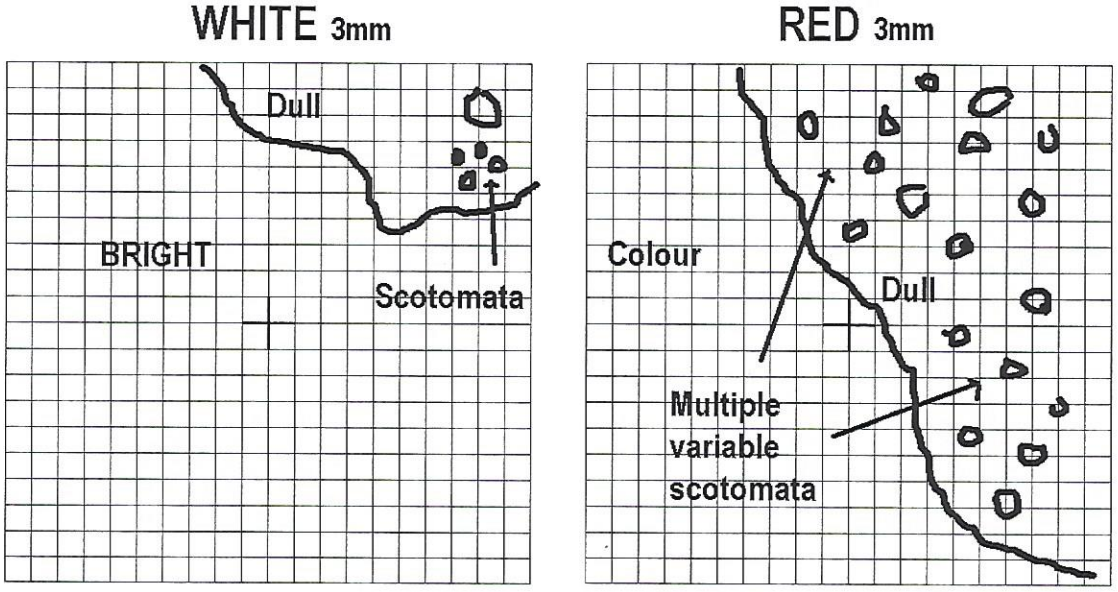
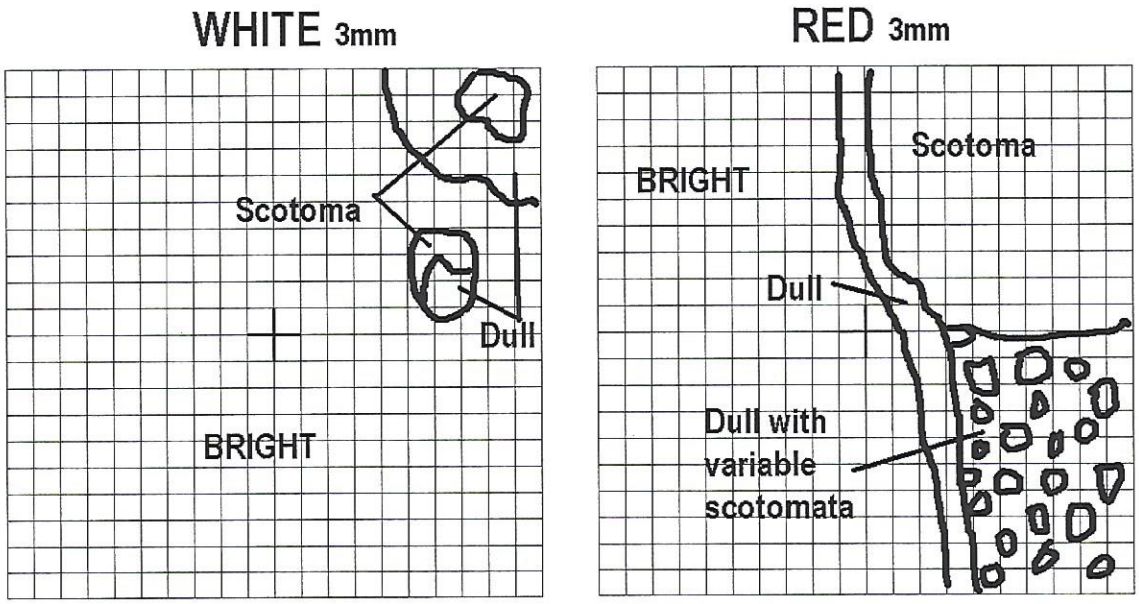


Figure 9: Amsler fields as at 24th September 1998 after 2 months of syntonics



Syntonics: Optometric Color Therapy for the Treatment of

Acquired Brain Injuries

By Larry B. Wallace, O.D., F.C.S.O.

The application of syntonic color therapy for the rehabilitation of brain injury can be very dramatic but is often under utilized, although its use greatly enhances the speed, efficiency and success of vision therapy.[1,2,3] Acquired brain injury may be related to traumatic brain injury, certain kinds of mild closed - head injuries, postconcussive syndromes, surgical trauma syndrome, cerebral palsy, stroke, and other kinds of cerebral vascular accidents. Essentially, acquired brain injury is a trauma to the brain that could result from a blow to the head or other neurological dysfunction, which produces anything from loss of consciousness to impaired cognitive or physical abilities. The injury may be mild or severe, but is often amenable to rehabilitation, especially with the use of phototherapies.

Vision is the dominant source of our information processing and is a learned or developed skill. Vision may be compromised in any trauma to the brain, resulting in changes in behavior, loss of memory, and changes in identity, learning and performance. Vision is closely tied to imbalance of the autonomic nervous system and the endocrine system, which support the visual system neurologically and chemically. Both systems are very amenable to rebalancing using color.

Because many visual problems are simply imbalances in the nervous system or endocrine system, treating the whole body through light application takes away the symptoms of these visual dysfunctions and brings not only the body but the visual system back into balance. In the case of head injuries of any type, the first thing that is upset is balance in the autonomic nervous system. Specifically, light into the eye has a profound effect by directly affecting the pituitary, pineal and hypothalamic pathways within the brain. Light shined into the eye also directly affects the blood, a living matrix system that connects all the vascular systems of the body.[4] Fifty percent of the blood in our body passes through the eye every 40 minutes and is directly visible through the pupil of the eye. Light shined into the eye can have a profound effect on the perivascular system and the blood flow, not only in the eye but through the whole body. Colored light shined into blood causes changes in pH and immune function.[5]

There are also inherent electrical energy systems that control and drive the physiology of the body. There is not only a digital system of the central nervous system but also a direct current system that parallels this both anatomically and functionally. This too is directly under the influence of light input. Light into the eye can have effects on the treatment of ocular pathology, both locally through specific tissues and non-locally to address systemic imbalances.[6] Light entry into the eye also affects the ocular functions changing the conditioned reflexes of eye coordination, focusing and eye movement skills. Specific frequencies of light can stimulate or relax the sensory motor systems of the eye by affecting electrical discharge in the hypothalamus. Light can affect endocrine function through direct neurological connection to the pituitary and pineal glands, automatically regulating much of the involuntary functions of our physiology. Frequencies of light also can affect the balance between the

heart and the brain, changing the heart variability rate and also rebalancing the autonomic and limbic circuits which regulate our emotions. Colored light not only produces vision in the brain cortex but energetically transfers information to the hypothalamus, the pineal gland, the pituitary and also the vestibular system, affecting posture as well. Light and color have a profound affect by activating the endocrine and autonomic nervous systems and their supportive functions such as vision, emotions, immune functions, cognition, and balance.

Diagnostic criteria for optometric phototherapy include a history that is significant for head trauma, but also things like fevers, infections, toxicity and stress. Clinically, one of the first signs of ANS imbalance is poor pupil responses: the inability of the pupil to sustain constriction under direct light, called the alpha omega pupil. Imbalances are reflected by reduced motility of the eyes, that is, jerky and erratic eye movements and inability to smoothly move the eyes together as a team. The analytical exam measures eye coordination, focusing skills, and the sensitivity of visual input and motor output. The keynote finding is visual field measurements especially noting general constrictions in the form, in color, sensitivity of the peripheral fields and enlarged blind spots.

Specific treatment uses frequencies of light that have general fields of action. For instance, red is known as a sympathetic or sensory stimulant; orange is known as a motor stimulant; yellow, as an intense motor stimulant; green, as an equilibrator or used to balance the physiological system; blue, as a sensory depressant; indigo, as a motor depressant; and violet being the most intense sensory depressant of all. Some of these color combinations comprise a strategy to treat the majority of imbalances in the autonomic and endocrine system and hence the visual system.

There are four basic syndromes treated.[7] One such combination is blue green "acute syndrome," which is used for symptoms such as pain, swelling and the need for palliation. Symptoms relate to infections, trauma, anoxia, stroke and high fever. Blue-green is primarily a parasympathetic activator, which serves to slow down sensory motor function.

Yellow-green is used in the "Chronic Syndrome," which relates to glandular, metabolic, or organic imbalances, toxemia in the system, and the general need for physiological balance. Yellow - green is used as a physiological stabilizer and detoxifier.

The red-indigo combination is termed the "Emotional Fatigue Syndrome," and those colors are used for emotional exhaustion, nervous stress and emotional trauma. It is common to find extreme fatigue and hyperirritability due to adrenal exhaustion.

The red-orange color refers to "Lazy Eye Syndrome" and is used for strabismus or amblyopia. Often seen as a requirement for higher sympathetic arousal. Individuals often exhibit over flexion in their motor systems.

In general, the red end of the spectrum serves to stimulate or activate the sympathetic branch of the autonomic nervous system, while the blue end or the violet-indigo end of the system tends to activate the parasympathetic branch of the autonomic nervous system and its support to various visual functions.

Most commonly, the autonomic nervous system acts in what is called a coupled reciprocal mode; when one branch of the autonomic nervous system is activated, the other is more depressed in its function acting as somewhat of a balance board effect between the two rising the action of one while depressing the action of its antagonistic branch. However, the autonomic nervous system can also be coactivated or coinhibited; that is, there is mutual antagonism where the branches of the autonomic nervous system can be both activated or both depressed. This is a common response to trauma.

A third basic action of the autonomic nervous system is unilateral where only one specific branch of the nervous system is affected. The dominance of the autonomic nervous system differentiates specific emotions and is mediated biologically by certain hormones. For instance, ACTH mediates the sympathetic nervous system, or cortisol mediates the parasympathetic nervous system. Chronic stress can coactivate both systems by accelerating or inhibiting both equally. Or there is unilateral activation of one branch of the autonomic, which has specific localized effects on our physiology such as under-

or over activation of neurological pathways. Balances or imbalances in the autonomic nervous system also have significant effects on the regulation of our emotions.

In a landmark book, *The Affect Regulation or the origin of Self and the Neurobiology of Emotional Development,* author Alan Shore discusses at length how imbalances of the autonomic induced by head injuries and head trauma can affect the whole body physiology by rewiring the neurochemical events which mediate our behaviors.[8] Shore discusses the hypertonicity of both the sympathetic and parasympathetic following some kind of trauma to the head, affecting our psychobiology. This includes imbalance between the orbital frontal cortex and the limbic structure's dual pathways.

The limbic structure of our brain stores implicit and explicit memory while the brain stem stores motor stress. Trauma blocks the normal neurological feedback systems of biochemistry and behavior resulting in maladaptations such as posttraumatic syndrome, TMJ syndrome, myofacial pain and posttraumatic vision syndrome. Orbital frontal trauma can reset our limbic system and reset the procedural memory of our central nervous system so that we are conditioned into a state of dysfunction. Trauma can imprint or freeze itself into our motor and sensorimotor systems by conditioning imbalances in the autonomic nervous system, resulting in overreaction or constriction of emotions. Shore speaks about the right orbital frontal cortex being the master regulator of the brain and the body. The frontal orbital cortex is the specific anatomical center where the autonomic nervous system is coupled with the dual limbic pathways of our lower brain stem. This area is highly susceptible to hematomas and contusions, which can result in soft tissue damage not picked up in general MRIs or CAT scanning procedures.[10]

Imbalances in the frontal orbital cortex result in biochemical electrical damage that pass through our whole brain, resulting in a shattering of our self-concept, and hyperreaction to stress, which puts us out of control in relation to environmental input.[11] This poor autonomic regulation also results in compromises to the immune function, peripheral vision, and the electric coherence of the brain. Seizure activity following trauma is one artifact of poor regulation. The use of color can restabilize the nervous system and should be one of the first steps taken following a head injury, before any other therapies are begun.

Because the autonomics are so easily upset, a whole sequella of events usually follows a trauma. The most common in the field of optometry is called posttraumatic vision syndrome.[12] The first sign of posttraumatic vision syndrome is decreased visual acuity, a lack of sharpness of vision, both far and near, resulting in symptoms such as blur and mental confusion.

Exophoria or exotropia is the second most common sign. This means that the eyes go into a divergent pattern, turning outward at both far and near, resulting in decreased depth perception, double vision, diminished concentration, diminished organization and visual memory.

Next is decreased convergence, or the inability to turn the eyes inward, to localize things in visual space relative to ourselves. Convergence is the ability of the eyes to turn inward, to localize objects in space relating to ourselves. When convergence is decreased we have blurred vision, may have closing of an eye, headaches, pain and reading problems.

Next is decreased blink rate, again an imbalance in the autonomic nervous system. This often results in a mild seizure-type activity of staring, which symptomatically produces dry eye and light sensitivity due to the pupil's inability to stay constricted under direct illumination. Posttraumatic vision syndrome also creates spatial disorientation with hallucinations, vertigo and memory loss.

Because the visual system is so intimately related to our self-image, often we will have distortions in body image with symptoms such as postural warps, right-left confusion, loss of spatial judgment and shifts of our midline in space relative to our body.

Another sign is decreased accommodation, which is the inability to sustain focus and keep detail clear at various distances. This results in the symptoms of reading problems, blur, and headaches. Decreased ocular motility, poor fixations and pursuits is another sign of posttraumatic vision syndrome. This means the inability to move the eyes smoothly through space and localize things not

only with the eyes as a team, but with each eye individually. Symptoms of this dysfunction are nystagmus, reduced depth perception, skipping words and losing our place when we are trying to read.

And finally, the most significant sign is visual field defects, which can be total loss of our visual field in certain sections; congruous losses, where each eye loses the same part of visual field, incongruous losses where there are different losses in different parts of space; altitudinal losses where we lose visual field perception either upper or lower, or enlarged blind spots. Symptoms of visual field defects consist of bumping into things, poor night vision, poor ocular motor skills, reduced visualization skills, postural warps and neuromotor distortions.

Symptoms of posttraumatic vision symptom are often overlooked, especially during initial treatment of the injury. Because these problems are sometimes hidden or neglected it prolongs and impairs the rehabilitation process. Vision consists of many subsystems requiring integration to create the flow of processing information to the brain. When information processing is disturbed, not only a whole host of vision signs and symptoms are produced, but also imbalances throughout the individual are produced, seen as compromises in function of emotional, physical and mental health. The treatment of these imbalances can be accomplished by using specific frequencies of light into the eye using specific instrumentation. Instruments use specific frequencies or filter combinations. Generally, treatment consists of light shined into the eye for 20-minute intervals three to five times per week. This treatment is comfortable. It has very low risk, as light is basically an energy modality and has almost no side effects. Every six to eight sessions, a progress evaluation is done which consists of remeasuring certain aspects of the visual field and the visual analysis, as well as monitoring the patient's signs and symptoms. These measurements allow the treatment to be modified to enhance results. The frequencies that are used to treat binocular and sensory motor imbalances also result in improvement in visually related attention and memory disorders, focusing and eye coordination problems, ocular pathology, eyestrain and headaches, and restoration of visual field constriction and defects.

A study was done at Neural Rehab, a clinic devoted to rehabilitation of head injury in Rochester, New York. A total of 46 patient records were reviewed. Of these, 28 had head traumas resulting from auto accident or falls, 18 had cerebral vascular accidents such as strokes or aneurysms. Of the 46, 40 people had decreased visual fields with general constrictions and enlarged blind spots; 39 had accommodation or focusing insufficiency; 24 had binocular deficiency including strabismus or convergence problems; 20 had exophoria, exotropia or hypertropia. Twenty of the individuals had general ocular motor dysfunction; 19 had reduced vision in one or both eyes; and six had hemiaopsia. The basic frequencies used in treating these conditions were primarily blue-green and blue-indigo, with other colors used in specific cases. However, out of 75 treatments, 52 used blue-green and blue-indigo. The results were that 32 out of the original 46 had increases in their visual fields from 20 percent to 500 percent. All 46 showed significant improvements in other areas of visual function. This color therapy was done in conjunction with a multidisciplinary approach to rehabilitation including physical therapy, occupational therapy, speech therapy, and 13 psychotherapy among other modalities.[12] Syntonics and optometric vision therapy are very powerful tools which need .to be included in the treatment of acquired brain injury.

In conclusion, the use of color therapy and phototherapy through the eyes is a primary method to rebalance the autonomic and endocrine systems as well as the electrical and biochemical systems of the body. The pathways for this energetic application are well established. Light and color have specific effects on emotions, body physiology and nervous function. These systems are almost always out of balance as a result of acquired brain injury. Through the use of light and color, the individual can be made neurologically ready for other treatments as well, with a rebalancing neurologically which sets the individual in a more receptive mode for learning new behaviors and learning new skills as a part of the rehabilitation process. Use of energy medicine such as light is one of the futures of medicine. Energy application such as colored light have very few if any side effects and can serve and support many other kinds of therapies. At this time, energy medicine is not a final and unified model

but is basically a matrix of different kinds of energies including kinesthetic, bioelectrical, electromagnetic, gravitational, thermal, light and sound[13] Energetic medicines can address traumatically blocked brain function by also allowing the living matrix in our body to extract the information needed to rebalance our biological systems. There are not one but many pathways where this could occur. In syntonic phototherapy it may be the retinal hypothalamic pathway, through the retinal vascular, and even acupuncture points. These applications are the future of medicine and healing. Syntonics is a time-honored and clinically proven modality of treatment and has a major role to play in the rehabilitation process.

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About the Cover

Tibetan Colour Wheel

By Peter Ruiter

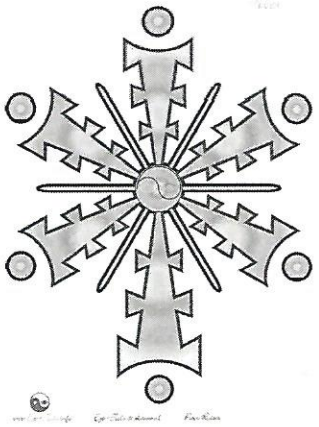
Origin

The original "Tibetan Wheel" eye training chart was designed by Tibetan monks for training all the muscles of the eye. The Tibetans have used this natural eye improvement technique with success for centuries. Using the new "Tibetan Colour Wheel" eye training chart for just a few minutes a day, you may experience substantial improvement in eye coordination within a few months. A number of publications on natural vision enhancement feature the Tibetan Wheel as a black figure on a white background.

Innovative aspect

The Tibetan Colour Wheel, named "Tibet", was designed by Eye-Tools. Major improvement is the 3mm thick black contour line. The advantage is that even if you can't see the figure clearly at a distance without glasses, you can still do the eye movement exercise, by running along the thick black line with your eyes. The outline is filled with an attractive colour pattern, making it inviting to display the chart in your kitchen or living-room, which may stimulate you to do the exercise twice a day.

Although the Tibetan Wheel is depicted in black-and-white in Western literature, it seems reasonable to believe it was originally made as a colourful sand painting.



Goals of the exercise

- Gradually increasing the flexibility of your ocular muscles in every direction. Improving the coordination and cooperation between the twelve major eye muscles on one hand, and the smaller muscles surrounding the lens. This leads to better accommodation, more cooperation between the muscles controlling the lens and the eyeball and in turn to more accurate binocular focus on an object in its surroundings.
- Increasing your awareness of your eyes, by following the contour line of the Tibetan Wheel with your eyes in a smooth and slow movement in all directions within your field of vision. In this way you become aware, which parts of the outline you can easily trace, and which eye movements and areas of your field of vision represent a challenge. Do you notice which areas you tend to skip, where do you speed up or slow down?
- Activating conscious seeing. By consciously observing how you use your eyes, you can increase the accuracy of your eye movement.
- Becoming aware of possible tension in your ocular muscles. Conscious observation and breathing activates the motor cells in your brain and improves eye muscle coordination.

Description of the exercise

The Tibetan Colour Wheel should hang or stand up straight, with the long arm pointing downwards. The reason is that the lower part of your field of vision is larger than the top part. The size of the Wheel chart is 30 by 42 cm (12 by 17 inches).

- Make sure you stand up straight and squarely in front of the chart. The centre of the Tibetan Colour Wheel should correspond (both vertically and horizontally) with the point midway between your eyes.
- Set up the Tibetan Colour Wheel chart in sunlight. Alternatively, illuminate it with a daylight spectrum lamp or display it on a (music) lectern and practise in your garden or on your balcony.

Remove your glasses or contact lenses

- If you can see the outlines of the diagram clearly, follow the edge of the thick black line with your eyes. You can do this either along the coloured inner area or along the white surrounding background.
- If you can't see the outlines clearly, follow the thick black line itself with your eyes. Imagine tracing the edge of the line or the line itself with your eyes.
- If necessary, you may use pinhole glasses to see more clearly.

Horizontal distance from the chart

Stand about 55 cm (22 inches) from the chart. As your eye muscles become more flexible, you can gradually stand closer to the chart. Ultimately you would stand about 5 cm (2 inches) away, with your face parallel to the chart.

- To guide this process, you could stick a strip of tape on the floor, moving it 3 cm (1¼ inches) closer to the chart every week. As you move closer to the chart, larger eye movements are needed to trace the outlines.
- This makes the muscles around your eyeballs stretch in every direction. The closer you approach the chart, the stronger your lens is curved by the small muscles surrounding the lens of your eye.

Breath

Turn your attention to your breathing. Rub your hands together until they feel warm. Tap the corresponding fingertips of each hand together sturdily 20 times. Beat your chest with your fingertips during 30 breaths, taking care to keep your wrists loose. Notice your breath being centred in your abdomen. Breathe consciously and evenly during the whole exercise and focus your breathing on your belly.

The Inner Smile

It is a good practice to start this eye exercise with the "Inner Smile": it softens and relaxes your eyes. You start the inner smile in both eyes and your third eye and work your way down to your heart. When you activate your heart, you start the flow of loving energy and you will feel it flowing down throughout the length of your body like a waterfall.

- Close your eyes and imagine an attractive person standing in front of you, smiling lovingly at you. Smile at the face and allow the corners of your mouth to curl up a bit. Experience your eyes starting to smile and relax. Also, feel how you can smile in your belly.
- Breathe in this loving energy through the point between your eyebrows; let the energy circulate for three seconds. Feel your face relaxing. Next, exhale and smile back, equally lovingly. Repeat this three times.
- Send your Breath to your eyes and so soften your eyes and your eye muscles. You can keep up the inner smile with your eyes open during this exercise.

Following the outlines with your eyes

Choose any point on the edge of the thick black line defining the Tibetan Wheel as a starting point.

- Blink your eyelids softly, breathe evenly and deep through your nose to your belly and smile.
- Move your eyes clockwise, very slowly and smoothly, while keeping your head still.
- Follow the edge of the line outlining the spokes of the wheel with your eyes. Each time you approach one of the six small circles, shift your visual attention to the circle and trace its outline. Then continue your way along the spokes with their circles until you reach your point of departure.
- Now palm your eyes during twenty breaths. Do not apply force, do not build up extra tension in your eye muscles. If at any moment during the exercise you should feel discomfort, stop immediately and palm. Only continue when you feel more relaxed.

- Repeat the exercise, now moving your eyes anti-clockwise. Round off the exercise with palming, until your eyes feel soft and relaxed.

Perform the Tibetan Colour Wheel exercise attentively twice a day

Doing the exercise once in the morning and once in the evening will gradually make your eye muscles more flexible. Conscious breathing combined with slow eye movement is essential for achieving good results. This meditation has no value, unless you do it with your full attention. Take care not to cause extra tension in the eyes.

Your posture during the exercise

- Stand up straight, with your feet at shoulder width.
- Take care that your weight is evenly distributed between both feet. Make sure your lean neither sideways nor forwards or backwards. This means your weight will be evenly distributed between the heel and the ball of each foot.
- Relax your knees (unlocked). Keep your belly and your hips relaxed. Relax your chest upwards. Relax your shoulders. Drop your chest a little and let your shoulders bend forward a bit.
- Let your arms hang loose at your sides. See that your fingers are slightly spread and naturally curved.
- Relax your jaws, drawing your chin slightly inwards. Look straight ahead at the Tibetan Wheel, breathing calmly and evenly through your nose towards your belly.

Posture of your head

- It is possible to create a condition in which your head balances on your spinal column. This results in a very subtle and refined elongation of the neck muscles. In this situation your head is kept in balance by tiny rocking motions of the neck upper and lower neck muscles. Consequently, every minute adjustment of the head's position on top of the spinal column causes a subtle massage of the neck and back muscles.
- Take care that your head is tilted neither forwards nor backwards. The back of your neck should feel unconstrained.
- Keep your eyes horizontal (not tilting sideways or up or down) and parallel to the training chart.

For more information about the Tibetan Colour Wheel, please contact Mr Peter Ruiter at Eye-Tools.
E-mail address: Eye-tools@planet.nl
Website: www.Eye-Tools.info

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