CJO-RCO

CANADIAN JOURNAL OF OPTOMETRY
REVUE CANADIENNE D'OPTOMÉTRIE

VOL 68 NO 5
SEPTEMBER / SEPTEMBRE 2006

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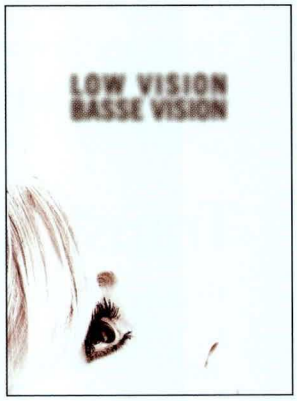
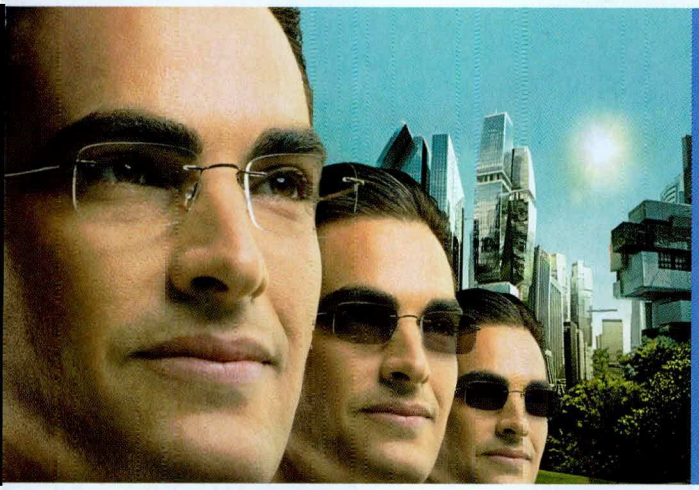


Cover: In an effort to encourage members to reflect on their role as complete eye heath service providers, this issue of the CJO shines a light on the important area of Low Vision. See the guest article by Dr Allan Jones, chair of CAO's Low Vision Committee, and find out more about this important area of eye health that is too often overlooked.

Couverture: Dans un effort pour encourager des membres à réfléchir sur leur rôle de fournisseur de services oculo-visuels complets, cette issue de la RCO jettera de la lumière sur le secteur important de la basse vision. Voyez l'article du Dr Allan Jones, président du Comité de la basse vision de l'ACO, et découvrez davantage au sujet de ce domaine important de la santé de l'œil souvent mis de côté.



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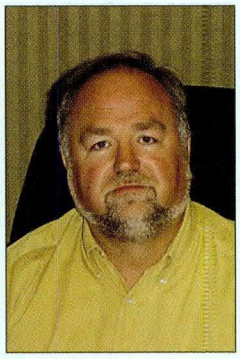
What does Low Vision mean to you?

Que signifie pour vous la basse vision?



Allan Jones, OD
Chair, Low Vision Committee / Président, Comité de la basse vision

CAO LOW VISION COMMITTEE: TERMS OF REFERENCE

- *to enhance the vision care of the public served by practices providing Low Vision services;*
- *to advocate the practice of Low Vision in Canada;*
- *to encourage the training and education of optometrists in the practice of Low Vision;*
- *to promote, enhance and advance the identity of optometry as a profession providing Low Vision;*
- *to collaborate with other organizations involved in providing services and representing the interests of Canadians with low vision and the blind;*
- *to promote the welfare of Canadians with low vision and the blind and to advance public knowledge about preventive eye care and blindness prevention;*
- *in consultation with the Executive Committee of CAO, to speak on behalf of the CAO on matters relating to low vision.*

Low vision — these words invoke varied meanings to different people. It may be blindness, sub-normal vision or poor to no vision. The truth is low vision encompasses any vision loss that affects the quality of life of the individual.

It is estimated that only 25% of those who need low vision rehabilitation receive any assistance. With 70% of low vision patients being over the age of 65 and the shift in age demographics, low vision will become an increasing burden and problem to Canadians.

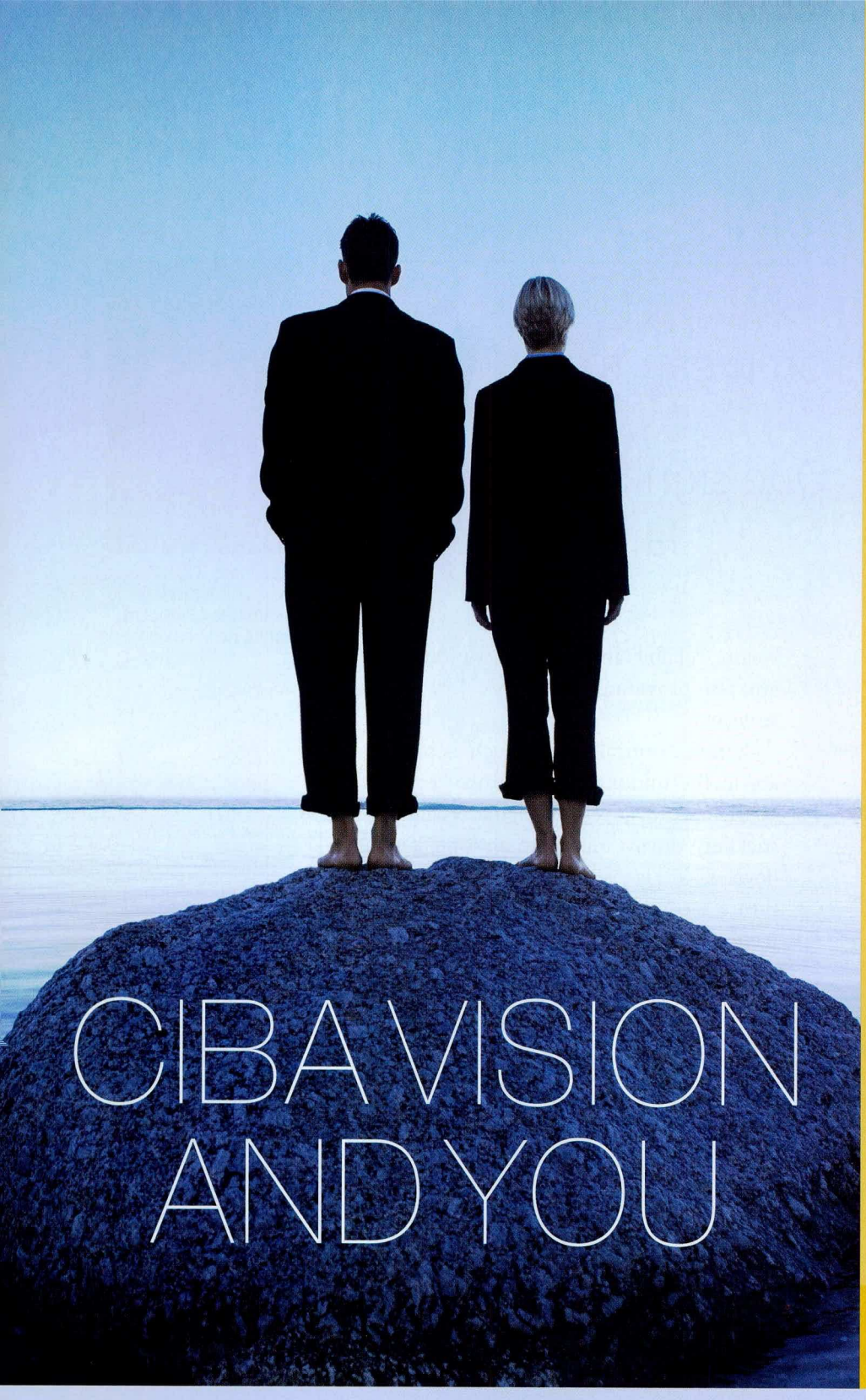
Optometry, with its education in functional vision, is the natural provider of such services. However, due to the lack of government and institutional involvement for services and the chronic nature of low vision rehabilitation, many optometrists are not providing even basic low vision services.

Complex optical devices such as bioptics are in the minority of treatment options. With new advances of digital technology trickling down into low vision reading devices, it is generally agreed in the future most advances in treatment will be technological not optical.

It is optometry though, with our education and background, that will make the biggest improvements in these patients' lives. Often a trial frame refraction is all that is required for these patients, or it may be as simple as a high add prism in reading glasses or to be told to use better illumination.

It is with pleasure that I draw your attention to the profiles in this issue of two optometrists who have made important and extensive contributions to the field of Low Vision. Through their work, teaching and research at the Schools of Optometry, Dr Jacques Gresset at the (UM) and Dr Graham Strong (UW) have made significant contributions in the field of Low Vision.

I encourage you to read the articles featured on low vision and to ask what more you could be doing to provide services. Consider providing magnification aids in your practice or finding out which optometrist you can refer to in your area. It is up to optometry to improve the lives of



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those who suffer from vision loss and to be the leader in assisting the 75% of Canadians with low vision who, at present, are not being treated.

As Chair of CAO's Low Vision Committee, I hope this issue of the CJO will encourage members to reflect on the importance of Low Vision in our role as complete eye heath service providers. Small things can make a big difference. Whether it is making these small adjustments to our practices, providing more extensive services or keeping up with new developments through continuing education, it is up to optometry to improve the lives of those who suffer from vision loss and to be the leader in assisting Canadians with low vision.

I hope you will rise to the challenge and shine a light on this important area of eye health that is too often overlooked.

MANDAT DU COMITÉ DE LA BASSE VISION

- *améliorer les soins de la vue des gens qui consultent un cabinet offrant des services de basse vision;*
- *promouvoir les services de basse vision en cabinet au Canada;*
- *mousser la formation et l'éducation des optométristes dans la pratique de services de basse vision;*
- *promouvoir et favoriser l'optométrie comme profession offrant des services de basse vision;*
- *collaborer avec d'autres organismes dispensateurs de services et représenter les intérêts des personnes aveugles et des Canadiens affectés d'une basse vision;*
- *promouvoir le mieux-être des personnes aveugles et des Canadiens affectés d'une basse vision et sensibiliser davantage le public aux soins oculaires préventifs et à la prévention de la cécité;*
- *de concert avec le Comité exécutif de l'ACO, représenter l'ACO dans les échanges sur la basse vision.*

La déficience visuelle – ces mots ont une signification diversifiée selon les personnes : cécité, vision sous la normale, ou vision médiocre à nulle. En vérité, la basse vision englobe toute perte de vision qui nuit à la qualité de vie de la personne.

On estime à seulement 25 % le pourcentage des personnes qui reçoivent une aide lorsqu'elles ont besoin de traitements pour leur basse vision. Vu que 70 % des patients affectés d'une basse vision ont plus de 65 ans et qu'il se produit un déplacement de l'âge dans la démographie, la basse vision deviendra de plus en plus un fardeau et un problème pour les Canadiens. L'optométrie, grâce à sa formation sur la vision fonctionnelle, est le dispensateur naturel de services de basse vision. Étant donné l'absence du gouvernement et des établissements dans les services, et la nature chronique de la réadaptation de la basse vision, beaucoup d'optométristes ne fournissent aucun service de basse vision, même les plus élémentaires.

Les appareils optiques complexes, comme les bioptiques, représentent une option de traitement minoritaire. Les progrès de la technologie numérique dans les appareils de lecture de basse vision nous amènent généralement à dire que la plupart des avancées dans les traitements seront de nature technologique et non optique.

Cependant, c'est l'optométrie, par notre formation et nos antécédents, qui améliorera le plus la vie de ces patients. Souvent, ces patients n'auront besoin que d'un examen de réfraction sur monture d'essai, ou simplement de l'ajout d'un prisme élevé dans des lunettes de lecture ou encore d'une meilleure illumination de leur environnement.

Permettez-moi d'attirer votre attention sur le profil de deux optométristes. Grâce à leur travail, le Dr Jacques Gresset (UM) et le Dr Graham Strong (UW) ont apporté une vaste contribution notable à la basse vision. Je vous incite donc à lire les articles sur la basse vision et à vous demander ce que vous pourriez faire de plus pour offrir des services. À tout le moins, pourquoi ne pas offrir de simples appareils de grossissement, ou alors trouvez les optométristes dans votre région vers lesquels diriger vos patients. C'est à l'optométrie qu'il incombe d'améliorer la vie de ceux qui sont affectés d'une basse vision et aussi de prendre les devants pour aider le pourcentage élevé (75 %) de personnes qui ne reçoivent actuellement aucun traitement pour leur basse vision.

À titre de président du Comité de la basse vision de l'ACO, j'espère que ce numéro du RCO amènera les membres à examiner l'importance de la basse vision dans notre rôle de fournisseur de services oculo-visuels complets. Qu'il s'agisse d'apporter de légères modifications à notre pratique, ou de nous tenir au fait des progrès grâce à la formation continue, l'optométrie a la responsabilité d'améliorer la vie de ceux qui souffrent de basse vision.

J'espère que vous relèverez le défi et jetterez de la lumière sur ce secteur de la santé oculaire qui est souvent mis de côté.

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Dorrie Morrow, OD
President / présidente

Assessing Low Vision

L'Évaluation de la basse vision

The new CAO Strategic Plan includes a goal to expand Optometry's role in providing low vision services in Canada. To achieve this, CAO formed a new Low Vision Committee and established terms of reference and goals. Dr Allan Jones, our Low Vision Committee Chair, comments further about his views in this issue.

There is no doubt that there is a growing need for low vision services and that Optometry is positioned to play an important role. The reality, however, is that too few of us offer low vision and this area of special interest is often overshadowed by the profession's advancements in diagnostic, therapeutic and clinical treatment services. In a recent CAO survey of provincial associations, Schools of Optometry and the Vision Institute of Canada, we saw regions where few optometrists are utilized for low vision, plus we learned more about gaps in provincial health coverage and other 'system' issues that influence where and how low vision is practiced.

The good news is that there are excellent models for low vision. Some of these are based in institutions including Schools of Optometry, the Vision Institute and in public hospitals. There are also successful models in private practice where local optometrists are the key providers of low vision assessments and therapies.

The Canadian Ophthalmological Society recently dedicated an issue of *Canadian Journal of Ophthalmology* to low vision. It is clear that ophthalmology shares our concern about public need, gaps in low vision services and government support (see www.pubs.nrc-cnrc.gc.ca/cjo, issue Volume 41, Number 3). One article of interest is titled "*Low Vision Service Models in Alberta: innovation, collaboration, and future opportunities.*" The article's abstract concludes "To prevent a crisis in low vision service provision, we need to build upon, and extend, existing partnerships between the CNIB and ophthalmologists, optometrists, government policy makers, and other service providers."

Clearly, an important challenge for our profession is to nurture these relationships and to be flexible in providing low vision care in a variety of models. We must also be patient advocates for system changes and government support. CAO will do its part, but we will need individual members to respond as well.

Consider your role in achieving these goals for enhancing low vision services in Canada. Our patients deserve comprehensive optometric care.

Le nouveau plan stratégique de l'ACO vise notamment à étendre le rôle de l'optométrie dans la prestation de services de basse vision au Canada. À cette fin, l'ACO a créé un nouveau comité de la basse vision et en a établi le mandat et les objectifs. Le Dr Allan Jones, notre président du Comité de la basse vision, nous présente ses commentaires dans ce numéro de la RCO.

Il ne fait aucun doute que le besoin de services de basse vision s'accroît et que l'optométrie est bien placée pour jouer un

PRESIDENT'S PODIUM
MOT DE LA PRÉSIDENTE

rôle important à cet égard. Toutefois, la réalité est que trop peu d'entre nous offrent des services de basse vision et que les progrès de la profession pour ce qui touche les services de diagnostic et de traitement clinique font souvent ombrage à ce domaine d'intérêt particulier. Dans un récent sondage de l'ACO mené auprès des associations provinciales, des écoles d'optométrie et du Vision Institute of Canada, nous avons pu constater l'étendue du manque de ressources, déterminer les lacunes dans le régime d'assurance-maladie des provinces et cerner d'autres questions « *systémiques* » qui influent sur l'endroit et la façon de dispenser les services de basse vision.

La bonne nouvelle, c'est qu'il y a d'excellents modèles de services de basse vision, par exemple, dans les établissements comme les écoles d'optométrie, au Vision Institute et dans les hôpitaux publics. On trouve aussi de bons modèles dans les cabinets privés où les optométristes locaux fournissent principalement des évaluations et des traitements pour la basse vision.

Récemment, la Société canadienne d'ophtalmologie consacrait un numéro du *Journal canadien d'ophtalmologie* à la basse vision. Il est clair que l'ophtalmologie se préoccupe comme nous des besoins du public, des lacunes dans les services de basse vision et du soutien gouvernemental (voir *www.pubs.nrc-cnrc.gc.ca/cjo*, vol. 41, no 3). Il y a un article intéressant intitulé Low Vision Service Models in Alberta. Le résumé de l'article se termine par ces mots : « *Pour prévenir une crise dans la prestation des services pour malvoyants, nous devrons bâtir et élargir les partenariats existants entre l'INCA, les ophtalmologistes, les optométristes, les stratèges du gouvernement et les autres dispensateurs de services* ».

Il est clair qu'un important défi pour notre profession sera de cultiver ces relations et de faire preuve de souplesse afin de pouvoir offrir des soins de basse vision selon divers modèles. Il nous faudra aussi être patients lorsque nous demanderons des modifications au système et l'appui du gouvernement. L'ACO fera sa part, mais chacun des membres devra aussi apporter sa contribution. Songez au rôle que vous pourriez prendre pour accomplir ces objectifs et ainsi améliorer les services de basse vision au Canada.

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VERSACE

It's not your fault!

Alphonse Carew
OD, FAAO

In general, Canadians have a reputation for being easy-going and exceptionally nice people, and certainly this is something to be proud of. As optometrists, we seem to take these characteristics to the next level. It seems that our profession attracts this personality type, which is good because being caring and friendly are necessary for exceptional practice growth.

However, there is a downside to being this generous and I see it often in the practices that I consult with. We tend to take on our patients' problems as if they were our own and work to resolve them even when it is not in our best interest. There will be times when you need to give things away but try and make sure these are the exceptions and not the rules.

Not all the problems that patients present with are our fault. To help I thought of a little oath you may want to review from time to time.

It's not your fault ...

- *The provincial health care system doesn't cover the cost of an eye exam. Blame the government.*
- *The lab breaks that specialty lens for the second time. Make the lab pay for this one – it is their fault!*
- *Two-year old lenses have scratches. Make your warranties reasonable. A significant scratch is one that is deep enough to feel or easily visible near the line of sight.*
- *Contact lenses, which are fractions of a millimeter thin, will occasionally tear. Certainly with disposables it is easy to replace a lens or two throughout the year but watch for the chronic abuser.*
- *The antibiotic you prescribed didn't cure the infection. When you have to see the patient again someone should pay for that time and any follow-up you might have to do.*
- *An eight-year-old broke his glasses by throwing them against a brick wall. There has to be reasonableness in what a warrantee on a frame will cover. Many use the term "will replace in 1 (or sometimes 2) years when the frame breaks under normal wear and tear". Even with this, it is helpful to state that you will only do this once, to stop some from coming back every 6 months.*
- *The patient's medical plan didn't cover the cost they believed*

would be covered. It is the patient's responsibility for the total cost of the exam and products purchased. If the insurance doesn't come through, they have to make up the difference.

- *A quality, fashionable pair of single vision glasses that a patient purchases about once every 3 to 4 years costs about same as pair of designer shoes, or a couple of dinners out, or couple of trips to the salon. When patients complain about prices, put it into perspective. It is a purchase that they make only every few years and the value it provides, in making them look fashionable and providing the gift of clear, comfortable vision, surpasses the other things they spend their money on.*
- *The appointment with the ophthalmologist will be sometime next year. Even though access to your practice is reasonable, it may not be the case for those professionals that you refer to. Of course you do your best with referral letters and perhaps follow-up calls but, in the end, it's the ophthalmologist's fault if they don't see the patient in a timely manner. Of course, for patients whose sight and eye health is threatened, you should go above and beyond to get them seen as early as possible.*
- *Patients can't adapt to their new prescriptions. Vision is complicated. Some people will not adapt to changes. Don't take it personally, take care of the patient and move on.*
- *The courier didn't get the contact lens order to you within 8 hours. Patients' expectations should be set realistically*

MEMBERS' WEB PORTAL

vurtur.com communications group

Part Two: The revitalization project of the Members' Web portal.
by Robin Galipeau, Vurtur Communications Group

ACCESS / LOGIN

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Once signed-in, your environment will display your account name in the top right corner, under the menu tabs.

Courtesy sign-in

The site has integrated best practice sign-in features, which provide you with fully automated password retrieval process (i.e. *get your lost password within seconds, 24 hrs a day*). The site also has a "Remember me" feature, which will always retain your username on next logins.

USER CONTROLS

Since this new platform is fully user aware, you can access your personal account preferences from "My Profile" link located at the top right user bar (directly under the main tab top menu). This Profile page will provide you with 3 key account sections.

- Website preferences: *Password Reset & settings*
- Your CAO Account profile: *direct access to membership record*
- In Touch e-mail newsletter subscription: *Allows you to subscribe or unsubscribe to the electronic version of InTouch.*

SITE FEATURES

The CAO website is hosted on an advanced Content Management System (CMS), which has many integrated features to help deliver the best experience possible, while focusing on getting you to the information as well as guiding you to the content.

The basic principals of this site are found in the three primary sections; top header, side portlets and the main content body. The top header consists of the primary tab navigations sections, site map and accessibility help, the search bar, the location reference bar (*bread crumbs*) and your own user bar. The portlets to the left display the main navigation tree, as well as the "Recent changes" portlet, which collects all recent additions and modifications listed by date. The portlets to the right provide recent news pages, as well as a calendar of events. When available, a poll will display with various features.

Then you have the primary body page where the page content is visible. All content pages have several key characteristics about its managed content. Each has the title clearly shown in the top left, with the last modified date directly below. To the top right of the content pages, you will find page actions: *'print this page', which only prints actual content; and 'full width toggle' that hides the portlets.* You then see the page's content description, if available, proceeded by the content itself.

When navigating folders, the system may show you a summary window of all content for each item within.

While navigating from the main left navigation tree, you

on product orders and delivery. Sometimes it's better to overestimate the time so when it comes in "early" the patient is pleasantly surprised. Disney made an art out of this — those line-ups are never as long as they say and you feel good when the wait was "only" 45 minutes instead of the posted 1 hour!

- *You can't bill a patient's insurance directly. It is the insurance company that made this decision. They don't want to make it easy for the patient to take advantage of the insurance .*
- *Fifty-year olds who get laser surgery cannot read afterwards. It doesn't matter how many times you tell the patient , they all seem to come back afterwards with the comment that they didn't know it was going to be this bad. Some doctors have gone to the point where they will get the patient to write out on their chart that they will not be able to read after the surgery and reading glasses will be required for eating, computer and reading or any close-up activity.*

Well, those are the few I thought up. I'm sure you have many more that are specific to your office. It might be a good idea to share them with your staff for they are often left to deal with these situations.

Most patients are reasonable in their expectations but it's just the people on the fringe that try and take advantage of your good nature. So, try and remember that sometimes it's just not your fault and move on.

HOW TO ...

may hover over the link as a summary alt tag will appear when available, displaying summary and/or description of the content. You may also choose to use the location bar (bread crumbs) to jump directly to a previous content folder.

Search

Finding content has never been so easy! You will notice a rapid LIVE search feature to the top right of the layout. Simply start typing the keyword(s) your are looking for, and a lower window will automatically display below with your relevant content. Simply keep typing to narrow your search. Once you have entered your keywords, hit enter to have the result page display in the main body area. From here, you will have access to an "advanced search" feature which allow for much more precise searches.

RSS

While navigating the "All News" and "All Events" pages, you will see an RSS icon (Really Simple Syndication). For those of you who use RSS readers from your computers or cell phones and blackberries… these sections are available to you on demand. RSS is a recent content fetching standard which allows users to "fetch" all RSS compliant content they have registered in their RSS readers. To learn more about RSS technology… simply type RSS in any internet search engine.

SITE ACCESSIBILITY CONTROLS

In the top right corner of the site, there is a link to an "accessibility" page, which will provide user with various access options. Most common are the site test size options which range from Small, to Normal, to Large. This text sizing option does more then just resize the main body, it will effect the entire site including links and menus.

The site is also scripted to use Access Keys (for those who like to use keyboard shortcuts). For example; you can use Alt+3 keys, then hit enter… this will take you directly to the Site Map, or Alt+4 then enter will position your cursor directly into the top right Search field. The site become very efficient to get around by leveraging these little techniques.

The platform which operates the new member's website also complies with the latest requirements for people with disabilities. You can research this feature by searching for "Section 508". It also assist's people with visibility problems to have access capabilities by having a Section 508 compliant site.

INTERACTIVE AREAS

Discussion Threads

One of the best features of this site is, without question, the ability to participate within in-place discussion threads. On any given page, you may find a discussion thread at the bottom of that page. You can now easily participate in discussion or initiate your own feedback and point of view with other constituents on pages where this feature is enabled.

Classifieds

You now have full control over placing your own ads. You can add and edit all your classified ads from both "Careers" and "For Sale" sections. Both of these areas have been optimized for geoprapical and content type ads to help you easily browse relevant items. You can also post comments and questions on any of these classified ads, as well as remove or respond to any within your own ads. All ads are automatically removed after 60 days.

We hope you find your new member's portal experience to be a pleasant one. Finding relevant content should now be a snap.

advertorial

Scotiabank Group™

Individual Pension Plans: an RRSP alternative for professionals like you.

Bruce Moir is a senior product manager with ScotiaMcLeod. Since graduating from the University of Waterloo he has spent the last twenty years in financial services specializing in individual and group retirement plans. A big focus lately has been with ScotiaMcLeod advisors across Canada providing education and assistance with Individual Pension Plans. Bruce can be reached via e-mail at *bruce_moir@scotiacapital.com*.

Many entrepreneurs and professionals often neglect making their RRSP contributions because they are solely focused on building their practice or else find that RRSP limits are insufficient to provide an adequate retirement income. If you are 45 years of age or older, are incorporated and receive an annual personal income over $100,000 from your practice, an Individual Pension Plan (IPP) is something you might want to consider.

An IPP is similar to an RRSP in that money accumulates over time, tax sheltered, in an account to provide you with retirement benefits. In addition, IPPs have the ability for larger tax-deductible contributions than RRSPs, allow the option to contribute large deductible amounts for past service with your company and can be safe from creditors. Therefore, an IPP can be an ideal option, in the right circumstances, for your retirement and estate plan.

What is an IPP?

IPPs are defined benefit pension plans designed for one person. They are registered with Canada Revenue Agency (CRA) and are covered under the Income Tax Act.

IPPs promise a specific level of pension income at retirement according to a predetermined formula. This formula is based on a percentage of your earnings over a given period, so it's important to meet a certain income threshold during your working years.

Your annual IPP contribution limit is determined by an actuary and will increase as you get closer to your retirement date. Your IPP will also be sponsored and funded by your employer (which may be yourself).

Once funds are contributed, they are locked-in by pension legislation.

What are the key benefits?

First and foremost, your IPP contributions are tax deductible and can exceed the usual RRSP maximums. Plus, there is a potential to fund previous years of service and contribute a significant deductible lump sum.

Contributions and plan expenses are tax deductible for the employer which can, again, be your own company or practice. In addition, the employer's contributions are an effective way to move corporate assets into your IPP, where they can grow on a tax-deferred basis. Your income from the plan is defined and it is based on your years of service and the applicable actuarial calculations.

Finally, under current legislation, IPPs may provide creditor protection to the funds in the plan. As an active professional, this is a layer of protection that may have future, unforeseen value.

Assemble the right professionals

Working with the appropriate group of professionals – such as an investment advisor, accountant, and pension actuary – it's easy to open and administer an Individual Pension Plan that makes sense for your circumstances.

To see if an IPP might be right for you, contact your local Scotiabank Small Business Account Manager. They are trained to provide sound financial advice to practicing professionals, including members of the Canadian Association of Optometrists, and will put you in touch with the right investment specialist from within the Scotiabank Group who can help put in place a personalized plan that reflects your needs and goals.

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The general population experiences +0.15 microns of spherical aberration over a 6 mm aperture. The enhanced optics technology within PureVision lenses is designed to reduce this spherical aberration across all lens powers. The "20/20" visual simulates the effects of +0.15 microns of spherical aberration. The "20/20 Enhanced" visual simulates the correction of that spherical aberration. The images are assumed to vertically subtend 1000 arc minutes.

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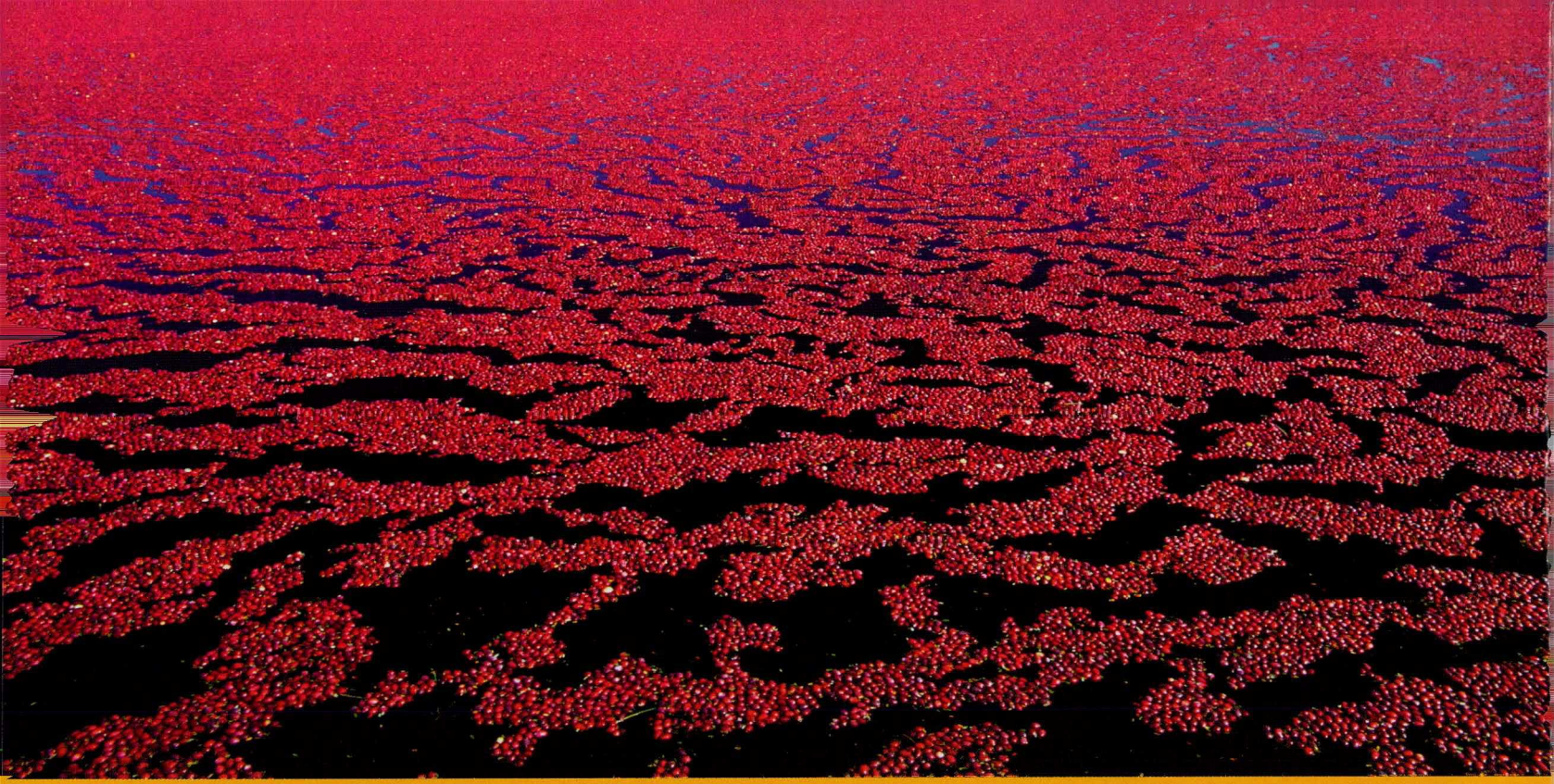

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Reference: 1. Environics Research Company, Survey of Optometrists and General Ophthalmologists, April 2004.

COETF REPORT
RAPPORT DU FFOCÉ

In an effort to highlight some of the projects and research by COETF award recipients, the COETF Trustees and Awards Committee have selected project reports to be published in the Canadian Journal of Optometry · Revue canadienne des optométristes. Recognizing that many recipients intend to publish their work in cited journals, the reports are not considered to be clinical articles. COETF funded research, when completed and peer reviewed, may be published in CJO·RCO and other journals. The COETF reports are intended to provide relevant information for the benefit of our readers and to showcase the high caliber of optometric research funded by COETF … Canadian Optometry's Charity.

COETF INTERIM REPORT - 2006

by Cindy S. Ho, BSc, OD

RESEARCH PROJECT SUMMARY

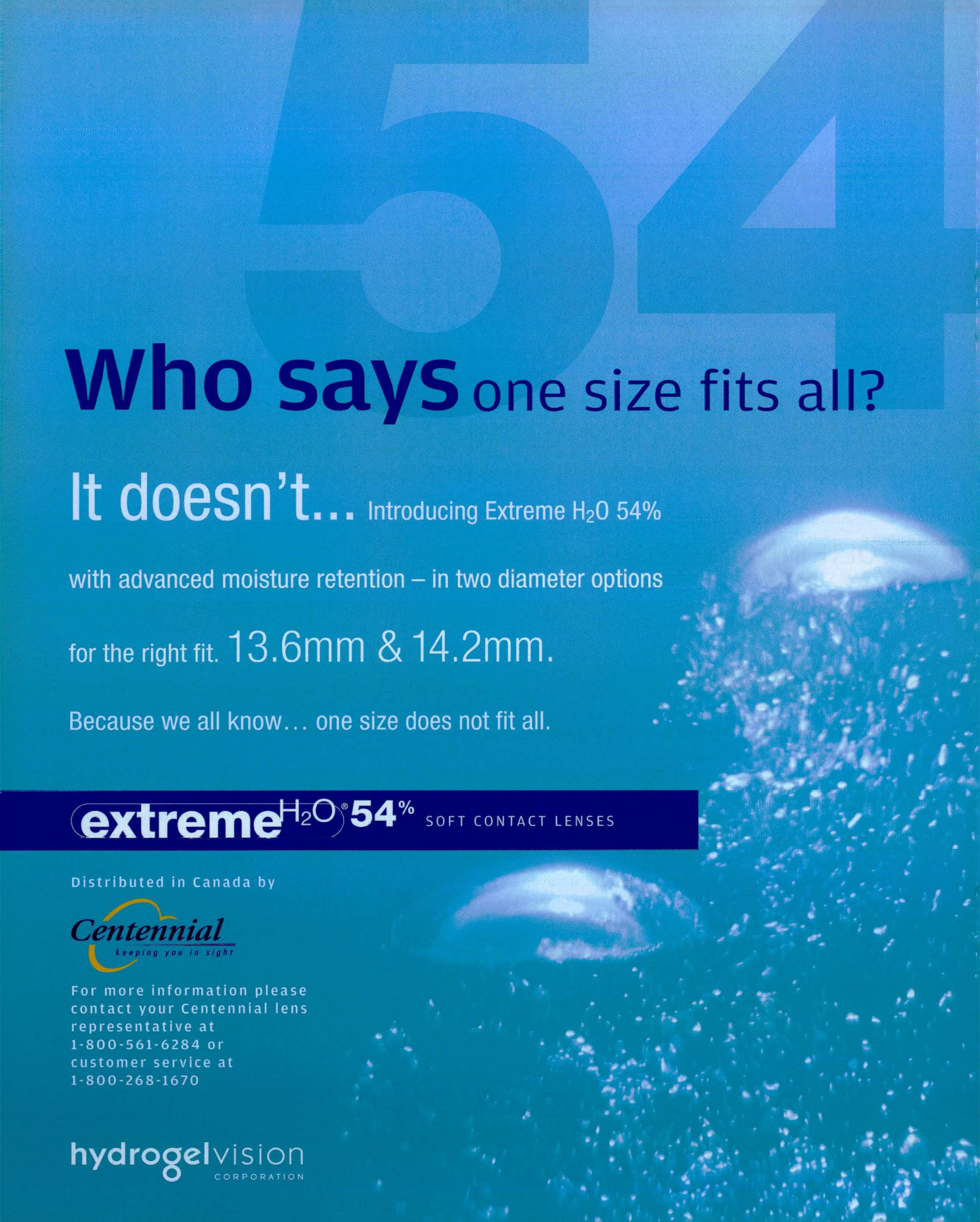
The human visual system consists of two main parallel neural pathways that process attributes of form (e.g. colour, orientation, size) and motion (e.g. speed, direction), respectively, in a visual scene. Children with amblyopia have difficulty performing tasks such as identifying small letters on a vision chart because of abnormal development in visual areas of the brain involved in form perception. Most clinical tests for amblyopia involve tests of form perception. Despite evidence that motion and form pathways develop differently early in life, motion perception is rarely tested clinically likely because the relationship between motion perception and amblyopia has not yet been well studied. Although seldom studied, recent studies (including those from our laboratory) have shown that motion perception is indeed affected in amblyopia. Undetected motion deficits may explain why patching treatment is not always effective.

Our present studies in the University of British Columbia's Visual Neuroscience Laboratory at BC's Children's Hospital continue to use psychophysics and neuroimaging to identify visual areas of the brain that could be responsible for impaired motion perception in amblyopic children. This could facilitate development of new and improved tools to diagnose and treat amblyopia, help us to understand the limitations of current treatment, and provide valuable insight into understanding normal human visual perception. Our research has been funded in part by the Canadian Optometric Education Trust Fund from 2003 to 2005. No additional funding was requested for 2006.

While the cortical changes responsible for the form perception deficits in amblyopia are well documented, the effect of amblyopia on neurons in cortical areas involved in motion perception is more ambiguous. A recent publication from our laboratory (Ho et al., 2005) revealed that motion perception is not normal in the non-amblyopic eyes of some amblyopic children and that different aspects of motion pathway function may be selectively affected in strabismic, anisometropic, and aniso-strabismic amblyopia. These findings suggest that diagnosis and treatment of amblyopia may need to take into account fundamental neural differences between the amblyopic subtypes.

PROGRESS TO DATE & FUTURE DIRECTION FOR 2006 /2007

In 2005, our goal was to assess 12 control subjects and 24 amblyopic subjects (12 anisometropic and 12 strabismic) on our psychological tasks. Data collection for the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computer-generated motion tasks has been completed for all but 6 strabismic subjects. During 2005, I submitted three additional manuscripts for publication based on our psychophysical studies to date (two are published or in press; one is currently under revision). The programming of the dynamic visual stimuli required for the functional MRI (fMRI) scanning has been started. Functional MRI scanning with all amblyopic and control subjects should be completed by the end of 2006. Functional MRI image processing and statistical analysis will be performed using the Brain Voyager QX software with the help of the Children's Brain Mapping Centre at BC's Children's Hospital. The anticipated completion date of our project is August 2007. Dissemination of our fMRI research findings through publications and presentations will likely begin in the spring of 2007. We will submit a final report to COETF in the fall of 2007.

ABSTRACT, PRESENTATION & PUBLICATION SUMMARY FOR 2005-2006

Ho, C.S., Paul, P., Asirvatham, A., Cavanagh, P., Cline, R & Giaschi, D.E. (2006). Abnormal Spatial Selection and Tracking in Children with Amblyopia. Vision Research, 46, 3274-3283.

Giaschi, D.E., Ho, C.S. & Cavanagh, P. (Aug 2006). Deficiencies of higher-order motion perception in children with amblyopia. European Conference on Visual Perception.

Ho, C.S. & Giaschi, D.E. (2006). Deficient maximum motion displacement in amblyopic children. Vision Research, under revision.

Wang, J., Ho, C.S. & Giaschi, D.E. (2006). Deficient motion-defined and texture-defined figure-ground segregation in amblyopic children. Journal of Pediatric Ophthalmology & Strabismus, in press.

Ho, C.S., Giaschi, D.E., Boden, C., Dougherty, R.F., Cline, R. & Lyons, C. (June 2005). Deficient motion perception in the fellow eye of amblyopic children. Vision Research, 45, 1615-1627.

Ho, C.S., & Giaschi, D.E. (May 2005). Low-level and high level maximum motion displacement deficits in amblyopic children. Human Early Learning Partnership Research Days, University of British Columbia, Faculty of Graduate Studies.

Ho, C.S., & Giaschi, D.E. (May 2005). Low-level and high level maximum motion displacement deficits in amblyopic children. Journal of Vision (abstract for Vision Sciences Society conference proceedings).

Ho, C.S., & Giaschi, D.E. (April 2005). Deficits of maximum motion displacement in amblyopic children. Department of Ophthalmology Annual Research & Alumni Day, University of British Columbia.

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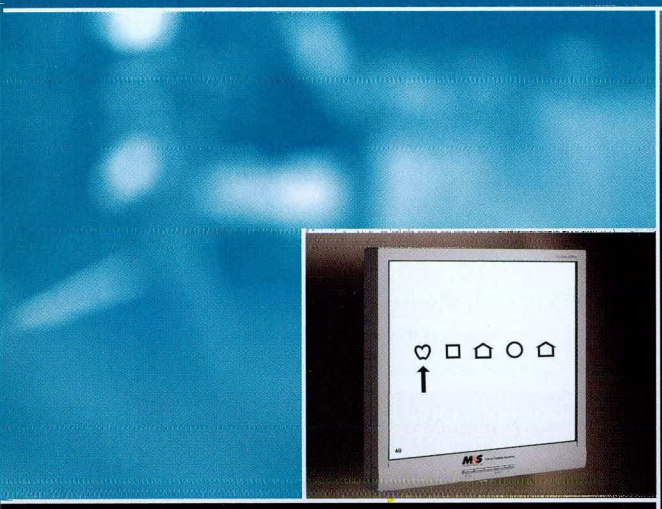

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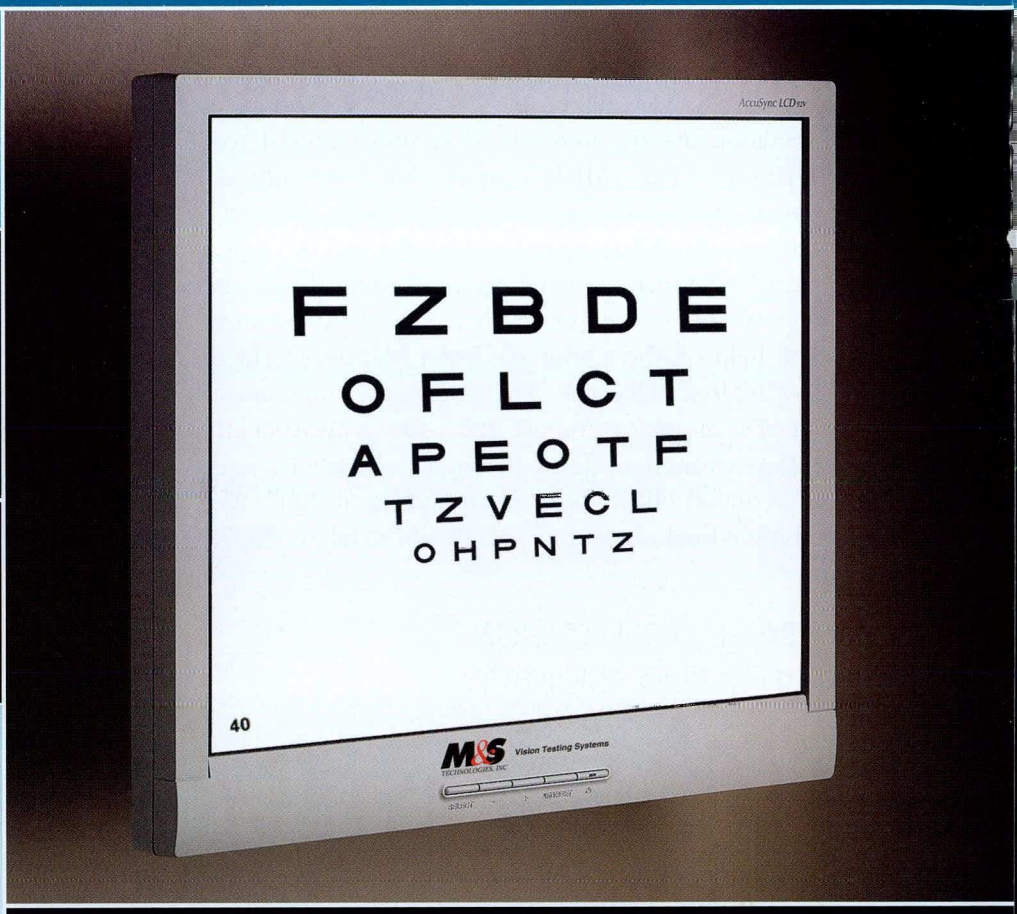

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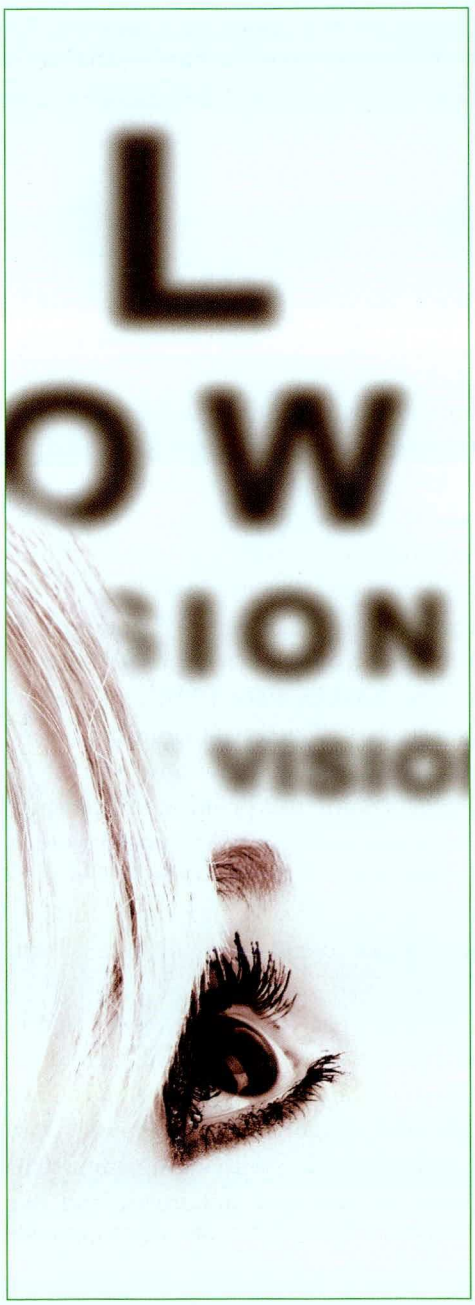
CNIB: Focus on the Future



In Canada, CNIB is the first place people turn to when they discover they are facing significant vision loss. CNIB helps people regain their independence by providing access to specialized rehabilitation services, innovative consumer products, and one of the world's largest libraries for people with print disabilities. Recently, the 88-year-old organization has made some changes, including a new brand and visual identity, as well as an exciting new approach to research.

INTEGRATED RESEARCH PROGRAM

A Director of Research was appointed in November 2005 to head up CNIB's new integrated research department and programs. The department is now structured in a way that will facilitate a more integrated approach to research at CNIB and will bring all research endeavors, both medical and social, under one umbrella.

The focus of Research at CNIB, which includes the mandate and direction of the former E. A. Baker Foundation, is:

- *Identifying and proposing CNIB's research strategy and agenda;*
- *Generating grants to develop and sustain research programs;*
- *Coordinating peer reviews of research applications;*
- *Developing partnerships with other agencies to advance CNIB's research agenda;*
- *Ensuring that CNIB staff are aware of the nature and implications of research projects;*
- *Supporting the integration of research data and outcomes in service delivery;*
- *Assisting the development of research skills within CNIB;*

- *Ensuring appropriate knowledge transfer, dissemination and publication of research results for research programmes conducted by CNIB.*
- *Funding sub-specialty training in optometry and ophthalmology*

CNIB's National Board established a Research Committee as a standing committee of the Board in 2005.

VISION REHABILITATION EVIDENCE-BASED REVIEW (VREBR)

Current research initiatives include an examination of the effectiveness of low vision rehabilitation. The Vision Rehabilitation Evidence-Based Review (VREBR) is a comprehensive "Study of Studies" that will produce a compendium of worldwide research on low-vision rehabilitation. Each chapter will be co-authored by nationally and internationally recognized research specialists in each of the topic areas, and will be an invaluable resource for other researchers in Canada and around the globe. Principal co-investigators are Dr. Phil Hooper (Chair-Chief of Ophthalmology at the University of Western Ontario, and Director of the Ivey Eye Institute) and Dr. Graham Strong (Professor of Optometry at the University of Waterloo).

Chapters completed thus far include: Terminology, Demography and Epidemiology of Low Vision, Low Vision Secondary to Age-Related Macular Degeneration and Low Vision and Driving. Dr Graham Strong of the University of Waterloo was the lead author of the Low Vision and Driving chapter, which looks at an issue that eye care professionals, and optometrists in particular, will be seeing more and more of as their patients age.

CAO has offered to publish the chapters or excerpts of the VREBR in a future issue of the Canadian Journal of Optometry. The Chapters will also be housed electronically on the VREBR website at [insert web address here].

NEW LOOK REFLECTS CNIB's HOLISTIC NATURE

In addition to the new research model, CNIB has undergone a revitalization of its public image. The 88-year old organization has a new logo and tagline that reflects CNIB's diverse role and reminds Canadians of its continuing role in all aspects of vision health. The organization has also changed its name from The Canadian National Institute for the Blind to its acronym, CNIB.

CNIB's new English logo is a combination of the blue, lowercase letters CNIB, with a green tree icon to the right of the letters. The braille equivalent of CNIB appears in white within the tree. Below the logo are the words "vision health. vision hope." The French logo has lowercase INCA with the braille equivalent of INCA in white within the tree. Below the logo are the words "santé visuelle, une vision pour l'avenir." The tree symbolizes growth, community, stability, hope, health and renewal.

cnib vision health. vision hope. | inca santé visuelle, une vision pour l'avenir.

"It's important for Canadians to understand that CNIB plays a significant role in the entire spectrum of activities related to vision," said Jim Sanders, President and CEO, CNIB. "We are here for anyone experiencing vision loss. We are also committed to research and public education directed toward the vision health of all Canadians." The new CNIB brand and visual identity are the result of the largest national consultation ever undertaken by the organization, supported by Pilot PMR and the donated creative expertise of Cossette Communications Group, Canada's largest communications agency. CNIB aims to move the organization to a position of relevance to all Canadians, to clarify its focus to stakeholders such as clients, donors, employees and volunteers, and to better communicate its range of activities, from funding research or advocacy work to consulting on accessibility issues.

"CNIB is not changing what it does – we are simply throwing open the doors and reacquainting Canadians with this modern and dynamic organization," said Sanders. "We are an organization with a long, important history and we need to revitalize our image and our focus to ensure that our services reach everyone who needs them."

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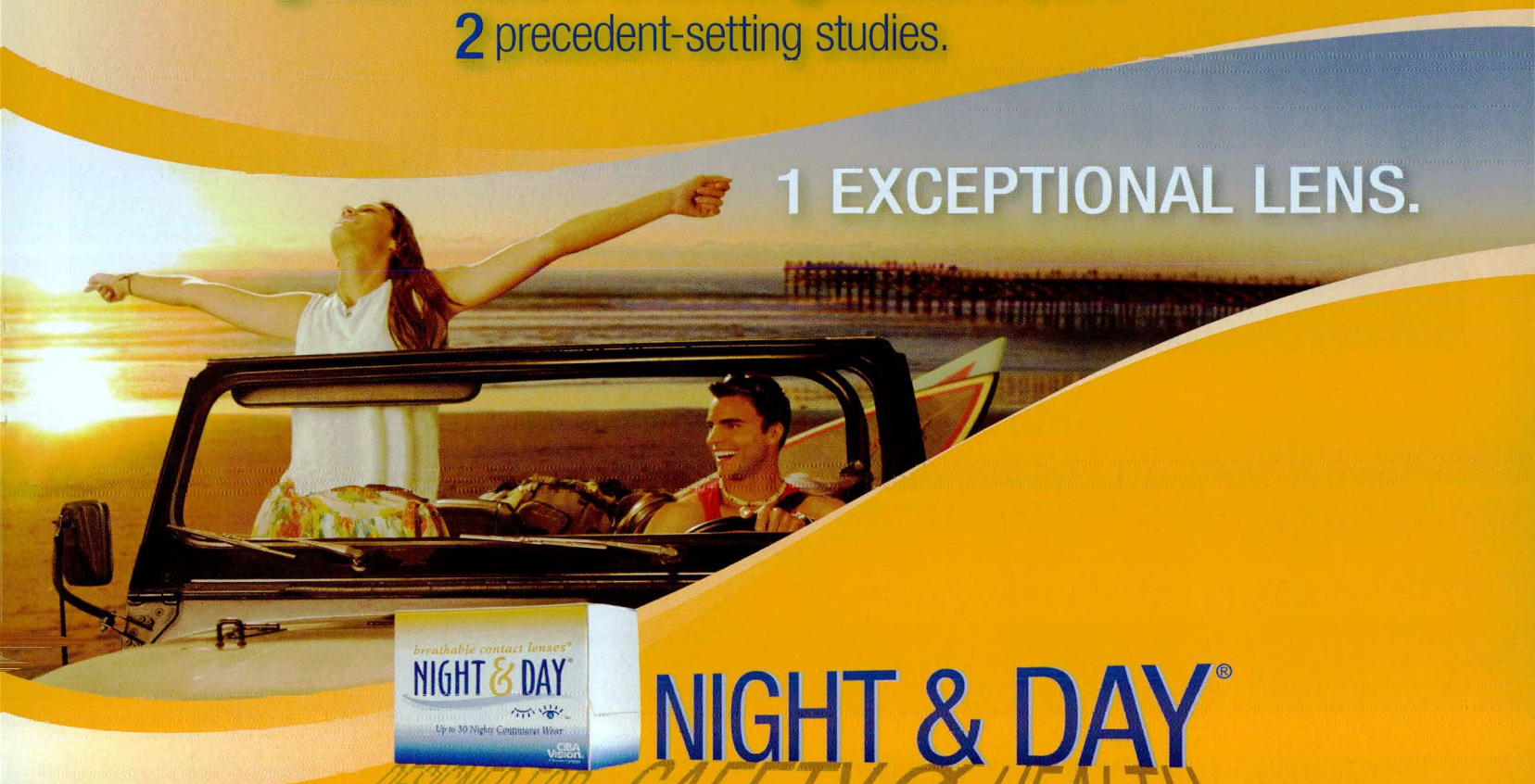

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References: 1. Schein O, McNally J, Katz J, Chalmers R, Tielsch J, et. al. The Incidence of Microbial Keratitis Among Wearers of a 30-day Silicone Hydrogel Extended-Wear Contact Lens. *Ophthalmology*. 2005;112(12):2172-2179. 2. Dillehay S, Long B, Barr J, Bergenske P, Donshik P, Secor G, Yoakum J. Summary of a 3-year in-practice trial in the U.S. with lotrafilcon A silicone hydrogel soft contact lenses. *Optometry and Vision*, 2005, vol.82, E-abstract 050075.

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1. Data on file, Bausch & Lomb Incorporated.
2. Aston University Technical Report, Birmingham, England; 1997.

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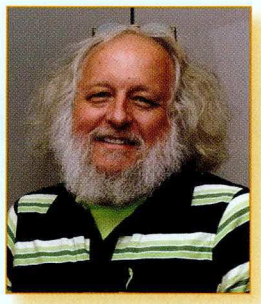
LOW VISION PROFILES

DR GRAHAM STRONG

by J. Sivak



Professor Graham Strong is a professor in the School of Optometry, University of Waterloo. He served as Director of the School and the Associate Dean of Science for Optometry from 1999 until 1002. Prior to joining the UW faculty in 1979, Dr Strong operated a successful optometric practice for nine years in a rural Ontario community. Since 1987, he has served as Director of the Centre for Sight Enhancement (CSE), an internationally acclaimed low vision research and clinical facility at the University of Waterloo. The CSE is Canada's only low vision service to be accredited by the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (NAC). Dr Strong also directs UW's Sight Enhancement Equipment Pool and Assessment Centre (SEEPAC), a provincially sponsored service specializing in the assessment and provision of high technology sight enhancement devices for people with low vision.

Dr Strong is active in local, national and international low vision research forums. Since 1972, he has served as leader of the Vison Research Team for the Ontario Rehabilitation Technology Research Consortium (ORTC). The ORTC is a large government-sponsored research collective, whose mission is "to enhance the lives of persons with disabilities, their families and communities by conducting research and development into technology based products and services". ORTC-sponsored research has led to the development and commerialization of many new award-winning rehabilitation products. In recognition of these achievements, Dr Stong's Sight Enhancement Engineering (WatSEE) lab received a Computerworld Smithsonian Award in 1999 and Dr Strong became invested as Comptuerwold Smithsonian Laureate.

Dr Strong's research and development initiatives are responsible for the creation of two new spin-off companies, Sight Enhancement Technologies and Sight Enhancement Systems. He has an ongoing research collaboration with the Drs Jeff Jutai and Phil Hooper from University of Western Ontario in conducting a comprehensive "evidence-based" review of key areas of Vision Rehabilitation (to date these have included epidemiology and demography; driving and low vision, age-related macular degeneration and rehabilitation; optimum text printing, etc.).

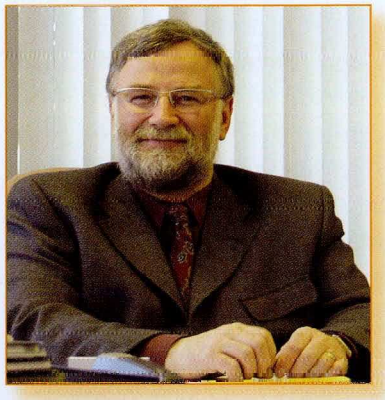
Strong is also sole PI on four ongoing low vision research and development projects (with funding support from HTX , CITO, and CIHR) to develop new assistive device technologies for people with low vision. He is also co-PI in a 5-year CIHR-funded project looking at Vision Rehabilitation outcomes, a PI on a 5-year NIDRR project researching vision aspects of people who are frail and elderly and how these may influence Universal Design. He is a co-applicant on two EA Baker projects (one researching issues related to deaf-blindness).

Dr Strong is an Adjunct Scientist at Toronto Rehabilitation Institute and is involved as vision consultant on two large facility design and development grants, including the "Intelligent Design for Adaptation, Participation and Technology (IDAPT) and the Innovative Rehabilitation for People in Challenging Environments" project.

In addition, he is a court-recognised Forensic Optometrist who has been consulted in connection with numerous homicide investigations and prosecutions. He also serves as a vision consultant for several police and military tactical shooting teams.

Dr. Strong's many contributions to the field of Low Vision were recognized in 2003 by the CNIB when he presented the inaugural E.A.Baker Lecture in Low Vision at the CAO meeting in Halifax.

LES VISAGES DE LA BASSE VISION



JACQUES GRESSET, O.D., PH.D.

by Olga Overbury Ph.D & Claude J. Giasson O.D. Ph.D.

Dr Jacques Gresset a obtenu son diplôme de premier cycle en Optométrie en 1978 de l'Université de Montréal et son Ph.D. en épidémiologie de l'Université Laval en 1991. Depuis qu'il a gradué en optométrie, le Dr Gresset a travaillé dans le domaine de la basse vision et de la réadaptation de la vision. Son enseignement à l'école d'Optométrie a introduit beaucoup de professionnels à ce secteur de spécialité et, ses efforts ont amené un nombre considérable d'optométristes à se spécialiser en basse vision.

En plus, Dr Gresset a travaillé étroitement avec l'Institut Nazareth et Louis Braille (INLB), d'abord en tant qu'optométriste oeuvrant en basse vision, puis en tant que clinicien supervisant des étudiants en optométrie. De plus, il a été un chercheur actif et productif dans le domaine de la basse vision, consacrant beaucoup d'efforts à étudier le contexte québécois. Un nombre important de ses publications et de ses présentations de conférence ont clarifié les besoins des handicapés visuels et examiné le réseau de services auxquels ils ont droit. Ces travaux ont permis d'informer d'autres chercheurs et praticiens au-delà des frontières du Québec au sujet de la situation québécoise.

En 1997, il a joué un rôle déterminant afin d'établir un satellite de l'institut à l'école d'Optométrie de l'université de Montréal. Cet aménagement réalisé en collaboration avec l'INLB et avec le directeur de l'époque, M. Pierre Simonet, a favorisé l'exposition directe des étudiants en optométrie à la population clinique desservie par l'institut sans besoin de se déplacer dans une région périphérique hors de l'île de Montréal. Cette collaboration a également facilité l'accès des personnes âgées vivant près du centre-ville aux services de l'INLB. Afin de célébrer cette collaboration, un colloque annuel est organisé chaque année par l'école d'Optométrie et l'INLB. Cet évènement permet aux membres de la communauté universitaire et du point de service de se rassembler et d'échanger de l'information au sujet de leurs interventions auprès des handicapés visuels. L'étape suivante consistait à tenir une conférence internationale à Montréal.

Dr Gresset a été un acteur important dans l'obtention de la 9e conférence internationale sur la basse vision qui aura lieu en juillet 2008, sous les auspices de l'école d'Optométrie de l'université de Montréal, de l'INLB et en partenariat avec l'Institut canadien des Aveugles. Enfin, Dr Gresset a été en grande partie responsable de l'établissement du seul programme gradué au Canada à former des professionnels oeuvrant dans le secteur de la réadaptation visuelle, spécialisés soit en orientation et en mobilité ou dans l'enseignement des techniques de réadaptation. Ces programmes ont produit des praticiens dans ce secteur depuis 2001.

Dr Gresset continue à être un chef de file dans le domaine de la déficience visuelle à la fois au niveau national et au niveau international.

JULY 7-10, 2008 - PALAIS DES CONGRÈS DE MONTREAL, CANADA

En 2008, la 9e Conférence internationale sur la déficience visuelle aura lieu du 7 au 10 juillet à Montréal, l'une des plus importantes villes canadiennes. À la tête de l'organisation de la Conférence, l'Institut Nazareth et Louis-Braille (Centre de réadaptation pour personnes ayant une déficience visuelle) et l'École d'optométrie de l'Université de Montréal travaillent en partenariat avec l'Institut national canadien pour les aveugles.

Déjà, le comité organisateur ne ménage pas ses efforts pour donner à ce rassemblement une dimension autant informative que festive. La Conférence présentera des sessions plénières et simultanées mettant en lumière les travaux de professeurs et chercheurs de renom se consacrant à la recherche sur les sciences de la vision, les services de réadaptation et les aspects psychosociaux de la réintégration. Une importante exposition ainsi que des séances d'affichage seront également au programme.

Avant tout, nous vous invitons à goûter à l'expérience montréalaise, à la fois intense et hautement colorée. Partez à la découverte des multiples visages de cette métropole bilingue et multiculturelle, réputée pour son environnement scientifique, son réseau universitaire de classe mondiale et sa joie de vivre.

Au plaisir de vous accueillir en 2008,

LINE AMPLEMAN
Coprésidente
Comité organisateur de Vision 2008
Directrice générale
Institut Nazareth & Louis-Braille

JACQUES GRESSET, OD, PHD, FAAO
Coprésidente
Comité organisateur de Vision 2008
Directeur
École d'optométrie
Université de Montréal

JULY 7-10, 2008 - PALAIS DES CONGRES DE MONTREAL, CANADA

In 2008, the 9th International Conference on Low Vision will be held from July 7 to 10 in Montréal, one of Canada 's major cities. The Institut Nazareth & Louis-Braille (Rehabilitation Centre specialized in visual impairment) and the École d'optométrie of the Université de Montréal will oversee the organization of this Conference in partnership with the Canadian National Institute for the Blind.

The Organizing Committee is already at work to make this conference both informative and entertaining. The Conference will feature plenary and concurrent sessions during which distinguished academics and researchers will present the results of their work on vision science research, services of rehabilitation and psychosocial aspects of reintegration. An exhibition and poster sessions will also be held.

Above all, we invite you to experience Montréal's festive, flavorful and adventurous way of life. Discover the many faces of this bilingual and multicultural city renowned for its scientific scene, world-class university network and joie de vivre.

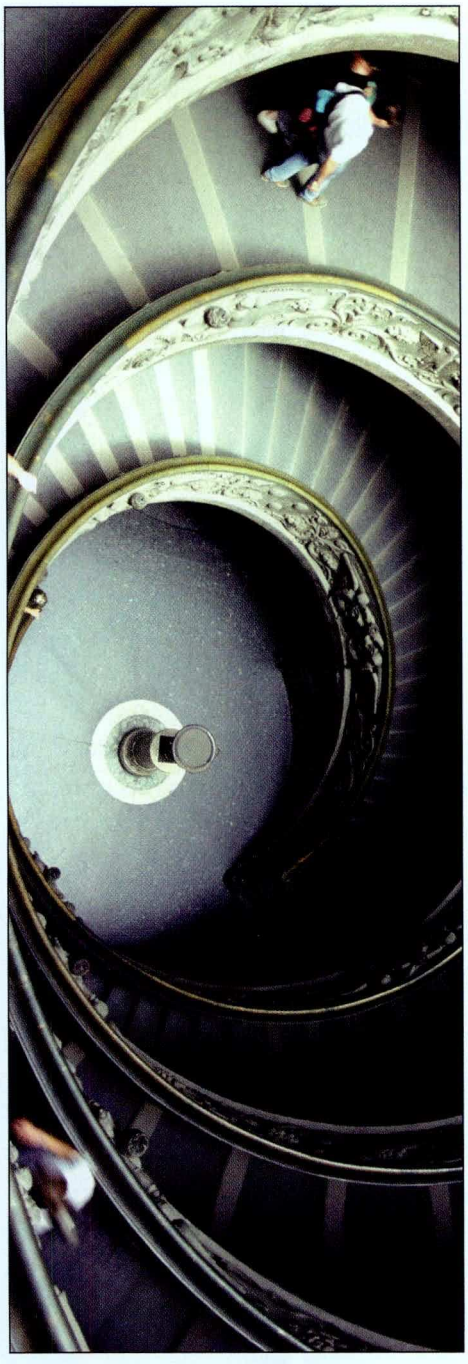
We are looking forward to seeing you in 2008!

LINE AMPLEMAN
Co-Chair
Vision 2008 Organizing Committee
General Manager
Institut Nazareth & Louis-Braille

JACQUES GRESSET, OD, PhD, FAAO
Co-Chair
Vision 2008 Organizing Committee
Director
School of Optometry
University of Montreal

ARTICLE ARTICLE

A Roundtable Discussion on Dry Eye



INTRODUCTION

Dry Eye is a pervasive and ubiquitous disease or condition. Dry Eye syndrome affects more than 10 million people in the United States and is one of the leading reasons for patients to consult eye care practitioners. This number probably grossly underestimates the number suffering from the condition because it does not include the estimated 50% of symptomatic contact lens wearers and there are currently approximately 35 million contact lens wearers in North America. While most of these patients do not suffer from severe dry eye, the condition can be debilitating and affect vision of many sufferers. This discussion is also timely because of environmental changes that presumably affect eye health and dry eye has been identified as a very important area of research.

Desmond Fonn *(moderator).*
I would like to thank you all for attending. The purpose of this forum is to discuss the diagnosis and management of Dry Eye. We are here at the kind invitation of Alcon Canada and I would specifically like to thank Brian Beatty and David Bard for sponsoring this Roundtable discussion. I hope that the next two hours will be fruitfully spent discussing important clinical issues. Brian and I selected the topics for discussion knowing full well that the time restraints would be a serious limitation. I will attempt to control the discussion as moderator and with that let me begin by asking the first question.

Q *Dr Desmond Fonn:* Dr Caffery the current definition of dry eye is: "Dry eye is a disorder of the tear film due to tear deficiency or excessive

ATTENDEES:
Dr Desmond Fonn, Professor, School of Optometry & Director of the Centre for Contact Lens Research, University of Waterloo (UW);

Dr Kerby Kelly, practice in Regina, (UW 1986);

DR. TREFFORD SIMPSON: Professor, School of Optometry & Associate Director of the Centre for Contact Lens Research, UW;

Dr Etty Bitton, Associate Professor, School of Optometry, University of Montreal (UW 1988);

DR. NISH RAJANI: practice in Toronto (UW 1995);

Dr Lyndon Jones, Professor, School of Optometry & Associate Director of the Centre for Contact Lens Research, UW;

Dr Lucie Berthiaume - Lesault, practice in Ottawa (UW 1988);

Dr Trevor Miranda, practice on Vancouver Island (UW 1995);

Dr Barbara Caffery, practice in Toronto (New England College of Optometry 1977);

Dr Dagmar Lutzi, private practice in Kitchener-Waterloo (UW 1978);

Dr Fadi Maroun, practice in Montreal (New England College of Optometry 1994);

Dr Gerald Leinweber, practice in Red Deer (UW 1980).

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1. Christensen M, *et al.* Clinical Evaluation of an HP-guar gellable lubricant eye drop for the relief of dryness of the eye. *Current Eye Research* 2004, Vol.28, No. 1, 55-62. 2. Hartstein I. An open-label evaluation of HP-Guar gellable lubricant eye drops for the improvement of dry eye signs and symptoms in a moderate dry eye adult population. *Current Medical Research and Opinions.* Vol. 21. No. 2. 2005, 255-260.

COUNTRY	PREV-ALENCE	SAMPLE SIZE	METHODS
Sweden (Jacobson et al.)	15%	705	Questionnaire Clinical tests
Japan (Hikichi et al.) (Shimmura et al.)	17% 33%	2,127 2,500	Questionnaire Clinical Tests Questionnaire
USA (Maryland: Schein et al.) (Beaver Dam Study:Moss)	14.5% 14.4%	2,520 3,722	Questionnaire Clinical tests Questionnaire
Scotland (Doughty et al.)	29%	292	Questionnaire
Canada (CANDEES)	28.7%	13,517	Questionnaire
Australia (McCarty et al.)	10.8%-16.3%	926	Questionnaire Clinical Tests
Denmark (Bjerrum)	24%	504	Questionnaire Clinical Tests
USA and Canada (Begley et al.)	22%	1,054	Questionnaire

disrupted in a variety of ways during contact lens wear (including the altering the tear film, the structure of the ocular surface [5-7] and the sensory channels [8]) that suggests that it is unlikely that symptoms in those wearing and not wearing lenses would be similar.

Finally, the treatment of dry eye in lens wearers is so fundamentally different than that in non-lens wearers that it renders any argument about the similarity or dissimilarity irrelevant. In those patients whose symptoms of dryness are extreme, if they are lens wearers, simply removing the lenses is the basic treatment. This is done by millions of contact lens wearers each year and is one of the direct causes of contact lens discontinuation [9]. Obviously non-lens related dry eye does not have as easily identifiable an etiology and therefore the therapy and prognosis is much more unclear.

So in closing, there are a number of converging lines of evidence that lens-related and non-lens related symptoms of dryness are not the same. Perhaps, however, because the basic treatment of each of these is so fundamentally different, any question about similarity is moot in any case.

Dr Dagmar Lutzi: You're looking at it from a sensory point of view. Maybe this is too simplified, but I think that the dry eye contact lens condition is different in that you're putting a soft lens on the eye which needs hydration and it's absorbing the tears. Someone who has borderline lacrymal deficiency is going to be fine without lenses; with the lenses on they're not okay because the little tears that they have are being absorbed by the lens material. So the cause of that dry eye or the symptoms are totally associated with the contact lens; once you remove the contact lens it's not there. So I think the mechanical aspect is often the cause of the problem.

Dr Trefford Simpson: I don't disagree, except we have shown a number of years ago that physical loss of water is not necessarily what drives the symptoms. In symptomatic patients the physical loss of water looks like it is related to discomfort, but it's not the only thing. We used lenses that lost water at different rates and it didn't matter because the discomfort increased regardless of the rate of water loss was. So if it's a retention of water in the bulk or around the surface it's probably not as straightforward. Then we looked at asymptomatic patients and their lenses were losing water at the same rate and their discomfort wasn't increasing at the same rate as the symptomatic people. So it might be something related to the lens itself, but it's not as straightforward as we were hoping. We were hoping materials that lost water the least would be most effective at treating patients who had symptoms. That was not the case.

Q *Dr Desmond Fonn:* Should ocular inflammation be included as part of the global definition of dry eye?

Dr Lyndon Jones: As far as the definition is concerned, the current definition was already long enough, but inflammation is obviously involved in many cases of dry eye. Inflammation should be included in the discussion, but that it may be better served by being included within the description of the disease and in the diagnostic tests performed.

Interestingly, it was pointed out that during the 1994 workshop paper on dry eye diagnosis and management, that there was almost no mention of inflammation, reflecting the changing view of the role of inflammation in dry eye. This is felt to be due to a number of reasons, the major one being that at that point in time the laboratory techniques available to investigate inflammatory biomarkers were poorly developed. A recent Medline literature search looking at the relationship between inflammation and dry eye reveals that over a hundred

peer-reviewed papers have been published on this topic. However, the first of these did not appear until late 1997 to early 1998, reflecting the relatively recent development of this area of research.

Historically, a big problem with analyzing tear samples is that most analytical techniques require large volumes of fluid for the analysis to be undertaken. This obviously poses a problem in tear film analysis of dry-eyed patients, who simply do not have large volumes of tears. The recent development of laboratory-based techniques such as flow cytometry and many other related technologies have allowed researchers to take very small samples of tear fluid (sometimes <1 microlitre) and provide a wealth of information on the biomarkers contained within this fluid sample.

While we acknowledge that dry eye and inflammation are linked, we do not know if the inflammation produces the dry eye state, or whether the dry eye problems result in an inflammatory cascade. It would appear that there is good evidence to support either model and both processes may occur, depending upon the type of dry eye that is present and the severity.

Dr Barbara Caffery: The body's response to many forms of primary disease is an inflammatory reaction response to the primary anomaly. If you break your leg, the inflammation at that level is very high, but we don't talk about the disease as an inflammatory disease. It's a disease of broken bones that needs to be fixed. The inflammation itself may need to be treated, of course.

Dr Lyndon Jones: The management of inflammation and dry eye currently involves the use of a number of agents. One simple method involves the regular use of artificial tears to flush the toxic biomolecules, such as pro-inflammatory cytokines, from the ocular surface, thereby preventing them damaging the ocular surface. However, recently there has been a growth in the number of therapeutic agents specifically targeted towards reducing the inflammatory cascade. These include the release of agents aimed at reducing cytokine release and build-up (such as Allergan's Restatis), along with other anti-inflammatory agents such as steroids.

Dr Nish Rajani: With the availability of Restasis and other agents such as Lotemax and Alrex - which are site-specific, non-penetrating, very safe-to-use steroids - dry eye is being treated more and more as an inflammatory disease, and with great results".

Q *Dr Desmond Fonn:* Can symptoms alone be diagnostic of dry eye?

Dr. Lucie Berthiaume: I have always taken the approach of concluding my examination by summarizing my findings with the patient and making sure to refer to their chief complaint. The chief complaint is most often identified during the patient's history, but other complaints or symptoms, can also come up during the course of the exam. Many patients will present with statements such as "My eyes are dry"- easy enough. If your eyes are dry, then they must be dry, regardless of the clinical findings: no corneal or conjunctival staining, no poor tear meniscus and even no reduced BUT.

In a busy practice there are in my opinion, only a certain number of tests you can do to identify dry eye signs. If these tests are negative as they are in some cases, this does not exclude dry eye diagnosis. We can certainly spend more time with more in depth evaluation of patients presenting specifically with dry eye but I would question whether a Shirmer test should be performed on every patient who has symptoms of dry eye.

Other patients will report symptoms of dry eye but say such things as "My eyes burn", " My eyes feel gritty", "I need to blink more at times". In these cases these patient do not think their eyes are dry, and it's a surprise to tell them that what they are feeling and experiencing may be due to dry eye.

Dr. Leinweber: In our office we have a "Welcome Back" or "Welcome to Our Practice" questionnaire that asks about symptoms such as whether or not your eyes burn, do they water, do you get tearing you're reading, do you find you have to blink a lot when you're reading because your vision gets blurred? If we get a positive response to some of those questions, then a more detailed investigation will follow. Symptoms are so important in the diagnosis and treatment options.

Dr. Bitton: I think dry eye is significantly under diagnosed because most people do not present with their chief complaint being that their eyes are dry. Many patients are there for their annual exam, and it's usually

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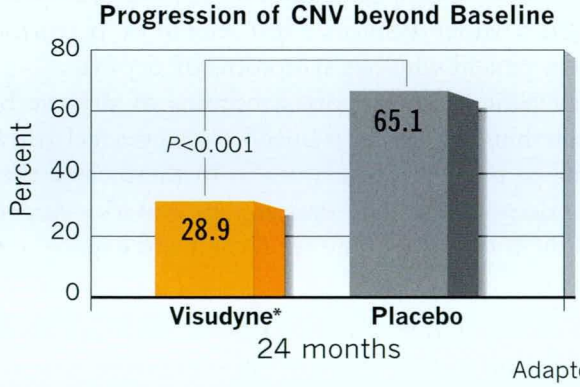

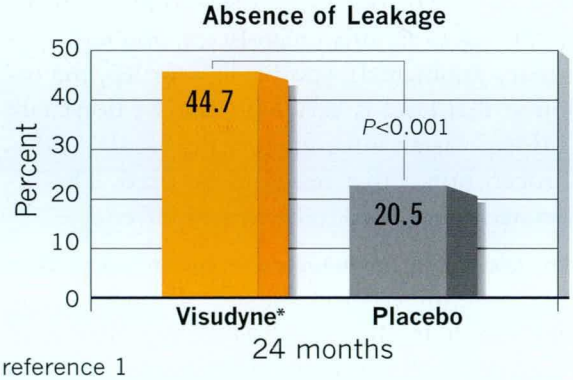

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† Treatment of AMD with PDT. n=609. Combined results from two multicentre, randomized, parallel group, Phase III studies of subfoveal choroidal neovascularization secondary to age-related macular degeneration using photodynamic therapy with verteporfin compared to placebo. Avg. number of treatments: Year 1=3.4, Year 2=2.1 Safety and efficacy beyond 2 years have not been established.

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a secondary complaint, or when prodded by questions that the dry eye symptoms will come out. I think at least one single question would be something like "Do you think you have dry eye".

Dr. Caffery: When a patient comes in with symptoms and you see evidence of dry eye, I always make a point of explaining to the patient that dry eye is chronic and the need for treatment, will need to be ongoing. Often those patients return and won't have followed up with the treatment plan. We therefore first need a product that makes it easy for the patients to comply.

Dr Desmond Fonn: Which tests are essential in the diagnosis of dry eye?

Dr Dagmar Lutzi: I think the major test that is essential in the diagnosis of dry eye is a thorough biomicroscopy, including instillation of fluorescein. This will actually encompass a series of other tests. Biomicroscopy should include an investigation for lid disease; specifically, one should look for blepharitis and meibomian gland dysfunction. Although technically not diagnostic of dry eye, these conditions certainly exacerbate it.

Corneal integrity can be evaluated by fluorescein staining which is typically found in the lower third of the cornea in dry eye. One must be careful not to instill excess amounts of flourescein, as this may mask subtle staining that may be associated with this disease. Excessive conjunctival staining can also be an indication of dry eye. Rose bengal stain can be used to detect degenerated and dead cells on the anterior surface of the eye that will not stain with fluorescein. Lisamine green works similarly and is reported to be less irritating to the patient than rose bengal.

Tear breakup time can be performed during biomicroscopy to assess tear quality. A low tear breakup time may represent a deficiency in the mucin layer of the tear film, a contributing factor in dry eye. Fluorescein aids in the evaluation of the height of the tear meniscus. The tear meniscus should also be examined for the presence of excess debris or mucous that might be indicative of dry eye. Schirmer tear test is is used to measure tear quantity, however, it is time-consuming and its interpretation may be influenced by the instillation of a topical anaesthetic prior to performing the test.

Dr Gerry Leinweber: Are there any tests that our staff are capable of doing?

Dr Barbara Caffery: My staff does Schirmer test. There's a huge amount of literature on Schirmers testing and I consider it a very important part of diagnosing dry eye.

Dr Fadi Maroun: One test that hasn't been brought up is collagen plugs. I'm not too sure why optometry has not been more proactive about using collagen plugs as a temporary plug. We are always keen on adding products to the eye, which again is changing the chemistry on the ocular surface, versus keeping that which is there and seeing if you can solve the problem. This test is not time-consuming and it can bring the patient back to the office ten days later.

Dr Lucie Berthiaume: Another way you can deal with this, if there are no clinical signs, there are just symptoms, is to send them home with artificial tears, make sure they will comply and have them back maybe two or three weeks later to reassess their symptoms.

Dr Desmond Fonn: Tear break-up time (TBUT) is considered to be a useful test of tear film stability. Is this statement true and what is the best method of measuring tear break-up time?

Dr Etty Bitton: Tear break-up time has had a long clinical and controversial history. The TBUT is considered a clinically reliable test of tear film stability, with some pitfalls. The TBUT has shown a great amount of variability in the literature, and certainly we see it in practice with our patients. Most of the variability has been attributed to the methodology: How much fluorescein is instilled? How is the TBUT being measured? Are the lids being held open? What size beam is being used to observe the cornea? All these factors contribute to the variability observed between visits. Furthermore, the magical 10-second cut-off has been challenged by work from Cho[10,11] where ethnic differences were noted. Consequently care should be taken in applying the 10 sec cut-off to all of our patients since lid structure, environmental factors can contribute to a lower acceptable norm for those individuals. To limit the variability of the TBUT even further, Korb[12] proposed a smaller fluorescein strip, called the Dry Eye Test (DET), which limits the amount of fluorescein instilled in the eye. Unfortunately the DET is no longer commercially available.

How should TBUT be measured? The fluorescein strip should be moistened using non-preserved saline, with the excess shaken off. The strip should then be applied gently to the inferior palpebral conjunctiva. Allow the patient to blink 2-3 times to spread the fluorescein evenly prior to assessment. To maximize viewing, the Cobalt filter should be in place along with the use of a yellow barrier filter (Wratten #12), now an integrated part of most modern slit lamps.

To properly observe the cornea during the TBUT, Cho [10] suggested using a wide illumination beam. This may cause photophobia in some patients, hence lowering the intensity of light may render the patient more comfortable. To further enhance the reliability of the TBUT, Nichols [13] suggests doing the test twice and taking an average. In conclusion, the TBUT is an easy test to perform and remains clinically useful if attention to methodology is taken.

Dr. Lyndon Jones: I think if people are taught how to perform the test, it will certainly increase the reliability. Do something simple, like --cut the fluorescein strip in half and use as little non-preserved saline as possible. The difference that you observe when you use the Wratten 12 filter is phenomenal.

Dr. Kerby Kelly: What about the non-invasive tear break-up time (NIBUT) test?

Dr. Trefford Simpson: There are several ways of measuring TBUT without the use of fluorescein, hence NIBUT. We use a corneal topographical device which creates placido ring images on the cornea which seems to work well.

Dr. Barbara Caffery: My impression is that if I have a soft lens wearer take their lens off and the TBUT is going to be much lower than without having worn their lens. So how reliable do you think a lens-removed TBUT is?

Dr. Lucie Berthiaume: I think that's an excellent question. It's definitely been shown that the TBUT in CL wearers is shorter, and so, again, I'd advocate that it could be used as a good screening.

Dr. Lyndon Jones: People have actually looked at how long it takes you to re-establish a tear film after removing your soft lens, and it's a minimum of 20 minutes.

Dr. Barbara Caffery: A quick comment. I think we have to use Lissamine green or Rose Bengal to evaluate staining of the conjunctiva.

Dr. Desmond Fonn: Do you think you've seen more staining with these 2 dyes than fluorescein and is that telling you something more about the condition?

Dr. Barbara Caffery: Yes, I think I see more disturbed cellular walls, or whatever it is that causes this dye to penetrate.

Q *Dr Desmond Fonn: What are the traditional methods of treating mild and moderate dry eye?*

Dr Nish Rajani: Treating mild to moderate ocular surface disease is relatively straight forward; patient compliance of our treatment regimens, well that's a different story. I think that the greatest obstacle in treating dry eye syndrome successfully is proper patient education so that they will follow our treatment protocol.

There is a disconnect between the way optometrists and their patients perceive the extent of this problem: "Patients perceive their dry eye as much more severe than their practitioner," according to Robin L. Chalmers, OD in a paper she presented to the American Academy of Optometry[14]. In her study 19% said their symptoms were severe whereas the optometrists in the study said only 9% of the subjects displayed severe symptoms. Although it is generally not sight threatening, it does cause our patients significant discomfort and we must treat and educate our patients about ocular surface disease even though this is somewhat tedious.

Believe it or not, what we call "dry eye" is, in my opinion, part of the problem. William Shakespeare wrote: "*What's in a name? That which we call a rose by any other word would smell as sweet.*" This may have been true in the Elizabethan era but I do not think the Bard of Avon's famous verse is applicable to modern day "dry eye".

I think that doctors and patients alike are underwhelmed with the diagnosis of "dry eye". In addition to the fact that the name does not sound clinical it is also a misnomer in that it tends to suggest only an aqueous deficiency. Also, patients with "wet dry eye" are easily confused by this moniker. I like the term ocular surface disease better than dry eye syndrome. It sounds more morbid as it should make doctors and patients take it more seriously and hopefully there would be a concomitant increase in counseling and compliance.

Let's Shed a Tear for our "Dry Eye" Patients

Artificial tears, in addition to managing lid disease, remains the mainstay therapy for dry eye syndrome. For currently available ocular lubricant drops to be effective they must be used q 2-3 hrs; we often fail to adequately convey this to our patients and it is tedious for them to instill drops this often. As a result patients tend use their drops infrequently or often not at all. I do not think it is possible to over-emphasize the frequency of instillation.

Historically, we have essentially considered two things when dealing with artificial tear products: preservatives and viscosity agents. We now have several brands of artificial tears with excellent preservatives in that they don't cause toxicity. The best known are: Tears Nauturale, Genteal, Theratears and Refresh lines of products.

I tend to favor the higher viscosity artificial tears like Systane, Tears Naturale Forte (Alcon) and Refresh Liquigel (Allergan). Most tend to blur vision for a few minutes. If patients are forewarned about this they tend to be more accepting of this treatment.

I tend to use punctal plugs less frequently than I did several years ago although they remain an excellent option for patients with low tear volume. In addition to increasing the residence time of naturally produced tears, they do the same for artificial tears supplementation. Artificial tears must still be used as otherwise we may create a cesspool of pro-inflammatory cytokines and other inflammatory mediators[15]. This is the reason that I tend to utilize them less frequently.

Omega-3 fatty acid supplementation has become a cornerstone of ocular surface disease treatment in my practice in the past several years. "Evaporative dry eye" occurs in the presence of meibomian gland dysfunction and this tends to be pervasive. Oral doxycycline and omega-3 fatty acids[16] enhance meibomian gland function and result in a more stable film.

David Star Jordan a physician and educator at Stanford University once stated: "Wisdom is knowing what to do next, skill is knowing how to do it, and virtue is doing it." Optometrists have the wisdom and skill to treat ocular surface disease; however, we all could be a little more virtuous in this regard.

Dr. Barbara Caffery: I think that a healthy body is an important aspect in the management of of dry eye disease. My advice is don't smoke, drink plenty of water during the day, eat fruits and vegetables and exercise.

Dr. Lucie Lesault: I think sleep patterns have a huge effect on people's symptoms and, at times,clinical signs as well. Sleep deprivation and stress may be linked to dry eye.

Dr. Trefford Simpson: I would like to add an accurate refraction and a good pair of glasses to avoid eye strain.

Dr. Barbara Caffery: Perhaps patients are not very compliant because the products we recommend are available OTC. If tear supplements were prescription items it might change their attitude.

Q *Dr Desmond Fonn:* How have the new treatments for mild/moderate dry eye performed?

Dr Gerry Leinweber : In general, the new generation of products have performed well. I am pleased to see we have many more options for providing relief to patients with dry eye. The new treatments that include Systane, are moving beyond simple lubricants to formulations that improve the quality of the tears over a longer period of time. Having non-preserved products is also a real benefit, as many patients are sensitive to preservatives, plus the single dose products are convenient.

Canada is a very big country. The climate in Alberta where I practice is very dry compared to other parts of Canada, and we can have very cold winters. I know that in speaking to practitioners across the country, the demands of our various local climates can greatly affect which products are of most benefit. In areas with more smog issues, a more frequent drop during the day seems to help, while in other areas, lid scrubs seem to be of more benefit. If there is a lot of conjunctival staining, the gels are of more benefit.

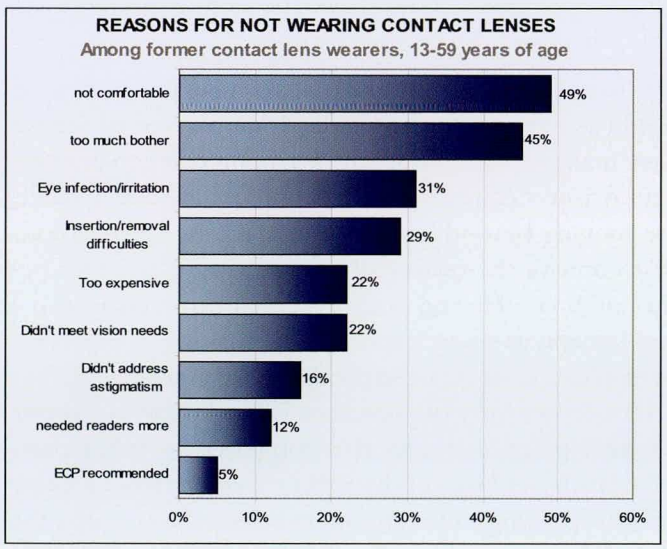
We have used NSAIDS but usually not for mild or moderate problems. I prefer to reserve these medications or steroids for more serious or stubborn problems but keeping the doses short. I would not consider Pulse Dosing as standard treatment for mild or moderate dry eye, but in stubborn cases, where a combination of first line treatments did not resolve the problem, then pulse dosing can be used.

There certainly is great logic in using the combination of lid scrubs bid to enhance natural tear production,

with drops or gels qid or prn and this is my preference when treating most moderate cases of dry eye. The next stage is to consider punctual occlusion to further enhance the benefits of therapy if this is not effective, and finally if still no relief, to consider TPA options.

Dr Desmond Fonn: What strategies do you use to treat contact lens related dryness and is this a major problem amongst your contact lens patients?

Dr Trevor Miranda: Lets tackle the second part of the question first. The short answer is yes. It contributes to increased numbers of contact lens dropouts and also to lower comfort and overall satisfaction amongst those patients that continue to wear their lenses.



The results above from Vistakon's Attitude and Usage Study of Vision Corrected Consumers 2002, 49% cited the lenses not being comfortable. Dryness causes at least half of all contact lens related discomfort issues[17].

Dryness in the discussion of contact lens wear can be divided into pre-existing dry eye and contact lens induced
dry eye (CLIDE). CLIDE is characterized by dryness and discomfort at the end of the wearing time; decreased wearing times; burning; lens intolerance; corneal and conjunctival staining and rapid TBUT. Dryness is a problem because we are fitting more presbyopic patients than ever before with mulitifocal contact lens options. Many patients want to wear their lenses longer or even on a continuous wear basis.

Strategies for treatment:

It is vital to determine the cause firstly. Is it the low production of tears as found by a Schirmer's test or is it pre-exisiting lid disease? Just asking how your lenses feel is not enough. Here are some of the strategies I employ for treating dryness in my contact lens practice:

Fit new low dehydration, high Dk/t lenses. I fit a lot of silicone hydrogel lenses whether or not the patient is considering overnight wear. This helps to reduce hypoxic effects on the cornea, which may contribute to symptoms of dryness. Simple and easy to follow instructions will help increase compliance. We recommend regular replacement schedules.

We often provide lubricating drops for patients when they are wearing contacts and Systane before and after contact lens wear. Dr Lutzi has found that drops containing sodium hyaluronate have provided patients with improved comfort and longer wearing times.

- We recommend sunwear over contacts to reduce external drying forces such as wind and sun.

- Recommend lid hygiene and lid scrubs for any lid disease.

- We try single use lenses either on a daily disposable or continuous wear basis to avoid solutions sensitivities and corneal inflammation that contribute to discomfort and dryness

- Decrease the wearing times.

- Reduce eye makeup that can cause irritation and local inflammation.

- Recommend oral omega 3 fatty acid intake. Patients who are deficient in Omega 3s have meibomian glands with very thick secretion. Consequently people who are deficient in omega-3 oils end up with an evaporative tear loss and dry eye syndrome.

- Consider punctual occlusion for highly motivated contact lens patients as a last resort.

- Future strategies may include topical cyclosporin A to reduce local inflammation.

Dr Desmond Fonn: Do contact lens disinfecting systems contribute to dryness/discomfort symptoms and if so what strategies do you use to minimize/eliminate the symptoms?

Dr. Kerby Kelly: Historically, preservatives have caused some adverse effects to contact lens wearers and to the contact lens material itself.

We can remember the toxic or hypersensitivity reactions to thimerosal and benzalkonium chloride. Fortunately

Pr Visudyne*
verteporfin for injection

PRESCRIBING INFORMATION (September 2004)

Pr Visudyne* Verteporfin for Injection for Intravenous Use

PHOTOSENSITIZING AGENT FOR AGE-RELATED MACULAR DEGENERATION, PATHOLOGIC MYOPIA AND PRESUMED OCULAR HISTOPLASMOSIS

VISUDYNE* (verteporfin) is a drug to be used in Visudyne* Therapy. Visudyne* Therapy is a two-stage process requiring administration of both verteporfin for injection and nonthermal red light.

CAUTION: Visudyne* Therapy should only be used by physicians trained in the treatment of age-related macular degeneration and pathologic myopia using photodynamic therapy with verteporfin for injection and specified lasers. Following VISUDYNE* injection, residual photosensitivity for 48 hours or more may result in erythema and blistering of the skin when exposed to sunlight or brightly focused indoor light.

INDICATIONS AND CLINICAL USE Visudyne* Therapy is indicated for the treatment of age-related macular degeneration, pathologic myopia and presumed ocular histoplasmosis in patients with predominantly classic subfoveal choroidal neovascularization.

CONTRAINDICATIONS VISUDYNE* (verteporfin) is contraindicated for patients with porphyria or a known hypersensitivity to any component of this preparation, and in patients with severe hepatic impairment.

WARNINGS Following injection with VISUDYNE* (verteporfin), care should be taken to avoid exposure of skin or eyes to direct sunlight or bright indoor light for 2 days. In the event of extravasation during infusion, the extravasation area must be thoroughly protected from direct light until the swelling and discoloration have faded in order to prevent the occurrence of a local burn which could be severe. If emergency surgery is necessary within 48 hours after treatment, as much of the internal tissue as possible should be protected from intense light. Patients who experience severe decrease of vision of 4 lines or more within 1 week after treatment should not be retreated, at least until their vision completely recovers to pretreatment levels and the potential benefits and risks of subsequent treatment are carefully considered by the treating physician.

Caution should be exercised when Visudyne* Treatment under general anesthesia is considered (See PRECAUTIONS).

Use of incompatible lasers that do not provide the required characteristics of light for the photoactivation of VISUDYNE* could result in incomplete treatment due to partial photoactivation of VISUDYNE*, overtreatment due to overactivation of VISUDYNE*, or damage to surrounding normal tissue.

Pregnancy TERATOGENIC EFFECTS There are no adequate and well-controlled studies in pregnant women. VISUDYNE* should be used during pregnancy only if the benefit justifies the potential risk to the fetus. Rat fetuses of dams administered verteporfin for injection intravenously at ≥10 mg/kg/day during organogenesis (approximately 40-fold the human exposure at 6 mg/m^2 based on AUC_{inf} in female rats) exhibit an increase in the incidence of anophthalmia/microphthalmia. Rat fetuses of dams administered 25 mg/kg/day (approximately 125-fold the human exposure at 6 mg/m^2 based on AUC_{inf} in female rats) had an increased incidence of wavy ribs and fetal alterations. In pregnant rabbits, a decrease in body weight gain and food consumption was observed in animals that received verteporfin for injection intravenously at 10 mg/kg/day during organogenesis. The no observed adverse effect level (NOAEL) for maternal toxicity was 3 mg/kg/day (approximately 7-fold the human exposure at 6 g/m^2 based on body surface area). There were no teratogenic effects observed in rabbits at doses up to 10 mg/kg/day.

Nursing Mothers Verteporfin and its diacid metabolite have been found in the breast milk of one woman after a 6 mg/m^2 infusion. The verteporfin breast milk levels were up to 66% of the corresponding plasma levels. Verteporfin was undetectable after 12 hours. The diacid metabolite had lower peak concentrations but persisted up to at least 48 hours. Because the effects of verteporfin and its metabolite on neonates are unknown, either nursing should be interrupted or treatment postponed, taking into account the risks of delayed treatment to the mother. Women should not nurse for 96 hours after Visudyne* Therapy.

Pediatric Use Safety and effectiveness in pediatric patients have not been established.

PRECAUTIONS

General Extravasation of VISUDYNE*, especially if the affected area is exposed to light, can cause severe pain, inflammation, swelling or discoloration at the injection site. The relief of pain may require analgesic treatment.

Standard precautions should be taken during infusion of VISUDYNE* (verteporfin) to avoid extravasation. Examples of standard precautions include, but are not limited to:

- A free-flowing intravenous (IV) line should be established before starting VISUDYNE* infusion and the line should be carefully monitored.
- Due to the possible fragility of vein walls of some elderly patients, it is strongly recommended that the largest arm vein possible, preferably antecubital, be used for injection.
- Small veins in the back of the hand should be avoided.

If extravasation does occur, the infusion should be stopped immediately. The extravasation area must be thoroughly protected from direct light until the swelling and discoloration have faded in order to prevent the occurrence of a local burn which could be severe. Cold compresses should be applied to the injection site (see Warnings).

Visudyne* Therapy should be considered carefully in patients with moderate hepatic impairment or biliary obstruction since there is no clinical experience with verteporfin in such patients.

Chest pain, vaso-vagal reactions and hypersensitivity reactions, which on rare occasion can be severe, have been reported. Both vaso-vagal and hypersensitivity reactions are associated with general symptoms such as syncope, sweating, dizziness, rash, dyspnea, flushing, and changes in blood pressure and heart rate.

There is no clinical data related to the use of VISUDYNE* in anesthetized patients. At a >10-fold higher dose given by bolus injection to sedated or anesthetized pigs, verteporfin caused severe hemodynamic effects, including death, probably as a result of complement activation. These effects were diminished or abolished by pretreatment with antihistamine and they were not seen in conscious non-sedated pigs or in any other species, whether conscious or under general anesthesia. Caution should be exercised when Visudyne* Treatment under general anesthesia is considered (see WARNINGS).

VISUDYNE* at >5 times the expected maximum plasma concentration in treated patients caused a low level of complement activation in human blood in vitro. VISUDYNE* resulted in a concentration-dependent increase in complement activation in human blood in vitro. At 10 µg/ml (approximately 5 times the expected plasma concentration in human patients), there was mild to moderate complement activation. At ≥ 100 µg/mL, there was significant complement activation. Signs (chest pain, syncope, dyspnea, and flushing) consistent with complement activation have been observed in < 1% of patients administered VISUDYNE*. Patients should be supervised during VISUDYNE* infusion.

Photosensitivity Patients who receive VISUDYNE will become temporarily photosensitive for 2 days after the infusion. During that period, patients should avoid exposure of unprotected skin, eyes or other body organs to direct sunlight or bright indoor light. This includes, but is not limited to, tanning salons, bright halogen lighting and high power lighting used in surgical operating rooms or dental offices (see Warnings). Prolonged exposure to light from light emitting medical devices such as pulse oximeters should also be avoided for 48 hours following VISUDYNE* administration. If treated patients must go outdoors in daylight during the first 2 days after treatment, they should protect all parts of their skin and their eyes by wearing protective clothing and dark sunglasses. UV sunscreens are not effective in protecting against photosensitivity reactions because photoactivation of the residual drug in the skin can be caused by visible light. Patients should not stay in the dark and should be encouraged to expose their skin to ambient indoor light, as it will help inactivate the drug in the skin through a process called photobleaching.

Drug Interactions Drug interaction studies in humans have not been conducted with VISUDYNE*. Verteporfin is rapidly eliminated by the liver, mainly as unchanged drug. Metabolism is limited and occurs by liver and plasma esterases. Microsomal cytochrome P450 does not appear to play a role in verteporfin metabolism. Based on the mechanism of action of verteporfin, many drugs used concomitantly could influence the effect of Visudyne Therapy. Possible examples include the following. Calcium channel blockers, polymyxin B or radiation therapy could enhance the rate of VISUDYNE* uptake by the vascular endothelium. Other photosensitizing agents (e.g., tetracyclines, sulfonamides, phenothiazines, sulfonylurea hypoglycemic agents, thiazide diuretics and griseofulvin) could increase the potential for skin photosensitivity reactions. Compounds that quench active oxygen species or scavenge radicals, such as dimethyl sulfoxide, b-carotene, ethanol, formate and mannitol, would be expected to decrease VISUDYNE* activity. Drugs that decrease clotting, vasoconstriction or platelet aggregation, e.g., thromboxane A_2 inhibitors, could also decrease the efficacy of Visudyne Therapy.

Carcinogenesis, Mutagenesis, Impairment of Fertility No studies have been conducted to evaluate the carcinogenic potential of verteporfin. Verteporfin was not mutagenic, in the absence or presence of light, when studied in microbial mutagenicity, unscheduled DNA synthesis, mammalian point mutation, chromosome aberration, and mouse micronucleus assays.

Photodynamic therapy (PDT) as a class has been reported to result in DNA damage including DNA strand breaks, alkali-labile sites, DNA degradation, and DNA-protein cross links which may result in chromosomal aberrations, sister chromatid exchanges (SCE), and mutations. In addition, other photodynamic therapeutic agents have been shown to increase the incidence of SCE in Chinese hamster ovary (CHO) cells irradiated with visible light and in Chinese hamster lung fibroblasts irradiated with near UV light, increase mutations and DNA-protein cross-linking in mouse L5178 cells, and increase DNA-strand breaks in malignant human cervical carcinoma cells, but not in normal cells. Verteporfin was not evaluated in these latter systems. It is not known how the potential for DNA damage with PDT agents translates into human risk.

No effect on male or female reproduction has been observed in rats following intravenous administration of verteporfin for injection up to 10 mg/kg/day (approximately 60- and 40-fold human exposure at 6 mg/m^2 based on AUC_{inf} in male and female rats, respectively). Males were dosed 28 days prior to and during mating until necropsy (approximately 60 days). Females were dosed for 14 days prior to and during mating until Gestation Day 7.

Geriatric Use Approximately 90% of the patients treated with VISUDYNE* in the clinical efficacy trials were over the age of 65. A reduced treatment effect was seen with increasing age.

Fluorescein Angiography Standard precautions for fluorescein angiography should be observed. Certain medical conditions (such as pregnancy or allergy to fluorescein) may make the injection of fluorescein dye for a particular patient inadvisable in the opinion of the ophthalmologist. Approximately 1/225,000 patients may experience a severe reaction resulting in a heart attack, stroke, or death. Most reactions are mild, such as temporary nausea or vomiting in a few patients and a rash, hives, or wheezing in about 1%.

Effects on ability to drive and use machines Following Visudyne* Therapy, patients may develop transient visual disturbances such as abnormal vision, vision decrease, or visual field defects that may interfere with their ability to drive or use machines. Patients should be advised to not drive or use machines as long as these symptoms persist.

ADVERSE REACTIONS In randomized clinical trials in choroidal neovascularization, mainly in patients with age-related macular degeneration (AMD), the most frequently reported adverse events to VISUDYNE* (verteporfin) are injection site reactions (including pain, edema, inflammation, extravasation, rashes, and less commonly, hemorrhage and discoloration) and visual disturbances (including blurred vision, flashes of light, decreased visual acuity and visual field defects such as grey or dark haloes, scotoma and black spots). These events occurred in approximately 10-30% of patients. The following events, listed by Body System, occurred in 1-10% of patients:

Ocular Treatment Site: Blepharitis, cataracts, conjunctivitis/conjunctival injection, dry eyes, ocular itching, severe vision decrease with or without subretinal or vitreous hemorrhage

Body as a Whole:	Asthenia, infusion related pain primarily presenting as back pain, fever, flu syndrome, photosensitivity reactions.
Cardiovascular:	Atrial fibrillation, hypertension, peripheral vascular disorder, varicose veins
Dermatologic:	Eczema
Digestive:	Constipation, nausea
Hemic and Lymphatic:	Anemia, white blood cell count decreased, white blood cell count increased
Hepatic:	Elevated liver function tests
Metabolic/Nutritional:	Albuminuria, creatinine increased
Musculoskeletal:	Arthralgia, arthrosis, myasthenia
Nervous System:	Hypesthesia, sleep disorder, vertigo
Respiratory:	Cough, pharyngitis, pneumonia
Special Senses:	Cataracts, decreased hearing, diplopia, lacrimation disorder
Urogenital:	Prostatic disorder

Severe vision decrease, equivalent of 4 lines or more, within 7 days has been reported in 1-4% of patients. At least partial recovery of vision, defined as more than one line improvement of vision following the event, occurred in most patients (approximately 75% of patients).

Photosensitivity reactions usually occurred in the form of skin sunburn following exposure to sunlight during the first 2 days after treatment usually within 24 hours of VISUDYNE* infusion. The higher incidence of back pain in the VISUDYNE* group occurred primarily during infusion and was not associated with any evidence of hemolysis or allergic reaction and usually resolved by the end of the infusion.

The following adverse events have occurred either at low incidence (<1%) during clinical trials or have been reported during the use of VISUDYNE* in clinical practice where these events were reported voluntarily from a population of unknown size and hence the frequency of occurrence cannot be determined precisely. They have been chosen for inclusion based on factors such as seriousness, frequency of reporting, possible causal connection to VISUDYNE*, or a combination of these factors:

Ocular Treatment Site: Retinal detachment (nonrhegmatogenous), retinal or choroidal vessel nonperfusion, severe vision decrease with retinal hemorrhage.

Nonocular Events: Chest and back pain (which may radiate to other areas including but not limited to pelvis, shoulder, girdle or rib cage) and other musculoskeletal pain during infusion.

Vaso-vagal and hypersensitivity reactions can occur, which on rare occasions can be severe. General symptoms can include headache, malaise, syncope, sweating, dizziness, rash, urticaria, pruritus, dyspnea, flushing and changes in blood pressure or heart rate.

Adverse reactions reported in treated eyes in patients with pathologic myopia or presumed ocular histoplasmosis were similar to those reported in AMD patients.

SYMPTOMS AND TREATMENT OF OVERDOSAGE Overdose of drug and/or light in the treated eye may result in nonperfusion of normal retinal vessels with the possibility of severe decrease in vision that could be permanent. An overdose of drug will also result in the prolongation of the period during which the patient remains photosensitive to bright light. In such cases, it is recommended to extend the photosensitivity precautions for a time proportional to the overdose.

DOSAGE AND ADMINISTRATION A course of Visudyne* Therapy is a two-step process requiring administration of both drug and light. The first step is the intravenous infusion of VISUDYNE* (verteporfin). The second step is the activation of VISUDYNE* with light from a nonthermal diode laser. The physician should re-evaluate the patient every 3 months and if choroidal neovascular leakage is detected on fluorescein angiography, therapy should be repeated.

Lesion Size Determination The greatest linear dimension (GLD) of the lesion is estimated by fluorescein angiography and color fundus photography. All classic and occult CNV, blood and/or blocked fluorescence, and any serous detachments of the retinal pigment epithelium should be included for this measurement. Fundus cameras with magnification within the range of 2.4-2.6X are recommended. The GLD of the lesion on the fluorescein angiogram must be corrected for the magnification of the fundus camera to obtain the GLD of the lesion on the retina.

Spot Size Determination The treatment spot size should be 1000 microns larger than the GLD of the lesion on the retina to allow a 500 micron border, ensuring full coverage of the lesion. The maximum spot size used in the clinical trials was 6400 microns. The nasal edge of the treatment spot must be positioned at least 200 microns from the temporal edge of the optic disc, even if this will result in lack of photoactivation of CNV within 200 microns of the optic nerve. For treatment of lesions that are larger than the maximum treatment spot size, apply the light to the greatest possible area of active lesion.

VISUDYNE* Administration VISUDYNE* should be reconstituted according to the directions given under PHARMACEUTICAL INFORMATION, Reconstitution. The volume of reconstituted VISUDYNE* required to achieve the desired dose of 6 mg/m^2 body surface area is withdrawn from the vial and diluted with 5% Dextrose for Injection to a total infusion volume of 30 mL. The full infusion volume is administered intravenously over 10 minutes at a rate of 3 mL/minute, using an appropriate syringe pump and in-line filter. The clinical studies were conducted using a standard infusion line filter of 1.2 microns. Precautions should be taken to prevent extravasation at the injection site. If extravasation occurs, protect the site from light (see Precautions).

Light Administration Initiate 689 nm wavelength laser light delivery to the patient 15 minutes after the start of the 10-minute infusion with VISUDYNE*. Photoactivation of VISUDYNE* is controlled by the total light dose delivered. In the treatment of choroidal neovascularization, the recommended light dose is 50 J/cm^2 of neovascular lesion administered at an intensity of 600 mW/cm^2 . This dose is administered over 83 seconds. Light dose, light intensity, ophthalmic lens magnification factor and zoom lens setting are important parameters for the appropriate delivery of light to the predetermined treatment spot. Follow the laser system manuals for procedure set up and operation. The laser system must be acceptable for the delivery of a stable power output at a wavelength of 689±3 nm. Light is delivered to the retina as a single circular spot via a fiber optic and a slit lamp, using a suitable ophthalmic magnification lens. The following laser systems have been tested for compatibility with VISUDYNE* and are acceptable for the delivery of a stable power output at a wavelength of 689±3 nm:

Lumenis Opal Photoactivator laser console and modified LaserLink adapter, Manufactured by Lumenis, Inc., Santa Clara, CA

Zeiss VISULAS 690s laser and VISULINK PDT adapter, Manufactured by Carl Zeiss, Inc., Thornwood, NY.

Concurrent Bilateral Treatment The controlled trials only allowed treatment of one eye per patient. In patients who present with eligible lesions in both eyes, physicians should evaluate the potential benefits and risks of treating both eyes concurrently. If the patient has already received previous Visudyne* Therapy in one eye with an acceptable safety profile, both eyes can be treated concurrently after a single administration of VISUDYNE*. The more aggressive lesion should be treated first, at 15 minutes after the start of infusion. Immediately at the end of light application to the first eye, the laser settings should be adjusted to introduce the treatment parameters for the second eye, with the same light dose and intensity as for the first eye, starting no later than 20 minutes from the start of infusion. In patients who present for the first time with eligible lesions in both eyes without prior Visudyne* Therapy, it is prudent to treat only one eye (the most aggressive lesion) at the first course. One week after the first course, if no significant safety issues were identified, the second eye can be treated using the same treatment regimen after a second VISUDYNE* infusion. Approximately 3 months later, both eyes can be evaluated and concurrent treatment following a new VISUDYNE* infusion can be started if both lesions still show evidence of leakage.

AVAILABILITY OF DOSAGE FORMS VISUDYNE* (verteporfin) is supplied in a single-use glass vial with a gray bromobutyl stopper and aluminium flip-off cap. It contains a lyophilized cake with 15 mg verteporfin. The product is intended for intravenous injection only.

Product monograph available upon request. September 2004.

QLT Inc. Vancouver Canada V5T 4T5

Co-developed and distributed by:

NOVARTIS OPHTHALMICS

Novartis Ophthalmics, Novartis Pharmaceuticals Canada Inc. Mississauga, ON L5N 2X7

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References:

1. Treatment of Age-Related Macular Degeneration With Photodynamic Therapy (TAP) Study Group. Photodynamic Therapy of Subfoveal Choroidal Neovascularization in Age-Related Macular Degeneration with Verteporfin. TAP Report 2. Arch Ophthalmol 2001;119:198-207

PAAB

VIS-051114

today's preservatives have a large molecular weight and size which precludes them from entering the matrix of hydrophilic lenses. These preservatives cause more damage to microbes making them as effective at lower concentrations. There are fewer solution problems, however, reactions still occur. The SiliconeHydrogels.org web site is a great resource of information on studies comparing the similarities and differences between conventional hydrogel and silicone hydrogel lenses. It appears that some solutions may not work as well with silicone hydrogels as conventional hydrogels but its unclear whether symptoms are manifested.

Adverse reactions to older contact lens solutions were often easier to find and identify. There was more of a diffuse SPK apparent. With newer formulations there might only be slight dryness or perhaps mild discharge. Sometimes you'll see low-grade inflammation of the tarsal plate as well. So it is somewhat more difficult now to figure out if it's the solution that's causing the problem.

Apparently many contact lens wearers in the U.S. use generic brands that are not prescribed by the practitioner. Patients may often ignore our recommendations and purchase the cheapest alternative. Many of the generic brands change the formulation without notice to the consumer. It may make more sense to retail the solution ourselves to ensure patient compliance.

Most care systems now are advertised as *no-rub* and unfortunately often equated in the patient's mind as *no care*. Digital cleaning is an important step with the new silicone hydrogel materials especially as they may attract more lipid deposition. Another useful tip is to have the patient rinse the contact lens as it may actually get rid of about 90 percent of the contaminants.

Depending on the severity of the symptoms patients may try rewetting or rewetting/surfactant combination drops or perhaps graduate to preservative-free alternatives such as peroxide or ultraviolet disinfection systems. Another good tip is to simply have the patient rinse their lenses with a non-preserved saline before insertion. This may solve some of the initial stinging and burning often experienced first thing in the morning.

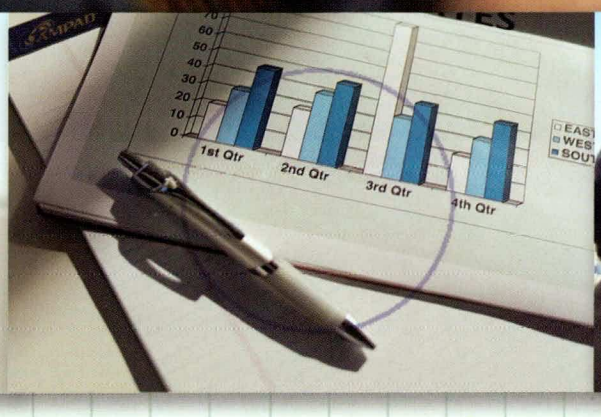
Dr. Etty Bitton: I really want to reinforce the use of the Wratten yellow barrier filter to make it easier to observe mild SPK changes as it may otherwise go undetected.

When things go wrong with contact lenses we, as practitioners, have a knee-jerk reaction to change the contact lens without considering the disinfecting system.

Dr. Gerald Leinweber: Interestingly for some people who have had solution sensitivities - "no solution" seems to be the answer for those people, and the other solution is extended wear, 30 days.

REFERENCE LIST

1. Begley CG, Chalmers RL, Mitchell GL, Nichols KK, Caffery B, Simpson TL et al. Characterization of ocular surface symptoms from optometric practices in North America. Cornea 2001;20:610-8.
2. Doughty MJ, Fonn D, Richter D, Simpson TL, Caffery B, Gordon K. A patient questionnaire approach to estimating the prevalence of dry eye symptoms in patients presenting to optometric practices across Canada. Optom Vis Sci. 1997;74:624-31.
3. Nichols JJ, Mitchell GL, King-Smith PE. Thinning Rate of the Precorneal and Prelens Tear Films. Invest Ophthalmol Vis Sci. 2005;46:2353-61.
4. Mathers WD. Why the eye becomes dry: a cornea and lacrimal gland feedback model. CLAO J. 2000;26:159-65.
5. Mathers WD, Sachdev MS, Petroll M, Lemp MA. Morphologic effects of contact lens wear on the corneal surface. CLAO J. 1992;18:49-52.
6. Aragona P, Ferreri G, Micali A, Puzzolo D. Morphological changes of the conjunctival epithelium in contact lens wearers evaluated by impression cytology. Eye 1998;12 (Pt 3a):461-6.
7. Albietz JM. Conjunctival histologic findings of dry eye and non-dry eye contact lens wearing subjects. CLAO J. 2001;27:35-40.
8. Feng Y, Simpson TL. Characteristics of human corneal psychophysical channels. Invest Ophthalmol Vis Sci. 2004;45:3005-10.
9. Pritchard N, Fonn D, Brazeau D. Discontinuation of contact lens wear: a survey. Int Contact Lens Clin. 1999;26:157-62.
10. Cho P. Stability of the precorneal tear film: A review. Clin Exp Optom 1991;74:19- 25
11. Cho P, Brown B. Review of the tear break-up time and a closer look at the tear break-up time of the Hong Kong Chinese. OVS 1993;70:30-38
12. Korb DR et al. Comparison of fluorescein break-up time measurement reproducibility using standard fluorescein strips versus the dry eye test (DET) method. Cornea 2001;20:811-815
13. Nichols K et al. The repeatability of clinical measurements of dry eye. Cornea 2004;23:272-285
14. Chalmers RL, Begley C, Venkataraman K, et al. The grading of dry eye severity: A comparison of clinician and self-assessment. Paper presented Dec. 15, 2002, American Academy of Optometry.
15. Melton R, Thomas R. Clinical Guide to Ophthalmic Drugs. Rev Optom (Suppl), 2003
16. Kaldaway RM, Sutphin JE, Wagoner MD. How to Treat Ocular Rosacea. Eyenet. 2002 June; www.aao.org.
17. In the news: CIBA's vision study on soft lens dropouts. Optom Vis Sci 2004 Nov; 81(11):814).



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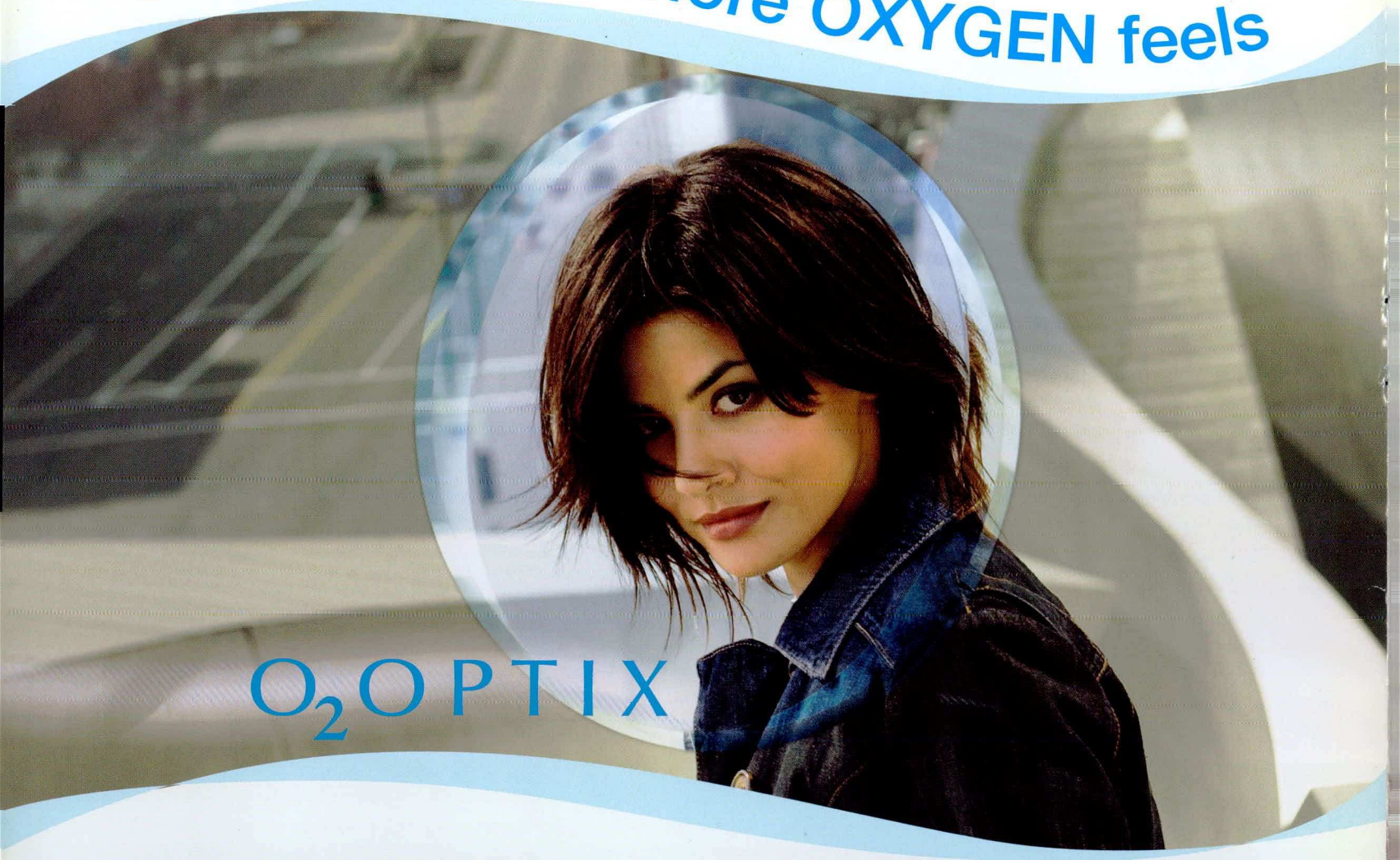
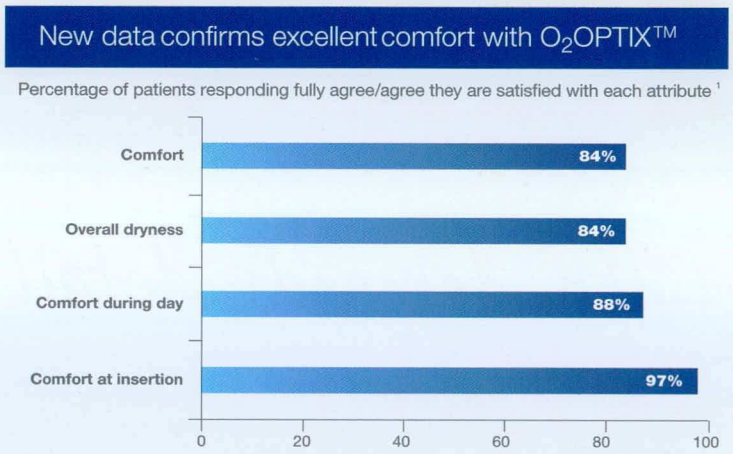


O2OPTIX is approved for overnight wear up to 6 nights



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*O_2OPTIX Dk/t = 138 @ -3.00D. Other factors may impact eye health. **References:** 1. CIBA Vision. Data on file, 2005

Important information for O_2OPTIX: For daily wear or extended wear for up to 6 nights for near/far sightedness. Risk of serious problems (i.e. corneal ulcer) is greater for extended wear. In rare cases, loss of vision may result. Side effects like discomfort, mild burning or stinging may occur.

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