Studies Support Myopia Control

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As an undergraduate student, Jeffrey Walline, OD, PhD, worked in a daycare center. "I loved to work with children," he says. He initially planned opening a pediatric optometry practice, but instead pursued research involving the use of contact lenses to help slow the progression of myopia in children.

"Myopia control clinics are extremely new. They've only been around for about three years," he says. The advent of myopia control clinics developed in response to recent studies that support the benefits of myopia control. These data support three approaches to controlling myopia: soft multifocal contact lenses, orthokeratology contacts and 0.01% atropine eye drops. Walline adds that there has been a dramatic increase in myopia cases reported worldwide each year and there are now several clinical studies underway to support a three-pronged approach.*

Soft Multifocal Contact Lenses

"Many studies have been conducted with center-distance soft multifocal contact lenses; all but two have found they slow the progression of myopia.[1-4] The two that didn't find a significant effect used lower add powers, so that suggests that the stronger the add power, the better the myopia control." This type of lens can help slow myopia progession by up to 40 percent.[1-5]

Orthokeratology Contact Lenses

Orthokeratology contact lenses are worn while the patient sleeps and are removed in the morning. "Patients can see clearly all day without contact lenses or glasses," he says. "These lenses also slow the abnormal growth of the eye."[6] Orthokeratology lenses have shown approximately a 40-percent reduction in myopia progression.[4]

Atropine 0.01% Eye Drops**

Low-dose atropine (0.01%) eye drops are intriguing because early studies indicate they can help slow myopia progression by as much as 60 percent.[7] "Interestingly," Dr. Walline says, "One study showed that the drops slow myopia progression, but not the abnormal growth of the eye."[7] In light of this, studies are underway to better understand how atropine works. Despite the impressive results, some parents may be reluctant to use a long-term medication on their small children.

People typically become myopic at age 8 and the condition progresses to age 16. Dr. Walline recommends myopia control upon diagnosis and maintaining it until at least the age when there's no more progression. "I like to have options available. There are some people who just don't want to use contact lenses, particularly if their child is young. Some kids don't want to wear lenses overnight. And some parents may not be comfortable giving their children long-term medication. The doctor should prescribe the approach that best fits their patient's lifestyle and preferences."

* The FDA has not yet approved any contact lenses or eye drops for slowing the progression of myopia, but current studies yielded positive results and additional supportive studies are underway.
**0.01% atropine not available in all areas and may require a special compounding pharmacy.

References:
1. Lam CSY, Tang WC, Tse DYY, et al. Defocus Incorporated Soft Contact (DISC) lens slows myopia progression in Hong Kong Chinese schoolchildren: a 2-year randomised clinical trial. *Br J Ophthalmol*. 2014;98:40-45. doi:10.1136/bjophthalmol-2013-303914.
2. Aller TA, Lui M, Wildsoet C. Myopia control with bifocal contact lenses: a randomized clinical trial. *Optom Vis Sci*. 2016;93:344-352.
3. Anstice NS, Phillips JR. Effect of dual-focus soft contact lens wear on axial myopia progression in children. *Ophthalmol*. 2011(118):1152–1161.
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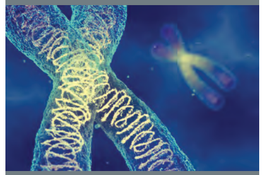
The Best Gene Therapy



Researchers are on the threshold of developing a gene therapy to help treat **Best** disease. This inherited form of macular degeneration is a blinding disorder caused by mutations in the BEST1 gene. It often strikes in children and young adults, gradually robbing them of their central vision.

Inside a healthy eye are two retinal cell layers that fit into one another like a zipper, interweaving vision cells and support cells. Best disease unzips those layers. This therapy "rezips" them again, tightly binding them together.

Based on a canine model, the study —published in *Proceedings of the National Academy of Sciences*—sets the stage for translating its findings into a human gene therapy for this currently untreatable disease. The therapy appears to be lasting, as the treated dogs' eyes remained disease-free for as long as five years. Following safety studies, a human clinical trial could be less than two years away. The study was led by clinical researchers at Penn's School of Veterinary Medicine and Penn's Perelman School of Medicine.

Reference:
1. Guziewicz KE, Cideciyan AV, Beltran WA, et al. BEST1 gene therapy corrects a diffuse retina-wide microdetachment modulated by light exposure. *Proceedings of the National Academy of Sciences*, 2018; 201720662 DOI: 10.1073/pnas.1720662115. Accessed March 31, 2018.

CooperVision®

Energize Your Practice with Biofinity Energys™

As digital device use becomes further ingrained in our everyday lives, people are spending much more time in front of their computers, smartphones, and tablets. As usage increases, so, too, does its impact on vision. Dry or tired eyes, blurry vision, and back, neck, and shoulder pain are a few of the symptoms associated with digital eye fatigue. Sustained focus on close-up digital devices may often strain the eye's accommodative system as ciliary muscles work hard whenever people focus on things up close on their laptops and mobile phones. Digital device use can overwork the ciliary muscle and lead to digital eye fatigue, and knowing that Americans check their phones more than 12 billion times a day[1], chances are, your patients may be experiencing some form of digital eye strain right now.

Biofinity Energys™ featuring Digital Zone Optics® lens design and Aquaform® Technology, helps eyes to better adapt, so they can seamlessly and continuously shift focus between digital devices and offline activities.[1] Digital Zone Optics® lens design may help reduce ciliary muscle stress during digital device use[2]. The lens is made with a polymer comfilcon A and incorporates a smooth, naturally wettable surface design with a special rounded edge, which reduces interaction between the lens and the inside of the eyelids, improving wearing comfort. It has a low modulus, high Dk (128) and is approved for extended wear for up to six nights and seven days. Biofinity Energys™ fits like a single vision lens and no special power adjustments are needed to provide your patients with excellent distance vision.

Did you know?
Americans check their phones more than 12 billion times a day[1]

Now is the time to start the conversation around digital device use and digital eye fatigue with your patients. Recommend the innovative aspheric technology and educate your patients with a variety of helpful marketing and demonstration tools available from CooperVision.

To find out more about how Biofinity Energys™ contact lenses can help alleviate some of the symptoms of digital eye fatigue, contact your local CooperVision sales representative today.

References:
1. Deloitte's 2017: "Global Mobile Consumer Study."
2. Based on a statistically significant difference of the mean change of Accommodative Microfluctuations and when compared to Biofinity® sphere after reading on an iPhone for 20 minutes.

ALLPets

Featuring the Best Friends of ALLDocs

Cat Scratch Fever
Dr. Simon Zmyslinski says his part Norwegian Forest Cat, Gizmo, loves to nap and destroy furniture and boxes.

Me and You and a Dog Named Blu
Colorado's Dr. Jennifer Blaurock likes to take long hikes with Blu, her affectionate 6-year-old Golden Retriever.

Forever Young
Dr. Michael and Amy Young said their final farewell to their faithful french fry-eating Pug, Henry, this past March. He will live forever in their hearts.

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ALL DOCS
ASSOCIATION OF LEASEHOLDING LENSCRAFTERS DOCTORS™

CONTACT QUARTERLY

SEPTEMBER 2018

The Big Meeting and a Movie

Kerry Gelb, OD
President

Get ready! ALLDocs has an incredible line-up of speakers for our upcoming 2018 Annual Meeting in Mexico and the exclusive premiere of an important ALLDocs documentary.

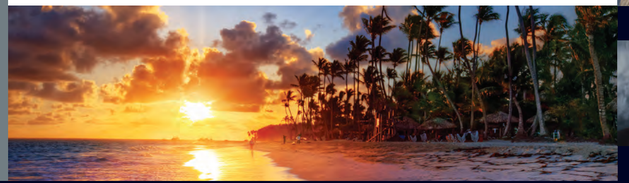
Cancún Unleashed

Remember, there's still time to register online for the Annual Meeting. This year, it will be held from November 11-16 at the all-inclusive Live Aqua Beach Resort Cancún in Mexico. Our keynote speaker will be Ted Naiman, MD, who will talk to us about "Nutritional Ecology," the tremendous effect diet and exercise can have on optimizing health. Other notable speakers include Dr. Harvey Fishman, Dr. Mihir Parikh, Dr. Jessica Steen and our very own Dr. Jon Scott Walker. This year's venue, Live Aqua, boasts seven pools including infinity and lap pools that come in varying temperatures. The resort also offers private cabanas on its stretch of private beach. Twelve restaurants and bars feature Italian, Asian, American, Mexican, Spanish and Latin American cuisines. If you're seeking pampering after a day of ALLDocs workshops, the Feel Harmony spa offers a full range of massages and facials. In addition, the resort's fitness center has the latest cardio and weight-training equipment.

Cancún and its surrounding areas offer countless recreational activities for fun and entertainment including snorkeling, diving, fishing, jet skiing, swimming with dolphins, parasailing, fine dining, dancing and much more.

The Big Film Premiere

Finally, the exclusive movie premiere of "Open Your Eyes" will take place during our Annual Meeting. As you know, this important ALLDocs film is a full-length documentary delivering the scientific, technological and sensible reasons why optometry should be at the forefront of primary health care by 2020. The world will finally know what optometrists do other than refractions. This film opens up the whole medical aspect of eye care and the power of a comprehensive eye exam. That's ALLDocs in ACTION!



Speakers Bureau

Check Out Our All-Star Lineup of Lecturers

Ted Naiman, MD

Dr. Naiman is a board-certified family medicine physician at the Department of Primary Care at Virginia Mason Medical Center in Seattle. He will be speaking about "Nutritional Ecology." His research and medical practice are focused on the practical implementation of diet and exercise for health optimization.

Harvey Fishman MD, PhD

Dr. Fishman will present research on the microbiome and ocular health. He is a Stanford MD/PhD with a concierge ophthalmology practice in Palo Alto, CA. Dr. Fishman conducts both basic science and clinical research in ocular disease, and is an entrepreneur with 11 patents and co-founder of several silicon-valley start-ups.

Mihir Parikh, MD

Dr. Parikh is a refractive and cataract surgeon covering "Visual Performance in Pre- and Post-Cataract/LASIK," including how an ECP's recommendation during the consult and post-surgery can help patients optimize vision for life. He has performed over 25,000 refractive procedures and specializes in LASIK, PRK, corneal inlays, crosslinking, ICLs and cataract surgery.

Jessica Steen OD, FAAO

Dr. Steen is an attending OD and instructor of ocular pharmacology at Nova Southeastern University College of Optometry. She will discuss "Evolving Trends in Retinal Vascular Disease." Her main clinical interests include neuroophthalmic, retinal and anterior segment disease with emphasis in medical and surgical management.

Jon Scott Walker OD, MS, FAAO

Dr. Walker is a practicing OD and Adjunct Professor at Arizona College of Optometry. He will cover "A New Perspective of Glaucoma and Treatment Options." A research consultant for several ophthalmology practices, he has been a principal investigator in more than 100 FDA clinical trials on lenses, solutions, pharmaceuticals, glaucoma and dry eye.

BUSINESS

Get on Board: Myopia Control in Your Practice

About half of young adults in the U.S. have myopia, which is about double the percentage of when their grandparents were the same age.[1] In response to this increase, many practices are developing a Myopia Management subspecialty.

Successful Treatment Options:*

1 Soft Bifocal Contact Lenses

Research demonstrates that this type of lens can slow myopia progression by up to 40 percent.[3-6] Lenses shown to be effective are **CooperVision's Biofinity® Multifocals, MiSight® 1-days** (currently waiting for U.S. approval) and **NaturalVue® Multifocal 1-day contacts.**

2 Corneal Reshaping Contact Lenses

Lenses such as **Paragon CRT® Contacts** are worn during sleep and removed in the morning. The cornea is temporarily reshaped by these lenses, which have been shown to slow myopia progression by 40 percent.[6]

3 0.01% Atropine Eye Drops

Early studies show that low-dose atropine (0.01%) eye drops can help slow myopia progression by as much as 60 percent.[7,8] However some parents may be reluctant to use a long-term medication on their small children. Additional studies are now underway. (These eye drops are not available in all areas and may require a special compounding pharmacy.)

In Addition: It has been found that time spent outdoors makes a difference. A study published in the *Journal of the American Medical Association*, found that after three years, children who spent 80 minutes outside every day, versus a second group that spent 40 minutes, had 23 percent less incidence of myopia. Researchers theorize that bright light may trigger the release of chemicals that help keep eyeballs from becoming misshapen.[1]

Myopia Control Clinic Tips:

- **Educate your staff:** Any successful medical subspecialty begins with an informed staff. Properly educating them will ensure that patients receive accurate information about myopia and myopia control.
- **Screen all children for myopia:** Myopia progresses most commonly between the ages of 7 and 16 and can be treated from an early age.[2]
- **Market your subspecialty:** Begin by screening patients and with patient referrals. A specialized web page is particularly important to this young demographic.[2]
- **Educate patients and parents:** Define myopia and go over myopia control options. Supply written copies of topics discussed with a comprehensive informed consent process. Discuss the potential long-term consequences of leaving myopia untreated including the strong positive association between having higher levels of myopia and having greater odds of developing conditions like myopic maculopathy, primary open-angle glaucoma, retinal detachments and posterior subcapsular cataracts.[2]

Current myopia management studies demonstrate the treatments described above can help control the disease.* This will be important to the approximately 5 billion myopes in the world by the year 2050.[2]

* The FDA has not yet approved any contact lenses or eye drops for slowing the progression of myopia, but current studies yielded positive results and additional supportive studies are underway.

References:

1. Cha Ariana E. The world's myopia crisis and why children should spend more time outdoors. https://www.washington post.com/news/to-your-health/wp/2015/09/16/the-world-myopia-crisis-and-why-children-should-spend-more-time-outdoors/?utm_term=.8c2aebeddc21 Accessed: March 25, 2018.
2. Press, Daniel J., Eiden S. B. Myopia management in action. *Review of Optometry*. 2018 (2) 78-83.
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5. Anstice NS, Phillips JR. Effect of dual-focus soft contact lens wear on axial myopia progression in children. *Ophthalmol*. 2011;118):1152-1161.
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8. Chia A, Lu QS, Tan D. Five-year clinical trial on atropine for the treatment of myopia 2. *Ophthalmol*. 2016;123:391-399.

SCEYENCE

No More Patchwork

Children may be very sensitive about wearing an eye patch to help correct amblyopia. A new product makes that unnecessary. A special pair of eyeglasses called Flicker Glass™ by the Good-Lite® Company uses rapid alternating occlusion to encourage the eyes to work in unison.[1]

How it works

The frames of this unique eyewear have two liquid crystal lenses and an electronic shutter. Flicker Glass encourages both eyes to work together, ultimately aiding in the restoration of binocular vision and depth perception.[2]

How children respond

The physical discomfort coupled with the social and psychological stigma associated with patching can make compliance challenging and be stressful for both parent and child. The company claims this binocular approach can stimulate the visual system and help restore depth perception. It does so with space-age looking eyeglasses (in red or blue). In a study of 20 children aged 6 to 17, none of the subjects reported discomfort from wearing Flicker Glass. Most were enthusiastic about wearing the glasses.[1]

Visit: www.good-lite.com/Details.cfm?ProdID=916 for more information.

References:

1. Segre L. What's new in vision care. All About Vision. http://www.allaboutvision.com/whatsnew/misc.htm Accessed March 31, 2018.
2. Electronix Flicker Glass™. Good-Lite website. https://www.good-lite.com/Details.cfm?ProdID=916 Accessed March 31, 2018.

BUSINESS

Disruption in the OD Marketplace

Craig W. Norman
Director
Vision Research Institute
Big Rapids, MI

Optometry practices will be facing many challenges in the coming decade, according to Craig Norman, FCLSA, Director of Research for the Visual Research Institute at Michigan College of Optometry. A clinician for more than 30 years, Norman has lectured worldwide on contact lens and eye-care topics, publishing numerous articles and posters.

Online Threats

"Part of the upheaval in our field is related to online refraction capabilities and acceptance," he says. "It sounds crazy from an optometric point of view, but it makes sense to young people who have grown up doing everything online." Simplecontacts.com offers mobile apps enabling patients to submit ocular selfies, followed by a mobile vision test. Staff doctors review them, and if they agree the prescription hasn't changed, will replace contact lenses. "You can't have a new Rx, but they will fill the current prescription." These companies are beginning to align with the online companies that sell contact lenses.

Hubble Startup

A recent startup company, Hubble, went one step further by brokering a deal with a Chinese manufacturer to produce their own low-priced, single-use contact lenses using older materials. "Patients go to the website, Hubble calls optometrists and refers these patients, helping to pay for the eye exam." In exchange for the referral, doctors agree to prescribe Hubble contact lenses.

Implant Surgeries

Implant surgeries for presbyopia may also impact optometry practices as patients become more aware of them. "Extended depth of focus (EDOF) procedures may some day solve many of the issues we have today with presbyopic contact lenses, including complaints about halos and glare."

FTC Rulings

While not finalized, new FTC rules may require doctors to keep prescriptions for up to three years, even if the actual prescription is only valid for one to two years. They may also enforce how quickly optometrists must supply their prescriptions to patients and third-party vendors, with noncompliance penalties.

Fighting Back

"Savvy consumers want items that are cost competitive," Norman says. "But eye-care practitioners are still getting the bulk of patients to sit in their exam chairs. So if they can communicate the importance of eye examinations, the superiority of their products and keep their eyewear competitively priced, their doctor-patient relationship will play a vital role in practice success. Most patients will still make the purchase while they are there with their eye-care professional."

SCEYENCE

Boosting Melatonin

Blue-light filtering lenses almost doubled nighttime melatonin levels, reduced awakenings and enhanced at least one measure of cognition in a recent independently conducted randomized controlled crossover trial of BluTech® ULTRA lens wearers.

Researchers at Nova Southeastern University College of Optometry in Florida assessed 24 undergraduate students wearing BluTech® ULTRA lenses for one week versus clear lenses with antireflective coating only (control) the next. The lenses were fitted into spectacle frames with blackout side shields and worn after 6:00 p.m. for five days.

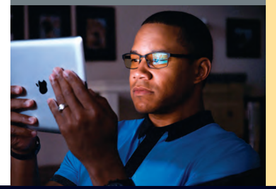
Student-worn actigraphy watches recorded nightly sleep patterns. At study's end, saliva samples were collected to quantify the melatonin levels; self-reported mood and neurobehavioral performance were assessed with the National Institutes of Health Toolbox Emotion and Cognition batteries, respectively.

During the week they wore the BluTech® ULTRA lenses, participants had an increase in melatonin levels (96%; *P*= 0.036), less awakening during sleep, reduced sleep-onset latency and evidence of improved cognition compared with the week they wore the clear lenses.[1]

BluTech® lenses are recommended for patients with sleep issues, exposed to LED lighting or doing computer work at night. For more info, contact info@blutechlenses.com.

Reference:

1. Helwick C. Blue light-blocking glasses may help with sleep, cognition. Medscape.com. https://www.medscape.com/viewarticle/887048_print Accessed: April 7, 2018.



EDUCATION

For full study results visit: www.alldocsod.com and click the evaluation study panel link.

ALLDocs Completes First Evaluation Study Panel

As many of you are aware, ALLDocs has instituted a new evaluation study panel. This panel will provide benefits to the ALLDocs community, by giving like-minded doctors insight into the effectiveness of new-to-market products, and how they perform in a LensCrafters Leaseholding setting.

The study panel will allow ALLDocs members early access to some of the newest products and medical devices, sometimes before they are launched nationally in the marketplace. We will continue to utilize a rotating panel to help determine how certain products will enhance our patient experience and affect our businesses. We will document the results after the evaluations are completed to allow ALLDocs members to gain insight into how these products perform clinically, and also how they affect our businesses and bottom line.

A summary of the final results for the Bausch + Lomb ULTRA® for Astigmatism lens evaluation are below. Thank you to the doctors who took the time to participate and document their patient results. If you would like to be included in future ALLDocs Evaluation Panels, visit www.alldocsod.com for upcoming study schedules and updates.

Product Information and Evaluation Results
Product Evaluated: Bausch + Lomb ULTRA® for Astigmatism

Number of Participating Optometrists: 45 Number of Surveys/Patients included in Evaluation: 761

Overall Clinical Results Documented

Initial Comfort	93% of patients reported comfort at initial fit
Initial Visual Acuity	92% of patients experienced 20/20 vision
Degree of Rotation	97% of patients had less than 5 degrees of rotation during initial fitting
Successful Fit	90% of the patients were fit successfully
Overall Patient Comfort	87% of patients reported an overall comfortable wearing experience
Visual Acuity at Follow Up (O.U.)	96% of patients experienced 20/20 vision at the follow-up visit
Slit Lamp Results	98% of patients had clear corneas/no injection at follow up

Bausch + Lomb ULTRA® for Astigmatism Product Information:

Available Parameters: +6.00D to -9.00D, -0.75D, -1.25D, -1.75D, -2.25D, -2.75 Cyl.
Material: Samfilcon A
Water Content: 46%
DK/t: 114@ -3.00D
Design Technology: OpticAlign™ design
Base Curve: 8.6MM
Diameter: 14.5MM
Center Thickness: 0.10 mm @ -3.00D
Orientation Mark: 1 guide mark at 6 o'clock
Axes: 10° to 180° (in 10° steps)
Visibility Tint: Light blue
Indications: Daily wear/30-day replacement
UV Protection: No
Guarantee: 90-day performance guarantee

SCEYENCE

Orbs in Space

Space Travel Restructures Eyes

Astronauts aboard the International Space Station returned to Earth with ocular structural changes. This phenomenon, known as space flight-associated neuro-ocular syndrome, has been studied by NASA scientists for several years. Now a University of Houston optometrist using optical coherence tomography imaging has quantified those changes, reporting his findings in *JAMA Ophthalmology*.

Fifteen astronauts who spent time aboard the space station were studied pre-flight and post-flight. All of the subjects had good vision before and after the flight, but many experienced a change in their eye structure.

In individuals exposed to long-duration microgravity, there was a change in the position of the Bruch's membrane opening, an increase in retinal thickness closer to the optic nerve head rim margin as well as an increase in the proportion of eyes with choroidal folds. Although the exact cause remains unknown, it is hypothesized that the changes are a result of microgravity-associated orbital and cranial fluid shifts.