

## Optometry DistList

Instance 2016: 26  
Friday, 29 April 2016

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- Is it time to confine Snellen charts to the annals of history?
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- Marijuana for Glaucoma: A Recipe for Disaster or Treatment?
- Optometrist (Job Opening)

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### Subject: **Inviting subscription & contributions to Optometry Distlist**

IVI invites contribution of articles to our initiative, *Optometry Distlist*, a bi-weekly e magazine catering to the wider Optometry and eye care community in India and overseas.

The Distlist features interesting developments in eye care and optometry including national and international events, job openings, news updates, research work, and initiatives undertaken by various organizations. The subscribers for the e magazine include students, educators, researchers, practitioners, entrepreneurs and those from the wider eye care industry. We have a little over 1000 subscribers since we began in 2014. To subscribe to Optometry Distlist, please write to us at: [info@indiavisioninstitute.org](mailto:info@indiavisioninstitute.org)

Contributions in any of the areas mentioned can be mailed to [info@indiavisioninstitute.org](mailto:info@indiavisioninstitute.org). In case of a published work, please include the website link pertaining to the contribution. Articles authored by the contributor must accompany references.

For further information, please write to [info@indiavisioninstitute.org](mailto:info@indiavisioninstitute.org)

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Date: Friday, 8 April 2016

From: Sandhya Shekar ([sandhya.shekar@indiavisioninstitute.org](mailto:sandhya.shekar@indiavisioninstitute.org))

Subject: **New Lenses Promise Painless Procedure for Bionic Vision**

A new medical invention claims to keep your vision 100% perfect for the rest of your life. An optometrist from British Columbia, Canada, believed invented corrective eye lenses that will revolutionize healthcare around the world. Dr. Garth Webb created the Ocumetics Bionic Lens that can make you see three times better than 20/20 vision. So not only would these new lenses correct sight problems like nearsightedness and farsightedness but they would go even further, giving humans "bionic" vision. With this invention, the use of glasses or contact lenses would no longer be necessary for the rest of our lives.

Created at the Ocumetics Technology Corp., the Ocumetics Bionic Lens looks like a small button that replaces your original lens. It is inserted during an eight-minute eye surgery, very similar to a cataract surgery, that is claimed to be painless. The patient's sight would be corrected immediately without the need for any further procedures.

The artificial lens replaces the eye's natural lens. Therefore, this surgery would also prevent the person from developing cataracts. The only drawback to it is that only people over 25 could undergo the surgery, since the eye is still under development before that age.

According to the CBC News, eight years of research and three million dollars were invested to create these new lenses. According to the doctor, the lens will be first tested in animals and then in blind human eyes. Then the company will seek Canadian approval for marketing the product which could be available in 2017.

For full article, please visit: <http://interestingengineering.com/new-lenses-promise-painless-procedure-for-bionic-vision/>

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Date: Wednesday, 13 April 2016

From: T V Amarnath ([amaropt@gmail.com](mailto:amaropt@gmail.com))

Subject: **Is it time to confine Snellen charts to the annals of history?**

**Purpose:** A paper published by the author in 1988 in this journal provided some important findings about the lack of precision of visual acuity (VA) measures made with commonly used Snellen charts versus the advantages of using letter charts designed using the principles proposed by Bailey and Lovie in 1976. That 1988 paper has been cited a number of times since, mostly supporting the findings. The purpose of this review is to examine the changes that have occurred in VA measurement in research and clinical practice since that earlier study.

**Recent findings:** While precise measures of VA using Bailey-Lovie or ETDRS charts are now commonly used in major, multi-centre research studies, it is disappointing to see that many research papers still report VA measured with Snellen charts and even use Snellen fractions, invalidly converted to logMAR notation, in parametric analyses of VA. Many studies have examined the test-retest variability (TRV) of VA measures in groups and individuals, but it is difficult to determine if clinicians or researchers determine patients' individual TRVs to more accurately detect real changes in VA for each individual.

**Summary:** This paper summarises the findings of the 1988 study: (1) Snellen charts and VA notations are not appropriate for accurate clinical and research measures of VA; (2) Charts employing the Bailey-Lovie design principles should be used to provide precise measures of VA. (3) Test-retest variability should be used to determine the limit for detecting significant change in VA. This author suggests that it is time for Snellen charts, Snellen fractions and decimal notation to be confined to the teaching of the history of VA measurement.

For full article, please visit:

<http://onlinelibrary.wiley.com/doi/10.1111/opo.12252/epdf>

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Date: Saturday, 23 April 2016

From: Sneha A ([sneha.krishnan@indiavisioninstitute.org](mailto:sneha.krishnan@indiavisioninstitute.org))

Subject: **When the brain makes a scene**

It's the peripheral ocular conundrum: if something is outside a person's fovea, can they be trusted to see it?

Many brain researchers would say no, but Massachusetts Institute of Technology postdoc fellow, Dr Michael Cohen, believes the answer is closer to yes – if we are looking at a scene like a park or a shop.

He told *OT* that the brain appears to be hardwired to quickly take in a scene, adding: "There are a few regions in the visual cortex that respond selectively or preferentially to scenes – the parahippocampal place area, the retrosplenial cortex, and the occipital place area. "These are regions that get highly active when a person is looking at a scene, but get substantially less active when looking at pictures of objects, faces or animals," he said.

Yet even when the brain might want to take in the whole view in front of its eyes in a short amount of time, there was no getting around the dominance of the fovea, Dr Cohen explained.

He added: "The fovea gets the most 'cortical real-estate' in the sense that a disproportionate amount of the visual system is involved in representing the fovea compared to the periphery.

"So since only so many neural resources are available for representing the periphery, it seems like the visual system represents the periphery as a summary statistic so we can still have a sense of the world around us, that is, the gist of a scene," he explained.

The brain's reflection of the 'gist' of a scene is highlighted in Dr Cohen's opinion piece published in the journal *Trends in Cognitive Science* today (19 April).

Dr Cohen said such findings about the limits of our perception can be uncomfortable for people to come to terms with.

It had affected his own mindset, he said, adding: "This type of research has just forced me to be more critical when thinking about my own reflection. It's so easy to overestimate the richness of perception and think that you see everything that is in front of you."

Article source:

<https://www.aop.org.uk/ot/science-and-vision/research/2016/04/20/when-the-brain-makes-a-scene>

Original Article Source: [http://www.cell.com/trends/cognitive-sciences/pdf/S1364-6613\(16\)00066-8.pdf](http://www.cell.com/trends/cognitive-sciences/pdf/S1364-6613(16)00066-8.pdf)

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Date: Tuesday, 26 April 2016

From: Deepika Kommanapally ([deepikak.opt@gmail.com](mailto:deepikak.opt@gmail.com))

Subject: **Marijuana for Glaucoma: A Recipe for Disaster or Treatment?**

Marijuana has been shown to lower intraocular pressure (IOP<sup>†</sup>) but with limited duration of action and numerous adverse effects. Use of marijuana to lower IOP as a means of glaucoma treatment would require frequent use throughout the day, leading to significant adverse effects, possible progression toward Cannabis Use Disorder (CUD), and/or withdrawal symptoms. The treatment of glaucoma based on the cannabis plant or drugs based on the cannabinoid molecule should be considered carefully before being prescribed. Considerations should include the adverse physical and psychological adverse effects, including substance abuse. Currently, the deleterious effects of marijuana outweigh the benefits of its IOP-lowering capacity in most glaucoma patients. Under extremely rare circumstances, a few categories of glaucoma patients may be potential candidates for treatment with medical marijuana. Further studies on alternate routes and more focused means of cannabinoid molecule delivery to the eye for glaucoma treatment are needed.

For full article, please visit:

[http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4553646/pdf/yjbm\\_88\\_3\\_265.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4553646/pdf/yjbm_88_3_265.pdf)

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From: Prashant S ([nayonika\\_eyecare@yahoo.com](mailto:nayonika_eyecare@yahoo.com))

Subject: **Optometrist (Job Opening)**

Nayonika eye care charitable trust looking for optometrist/ refractionist for their eye projects in Bangalore with following brief profile.

- Gathering medical records and patient information
- Assisting the ophthalmologist in basic procedures
- Conducting regular eye camps and school screening
- Taking ocular measurements, both anatomical and functional
- Administering or preparing medications
- Providing eye care and contact lens information to the patient
- Maintaining and cleaning ophthalmic instruments

**Location:** Bengaluru

Interested candidates can forward their resume to Prashant S or Dr Surekha Prashant at [nayonika\\_eyecare@yahoo.com](mailto:nayonika_eyecare@yahoo.com)

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