

Optometry DistList

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Date: 04 September, 2016

From: Asmita Pokhrel (asmitapokhrel405@gmail.com)

Subject: **What Did Nearsighted Humans Do Before Glasses?**

Nearsightedness, or myopia, is increasing at an eye-popping rate. By 2050, scientists predict more than 4.7 billion people, roughly half of the global population, will be nearsighted. Fortunately, humans have created a solution — eyeglasses! But how did people manage thousands of years ago?

Scientists are still working out the exact mix of factors that contribute to myopia, but, on average, humans thousands of years ago probably had to squint less to see at a distance, according to Schwab.

Things started to look up for the visually challenged at the end of the 13th century, when the earliest known eyeglasses were invented in northern Italy. These glasses had more in common with magnifying glasses than today's eye accessories. Early glasses were heavy and prone to shattering, Benjamin says. Intended to help people read, rather than aid nearsightedness, they often featured quartz instead of glass, as the latter was often turbid.

But after the Reformation, spectacles became more common. In the 1700s, temple pieces — the long extensions of glasses that fit snugly against the head — allowed people to wear glasses throughout the day. Styles diversified rapidly, featuring different colours and expensive materials. Before prescriptions, customers tried on glasses and chose a pair through trial and error, often from a traveling peddler. But in the 1800s, Handley says, people began receiving eye exams for glasses.

Of course, glasses still present challenges. Xavier Holland of Boston, 28, has worn glasses for nearsightedness since he was 10. The glasses fog when Holland opens the dishwasher,

and make 3-D glasses at the movies a pain. But Holland appreciates another benefit ancient humans didn't get to enjoy: fashion.

For the complete article, please visit: <http://www.npr.org/sections/health-shots/2016/07/07/484835077/what-did-nearsighted-humans-do-before-glasses>

Date: 05 September, 2016

From: P. Sandhya Rani (sandyuoh@gmail.com)

Subject: **Laser Pointers Can Cause Serious Eye Damage in Kids**

Laser pointers may look harmless enough, but when children play with them they can end up with blurry vision, blind spots or potentially permanent vision loss, eye experts report. The cases "bring to light this is happening more frequently," said study author Dr. David Almeida, an ophthalmologist in private practice in Minneapolis. "It was previously thought this was a one-in-a-million event. It's still probably a rare to uncommon reaction, but it's not a never reaction," Almeida said.

Part of the problem is unreliable labeling of laser pointers, which are typically sold in office supply stores and online.

Prior research revealed that a significant percentage of both red and green laser pointers are labelled as having between 1 and 5 milli-watts of power outputs. That amount is supposedly safe to the eyes. But, the devices had power outputs greater than 5 milli-watts, according to background information in the study.

"Access to laser pointers seems to be growing, and it's easy to order these online and hard to regulate them," said Dr. Charles Wykoff. He's deputy chair of ophthalmology at the Blanton Eye Institute at Houston Methodist Hospital.

"You don't really know the output of the device you've bought," he noted.

In the study, Almeida and his team detailed the cases of four boys whose vision was damaged when they looked directly at laser pointers, either head-on or reflected in a mirror.

The resulting retinal damage caused "acute, dramatic" symptoms. These symptoms can include blurry, distorted or absent vision in the centre of the visual field, Almeida explained. Three of the four children highlighted in Almeida's research suffered potentially irreversible vision loss.

Wykoff added: "Don't look at them, don't point them in your eye, and don't point them into others' eyes. Once the injury has occurred, there's really not much that can be done.

For the complete article, please visit: <http://www.health.com/news/laser-pointers-can-cause-serious-eye-damage-kids>

Date: 8 September, 2016

From: Priyanka Patnaik (priyanka_1388@yahoo.com)

Subject: **Challenge to Research Supporting Use of Coloured Lenses or Overlays**

The use of coloured lenses or overlays to ameliorate reading difficulties “cannot be endorsed,” a new paper has concluded.

Writing in the College of Optometrists’ research journal, *Ophthalmic and Physiological Optics*, a University of Bradford team, led by Professor Brendan Barrett, states that any benefits reported by individuals in clinical settings are likely to be the result of placebo, practice or so-called ‘Hawthorne’ effects.

Presenting the results, the authors discuss the strengths and shortcomings of the published literature. They acknowledge the difficulties associated with conducting trials of this type, and offer suggestions about how future trials might be conducted.

In a press statement, the College of Optometrists said that it regularly reviews its clinical guidance, and such reviews are based on the best available evidence where possible.

OT understands that over 500 community optometry practices and hospital and university clinics use the intuitive colorimetry (IC) in the UK. Having contacted the College to ask what advice it would give to practitioners about their continued use of IC and other overlay products, Jo Mullin, the College’s Director of Policy and Strategy, told *OT*: “The College’s position is that its members should use their professional judgment, informed by the best available evidence, in deciding whether they offer IC assessments and subsequent treatment or intervention.

The use of colored lenses or overlays to ameliorate reading difficulties “cannot be endorsed,” a new paper has concluded.

For the complete article, please visit: <https://www.aop.org.uk/ot/science-and-vision/research/2016/09/05/challenge-to-research-supporting-use-of-coloured-lenses-or-overlays>

Date: 10 September, 2016

From: Indira Priyadarshini (indu2545@gmail.com)

Subject: **Eye Could Harbour Zika Virus**

Ocular tissues could offer a safe harbour for the Zika virus, allowing it to spread from a person who otherwise seems to have recovered from the infection, according to a new study. American researchers have found that the Zika virus can live in the eyes of mice. Because the immune system is less active in the eye to protect its sensitive tissues, the ocular tissues could be acting as a reservoir for the disease in human patients who have fought off the disease in the rest of their body, Washington University researcher, Professor Michael Diamond, hypothesized.

The study, published in the journal *Cell Reports*, found the virus in cells in the iris, cornea, retina and optic nerve of the mice seven days after Zika's introduction elsewhere in the body. Professor Diamond explained that the next step in the research would be to see whether the same process occurs in humans.

The presence of live Zika virus in human tears would be a key finding in the ongoing research. The disease is spreading more quickly than typically happens when passed from person to person through mosquitoes. Fellow Washington University researcher, Dr Jonathan Miner, highlighted that the virus may also be spreading through tears or other bodily fluids.

He added: "There could be a window of time when tears are highly infectious and people are coming into contact with it and able to spread it." This could also mean that human tears could be tested for the virus, rather than requiring blood to be drawn, Dr Miner noted. Previous research has found that Zika infection can significantly alter the developing eyes of fetuses, as well as their brains.

For the complete article, please visit: <https://www.aop.org.uk/ot/science-and-vision/research/2016/09/09/eye-could-harbour-zika-virus>

Date: 12 September, 2016

From: Sony Singh (sony.singh@indiavisioninstitute.org)

Subject: **Slimy Hagfish Inspire 'Super Hydrogels'**

The unusual secretions of the Atlantic hagfish are being studied by scientists who want to harness the viscous and elastic properties of the creature's slime for human use. When attacked or threatened by a predator the marine creature defends itself by secreting a milky-white substance from its glands. This instantly reacts with the seawater around it to form a mass of slime that clogs the mouth and gills of the would-be attacker. But this slime has special properties that could benefit mankind, according to scientists from ETH Zurich (Swiss Federal Institute of Technology).

Hagfish slime is an extremely diluted hydrogel, consisting of over 99.99 percent water. Hydrogels are used in a multitude of everyday products including diapers, moisturizers and contact lenses. But hagfish slime is more efficient and fast-forming than other types of hydrogel, such as conventional animal gelatin.

The glandular secretion the hagfish produces when attacked is made from mucin vesicles and tightly coiled skeins of protein measuring just 150 micrometers in diameter. When released by the hagfish they quickly interact with seawater; the mucin vesicles releasing a saliva-like substance and the skeins unwinding into long threads. Together they form a matrix of slime that can disable much bigger marine animals.

The researchers travelled to Norway to collect samples of the hagfish's secretion before transporting it back to their laboratory in Zurich. "We bring in the fish, we sedate them, we blot them dry. And once they're sedated we put them on a dissection tray and then we mildly stimulate the ventral side of the fish. This causes the muscles to contract and the exudates, this glandular secrete, to be expelled," said Böni, adding: "After the sampling the fish wakes up again; so the fish is not harmed by taking the sample."

They are now working to unlock the secret of the slime formation and its huge capacity to absorb water with the hope of recreating it artificially in the lab. Böni believes that the hagfish's natural system is far too complex to completely replicate, but is hopeful they can develop a gel that follows the principle of the natural slime. Similar research from the University of Guelph in Canada has proposed that the fibres of the hagfish slime could be used to make textiles.

For the complete article, please visit: <http://www.reuters.com/article/us-hagfish-hyrdogel-idUSKCN0YE1YA>

Date: 13 September, 2016

From: Seema Banerjee (seemadrishti@gmail.com)

Subject: **Allergan's First-In-Class Technology to Innovative Eye Care**

Allergan, a leading global pharmaceutical company, and RetroSense Therapeutics LLC, a private, clinical-stage biotechnology company focused on novel gene therapy approaches to restore vision in patients suffering from blindness, has announced that Allergan has acquired substantially all of the assets of RetroSense in an all-cash transaction. Under the terms of the transaction, Allergan has agreed to potential regulatory and commercialization milestone payments related to its lead development program, RST-001, a novel gene therapy for the potential treatment of Retinitis Pigmentosa (RP).

"The acquisition of RetroSense and its RST-001 program builds on Allergan's deep commitment to eye care, and our focus on investing in game-changing innovation for retinal conditions, including Retinitis Pigmentosa, where patients desperately need treatment options," said Brent Saunders, CEO and President of Allergan.

RST-001 is first-in-class gene therapy application of optogenetics, a therapeutic approach that confers light sensitivity to cells that were not previously, or natively, light sensitive. By applying optogenetics to retinas in which rod and cone photoreceptors have degenerated, the technology introduces additional light sensitivity to the retina. In 2014, RST-001 received an Orphan Drug Designation by the US FDA for the treatment of Retinitis Pigmentosa.

The RST-001 optogenetic approach employs a photosensitivity gene, channelrhodopsin-2, to create new photosensors in retinal ganglion cells to potentially restore vision in retinal degenerative conditions. In August 2015, RetroSense's Investigational New Drug (IND)

application for RST-001 received clearance from the United States Food and Drug Administration (FDA). In March 2016, RetroSense initiated a Phase I/IIa clinical trial to evaluate the safety of RST-001 in patients being dosed, and in August 2016, the low dose cohort of patients had been safely dosed.

"Retinitis Pigmentosa patients from around the world are closely following the RST-001 study," stated David G. Birch, Ph.D., chief scientist and executive officer of the Retina Foundation of the Southwest and principal investigator of the Phase I/IIa clinical trial. "Today, the treatment options are so limited, physicians are excited about the potential to restore or improve vision for their patients."

For the complete article, please visit: <http://www.prnewswire.com/news-releases/allergan-acquires-gene-therapy-company-retrosense-therapeutics-adding-first-in-class-technology-to-companys-innovative-eye-care-pipeline-300322553.html>

Date: 14 September, 2016
From: Apoorva Chauhan (apoorva.chauhan@indiavisioninstitute.org)
Subject: **IVI Optometry Wizard of the Year 2016**

A national quiz organized by India Vision Institute (IVI) for Optometry practitioners, educators and students to test their knowledge in Optometry among their peers. The questions will encompass all major disciplines of optometry.

Eligibility: Optometry practitioners, educators and students.
Prize: The prize money the finalists win will be based on the number of correct answers. The maximum prize money will be INR 10,000.

All three finalists will receive a memento from IVI along with a certificate.

For further details, please visit: <http://www.indiavisioninstitute.org/upcoming-programs-view.php?id=69>

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All contributions need to be in word format (not more than two to three paragraphs including a title).

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