An app may soon be able to tell optometrists and ophthalmologists whether the axial length of a child’s eye is appropriate for their age. The project is the brainchild of Alder Hey Children’s Hospital lead optometrist, Ian Cunningham.

Mr Cunningham and his fellow researchers were able to document the natural axial development of the eye by measuring it using state-of-the-art equipment on children who were already undergoing an operation for a non-eye-related condition at the hospital.

“We’ve actually measured this using contact ultrasound biometry for the very first time ... We were able to have the children sedated, so that we could get very precise measurements of the axial length of the eye. This is the largest growth study that we know of.”

From the results of the 330 children at a range of ages, the research team has been able to develop growth charts for the typical development of the eye.

The results of the research, collaboration between the hospital and California’s Smith-Kettlewell Institute, could also be valuable to researchers looking at other childhood ocular conditions, Mr Cunningham highlighted.

“Axial length is important to think about in pressure-raising conditions, such as congenital glaucoma. As the structure of the infant’s eye is very soft, the pressure may cause it to grow more quickly.”

The ultimate plan is to incorporate the growth charts into a simple-to-use app, Mr Cunningham outlined. “If there’s a 17.8mm eye on a five-month-old, we can check if that is normal, and then check again in six months’ time. We’re trying to simplify it,” he concluded.

For the complete article, please visit: https://www.aop.org.uk/ot/science-and-vision/technology/2017/01/17/an-app-in-sight?platform=hootsuite
A Light Sleep

An early study shows the positive effects of sleeping with an LED light mask on retinal disease. Patients with diabetic macular oedema showed improvements in their retina after sleeping with a light emitting diode (LED) sleep mask, in a small study by UK scientists. The team, based in Liverpool and Durham, monitored the effects of the organic light masks on 60 volunteers who wore them for three months, followed by a one-month recovery period.

The participants were a group aged 18–30, a group aged 50–70 and a group of patients with diabetic macular oedema. The latter group showed a significant level of retinal thinning during the study.

More than two in three patients also had cysts in their eyes either reduce or resolve completely, according to the paper published in the journal *Eye*. However, the study did find that the use of the masks came at a price – patients demonstrated lower daytime alertness and wellbeing. Over the study period, 16 patients also withdrew.

Despite these issues, the authors wrote that, with the preliminary data showing a beneficial effect on the symptoms of patients with diabetic macular oedema, “This novel therapeutic approach is ready for large clinical trials.”

For the complete article, please visit: https://www.aop.org.uk/ot/science-and-vision/research/2017/01/19/a-light-sleep?platform=hootsuite

Sight Loss and Ebola: The Long Term Complications

A potentially blinding eye disease has been highlighted as a possible long-term complication of Ebola virus. As part of a study published in Ophthalmology, Emory Eye Centre physicians examined 96 patients recovering from Ebola virus disease (EVD) in Liberia. They found that 21 patients had developed EVD-associated uveitis, and were therefore at risk of reduced vision or blindness as a complication of the inflammatory eye disease. The study reported that 40% of the Ebola survivors with uveitis were legally blind based on the World Health Organization classification. As well as uveitis, three patients from the group developed an EVD-associated optic neuropathy. Emory Eye Centre, assistant professor of ophthalmology, Brent Hayek explained that the research was an opportunity to help patients understand the vision issues that could result from the disease.

"We’ve also been able to teach and train local providers in Liberia how to best screen and examine survivors with ocular issues and use a mobile clinic design to do it most efficiently,” he highlighted. Cataracts and vitreous opacity, which can both be complications of untreated uveitis, were also found among the patient group.

UK residents were among the team of international health workers who travelled to West Africa following the EVD outbreak in 2014. More than 10,000 EVD cases were reported in Liberia during an outbreak in 2014. Two other West African nations were also affected; Liberia and Sierra Leone. In total, more than 28,600 cases and 11,300 deaths from the disease were reported by the World Health Organization during the 2014 outbreak.

For the complete article, please visit: https://www.aop.org.uk/ot/science-and-vision/research/2017/01/20/sight-loss-and-ebola?platform=hootsuite
Date: 11 January, 2017
From: D Shravan Kumar (dsravankumar18@gmail.com)
Subject: Vision Problems after Concussion

Vision problems are a common and sometimes lasting consequence of head injuries--from children and teens with sports-related concussions to military personnel with combat-related Traumatic Brain Injury (TBI).

Visual dysfunction after TBI can take many forms and can contribute to lasting disability following head injuries. The new research shows similarities between sports concussions and more severe blast injuries experienced by military service personnel--confirming that an ongoing commitment to TBI research can have far-reaching benefits.

Post-concussion visual dysfunction can occur on its own or in association with vestibular dysfunction (balance problems or dizziness). A study led by Mark W. Swanson, OD, MSPH, FAAO, of Children’s of Alabama, Birmingham, evaluated the relationship between vision symptoms and academic problems in children with concussion. The study included 276 children and adolescents with multiple post-concussion symptoms lasting ten days or longer. Among patients who still had post-concussion symptoms after 30 days, the risk of academic problems was three times higher for those with vision symptoms and 15 times higher for those with difficulty concentrating. The authors believe that vision assessment should be part of "return to learn" strategies for children with lasting symptoms after concussion.

A study led by José E. Capó-Aponte, OD, PhD, FAAO of the US Army Aeromedical Research Laboratory assessed the rate of visual dysfunction in 500 military personnel with two types of mild TBI. About two-thirds had blast-related TBI, most often caused by improvised explosive devices. The rest had nonblast-related TBI, with causes such as falls or blunt force. Nearly one-third of patients had significant visual problems and symptoms one year after injury--whether they had blast-related or nonblast-related TBI. Eye pain was more common in the early stages, while double vision (diplopia) was more frequent later on.

The findings highlight the need for ongoing vision rehabilitation care for veterans with TBI. They also suggest that visual problems resulting from civilian TBI--which is rarely blast-related--are similar to those after blast-related military TBI.

In an invited commentary, James F. Jorkasky of the National Alliance for Eye and Vision Research and Vision Rehabilitation expert Gregory L. Goodrich, PhD, FAAO, discuss the importance of continued research into vision problems after head trauma. Since 2009, Congress has provided annual funding for a dedicated Vision Research Program.

For the complete article, please visit: https://www.eurekalert.org/pub_releases/2017-01/wkh-vpa010617.php

Date: 23 January, 2017
From: Abhishek Kalbarga (abhishek.kalbarga@indiavisioninstitute.org)
Subject: The 2nd World Congress of Optometry - September 11-13, 2017- Early Bird Discount Ends on 31 March 2017

The 2nd World Congress of Optometry, with the theme “Accessible, quality vision and eye health” is being held in Hyderabad, India from September 11-13, 2017. Building on the excitement from the 1st World
Congress in Medellin in 2015 which attracted over 2300 delegates, this biennial congress is a World Council of Optometry (WCO) initiative in partnership with the Asia Pacific Council of Optometry (APCO) and the India Vision Institute (IVI).

This year's theme ties into the World Health Organisation (WHO) 'Universal Eye Health: A global action plan 2014-2019', the target of which is a reduction in the prevalence of avoidable visual impairment by 25% by 2019. One of the ways to accomplish this is to have in place a strong and equitable eye health system within which optometry plays a valuable and essential role.

The Scientific track of the program will feature cutting edge research and clinical practice, while the Educators’ track will offer a unique platform to shape optometric education. The World Congress will bring together optometric expertise from across the world offering delegates globally recognized US COPE and UK CET continuing education accreditation.

At a strategic level the Presidential Forum will convene Presidents of national optometric associations, Deans of schools of optometry and key industry stakeholders to discuss the progress of optometry and shape the future of the profession across the world.

Mark your calendars for this exciting event!

We look forward to seeing you in Hyderabad!

Registrations are now open!
For more information, please click http://www.worldcongressofoptometry.org/
Social Media: www.facebook.com/worldcongressofoptometry

Date: 16 January, 2017
From: Paula Mehta (info@optometrycouncilofindia.org)
Subject: Optometry Council of India (OCI): World Sight Day Event

World Sight Day was celebrated by Optometrists all across India in a way that created history and marked a new beginning for the profession. Optometry Council of India (OCI) celebrated World Sight Day through a Public Awareness Campaign regarding eye care. This activity was done in collaboration with Indian Optometry Federation (IOF) and Association of Schools and Colleges of Optometry-India (ASCO). The activity was supported by three industry sponsors: Alcon, Bausch&Lomb and CooperVision India. OCI would like to thank the supporters and sponsors of this successful event.


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