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Overview



VISION... TAKEN SERIOUSLY

Image: Getty

1.8m

people in the UK are living with sight loss

2.25m

people with sight loss expected by 2020

50%

of sight loss can be avoided

Source: RNIB

Today marks the beginning of National Eye Health Week when the UK eyecare community is promoting the importance of eye tests and looking after your eyes as a key part of general health, writes Lilian Anekwe

There is stark evidence that most of the UK public are unaware they need regular eye tests and do not prioritise their eye health. Some 8 per cent of adults in the UK have never had an eye test.

It's not clear why people are reluctant to have their eyes tested. National Health Service statistics show that even though the NHS provides free eye tests for children, older people, those with certain health problems and people on low incomes, they still aren't getting their eyes tested. In Scotland, where eye tests are provided free for everyone, uptake is still low.

The reasons why are complex, but it's a problem that does seem to affect eye health uniquely. NHS figures show 2.9 million children had their eyes tested between 2012 and 2013, which was the lowest proportion of all eye tests in ten years. By contrast, 7.8 million children were

seen by an NHS dentist between 2011 and 2013, an increase of 0.5 per cent compared with March 2006.

This has a devastating impact on people's vision, on society and on the economy. Figures compiled by the Royal National Institute for the Blind (RNIB) show that currently 1.8 million people in the UK are living with sight loss. The amount spent indirectly on vision loss in the UK amounts to £5.1 billion a year. This includes £2.4 billion linked to the cost of providing informal care and £1.9 billion associated with lower employment rates.

This situation needs to be tackled now. The UK's population is ageing and the incidence of illnesses that are key underlying causes of sight loss, such as obesity and diabetes, is growing. Combined with too few people having their eyes tested, this means that, without action, the number of people with sight problems in the UK is likely to increase dramatically over the next 25 years. The RNIB predicts that by 2020 the number of people with sight loss will rise to more than 2.25 million.

VISION LOSS IS AVOIDABLE

The good news is that more than 50 per cent of vision loss can be avoided – if people have regular eye tests every two years, as recommended by the NHS. It's never too late and there are initiatives in place, during National Eye Health Week and beyond, to make this change a reality.

Francesca Marchetti, past-chairwoman of National Eye Health Week, says: "The message about the importance of having an eye test

hasn't been getting through thus far. People still renege on their appointments for an eye test. I'm not sure why, whether it is fear, a lack of awareness or education, or naivety. But what it means is that people are making do with poor vision and that's unacceptable.

"This is why it's important that during National Eye Health Week we have people from across the board all saying the same message: have your eyes tested. It's not commercially driven, it's health driven. Nobody makes any money out of it, nobody owns the week, there's no sales or political agenda – the whole profession works together to promote eye health."

Another example is the UK Vision Strategy, which was launched in 2008 and is supported by government. Katherine Raven, UK Vision Strategy senior manager, says the aim is to unite organisations across the UK that want to take action on issues relating to vision.

"The refreshed UK Vision Strategy was launched last year and will run until 2018. It focuses on three priority outcomes: that everyone in the UK looks after their eyes and sight, that everyone with an eye condition receives timely treatment and support, and that people with sight loss can fully participate in society," she says.



The UK's population is ageing and the incidence of illnesses that are key underlying causes of sight loss, such as obesity and diabetes, is growing

"We have many initiatives underway across the UK to help move eye health and sight loss up the agenda. This includes our work with the Royal College of General Practitioners to enable GPs to identify sight loss at an earlier stage, and ensure people get the treatment and support they need more quickly. Campaigns such as National Eye Health Week are an excellent way of raising public awareness about the importance of taking care of our eyes and having regular sight tests."

Tips for Healthy Eyes  
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During National Eye Health Week the optometry profession will provide eye tests and information on maintaining eye health through good nutrition, avoiding smoking and protecting the eyes from damaging sunlight.

These initiatives and increased public awareness can be an important springboard to raise the number of people who have their eyes tested, and reduce the number of people living with preventable sight loss.

Opinion

CAMPAIGNING TO PROTECT THE UK'S EYE HEALTH

Our eye health is deteriorating. Every day 100 people in the UK start to lose their sight and experts predict this figure will rise over the coming years, despite the fact that half of all sight loss is avoidable. So what can be done? David Cartwright, chairman of National Eye Health Week, explains how the campaign aims to help Britain see better



Good eyesight is an important part of our overall wellbeing and plays a critical role throughout life, from helping us to learn and communicate in childhood to maintaining our independence in old age.

Yet many of us rarely think about the importance of caring for our eyes to prevent losing our sight in the future.

In fact 20 million of us fail to have our eyes checked once every two years, as recommended, and one in ten has never had an eye examination. Yet sight tests are essential health checks.

Not only can they detect common eye conditions, such as glaucoma, before they cause irreversible vision loss, they can also uncover signs of general health problems, including diabetes, hypertension and high cholesterol.

The worrying truth is that many of us only go to see our optometrist when we are aware something is wrong and sadly this can mean the damage is already done.

National Eye Health Week seeks to change this by raising public awareness about the need to take care of your eyes and make sight tests as much a part of your routine healthcare as having dental check-ups or a smear test.

Getting your sight tested is easy – there are qualified optometrists on almost every high street, the appointment lasts around 30 minutes and, for many of us, it's absolutely free.

More than 30 million people in the UK are eligible for free sight tests paid for by the NHS, and millions more are entitled to tests and prescription eyewear paid for by their employer.

The campaign also aims to encourage people to adopt healthier lifestyles to benefit their eye health. Did you know smoking increases your risk of blindness? If you're a smoker then this is another good reason to kick the habit as current smokers are three times more likely to develop age-related macular degeneration (AMD), the UK's leading



Getting your sight tested is easy – there are qualified optometrists on almost every high street, the appointment lasts around 30 minutes and, for many of us, it's absolutely free

cause of blindness, compared with past or non-smokers.

Your weight can also affect your eye health. A body mass index of 30 or more doubles your risk of AMD and significantly increases your chances of developing cataract.

Early obesity is also associated with diabetes and 60 per cent of

people with type 2 diabetes will develop diabetic retinopathy.

Eating a healthy balanced diet may also benefit your eye health. Eye-friendly nutrients found in many fruits and vegetables can help to protect against AMD.

Cold water fish, such as sardines and tuna, are all excellent sources of essential fatty acids, which have been recommended for the avoidance of dry eye, AMD and generally better health.

Protecting your eyes from UV radiation is also vital. According to the World Health Organization, UV damage is the most preventable factor of developing cataracts and around 10 per cent of all skin cancers affect the eyes. The risks associated with UV exposure are cumulative so it's important to protect your eyes whenever the UV index reaches three or more. UV damage can occur even when it's cloudy so everyday UV protection could help you minimise your risk of suffering future sight loss.

There are events taking place across the country during National Eye Health Week (September 22 – 28) where you can find out more about the simple things you can do to keep your eyes and vision healthy.

For more information about events taking place near you, plus essential eye health tips and a collection of exclusive recipes, you can visit the National Eye Health Week website www.visionmatters.org.uk or follow the campaign on Twitter @MyVisionMatters

CAMPAIGN DIARY

Here are just some of the events and activities taking place during this year's National Eye Health Week...

SEPTEMBER 22

Vision Van: The Vision Express Vision Van is at Grey's Monument, Grainger Street, Newcastle upon Tyne, 10am to 5.30pm  
Free sight tests and advice on how to look after your eyes

SEPTEMBER 23

Nationwide launch of the Sunbeams Campaign: National Eye Health Week highlights the importance of protecting children's eyes from damaging UV  
Visit www.visionmatters.org.uk/sunbeams for more information

SEPTEMBER 24

Vision Van: The Forum, Millennium Plain, Norwich, NR2 1TF  
Cake Sale: Joyes House, New Road, Gravesend, DA11 0AT, from 10am  
Eat cake and learn more about how to take better care of your vision

SEPTEMBER 25

Vision Van: Victoria Square, Birmingham, B1 1BD  
Ask the Expert: Dr Grays Hospital, West Road, Elgin, from 12 noon  
Put your eye health questions to local optometrist Lloyd Griffiths

SEPTEMBER 26

Carrots NightWalk: Birmingham University  
See Birmingham like never before and raise vital funds for Fight for Sight research to prevent sight loss and treat eye disease  
For more information visit www.fightforsight.org.uk/carrots-charity-nightwalk

SEPTEMBER 27

Children's Day: Pinder Opticians, Pollokshaw Road, Shawlands, Glasgow  
Children's eyecare advice, poster competition and goodie bags

ALL WEEK

Nationwide Spectacular Selfies: Greenslades Opticians, Weston-super-Mare  
Post a selfie of yourself wearing spectacles or sunglasses along with a sentence saying "Why my vision matters" on Greenslades Opticians' Facebook page  
Visit www.facebook.com/GreensladesOpticians for more information

# IMPORTANCE OF EYE TESTS

An eye test can do more than check or correct your sight, it can literally save your life, as Victoria Lambert reports



Image: Getty

**N**ext time you get your eyes tested, you may enjoy cutting-edge technology as part of the appointment. Ocular computed technology is being introduced to take 3D pictures of the retina, helping optometrists to detect swelling which may indicate age-related macular degeneration or AMD.

Chances are, though, you'll start with a peek at a Snellen chart, the familiar series of letters of differing sizes, developed in 1862.

Don't be disappointed as traditional eye tests, which enable optometrists to support the clearest, most comfortable vision in all of us, are yet to be surpassed.

The more modern tests, however, come into their own to protect us against permanent sight loss and even detecting health problems of a more serious nature.

But poor uptake of regular sight tests is probably the biggest risk to the nation's eye health. According to the Eyecare Trust, an eye health charity, 20 million of us fail to have our eyes checked once every two years, as recommended, and one in ten have never had an eye test.

sight test. "We have a duty to examine your eyes from a health point of view when we carry out a sight test. This means checking for early signs of macular degeneration or glaucoma," says Dr Blakeney.

#### COMMON DISEASES

AMD is the leading cause of visual impairment in the UK, affecting up to 500,000 people to some degree, according to the NHS.

Although there is no treatment for the main type of AMD or dry macular disease, the Macular Society provides information and support which helps people cope. Anyone whose vision deteriorates very quickly, with the appearance of wavy lines, should seek immediate care through A&E as this would suggest the onset of wet AMD, which is treatable if caught in time.

Glaucoma, however, which affects about 480,000 in England, with those of black-African or black-Caribbean origin most at risk, can be treated more easily using eye drops, lasers and even surgery. Early detection matters though as any damage caused is irreversible.

## EYE HEALTH FACTFILE



#### AMD

- An estimated 415,000 people were living with wet AMD in the UK in 2010. In addition, a further 1.5 million people are living with the early stage of the disease.
- By 2020, the number of people living with wet AMD is estimated to increase to 516,000. The number of people living with early AMD is expected to increase to more than 1.8 million.

#### CATARACT

- There were 337,000 cataract operations in England in 2011-12 and 98 per cent of cataract operations were carried out as day cases. The average age for those undergoing a cataract operation was 74.4 years old.

#### SIGHT LOSS IN THE UK

- Almost two million people in the UK are living with sight loss.
- There were an estimated 298,800 registered blind or partially sighted people in England in 2011.
- There are an estimated 25,000 blind and partially sighted children aged 0-16 in Britain.
- It is predicted that by 2020, the number of people with sight loss will increase to more than 2.25 million.
- By 2050, the number of people with sight loss in the UK will double to nearly four million.

#### GLAUCOMA

- There are estimated to be 266,000 people living with detected glaucoma in the UK. An estimated additional 191,000 people are living with undetected glaucoma.
- By 2020, the number of people living with ocular hypertension is estimated to increase to 602,000. The number of people living with glaucoma, both detected and undetected, will also increase to around 561,000.

ried out. Having an adequate field of vision is a requirement for a British driving licence.

Some patients will be used to having a photograph taken of the back of the eye. "It's an objective record of what things look like," explains Dr Blakeney. Now ocular computed tomography is becoming more common and will be particularly useful for spotting swelling in the macular region, suggesting the start of AMD.

But eye tests aren't just important for vision or specific eye-related health issue. Using an ophthalmoscope, optometrists can examine blood vessels to see if any capillaries have thickened, narrowed or burst, which would be due to high blood pressure.

If the damaged capillaries are in the retina - known as retinopa-

thy - it could indicate diabetes, with high blood sugar the culprit behind swelling, leaks of fluid into the eye and burst vessels.

Both conditions are much more likely to be detected in your GP's clinic, says Dr Blakeney, adding "only blood tests are definitive", but high blood pressure, in particular, should be monitored.

Dale Webb, director of research and information at the Stroke Association, explains: "High blood pressure is a leading risk factor and contributes to over half of all strokes in the UK.

"It puts a strain on all blood vessels, including the ones leading to your brain. This makes a blockage more likely to develop or a blood vessel in the brain to weaken and bleed, both of which could cause a stroke."

Dr Webb adds: "Visual problems are a huge issue; 60 per cent of stroke survivors will be affected, with problems such as loss of central or peripheral vision or impaired eye movement.

"Unfortunately, we know that one in three stroke survivors aren't warned this could be a problem or that there is treatment to help. So it's worth talking to your optometrist if you're concerned. They can provide information, basic screening and refer you back into health-care via your GP to a specialist ophthalmologist in hospital."

#### CHILDREN'S EYE HEALTH

Optometrists could also pick up a serious disease in children: retinoblastoma or eye cancer, which affects up to 50 under-fives every

### SEVEN TIPS FOR HEALTHY EYES

- HAVE A COMPREHENSIVE EYE TEST**  
Visiting your optician for a comprehensive dilated eye test is the only way to really ensure your eyes are fine. When it comes to common vision problems, some people don't realise they could see better with glasses or contact lenses. In addition, many common eye diseases, such as glaucoma, diabetic eye disease and age-related macular degeneration, often have no warning signs. An eye test is the only way to detect these diseases in their early stages.
- KNOW YOUR FAMILY'S EYE HEALTH HISTORY**  
Talk to your family members about their eye health. It's important to know if anyone has been diagnosed with a disease or condition since many are hereditary.
- EAT RIGHT TO PROTECT YOUR SIGHT**  
You've heard carrots are good for your eyes. But eating a diet rich in fruits and vegetables, particularly dark leafy greens, is important for keeping your eyes healthy too.
- WEAR PROTECTIVE EYEWEAR**  
When playing sports or doing activities around the home, wear protective eyewear. This includes safety glasses and goggles, safety shields and eye guards specially designed to provide the correct protection for certain activities.
- QUIT SMOKING OR NEVER START**  
Smoking is as bad for your eyes as it is for the rest of your body. Research has linked smoking to an increased risk of developing age-related macular degeneration, cataract and optic nerve damage, all of which can lead to blindness.
- GIVE YOUR EYES A REST**  
If you spend a lot of time at the computer or focusing on any one thing, you sometimes forget to blink and your eyes can become fatigued. Try the 20-20-20 rule: every 20 minutes, look away about 20 feet in front of you for 20 seconds. This can help reduce eyestrain.
- CLEAN YOUR HANDS AND YOUR CONTACT LENSES - PROPERLY**  
To avoid the risk of infection, always wash your hands thoroughly before putting in or taking out your contact lenses. Make sure to disinfect contact lenses as instructed and replace them as appropriate.

Source: National Eye Institute

### Q&A

## KEEP YOUR EYE ON THE BALL

Eye tests are not just about improving vision, but also a barometer for overall health. Yvonne Gordon asks optometrist Omar Hassan about maintaining eye health, and the role of eye tests in detecting and preventing disease



- Q WHY IS IT IMPORTANT FOR THE PUBLIC TO BE AWARE OF THE IMPORTANCE OF EYE TESTS?**  
**A** Eye tests should form part of an individual's routine health check. We all value our sight yet few of us have our eyes examined regularly. Eye tests are the most important preventative measure of detecting vision issues early on, which means a greater chance of successful treatment. Without regular eye tests, eye conditions, which could be easily and simply managed, could go unnoticed.
- Q WHAT ABOUT CONDITIONS ELSEWHERE IN THE BODY?**  
**A** The eye is often regarded as a window into an individual's general health as it is an organ where blood vessels can be viewed without invasive procedures. Assessment can highlight problems with blood pressure, diabetes and potential heart issues, as well as indicating brain abnormalities and certain cancers.
- Q WHAT CAN THE LATEST EYE TECHNOLOGY PICK UP REGARDING EYE HEALTH?**  
**A** Increasing use of the fundus camera and a non-invasive 3D imaging test, known as optical coherence tomography (OCT), mean optometrists can fine-tune detection of certain eye conditions. Historically, these were picked up through physical assessment of the retina which is still very important. But new instruments enable scans behind the visible rear eye giving an even more thorough assessment of potential problems.
- Q HOW CAN WE MAINTAIN EYE HEALTH IN DAILY LIFE?**  
**A** A good diet always helps. Evidence suggests we can maintain healthy eyes by eating walnuts, seeds and fish, such as salmon or sardines rich in Omega 3 fatty acids. Also green leafy vegetables, such as spinach, broccoli and kale, which contain eye-enhancing carotenoids, may delay the onset of some eye conditions. Avoid smoking which is proven to cause the eye to deteriorate more rapidly.
- Q WHAT ARE SOME OF THE WAYS THAT EYES CHANGE WITH AGE?**  
**A** It is perfectly normal for eyes to change with age, such as when a child becomes more shortsighted or an adult finds close-up reading harder. Usually this has no impact on general health. But any effect these conditions may have on vision can largely be managed by wearing glasses or contact lenses.
- Q AND FINALLY...**  
**A** The one thing we should do is have regular eye tests whether or not we are having vision problems. No one needs to be afraid of having an eye test. They are painless and only take 20 to 30 minutes every two years, unless advised otherwise by your optometrist. Always follow professional eyecare advice and never take your vision for granted.

## Some 20 million of us fail to have our eyes checked once every two years

So what does a modern eye test involve? Susan Blakeney, College of Optometrists' spokeswoman and a practising optometrist in Kent, explains: "The main thing we do is check your vision; the lens in the eye becomes stiffer with age, so everyone will experience some change and probably need help for reading if nothing else. But we also check that your eyes are aligned and work well together."

However, making sure your focus is perfect isn't the only point of a

"We test for glaucoma using a puff test, which measures pressure in the eye. And we look at the nerve at the back of the eye using an ophthalmoscope, which has a bright light and strong lens," says Dr Blakeney.

When optometrists look into the eye, they can see all its structures - from whether a cataract is developing to retinal damage, which might point to AMD, or even swelling, which could indicate a brain tumour.

A visual field test, which measures peripheral vision, is also car-

# Making it easier to look after your sight

vision ~~express~~

This week is National Eye Health Week when eyecare charities, organisations and health professionals from across the UK join together to promote the importance of eye health and the need for regular sight tests and eye health checks

Some 1.5 million people have their eyes tested with Vision Express every year. But research by the Eyecare Trust shows many more people need an eye test than have one: 85 per cent of adults in the UK admit to having problems with their vision, but 40 per cent have taken no action to address it.

"Our customers value our expertise in eyecare," says Jonathan Lawson, chief executive of Vision Express. "Often people don't realise they need an eye test. Many recognise the importance of eye health, they have a concern about their vision, particularly as they get older, and yet the majority of people do nothing about it. One of our biggest challenges is educating people that an eye test is an important way to maintain eye health. The key part of coming to see our professionals for an eye test is that they can provide expert guidance on vision and eye health."

The NHS recommends most people have an eye test every two years. Yet figures from the Eyecare Trust show 8 per cent of people have never had an eye test – a problem that Omar Hassan, head of professional services at Vision Express, says their optometrists know only too well.



White City, London, falls within the Hammersmith and Fulham clinical commissioning group, which ranks seventh in the country for low uptake of free NHS eye tests

"I'm an optometrist and from experience people get used to what they can see. But often eye conditions don't start to cause symptoms unless they are at a far advanced stage," he says. "The message we want to give to the general public is have an eye test. An eye test doesn't just check vision; it is an important part of a general health check. With over 100 types of

test, we can detect indicators of conditions, such as high cholesterol, high blood pressure, diabetes and increased risk of stroke. Any problems our optometrists pick up during an eye test can be referred to the relevant healthcare professional."

To address the nation's worsening eye health, between September 19 and 25, the Vision Express Vision Van will visit London, Newcastle, Liverpool, Norwich and Birmingham to offer extra support and services

People could be missing out on eye tests because of misconceptions about cost. The NHS provides free eye tests for 30 million people in the UK – children under 18 and in full-time education, over 65s and people with certain eye or health problems. But research by the Eyecare Trust shows 37 per cent of people put off having an eye test due to concerns about cost. The effect is greatest on the most vulnerable. For example, NHS statistics published in 2013 showed only 19 per cent of children had a free eye test – a ten-year low.

To address the nation's worsening eye health, between September 19 and 25, the Vision Express Vision Van will visit five cities – London, Newcastle, Liverpool, Norwich and Birmingham – to offer extra support and services to protect people's eye health. Expert optometrists on board the Vision Van will be offering free, comprehensive eye tests.

The Vision Van is part of Vision Express' commitment to safeguarding the UK's future eye health, following the hard-hitting campaign launched earlier this year: Vision. Taken Seriously.

Vision Express is also partnering with the Stroke Association and the Macular Society to help raise aware-

ness of these eye health-related conditions. Stroke Association figures show 60 per cent of stroke survivors – some 700,000 people in the UK – experience vision problems after a stroke. Glaucoma and age-related macular degeneration, both of which can be detected by an eye test, are the biggest causes of preventable sight loss, yet 72 per cent of people at risk don't realise it, according to research by the College of Optometry.

Vision Express' nominated charity partner is the Childhood Eye Cancer Trust. Last year Vision Express customers and employees raised more than £105,000 to support families of children with a rare eye cancer called retinoblastoma, which can also be detected by expert optometrists.

Trained to standards set by the College of Optometry, Vision Express' optometrists use the latest best-practice techniques and equipment to detect vision problems. This ongoing professional support has seen optometry trainees' pass rates at Vision Express increase from 69 per cent in 2001 to 90 per cent in 2014 – a higher than industry standard.

The commitment to staff development extends to youth employment, which Mr Lawson describes as an issue close to his heart. Vision Express runs a 13-month apprenticeship scheme and was the first retailer to join The 5% Club, an industry-led campaign to reach 5 per cent of its workforce consisting of young people on structured training schemes over the next five years.

Mr Lawson predicts that, in the future, Vision Express will provide easy and convenient ways to look after our eyes. Already a significant proportion of eye tests at Vision Express are booked online and he is confident this will grow after the groundbreaking acquisition by parent company Grand Vision of lenstore.co.uk, an online contact lens retailer. This is yet another way Vision Express will be able to help its customers make their eye health a priority.

As Mr Lawson concludes: "Making it easier and more seamless for customers to book and have their eye test is a key priority to us. We just want as many people as possible to have regular eye tests."

As an official partner of National Eye Health Week, Vision Express will be offering free eye tests through the Vision Van to help people in the UK to take their sight and eye health seriously

SEPTEMBER  
22<sup>nd</sup>

Vision Van:  
London,  
Wood Lane,  
Westfield White  
City, W12 7GF

SEPTEMBER  
23<sup>rd</sup>

Vision Van:  
Liverpool,  
Williamson  
Square,  
L1 1EL

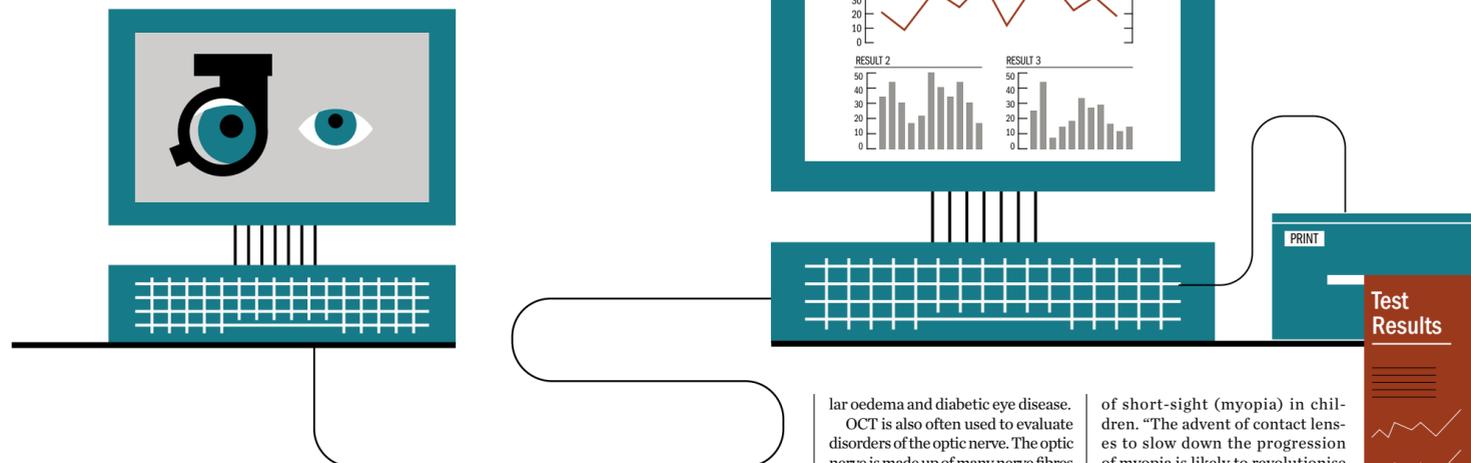
SEPTEMBER  
24<sup>th</sup>

Vision Van:  
Norwich,  
The Forum,  
Millennium Plain,  
NR2 1TF

SEPTEMBER  
25<sup>th</sup>

Vision Van:  
Birmingham,  
Victoria Square,  
B1 1BD

# FUTURE VISION OF TECHNOLOGY



With increasingly sophisticated technologies, eyecare professionals have never been better placed to offer the highest standards in eye healthcare, as Nicky Collinson reports

Walk into any ophthalmic consulting room today and you're likely to find an Aladdin's cave of high-tech ophthalmic instruments capable of delving into the eye's structures to assess eye health and underlying health conditions.

Catharine Chisholm, former president of the British Contact Lens Association and clinical affairs manager for Topcon Medical GB, explains: "We are moving into a new age in eye healthcare where advances in imaging technology are enabling opticians to spend less time taking measurements, and more time analysing the findings and providing patients with a tailored management plan.

"Instruments for measuring the pressure inside the eye or photographing the back of the eye, for example, are now so automated and user-friendly that other members of staff can be trained in their use, further freeing up valuable consultation time for the patient," says Dr Chisholm.

One of the most important structures of the eye to be assessed during the eye test is the retina. Using a digital fundus camera, your optician can attain a snapshot of the interior surface of the eye, including the retina, optic disc, macula and posterior pole (the fundus).

The test requires the patient to sit at the fundus camera with their chin in a rest and forehead against a bar. The optician focuses and aligns the camera then a flash

goes off as the shutter is pressed, and a fundus photograph created. The resulting retinal photographs can then be used to follow, diagnose and monitor eye diseases.

"It's true that 'a picture is worth a thousand words' and digital retinal photography creates a library of images for the patient that can be compared and reviewed on successive visits," says Amanda Danson, optometrist and clinical director at Birmingham Optical. Such technology forms the backbone of diabetic retinal screening services.

## EARLY DETECTION

In addition to hospital eye departments, a growing number of optical practices now also offer the more sophisticated imaging technology of optical coherence tomography (OCT). "This enables the retina to be reviewed in extraordinary detail – to not only see what is on the surface but, more importantly, to see any changes in the layers beneath where many conditions can be detected at an earlier stage," says Ms Danson.

Most commonly used by ophthalmologists, OCT is a rapid, non-invasive imaging test that uses light waves to take cross-sectional, 3D images of the retina. With OCT, each of the retina's distinctive layers can be seen, allowing the clinician to map and measure their thickness. These measurements help with the early detection, diagnosis and treatment of retinal diseases and conditions, including macular degeneration, macu-

lar oedema and diabetic eye disease.

OCT is also often used to evaluate disorders of the optic nerve. The optic nerve is made up of many nerve fibres and sends signals from your retina to your brain, where these signals are interpreted as the images you see. The OCT exam is helpful in determining changes to optic nerve fibres, such as those caused by glaucoma.

An additional benefit of OCT is that it allows some patients to visit their local optometrist for in-depth analysis rather than travelling to hospital. "Some optometrists are sharing retinal images or scans with hospital ophthalmologists if they are uncertain about whether to refer, thus increasing patient access to expert knowledge without the patient necessarily having to travel to the hospital," adds Dr Chisholm.

## THROUGH A CONTACT LENS

But it's not just developments in ophthalmic imaging that are leading to better eye healthcare. Advances in contact lens technology have improved both comfort and vision, with lenses to correct distance and near-vision now widely available, meeting the needs of our ageing population.

"When wearing contact lenses, there are no glasses frames 'in the way' – so all in all they offer a more convenient, restful and effortless way to see clearly," says Mark Chatham, contact lens optician and clinical specialist at CooperVision. "And, of course, there is the great flexibility which comes from having a different look for different occasions."

Big news in the contact lens world right now is the development of lenses that slow the development

of short-sight (myopia) in children. "The advent of contact lenses to slow down the progression of myopia is likely to revolutionise children's eyecare in the next few years," Dr Chisholm predicts.

"Although myopia cannot be prevented, reducing its progression may have significant implications for the risk of eye disease later in life – something that will undoubtedly have an impact at a public health level too."

We are moving into a new age in eye healthcare where advances in imaging technology are enabling eyecare professionals to provide patients with a tailored management plan

Other potentially revolutionary developments on the horizon include anti-allergy contact lenses, and lenses capable of monitoring diabetes and glaucoma. Even Google is getting in on the act by working with pharmaceutical giant Novartis to develop a "smart" contact lens featuring non-invasive sensors, microchips and other miniaturised electronics to address ocular conditions.

Whatever comes next, developments in eyecare technology are already offering a world of possibilities to improve vision and eye health – many of them at the mere click of a shutter. ■



# 50% of sight loss is preventable.

But early detection is key to prevention. By caring for your eye health, vision can last a lifetime.

This is why we fund charities such as the Macular Society and the Childhood Eye Cancer Trust who conduct vital medical research. These partnerships are inspired by our ambition to improve the nation's eye health.

Your eyes are amazing, and we want to keep them that way.

And our eye tests don't just assess your eyes. Thanks to our partnership with the Stroke Association, our optometrists could identify signs of high blood pressure that may put you at risk of a stroke.

So eye tests are important. Book yours today.

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