Opthalmology Q&A

Opthalmology

If you are housebound you are entitled to a home visit by an optician. Not all optometrists make home visits. Specsavers, The Outside Eye Clinic and some independent optometrists make home visits to the housebound.

If you are over 60 years old or qualify for means-tested benefits such as income based Employment and Support Allowance you are eligible for a free sight test at home as well as a voucher towards the cost of a new pair of glasses. You are also eligible for a free sight test if you or a family member suffer from certain conditions which may affect the eye such as glaucoma or diabetes.

OPTHAMOLOGY QUESTION AND ANSWER

Mr John Breakwell BSc, FBOA FSMC has over 40 years' experience working as an optometrist in private practice and from within the NHS at University Hospital Coventry and Warwickshire. He has a specialist interest in diabetes and its impact on the eye and contact lenses. He has served as an examiner for The British College of Optometry since 1979.

Mr Breakwell has kindly put together some preliminary notes on ME and ophthalmology before answering the questions.

<u>Notes</u>

Myalgic Encephalomyelitis ME is a complex, chronic medical condition with an unknown cause. There is no established diagnostic test and so the diagnosis is established based upon clinical criteria; Severe fatigue, pain, deterioration of symptoms following exercise, sleep disturbances and associated neurological, endocrine and immunological abnormalities. The ophthalmic problems that the patients describe are part of the neurological complications that define the disease.

Neurological/ Cognitive Dysfunction.

There are a number of ophthalmic manifestations that are not present in all cases and of course vary in severity between patients. The visual abnormalities are common in patients with ME. In a variety of studies it has been reported that 60-70 percent of patients describe one or more of the following:

- *Eye pain*
- *Sensitivity to bright light*
- *Loss of the ability to focus*
- *Loss of depth perception*

The cause of these symptoms are not known, studies have shown variations in brain wave activity and blood flow within the brain but are inconsistent and not diagnostic.

There are autonomic/endocrine manifestations and whilst a lot are related to blood pressure control, heart rate, sweating, bowel and bladder function, changes in pupil diameter are under, in part, the control of the sympathetic nervous system.

The cause of ME is unknown, although a viral illness is often described prior to the onset of symptoms, although ME has also been described after surgery, anaesthetics, major illness and on occasions no precipitating factor identified. Although there have been studies looking at changes in the immune system in patients with ME that found subtle changes there has been little consistency in the findings. Although there are theories that the immune system has been affected possibly triggered by a viral illness there is no definitive evidence.

I could not find any studies describing macular degeneration or optic atrophy as any consistent finding in ME. A lot of the symptoms are related to an imbalance in how the patient perceives sensory stimuli (sensory overload) but there is no evidence of overt neurological damage that can be detected. This does not mean to say it does not exist but probably means we do not have the tools yet to detect it.

Q & A

DISCLAIMER These are the personal opinions of Mr Breakwell

Q1 What does having a sight test at home entail?
It is always preferable to have a sight test in a practice environment because the optometrist will have access to many more tests and equipment that might be required so I would always recommend this if it is at all possible. At present many optometrists (including myself) cannot offer testing at home because of the Covid-19 pandemic and the rigorous safety regulations required. However, some larger concerns are still offering a service and if there is no alternative they will come to your home. They will test your eyes, checking the health as described previously and refract them to establish if new spectacles are required. They will bring spectacle frames for you to select and fit them if necessary. They can also initiate onward referral if needed.

Q2 Why is it advisable to have your eyes tested every two years?
Eye examination is advisable regularly for all ages but those over 35 are especially vulnerable to ocular conditions that would benefit from a sight test. The major conditions that require monitoring are Cataract, Glaucoma, Diabetes, Dry Eye, and Macular Disease all of which may be discovered during an examination. The detection of Refractive problems**,** i.e. detecting whether a corrective prescription would be required is, of course, the core purpose and uncorrected errors often produce many symptoms; headaches, eye strain, blurred vision, migraine symptoms, and double vision that would benefit from spectacle wear.

Q3 Due to my ME I have to prioritise which medical appointments I take up. Is there a point in my life when sight tests should be my priority?
ME is primarily a neurological not an ophthalmological problem so physician appointments should be your priority but having said that anyone over the age of 35 will greatly benefit from an eye examination.

Q4 What can an optometrist learn about your overall health and potential other health conditions from looking into your eyes?
Early signs of Diabetes, Hypertension, Anaemia, Ocular Tumours, and other Neurological problems have been found during a routine eye examination.

Q5 Have you seen common occurrences when examining the eyes of people with ME?
The most common problem reported is light sensitivity as mentioned in my notes this is now thought to be due to a sensory overloading in certain areas of the brain**.** Loss of focussing ability and depth perception are also common findings. MS sufferers often show some optic disc changes and it has been postulated that ME sufferers might also show some changes but this has not been shown in any of the current literature and as this is a very subjective observation it has to be discarded.

Q6 What eye symptoms warrant speaking to a doctor or ophthalmologist promptly?
Sudden onset of loss of vision (partial or complete) in one or both eyes, painful eyes especially if severe acute redness is present, intractable diplopia (double vision that is constant), Severe trauma.

Q7 I suffer a lot from headaches and migraines. Is there anything you can suggest to help?
A sight test is essential and most GPs would send you to the Optometrist to rule out uncorrected refractive errors. A pale tint in the spectacles can help with some patients. Normal discussions with your GP regarding which medications might help are important as is examining what stimulates the problem. (Certain foods, exercise, stress, ambient lighting, ergonomic considerations at work etc)

Q8 Is it more difficult for people with ME to adapt to wearing varifocals? I am loathed to spend a significant amount of money on lenses which may not be successful, or which may need the prescription altering frequently?
There is nothing in the literature suggesting ME patients should not wear varifocals but every case does present a different set of problems. ME patients do, however, tend to vary more frequently in their refraction so there is a cost implication from this. Eye movements and head position have to change continually with varifocals to bring the optimum image before the eye and even this exercise could arise in more fatigue for the patient and if stress levels are also increased pain could be an obvious outcome.

Q9 I have a cataract on both eyes. Is there an alternative to silicon lenses (implants)? I am also allergic to the eyedrops prescribed. Is there a way around this?
This problem needs to be discussed with your Ophthalmologist. There are alternatives to implant surgery, (which are silicon), Contact lenses (not silicon hydrogels) or high powered spectacles could be used post surgery. Allergy to certain drops does occur but there are usually alternatives that your surgeon could utilize.

Q10 I suffer from dry eye syndrome. What would you recommend for this?
There are very many different lubricants available now and what suits one person may not suit another, they differ in viscosity, tonicity, acidity and concentration. As a general rule the non-preserved lubricants are preferrable especially initially.

Q11 I am diabetic but my ME is so severe I cannot leave the house so cannot access diabetic screening. In this situation what is my best option?
Diabetic Screening is when a trained professional checks the retina of diabetics to monitor fine changes in the vascular meshwork within the eye usually through dilated pupils so that

the peripheral retina can be seen more clearly. Small haemorrhages and exudates are common in long-standing diabetics, some can be treated (usually by changing medication or sometimes with Laser therapy) and are referred on.

Commonly a digital photograph is taken and compared with previous images but the camera is large and not used for Domiciliary visits. I would suggest your best option is to find an Optometrist who will come out to visit you for a full eye examination and then perform a full Ophthalmoscopy examination through dilated pupils.

Q12 I have monthly disposable contact lenses, (these were prescribed before I had severe ME.) I sleep about 14 hours a day. Is it a good idea to continue with the lenses?

At present I would say no as you might overwear if you sleep in them. As you recover may I suggest moving into daily disposables when you will always have "clean" lenses to insert and give less infection risks.

Q13 Is there anything I can do nutritionally to prevent age related macular degeneration and if so would I need to have been eating it all my life?

It has been established that certain anti-oxidants in our diet do seem to inhibit the initiation and progress of certain age related maculopathies. These chemicals are found more abundant in some vegetables and fruit (eg spinach, spring greens, cabbage, blueberries, pomegranate etc)

Family history of macula problems is also very important and contributes tremendously in the process. The AREDS2 study in the USA found that the regulated anti-oxidant vitamins and minerals supplement does have an advantage over random food intake because of controlled dosage. I personally advise that taking supplements (Lutein based such as Macushield) does seem to help in retarding the progression of dry AMD changes especially with known family history and who have difficulty with taking the specific fruit and veg.

This is still a highly debated topic and whether you need to have been "eating your greens" forever I do not know.

Q14 Do we know why people with ME suffer from photophobia (light sensitivity)?

It is neurological in origin, refer back to the notes and above.

Q15 I am photophobic and suspect I would not be able to tolerate the light you use during a sight test. Is there any point in having my eyes tested in this situation?

It would make eye examination very difficult but my advice would be to try and tolerate the few minutes it would take. The time element would be minimised if you sought out a practice that had both a fundal camera and an autorefractor as these procedures would generally take less time but more intense light would be used.

Q16 What other medical conditions is photophobia associated with?

Many and this is probably better dealt with by a medical physician. As far as the eye is concerned acute internal infections, closed angle glaucoma, progressing cataract, acute corneal or conjunctival changes, and trauma can all produce photophobic problems.

Q17 Would permanently dilated (enlarged) pupils cause photophobia?

Yes they might but as a neurological problem, pupil reflexes could be affected by ME and dilation might occur because of involvement of the mid brain with ME (sensory overload

again)
It would be difficult to differentiate between “normal” large pupils with a sluggish response and ME implications neurologically.

Q18 I am very sensitive to light. My optician prescribed a spectacle lens with an 89% tint. I wear them all the time. However, I still have to keep the curtains drawn and despite this the light coming through the curtains still hurts my eyes. Is there anything else that could be done to help this pain?
Optically no unfortunately but discussion with your GP might help to look at pain relief, certain medications can be effective in reducing such symptoms. Perhaps a neurologist would probably be in the best position to advise you.

Q19 I have heard that there are some spectacle lenses, soon to be available, which will dramatically cut blue light compared to what is available now. I would like to know more about this.
Lenses are available now that block uv wavelengths at the blue end of our spectrum (400-470 nm) These wavelengths can be emitted from Digital screens (TV, Tablets, smartphones, PCs). The jury for me is out at present as to the optical advantages of such lenses but some Opticians believe they help. I believe that the digital screen manufacturers will be forced to produce products that inhibit these emissions and render such lenses no longer necessary, but in the meantime you can expect a “hard sell” in the media in the near future.

Q20 My son has severe ME. He had three weeks when he was so weak, he was unable to lift his eyelids even when he was awake. His eyes and eyelids were very painful. Our GP was concerned the eyelash glands would become affected and recommended frequently bathing with cooled boiled water making sure water went into the eye. He found this very painful. How would you suggest managing such an episode?
My first concern with such a problem would be to rule out the possible co-morbidity of Myasthenia Gravis which can produce ptosis (droopy lids), another neurological disease.
I would never recommend boiled tap water because you do not know which chemicals and organisms that may still be present even after boiling. I think it would be preferable to use an unpreserved eye lubricant in vial form (eg Celluvisc, Systane, Thealoze Duo) Much more soothing for the eyes and free from preservatives which may cause irritation.

Q21 I am a care worker caring for someone with ME, I need to wear a mask to reduce the transmission of Covid 19 but then my glasses steam up and I can`t see properly. Is there anything you can recommend to stop my lenses steaming up?
I`m also in PPE for about 7 hours a day at present! My best tip is to micropore tape the top of your facemask to your face which prevents the hot breath going up into your eyes, this also inhibits face mask dry eye which is also very annoying. Unfortunately when you remove the tape you also tend to remove a layer of skin --not the best look. There are also commercially available clothes and sprays to put on your spectacles the best being a product called “No Fog”
but I found this of limited value but my receptionists find it very useful and use it whilst working in facemasks and spectacles.

We would like to thank Mr Breakwell for taking the time to answer the questions