

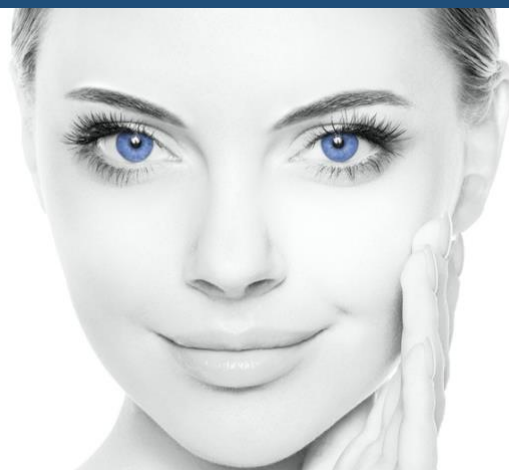


The Eye Doctor Clinical InSights

Dry Eye January

Topics in this issue >>>

- How prevalent is Dry Eye Disease
- Can Dry Eye Disease cause blindness?
- Can bacteria exacerbate dry eyes?
- Why choose Sterileyes®?



NOT A DRY EYE IN THE HOUSE

The Body Doctor, a family run business, celebrates 10 years of supplying innovative solutions to the eyecare industry around the world.

As winners of the Queen's Award for Innovation, we are delighted our patent has been granted for Sterileyes®. Sterileyes® is an antibacterial shield bound to the fibres of our fabrics, clinically proven to reduce bacteria by 99%.

Our Sterileyes® fabric is antimicrobial to leading causative microorganisms of eye infections associated with dry eye development. Sue Grant, Managing Director of The Body Doctor adds: "There are many false claims surrounding bacteria on compresses, we are led to believe that heating a compress will eliminate all bacteria but this is false. It is also believed that if the compress filling has antibacterial properties, bacteria will not survive on the cover applied to the eyes which is also wrong. In addition, most compresses

now offer hot and cold usage and of course, no bacteria are killed when using cold. After a long arduous journey, through trials and testing, we feel our concerns for patients recommended a compress laden with bacteria have been borne out. Particularly in this new world where people are more aware than ever of the risks of transference of bacteria and viruses. Several years ago we undertook the challenge of providing the safest, cleanest and most cost-effective treatment available for patients suffering with MGD, Blepharitis and evaporative Dry Eye Disease. We are delighted that this journey has concluded with the grant of the patent to do just that."

The Eye Doctor, Class 1 medical device, rigorously tested, including BS8433:2004, REACH BSEN14362-1/2 Pesticides, EN71 PT3.



Dr. Colin Parsloe

Consultant Ophthalmologist

Can Dry Eye Disease cause blindness?

"Yes, I believe this link has been shown in reports such as the DEWS report of 2007, other references to this can be found in certain textbooks (10) and in popular optometry and optician journals. The link between Dry eye Disease and loss of vision from Microbial keratitis is not an absolute as there are other innate immune mechanisms that do assist to protect the eye, however, it is believed that having Dry Eye Disease, and in particular severe Dry Eye Disease, is a risk to developing corneal infections."

Why is an Antibacterial Hot Compress such an important evolution in managing Dry Eye Disease?

"There is research showing that reducing the bacterial load in subjects with anterior blepharitis or MGD significantly improved the clinical picture of the eyelid margin tissues including the Meibomian glands. (1) It is argued that in order to treat Meibomian gland disease you need to reduce the bacterial load – indeed Suzuki T propose that systemic (tablets) antibiotics are required for treatment to be successful (2). It is clear in conditions such as dry eye disease, there is an increase in the number of bacteria. Zhang et al conclude that this contributes to the disease process (3). It has also been shown that 'the severity of MGD was positively correlated with a higher isolation rate, a greater number of bacterial species, and a higher grade of bacterial severity, which implied that MGD might be correlated with bacterial changes.' (4) When looking at the difference in bacteria between healthy people and people with MGD, it was found that those suffering from MGD have a higher bacterial load. The bacteria produce specific toxins that can contribute to dry eye disease. (5) It has been shown that those with the most severe disease had the highest level of infection of Staphylococcus bacteria. (6) It is recognised that contamination of hot compresses used as management for MGD may "exacerbate" this condition. (7) It is abundantly clear that the higher the bacterial load in the eye, the more likely it is that their dry eye disease will be more severe. We are therefore confident to say that the device with the lowest number of bacteria will be the best product to use."

(10) Yanoff M, Duker JS, Augsburger JJ. Ophthalmology. St. Louis, MO: Mosby; 2004. p. xxii.p. 1652.
 (1) Guillon M, Maissa C, Wong S. Eyelid margin modification associated with eyelid hygiene in anterior blepharitis and Meibomian gland dysfunction. Eye Contact Lens. 2012;38(5):319-325. doi:10.1097/CLC.0b013e318268305a
 (2) Suzuki T. Inflamed Obstructive Meibomian Gland Dysfunction Causes Ocular Surface Inflammation. Invest Ophthalmol Vis Sci. 2018;59(14):DE594-DE5101. doi:10.1167/iov.17-23345
 (3) Zhang X, Wang Y, Qu Y, et al. Dry Eye Management: Targeting the Ocular Surface Microenvironment. Int J Mol Sci. 2017;18(7):1398. Published 2017 Jun 29. doi:10.3390/ijms18071398
 (4) Jiang X, Deng A, Yang J, et al. Pathogens in the Meibomian gland and conjunctival sac: microbiome of normal subjects and patients with Meibomian gland dysfunction. Infect Drug Resist. 2018;11:729-740. Published 2018 Oct 11. doi:10.2147/IDR.S162135
 (5) Zhang SD, He JN, Niu TT, et al. Bacteriological profile of ocular surface flora in meibomian gland dysfunction. Ocul Surf. 2017;15(2):242-247. doi:10.1016/j.tos.2016.12.003
 (6) Dong X, Wang Y, Wang W, Lin P, Huang Y. Composition and Diversity of Bacterial Community on the Ocular Surface of Patients With Meibomian Gland Dysfunction. Invest Ophthalmol Vis Sci. 2019;60(14):4774-4783. doi:10.1167/iov.19-27719
 (7) Bilkhu P, Wolfsohn JS, Hilton A, Matthews C, Legood S, Riley L. Microwave decontamination of eyelid warming devices for the treatment of meibomian gland dysfunction. Cont Lens Anterior Eye. 2016;39(4):293-297. doi:10.1016/j.clae.2015.12.001

Dr Fayyaz Musa Consultant Eye Surgeon

Can bacteria exacerbate dry eyes?

"Our skin in normal circumstances contain a large variety of resident bacteria; the most common group are called Staphylococci. It is when this bacteria becomes excessive or migrates to places they're not normally found that they can start to cause infections. Medical studies have found that abnormal quantities of Staphylococci have been found in 50% of patients with dry eye; in normal patients this is only 8%. Other studies have reported that 75% of patients have had Staphylococcal Blepharitis in conjunction with dry eye. It is thought that a decrease in antibacterial properties of the tear film such as Immunoglobulins and Lysozyme can predispose patients to this condition. The bacterial toxins that are excreted are thought to be a major cause of the inflammation. The inflammation then reduces the normal lubricating and nourishing function of the eyelids resulting in irritation and dryness of the eyes. Demodex is another type of organism that can cause chronic Blepharitis. Treatment for this cause of Blepharitis is usually with Tea Tree oil based remedies, such as The Eye Doctor's Tea Tree Oil Eyelid Wipes. These are biodegradable and individually wrapped – ideal for daily eyelid hygiene. Eyelid cleaning on a daily basis and in a specific fashion is essential to help maintain healthy eyelids."

If you would like to feature as a guest speaker in our next newsletter, please contact Zerqa Maikl, Optical Director at The Body Doctor: zerqa.maikl@the-body-doctor.com



Sterileyes®

Patented Antibacterial Protection

Sterileyes® is an antibacterial shield bound permanently to the fibres of the fabric on all Eye Doctor eye compresses. Clinically proven to reduce potentially harmful bacteria by up to 99.9%, this patented, stay-fresh technology inhibits the growth of odour-causing bacteria. Sterileyes® does not interfere with your skins natural bacterial flora.

WHY RISK IT?

Andrew D Price FBDO(Hons)CL MBCLA
Why choose Sterileyes®?

"It has long been thought that the normal heating of a hot eye compress to a therapeutic temperature is sufficient for sanitising the fabric and the filling each time it is used, providing a safe level of micro-organism reduction after collecting potential pathogens from the patients previous use. There is now a wealth of evidence regarding the limited effectiveness of microwaving in reducing the range and concentration of potential pathogens. Not only do these pathogens pose a risk of eye infection or even blindness, but they release toxins that adversely affect lipids – the very thing we are trying to improve. It was this concern that led The Body Doctor to develop their unique antibacterial technology. I have a duty to not only provide the safest, but also the most effective warm compress available to my patients, so I can only choose products with Sterileyes®".

