

# Clemson Eye News

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Quarterly Report for Health Care Professionals Delivering Eye Care

## Advanced Treatment for Dry Eye

By Dr. Brian Johnson



Dry Eye affects an estimated 25 million

Americans and is the most common reason for a visit to an eye specialist. It is a complex disease involving the tear quantity, quality, inflammation, and eyelid oil or Meibomian Gland Dysfunction (MGD). There are several dry eye symptoms such as a stinging, burning or scratchy sensation in your eyes, stringy mucus in or around your eyes, sensitivity to light, eye redness, difficulty wearing contact lenses, difficulty with nighttime driving, and watery eyes, which is the body's response to the irritation of dry eyes.

### Causes

Over the past 15 years, research has revealed that Meibomian Gland Dysfunction is the leading cause of eye discomfort for over 86% of patients with Dry Eye. The Meibomian Glands of the upper and lower lids play one of the biggest roles in dry eye symptom management. The Meibomian glands produce specific lipids (a clear oil) that coat and cover the tears which prevents them from evaporating. The meibomian glands can get obstructed with bacteria, cholesterol, debris, allergens and even make-up. Additionally, incomplete blinking caused by staring at devices such as computers and smart phones can lead to the glands being obstructed.

Other causes include age, medications, health and environmental conditions, and contact lenses. It is more common

in women than men. Dry eye occurs when there are insufficient tears to provide adequate moisture or when the tear film over the eye is of poor quality.



Photo of Meibomian Glands

**“Unaddressed, dry eyes can become symptomatic and cause significant discomfort as well as decreased or fluctuation vision. Permanent changes can occur to the cornea and structures of the eyelid, leading to irreversible damage.”** says Dr. Brian Johnson, Ophthalmologist at Clemson Eye.

### Testing

Several tests are used to determine if MGD is causing Dry Eye. Meibography enables critical analysis of the structural integrity of the lipid producing glands of the lid. The Meibomian Gland Evaluator measures the function of the glands during normal blinking. This test also examines the quality of the meibomian secretions and helps to establish a course of treatment. The Light Test diagnoses whether the lids are properly



Mary Louise Parisi, Chief Executive Officer of Clemson Eye Visual Health and Surgery, speaks about the KAMRA eye device.

### KAMRA

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son, Anderson, Easley and Greenville, but KAMRA is only performed at its new office, Clemson Eye's Center for Visual Health & Surgery, a 19,000-square-foot, \$4 million facility on Pelham Road.

Moore says it's great to be able to read without glasses.

"It was just inconvenient because you had to have reading glasses at times, and you may not have them with you," he said. "After (KAMRA), you don't have to take reading glasses everywhere you go."

During his procedure, Moore said

And should there be trauma or disease in the eye at some point, or if the patient doesn't adjust, the inlay can be removed, she said.

The procedure, which is not covered by insurance, costs \$4,500, Parisi said.

As with any surgical procedure, there are potential risks.

## Kamra Corneal Inlay

The Greenville News recently featured an article on the advanced procedure that has been shown to improve near vision, the Kamra Corneal Inlay. While Lasik surgery improves distance vision, Kamra is a surgical solution for presbyopia. During the 20-minute procedure, the eye surgeon uses a laser to make a pocket in the cornea of the non-dominant eye, and inserts the inlay, which works like a small camera aperture to increase the depth of focus. If you or your employees are frustrated with reading glasses, then we would like to invite you to schedule a free consultation to find out if you are a candidate for the Kamra corneal inlay. As a professional courtesy, we are offering our medical community the procedure at half price so that, as an industry, we may spread the word about this exciting new treatment. Also, if you have five or more people who are interested, then we would be happy to host a private seminar at your office.

## Clemson Eye News continued

sealing to prevent exposure desiccation. MGD is a progressive disease that leaves in its wake permanent structural damage. This is because once the Meibomian Glands become clogged they begin to deteriorate. First the glands dilate, and then shorten, finally they atrophy. Therefore, our doctors routinely test for MGD.

### Treatment

Traditional treatment includes artificial tear drops and lifestyle changes, but there are some advanced therapies. During a dry eye exam, the doctor will check to see if the glands are releasing oil during the blinking process. The Lipiview® test provides an accurate digital image of the Meibomian glands and blink function. If the test shows the gland function has dropped off and there is 'Evaporative Dry Eye', then the doctor will recommend cutting edge treatment either with a LipiFlow® or other therapies such as prescription anti-inflammatories, Restasis, Xiidra, omega-3 supplements, Prokera, or punctal plugs.



Dr. Johnson treating with LipiFlow®

LipiFlow® is the only electronic device cleared by the FDA for treatment of MGD with clinical studies of safety and effectiveness. Through advances in the application of Vectored Thermal Pulsation (VTP™) technology, LipiFlow® utilizes a patented algorithm of precise heat applied to the inner eyelids with directed gentle massage to

remove blockages from the Meibomian glands. This treatment is designed to restore the natural oil flow to the tear film that covers the eye's surface and save the glands.

Overall, Dry Eye treatments may make a sufferer more comfortable and often improve the quality of vision. Anyone with symptoms of Dry Eye should visit an eye care professional specializing in Dry Eye treatment.

## What's New

LASIK uses lasers to correct vision problems like nearsightedness, farsightedness, and astigmatism. It is the most popular refractive surgery performed in the United States and considered the safest elective procedure in all of medicine. Laser vision correction gives you great vision, generally restoring 20/20 vision and eliminating or reducing reliance on glasses and contacts.

Clemson Eye is a well-respected leader in laser vision correction, having treated more than 15,000 Upstate patients to freedom from glasses and contacts. Not all LASIK procedures are created equal. Some outcomes are better than others, depending on many factors, including the equipment and technique used. In 2016, Clemson Eye purchased a topography guided laser system called Contoura Topography-Guided LASIK. It is the most advanced laser vision correction in the nation.

Recently FDA approved, Contoura is a step into the future. The system uses advanced technology to incorporate a patient's prescription and corneal irregularities into a highly customized map of their eye. It plots approximately 22,000 points of curvature on the cornea (front part of eye) versus 168 points through traditional topographers, allowing for

greater customization and accuracy in treating the prescription or refractive error. While these advancements improve surgical planning and visual outcomes for all LASIK patients, they are particularly beneficial to patients with irregular corneas caused by past surgery, eye disease or corneal scarring due to contact lens wear. Results from a recent study<sup>1</sup> exceeded expectations. When treated with a topography guided system, 92.7% of all patients achieved an uncorrected visual acuity (UCVA), that is vision without glasses, of 20/20 or better, and 68.8% achieved a UCVA of 20/16 three months after surgery.<sup>2</sup> Symptoms traditionally associated with LASIK, such as glare, halos, difficulty driving at night, light sensitivity and eye dryness, also improved after topography guided LASIK treatment. There has never been a better time to have laser vision correction.



Topography guided LASIK Scan

1. Results from FDA T-CAT-001 clinical study for topography-guided vision correction (with the 400 Hz ALLEGRETTO WAVE® Eye-Q Excimer Laser).
2. Post hoc analysis of postoperative UCVA compared to preoperative BSCVA of 230 eyes contained in the FDA T-CAT pivotal trial at 12 months. The primary end point evaluated changes in BSCVA.