

A Healthy Tear Film Equals a Happy Patient

One surgeon's standard of care for preparing the ocular surface for surgery.

BY ALISON TENDLER, MD

Although surgeons may differ in their desire to look for and treat dry eye disease (DED), they all have the same underlying goal: making patients happy. Patients will be displeased with any surgical experience if their preoperative quality of vision is poor. Good quality of vision starts with the outermost layer of the eye—the tear film.

My standard of care for treating the ocular surface has evolved with the growing knowledge of the pervasiveness of DED and how the tear film affects refractive surgical outcomes. I generally follow a few simple rules.

No. 1. BE SUSPICIOUS

I always suspect DED in my patients. For laser refractive surgery candidates, I consider patients' BCVA and their ability to achieve a visual acuity of 20/20 or better. If any letters are missed or if patients' vision is better after blinking, I question the health of the tear film. I ask contact lens wearers about their level of comfort, how many hours per day they wear their lenses, and if they have concerns. Many people who wear glasses do so because they did not like wearing contact lenses. Patients whose vision fluctuates when they read or use a computer may not only have a cataract. They may also have DED.

No. 2. LOOK CAREFULLY

I evaluate patients for ocular surface disease (OSD) simply by observing them. Are their eyes red? Do they look tired? Both can be signs of OSD. I also check if, at the slit lamp, the patient blinks normally. I pay attention to any structural eyelid concerns such as laxity, inferior scleral show, blepharitis, meibomian gland dysfunction, telangiectasias of the lid margin, and saponification. Also, I note if the tear lake is low, if the tear film is full of debris, or if the tear breakup time is inadequate. Epithelial keratitis is on my radar as well. At my clinic, I see patients after they have had a battery of

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refractive tests, including dilation, so the ocular surface has been stressed. This helps me identify patients without significant DED.

No. 3. REVIEW PREOPERATIVE IMAGES

A picture tells a thousand words, therefore, assess preoperative images very carefully to look for irregularities and inconsistencies that would indicate a disruption to the tear film. My patients undergo testing with the Marco Epic-5100 Refraction System (Marco), topography with either the Pentacam Comprehensive Eye Scanner (Oculus Optikgeräte GmbH) or the Orbscan (Bausch + Lomb), measurements with the Lenstar (Haag-Streit AG), and cycloplegic and manifest refractions in the lane. Any variation among the measurements gives me cause to pause and question why there is disagreement. For example, I would want to know why the amount of astigmatism was not consistent throughout all of the measurements. Similarly, if the axis were not consistent across all of the images, then I probably would not be able to accurately plan limbal relaxing incisions or an astigmatic keratotomy or figure out on what axis to implant a toric IOL. Variations in measurements in combination with DED can affect refractive surgeons' abilities to create the best treatment plan.

No. 4. TREAT OSD AGGRESSIVELY

I am generally conservative in my approach to treating patients. When it comes to OSD, however, I treat

them aggressively, especially when a patient expects spectacle independence and has paid for that result. Before they leave my office, laser refractive surgery patients are treated with cyclosporine 0.5% (Restasis; Allergan, Inc.) and a nighttime gel or ointment. For cases of significant lid margin disease, I add warm compresses, lid hygiene, and gland massage. I talk with the patient about the possibility of needing punctal plugs, starting omega-3 fatty acids, and using an oral medication. If their disease is minimal or mild, my patients continue this treatment until surgery and then postoperatively for 3 to 4 months. If their examination showed significant disease, then they return in 3 to 4 weeks for reassessment and repetition of all imaging to determine if the tear film is stable before proceeding with surgery.

For cataract patients, this process can be more frustrating, as the OSD can be more difficult to manage and take longer to treat. I aggressively treat cataract patients who desire spectacle independence. The effort to manage these patients' DED must continue well after cataract surgery, because many of them will need

a laser enhancement 3 to 6 months postoperatively to further improve their visual acuity.

No. 5. CONTINUE TREATMENT

One of the most common questions I am asked is how long treatment will last. I continue treatment until (1) patients are happy with their vision, (2) they do not desire or need a laser enhancement, and (3) I tell them they can stop. Overall, this takes about 3 to 4 months after a refractive procedure.

CONCLUSION

Following these rules allows me to help patients achieve their visual goals. ■

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