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March 2021

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GLAUCOMA ISSUE

By Joe Darrah, contributing editor

# A natural treatment for dry eye

The biological Regener-Eyes drops represent a “new frontier in ophthalmology.”

**T**he chronic and progressive nature of dry eye disease requires a calculated approach to the treatment pathway — a pathway that can be challenging for patients to adhere to, especially if symptoms persist or evolve. For those who have a more advanced disease, the science of regenerative medicine may represent an option to help improve quality of life.

Among the emerging products in this field is Regener-Eyes (Regener-Eyes LLC), a first-in-class sterile biologic eyedrop. The eyedrop is composed of certain types of proteins that have been shown to help reduce inflammation and allow damaged tissues to regenerate, repair and, ultimately, heal, the company says. Cynthia Matossian, MD, FACS,

founder and medical director of Matossian Eye Associates, a multi-specialty ophthalmology practice with locations in Pennsylvania and New Jersey, says the drop is “a potent, acellular medication that’s typically reserved for patients who don’t respond adequately to first-approach therapies.”

## NATURAL PROTEINS

Because it is an inflammatory and progressive condition, advanced dry eye disease patients may benefit from regenerative treatment. With Regener-Eyes, the repair process may be activated through the natural proteins included in this ophthalmic preparation:

- **Cytokines.** Short-lived proteins that are released by cells to regulate the function of other cells and serve as anti-inflammatory agents in the body.
- **Chemokines.** Small, hormone-like secretions that stimulate the movement of immune system cells toward specific body sites and signal the immune system for healing potential.
- **Growth factors.** Proteins that stimulate the growth of specific tissues by promoting cellular differ-

entiation and cell division and may help to trigger potential for cell regeneration.

- **Hyaluronic acid.** A clear protein that is distributed throughout connective, epithelial and neural tissues; provides the body with cushioning and lubrication.

These proteins, including Pentraxin 3 and Collagen Types 1, 3, 4 and 5, are necessary for normal cell function, overall health and homeostasis, the manufacturer explains. When administered onto the eye through a drop, they are designed to work in collaboration with the body’s natural cell functioning. They may help to signal anti-inflammatory and regenerative responses for quicker, more effective healing.

Dr. Matossian states these biologic drops are additive to the more standard dry eye treatment algorithm. “I employ a stepwise approach,” she says.

That process begins with educating patients about their disease state, to assist in compliance and the potential to pay for non-covered medications and procedures. The second step is to ensure patients are

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Regener-Eyes, a first-in-class sterile biologic eye drop

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using preservative-free artificial tears for lubrication. In the presence of meibomian gland dysfunction (MGD), Dr. Matossian recommends a heated moisture mask and a quality oral omega-3 supplement as the next steps.

For patients whose dry eye is not adequately controlled with these steps, she prescribes an immunomodulator and often recommends in-office procedures combined with at-home remedies. If the patient remains symptomatic or if the disease signs continue to progress, “Depending on the severity of the disease and depending on the patient’s response to the treatments used, I introduce Regener-Eyes,” she says.

Typically, Dr. Matossian begins the drops after an initial insertion of a self-retaining amniotic membrane ring for 5 days.

## **TWO VERSIONS**

Regener-Eyes is available in two versions: Professional Strength, for the most severe of cases, and Lite, for milder disease states. “Assuming that patients are already using fundamental therapies, typically I start them on Professional Strength because they are struggling with their ocular surface — if there is still staining on the cornea,” Dr. Matossian says. “As the healing process starts and continues to improve through the biologics of the drops, I switch to Lite depending on their healing rate.”

For patients who wear scleral lenses, she typically recommends the Lite version be placed in the vault of the lens before insertion.

The Lite version can be stored at room temperature. Professional Strength must be refrigerated, and the shelf life of an open container is 90 days.

## **PATIENT EDUCATION, COST**

As part of the overall treatment strategy for dry eye, Dr. Matossian encourages thorough patient education with any medication and supplemental therapy. Without it, “patients will not understand the nature of dry eye disease and MGD, nor the need for multiple treatments on a recurrent or indefinite basis,” she says.

The result: Patients will not comply with their prescribed therapeutics.

“As providers, we know the cost of medications has significantly increased,” Dr. Matossian says. “When you consider patients with comorbidities, it can be challenging for them to pay out of pocket for something that is not a first-line therapy. However, I have found success with Regener-Eyes as an intermittently adjunctive option before going to serum tears.” **OM**