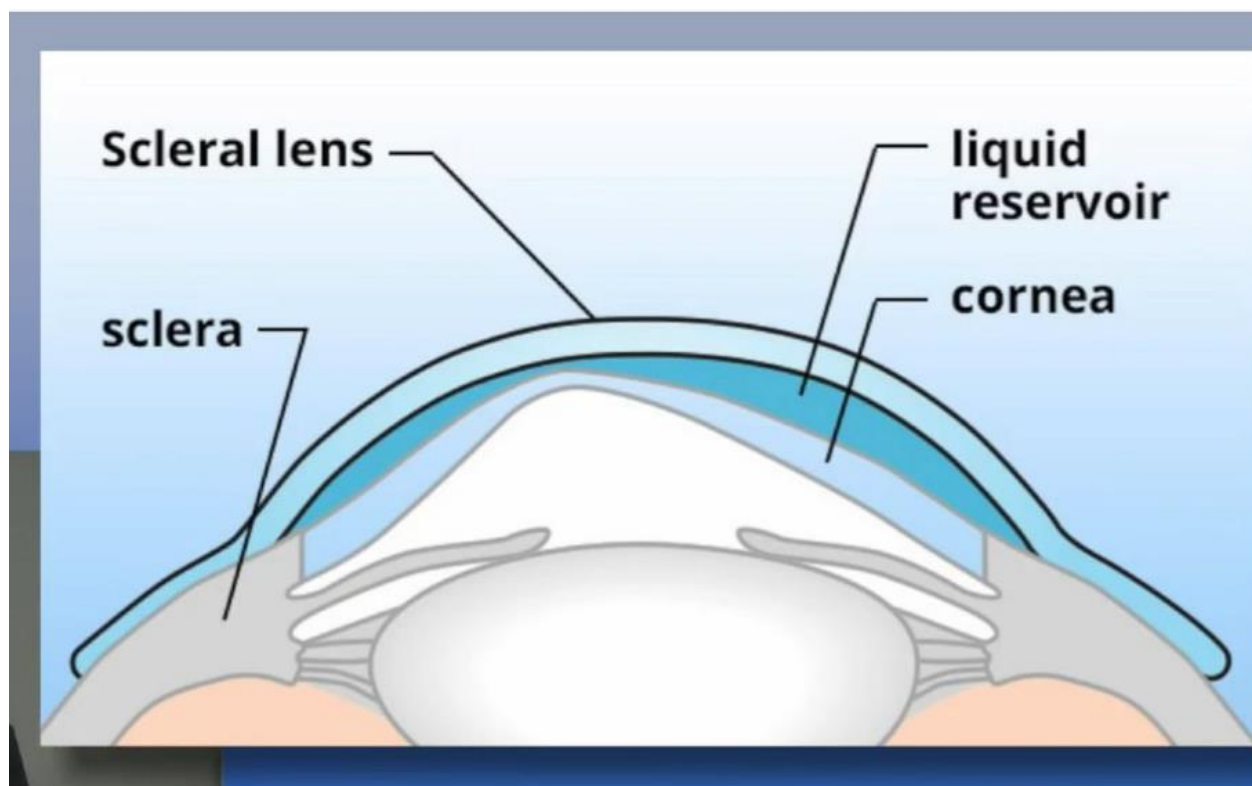


# BostonSight® PROSE and Scleral Lenses for Dry Eyes and Blepharospasm

Presented by Roxana T. Hemmati OD, FAAO, FSLs

Reported by Nilda Rendino

About 30 years ago they took the same material used in an oxygen permeable corneal contact lens and developed a scleral lens. Also known as a scleral contact lens or ocular surface prostheses, it is a large contact lens that covers the entire ocular surface. It vaults over the cornea without touching it. Between the lens and the cornea is a liquid reservoir filled with a preservative-free liquid prior to inserting, and it stays in all day until removed. Scleral lenses are designed to treat a variety of eye conditions, many of which do not respond to other forms of treatment.



**PROSE** (Prosthetic Replacement of the Ocular Surface Ecosystem) is a treatment that uses a scleral shell and is similar to a scleral lens. They are large in diameter (~15-19 mm) and work basically the same. Inserting them can be a challenge.

## Benefits of Scleral Lenses

- They improve vision. 67% of eyes deemed “uncorrectable” with other lens modalities were successful with the scleral lens. They create a smooth front surface through which light can enter and help transmit a sharp image to the back of the eye, and the resultant tear layer neutralizes corneal irregularities.
- They provide ocular surface protection. The hard shell lens protects against external stimuli, and the tear reservoir prevents the eye from drying and improves comfort when worn.
- They support healing and reduce symptoms, and they reestablish a healthy and stable cornea.

**Indications for scleral lens use are:**

- **Irregular Cornea**-Keratoconus (corneal bulging), post-graft, post-Lasik, corneal scarring, trauma, corneal degenerations,
- **Normal Cornea**-High refractive error, sports,
- **Ocular Surface Disease** such as dry eye/Sjogren's, and
- **Lid Abnormalities**-Ptosis, exposure keratitis/incomplete lid closure

Currently blepharospasm is not on the indications list, but in a small sample, dry eye discomfort and blinking were reduced, and when fluoresceine is applied to examine the eye, the blinking is further reduced sometimes. There needs to be a study with a bigger data pool of BEB patients to determine the answers to the following questions: 1. is the reduction in blinking influenced by the PROSE lens or the fluoresceine? 2. if the latter, is it the filtration effect which might be used to fit glasses? and 3. if it's the molecules, would it be safe to wear all day?

### **Lens/Tint Options**

- Rose tinted lenses (FL-41) with 10% or darker tint filter out the green and blue part of the light spectrum. BEB patients are more sensitive to those lights.
- Ultra-violet blocking coating
- Gray gradient prescription glasses might help with reading

PROSE vs. Scleral- the scleral lens can be fitted anywhere by a trained professional. The PROSE lens must be fitted at one of 12 clinics in the country, but they provide a greater level of customization and a significant success rate. For more information or to find a practitioner, contact the Scleral Lens Education Society ([www.scleralens.org](http://www.scleralens.org)).

Published in the Winter 2020 Newsletter.