

BOSTON SIGHT

## PROSE Treatment Information for Patients and Doctors

“**PRIOR TO GETTING MY** PROSE devices, life was hard.

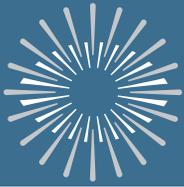
Everything that I loved to do was slipping away...That all changed the day I got PROSE.”

— PROSE patient



# Illinois Eye and Ear Infirmary

**UIC** Department of Ophthalmology & Visual Sciences



## PROSE Treatment

Prosthetic replacement of the ocular surface ecosystem (PROSE) is a treatment pioneered by Boston Foundation for Sight that restores vision, supports healing, reduces symptoms and improves quality of life for patients suffering with complex corneal disease. BostonSight™ PROSE uses FDA approved (1994) custom designed and fabricated prosthetic devices to replace or support impaired ocular surface system functions.

BostonSight PROSE treatment is available at top-ranked academic medical centers and clinics across the U.S.

## Benefits

BostonSight™ PROSE can:

- **Reestablish a healthy** and stable ocular surface environment that supports healing and reduces symptoms
- **Improve blurry vision** by masking surface corneal irregularities and transmitting a sharp image to the back of the eye
- **Prevent further damage** by protecting the cornea against the environment and eyelids

For many of the thousands of patients suffering with complex corneal disease, PROSE may be the ideal, and sometimes only, treatment capable of restoring vision and dramatically reducing eye pain and light sensitivity.



## Indications

### Ocular Surface Disease

#### DRY EYE SYNDROME / K SICCA

- Ocular chronic GVHD
- Sjögren's syndrome
- History of refractive surgery (LASIK/ PKP)
- Rheumatoid arthritis
- Post-radiation

#### LIMBAL STEM CELL DEFICIENCY

- Stevens Johnson syndrome
- Aniridia
- Ocular cicatricial pemphigoid
- Chemical / thermal injury
- Persistent epithelial defect (PED)

#### EPIDERMAL OCULAR DISORDERS

- Goldenhar syndrome
- Ectodermal dysplasia
- Atopy
- Epidermolysis bullosa

#### NEUROTROPIC KERATITIS

- Herpes zoster (shingles)
- Herpes simplex (ocular herpes)
- Familial dysautonomia
- Moebius syndrome
- Trigeminal nerve dysfunction
- Post-surgical
- Trigeminal Ganglionectomy

#### CORNEAL EXPOSURE/ LAGOPHTHALMOS

- Anatomic
- Paralytic
  - Acoustic neuroma

### Corneal Ectasia / Irregular Astigmatism

#### CORNEAL DEGENERATIONS

- Keratoconus
- Keratoglobus
- Pellucid marginal degeneration
- Terrien's marginal degeneration
- Salzmann's nodular degeneration
- Ehlers-Danlos syndrome

#### CORNEAL DYSTROPHIES

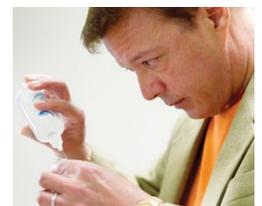
- Cogan's dystrophy (map-dot-fingerprint)
- Bowman's dystrophy (Reis-Bucklers)
- Granular corneal dystrophy
- Lattice corneal dystrophy
- Meesmann's corneal dystrophy

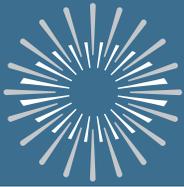
#### POST OPERATIVE ASTIGMATISM

- Cornea transplant (PK, PKP)
- Radial keratotomy (RK)
- Photorefractive keratectomy (PRK)
- Phototherapeutic keratectomy (PTK)
- Epikeratophakia
- LASIK
- Open globe injury

#### CORNEAL SCARRING

- After trauma
- After infection



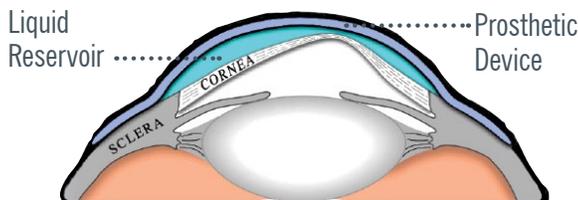


## DEVICES USED IN PROSE

The prosthetic devices used in BostonSight™ PROSE treatment are transparent domes, about the size of a nickel, made of gas-permeable plastic that allows oxygen to reach the ocular surface. Devices fit under the eyelids and rest on the sclera (the relatively insensitive white tissue of the eye), vaulting the damaged cornea and creating a new smooth optical surface that protects the eye from the environment and blink trauma. The removable devices are filled with saline at the time of application, creating a reservoir of fluid that continuously bathes the eye in oxygenated artificial tears.

PROSE creates:

- A new transparent, smooth optical surface over the irregular, damaged or diseased cornea
- An expanded artificial tear reservoir that provides constant lubrication while maintaining necessary oxygen supply



## TREATMENT PROCESS

PROSE treatment teams include cornea specialist ophthalmologists and optometrists who have completed an intensive BostonSight PROSE Clinical Fellowship.

Clinical Fellows use a proprietary DTF™ CAD/CAM system to design each device to precisely fit the patient's unique eye shape and maximize ocular surface system function. All PROSE devices are manufactured at Boston Foundation for Sight's state-of-the-art lab.

## TREATMENT STEPS

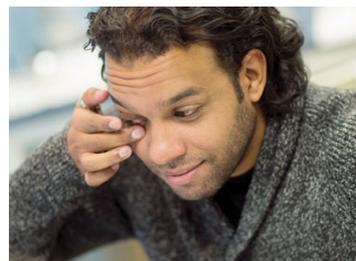
- Referral from primary eye care provider, medical doctor or cornea specialist
- Initial medical review by PROSE doctors
- 2 to 3 hour medical consultation
- Insurance coverage determination and potential eligibility for financial assistance (2 to 6 weeks)
- PROSE treatment (4 to 12 day-long visits)
- Periodic follow up visits as required
- Annual evaluation by the PROSE team

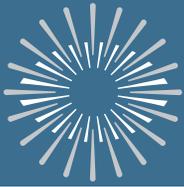
PROSE doctors work with each patient, his/her support system and other medical providers to understand their specific needs and reach treatment goals together.

Patients continue to be followed by their primary eye care provider during and after treatment; ongoing care is managed with their primary provider and PROSE treatment team.

## INSURANCE COVERAGE

Many major insurance carriers cover BostonSight™ PROSE treatment and services. Financial assistance may be available for those who qualify. Check with your local PROSE Provider.





## Symptoms and Treatment Success

A recent Boston Foundation for Sight report based on a survey of over 1,000 people with corneal disease, including 378 BostonSight™ PROSE patients, found that:

- 80% had moderate or severe eye pain
- 72% had light sensitivity
- 72% had difficulty driving at night
- 69% had difficulty reading regular print newspapers, magazines or websites
- 65% had difficulty with work or hobbies that require seeing up close

The survey also asked respondents about their success with a variety of treatments. Of the most common:

- 5% had significant success with oral antibiotics, fish oil or flaxseed oil
- 6% with punctal plugs
- 6% with topical immunosuppressant medications (cyclosporine / Restasis)
- 10% with artificial tears, lubricant gel or lubricant ointment
- 10% with topical steroids

**80% had significant success with BostonSight™ PROSE**

**95% had moderate or significant success**

## Peer-Reviewed Research

BostonSight™ PROSE treatment:

“...significantly improved visual acuity and visual functioning in patients with corneal ectasia, irregular astigmatism and ocular surface disease...”

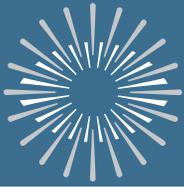
— **American Journal of Ophthalmology**  
**2010; 149: 54-61**

“...yielded significant increase in visual function...with high tolerance (wearing failure 8%) at 6 months. 93.1% of eyes achieved visual acuity of 20/40 or better.”

— **Poster Presentation, World Cornea Congress VI, April 2010**

BostonSight PROSE Providers have published more than 25 peer-reviewed publications and 50 papers and presentations on PROSE treatment. Visit [www.bostonsight.org/research](http://www.bostonsight.org/research).





## About Boston Foundation for Sight

Boston Foundation for Sight is a world renowned nonprofit eye health care organization with a mission to improve the quality of life for patients and their families by transforming the understanding, treatment and care of complex corneal disease.

The Needham, MA Center of Excellence includes a Medical Institute, a BostonSight™ PROSE Device Manufacturing Lab, a Clinical Research Center and a Patient & Community Support Center.



Through educational partnerships with the acclaimed Massachusetts Eye and Ear and New England College of Optometry, Cornea Fellows and Optometry Residents are educated in the latest treatments and join doctors in cutting edge clinical research.

Clinical collaborations with top-ranked academic medical centers continue to expand access to BostonSight PROSE treatment, restoring sight to thousands of patients worldwide.

[www.bostonsight.org](http://www.bostonsight.org)

## BostonSight™ PROSE Provider Network

ALKEK EYE CENTER

Baylor College of Medicine, Houston, TX

BASCOM PALMER EYE INSTITUTE

University of Miami, Plantation, FL

BOSTON FOUNDATION FOR SIGHT

Needham, MA

BROOKE ARMY MEDICAL CENTER

San Antonio, TX

ILLINOIS EYE AND EAR INFIRMARY

University of Illinois College of Medicine, Chicago, IL

KELLOGG EYE CENTER

University of Michigan, Ann Arbor, MI

MASSACHUSETTS EYE AND EAR

Boston, MA

NORTH SHORE — LIJ HEALTH SYSTEM

Great Neck, NY

PROCTOR FOUNDATION

at University of California, San Francisco, CA

USC EYE INSTITUTE

University of Southern California, Los Angeles, CA

WEILL CORNELL EYE ASSOCIATES

Weill Cornell Medical College, New York, NY

WILMER EYE INSTITUTE

at Johns Hopkins, Baltimore, MD

The BostonSight PROSE Network is always expanding. Visit [www.bostonsight.org/providers](http://www.bostonsight.org/providers).

# Illinois Eye and Ear Infirmary

**UIC** Department of Ophthalmology & Visual Sciences

## About Illinois Eye and Ear Infirmary

The University of Illinois, Chicago, Department of Ophthalmology and Visual Sciences is dedicated to combating vision loss and blindness by providing the most advanced and compassionate patient care, conducting exemplary research, and offering the best possible physician and resident education programs.

The Illinois Eye and Ear Infirmary's commitment to treating the most difficult and complicated cases now includes a BostonSight™ PROSE Clinic under the direction of Ellen Shorter O.D., Contact Lens Service, and Elmer Tu, M.D., Director, Cornea Service.

With over 30 physicians in all the major areas of ophthalmologic subspecialties, the IEEI leads in the diagnosis, management and treatment of the most difficult and complicated cases including patients visually disabled by corneal diseases or severe ocular surface disease that require special customized prosthetic devices.

## Meet Our Doctors



Elmer Tu, M.D.  
DIRECTOR, CORNEA SERVICE



Ellen Shorter, O.D.  
BOSTONSIGHT PROSE  
CLINICAL FELLOW



Charlotte Joslin, O.D., Ph.D.  
DIRECTOR, CONTACT LENS SERVICE

## CALL TODAY FOR A CONSULTATION

To learn more or set up a consultation contact the BostonSight™ PROSE Clinic today at 312-996-5410.

### University of Illinois at Chicago

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[www.uic.edu/com/eye](http://www.uic.edu/com/eye)

