



### Dry Eye Specialists:

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# Dry Eye Disease

## TREATMENTS & SYMPTOM REDUCTION



## DRY EYE DISEASE

Dry eye disease is a very common condition, affecting more than 100 million Americans. Depending on the type of dry eye you have, there are various treatment options to relieve symptoms and prevent disease progression. Dry eye not only affects the quality of your vision, but can disrupt your life and common daily activities, such as working and enjoying the outdoors.



### COMMON SYMPTOMS

Eye Fatigue	Redness
Excess Watering	Irritation
Light Sensitivity	Grittiness
Discomfort	Itchiness
Fluctuating Vision	Burning

## DRY EYE EXAMINATION

In order to properly prepare you for your dry eye exam, please make sure you follow these instructions:

- The night before your exam, please stop using eye drops gels and ointments.
- *On the morning of your appointment:* Do NOT apply any creams, soaps, lotions, moisturizers, makeup or any liquids on your face or around your eyes.
- Please try not to rub your eyes before your exam.
- Once the exam is over, you can resume use of drops, cream, makeup and other liquid products on your face.

## AQUEOUS-DEFICIENT DRY EYE

People whose eyes have a problem producing the water component of tears have a form of dry eye called aqueous deficient dry eye.

### Treatment Options

- A. Prescription eye drop(s):** usually taken twice daily, they reduce inflammation and may improve tear production reducing dry eye symptoms over time.
- B. Punctal plugs:** small plugs placed in the drainage duct of the lower or upper lid to block tear flow into the nose keeping tears in the eye and helping with dry eye symptoms. Provides immediate relief.
- C. Artificial tears:** over-the-counter eye drops provide temporary relief of symptoms. Bottled drops can be used up to six times per day and non-preserved vials as often as needed.



## EVAPORATIVE DRY EYE

The most common form of dry eye is called evaporative dry eye. Evaporative dry eye occurs due to a lack of oil in the tear film. Oil, or lipids, are an important component of healthy tear production because they help maintain moisture in the eyes by preventing tear evaporation. When your meibomian glands (oil-producing glands in the eyelids) are clogged or not functioning properly (meibomian gland dysfunction), this leads to the evaporative form of dry eye.

### Treatment Options

- A. LipiFlow or IPL Therapy:** these in-office treatments address the root cause of evaporative dry eye and are the only means of opening clogged oil glands in the eyelids. It is the first step in stabilizing the tear film and reversing the gradual loss of the oil producing glands. Four out of five patients will notice improvement in their dry eye symptoms. Maintenance treatments may be needed to maintain the effect over time.
- B. Oil-Based Eye Drops:** this adds to the beneficial effects of LipiFlow and IPL providing temporary relief of symptoms. We recommend the Retaine MGD brand; a preservative-free, oil-based drop for dry eye.
- C. Fish Oil & Flax Seed Oil:** taken orally, 2,000-3,000 mg per day can provide mild degrees of relief from dry eye symptoms.
- D. Hot Compresses:** applied once or twice daily for five minutes provides temporary relief of dry eye symptoms. Best done with a flax seed or rice pillow. Flax seed pillows are available for purchase at The Eye Institute of Utah.

## LIPIFLOW® THERMAL PULSATION SYSTEM



Patients who suffer from evaporative dry eye and have sufficient meibomian glands (eyelid oil glands), may benefit from a revolutionary treatment called the LipiFlow Thermal Pulsation System.

The Eye Institute of Utah was one of the first practices in Utah to offer LipiFlow, a 12 minute, in-office treatment that helps restore normal oil flow in the tear film and relieve dry eye symptoms. The treatment works by applying heat and pressure to clogged, oil-producing glands in the eyelids, loosening hardened oils and restoring normal oil production. The presence of healthy oils in the tear film is important in preventing tear evaporation and maintaining stable vision.

LipiFlow may reduce dry eye symptoms and the progression of dry eye disease for 18-24 months in some patients. Results will vary as dry eye is a complex, multifactorial disease process. To determine if you are a candidate for this remarkable technology, please schedule an evaluation with one of our doctors in the Dry Eye Clinic.



**85% of patients reported significant improvement of chronic dry eye symptoms after the LipiFlow treatment.<sup>1</sup>**

1. Lane SS, et al. A New System, the LipiFlow, for the Treatment of Meibomian Gland Dysfunction (MGD). Cornea 1/4/12

## INTENSE PULSED LIGHT

Intense Pulsed Light (IPL) treatment for dry eye utilizes pulses of light to liquefy and release hardened oils that have clogged meibomian glands in the eyelids. IPL also affects vascularization and inflammation of the eyelids, reducing eyelid redness and stimulating healthy gland function.

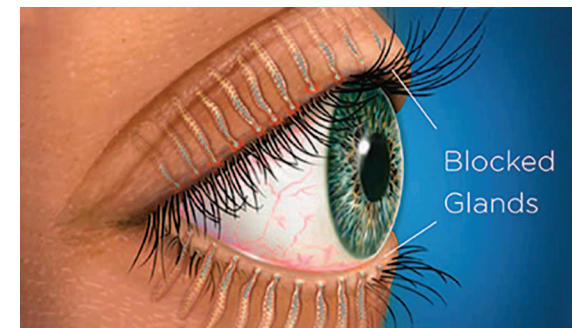


Although many people notice improvement in dry eye symptoms after their first or second treatment, your doctor will recommend an initial series of four IPL treatments, performed once a month over the course of four months.

This initial treatment bundle is designed to help with the long-term success in treating meibomian gland dysfunction (MGD), the root cause of dry eye disease.

After the initial series of treatments, most people will need occasional maintenance treatments, depending on the severity of their dry eye condition.

*LipiFlow and IPL treatments are designed to restore normal oil flow in the tear film by opening up blocked meibomian glands in the eyelids (shown below).*



## POOR OR PARTIAL BLINKING

Blinking is a natural reflex of the eye that helps spread the natural oils and water in the tear film across the surface of the eye to maintain proper lubrication and reduce evaporation. Patients with both forms of dry eye may be worsening their chronic dry eye by failing to blink fully.

### Possible Solutions

Blink exercises done frequently throughout the day can significantly improve blinking performance. Without proper blinking, all other dry eye treatments will only be partially effective. Ask your doctor or a staff member for our blinking exercise instructions.

## POOR LID CLOSURE WHILE SLEEPING

Sleeping with the eye partially open causes them to dry through the night resulting in morning irritation.

### Possible Solutions

- A. Artificial tear gel or ointment:** provides a protective coating on the eye during sleep and helps with morning irritation. Popular brands include Retaine ointment, Genteal Gel, and Systane Gel. Apply a half inch strip between the lower eyelid and eyeball at bedtime.
- B. Goggles:** these form a barrier to trap moisture near the eye. The Tranquileyes brand is one of the many styles and is available for purchase at The Eye Institute of Utah. It should be used without the inserts during sleep.

