## WHAT IS DRY EYE DISEASE?

Dry eye disease is caused when your eyes natural tear production isn't working properly, leaving your eyes vulnerable and exposed to the daily elements of life. This is significant because, with each blink, tears protect the surface of the eye, washing away dust and microorganisms. When this protective coating dries up, the eyes may feel "gritty" or burn. It often causes symptoms such as:

- Redness
- Irritation and inflammation
- Excessive watering
- Blurry vision

Dry eye disease is a common condition affecting millions of people worldwide. While it can be irritating, uncomfortable, and even painful at times, there are ways to treat it.

In order to properly treat dry eye related issues, we have to determine the root cause of the problem. Prolonged screen time without breaks is a big reason people suffer with dry eyes. It is also a common side effect of many prescription medications. Dry Eye can also be associated with Autoimmune disorders.

Dry eye disease can develop due to a problem with the meibomian glands. The meibomian glands are specialized oil glands in the eyelids and are responsible for the oil in your tears that prevent them from evaporating too quickly. When there is a problem with the meibomian glands more advanced treatment options may be considered. These treatments are designed to improve the function of the meibomian glands by stimulating them and breaking up any blockages which would allow the oils to reach your tears and protect your eyes as they should.

# WAYS TO TREAT DRY EYE DISEASE

Listed below are general, over the counter, options that can be done at home. A daily regimen is recommended to help treat the symptoms of dry eye.

**Hygiene** - Bacteria can breed on the lid margin and between the lashes. Toxins are then released into the tear film, which induces inflammation and redness. It is important to clean your eyelids thoroughly morning and night. We recommend Ocusoft Lid wipes or Ocusoft lid scrub.

**Heat Therapy** – The eyelid is lined with oil glands responsible for creating the most critical component of tear film. However, poor diet and system inflammation cause the oil to thicken and the glands to become clogged. Inadequate oil levels equate to premature tear evaporation and subsequent burning and visual disturbance. Daily heat therapy can help thin the oil and increase its flow into the tear film.

**Nutraceuticals** – Inflammation is often the driving force of dry eye disease. It has many secondary effects such as thickening of the oil and degradation of both the oil and water glands. Fish Oil is proven to decrease inflammation systemically, which also helps to subside inflammation locally.

Additionally, it can thin the oil and increase its flow into the tear film. Fortifeye and Nordic Naturals are the brands we most recommend.

Below is an introduction to a few of the common causes and "next level" treatments that you may need.

#### Inflammation -

Signs: Inflamed lid margin, redness, corneal damage.

Symptoms: Tearing, light sensitivity, pain.

Treatments: Steroid drops are prescribed for acute relief to help calm the eye. Immunomodulator drops are prescribed for long term anti-inflammatory therapy. Autologous blood serum drops are made from your own blood and can be used as frequently as desired to soothe and heal. An amniotic membrane patch is placed on the eye for several days to heal and strengthen the damaged cornea.

#### Meibomian Gland Disease (MGD) -

Signs: Quick tear evaporation, stagnant oil glands a/o thick meibum (oil).

Symptoms: Must blink to see better, burning.

Treatment: Warm compress for 15 min with a mask that delivers 102-110 degrees of moist heat. In office heat therapy followed by therapeutic gland expression. Punctal occlusion of the drainage canal in the eyelid via a quick and painless insertion of a small plug slows tear evacuation.

#### Bacteria -

Signs: Lash debris, scurf, collarettes, inflamed lid margin

Symptoms: Itching, crusting, discharge

Treatment: Lid scrubs with more highly concentrated products. Twice daily application of hypochlorous acid has broad spectrum antibacterial activity as well as anti-inflammatory benefits. At home blepharoexfoliation with a handheld device to clean the lid margin painlessly, while massaging the lids to aid with oil flow.

#### Lid Function -

Signs: Poor lid seal during sleep, partial blinks, droopy or outwardly rotating lower lid, eyelashes growing in, excess conjunctival tissue

Symptoms: Pain or dryness upon awakening, burning while reading, redness, fluctuating vision.

Treatment: Hydrating sleep mask creates a moisture chamber during the night. Blink exercises help create muscle memory.

## ARE THERE NEW TREATMENTS OPTIONS AVAILABLE?

There is some good news for those patients who have exhausted all other options, or just wish to bypass the inconvenience of conventional treatment options! Over the past few years IPL (Intense Pulsed Light) and RF (Radio Frequency) treatments have been shown to provide improvement of signs and symptoms of dry eye disease.

### WHAT IS IPL?

IPL is a treatment method that uses bursts of light energy to treat several skin conditions. However, it's also been found to be effective in treating dry eye disease. These pulses of light can target and break down the blockages in the meibomian glands, allowing them to produce and release more oil into the tears. This helps to improve tear film stability and reduce dry eye symptoms.

## WHAT IS RF?

RF treatment uses energy waves to heat the tissue under the skin. This heat stimulates the body's natural healing process, promoting collagen production and improving blood flow. When applied to the eyelids, RF can help to unblock the meibomian glands and improve tear production.

# IS IPL OR RF TREATMENT BETTER?

Both IPL and RF treatments offer significant benefits for dry eye.

- They address the root cause of the condition
- They can stabilize the tear film
- They use a noninvasive approach
- Minimal, if any, side effects

IPL treatment is known for its ability to break down gland blockages effectively, while RF is praised for its boost to the body's natural healing process. But they both target a similar area. In the past you would have to choose between the two options depending on your individual needs and preferences. Fortunately, it's now possible to have the best of both options. You can now have both treatments done at the same time, making it possible to reap the benefits simultaneously! This dual approach allows for a more comprehensive treatment of dry eye disease since it allows us to address problems in the meibomian glands and the surrounding tissue simultaneously.

# HOW MUCH DOES A TREATMENT WITH IPL/RF COST?

IPL/RF dry eye treatment plan consists of 4 sessions scheduled 2 weeks apart. This initial treatment plan is \$1200 for the 4 sessions. With retreatment of a single session every 6-9 months depending on symptom reoccurrence. Each additional session charge is \$300.

We also offer an upgraded package called "Dry Eye +" which adds in a skin rejuvenation option. This package goes one step further to address fine lines and to help even out any skin tone issues. This package is \$1600 for the 4 sessions with retreatment of a single session every 6-9 months for \$400.