

# Dry Eye

Dry eye disease is a complex condition of the tears and ocular surface that results in discomfort, visual disturbance and instability of the tear film. Due to the high density of the corneal nerves compared to other tissues in our body, the discomfort that occurs with untreated disease causes significant distress to certain patients who are unable to function normally.

## **What Are the Symptoms?**

Ocular symptoms can include:

- soreness
- stinging, burning, watery eyes
- tired eyes
- fluctuating vision
- lids stuck together on waking and
- occasional transient sharp pains in eyes.

Often these symptoms can be exacerbated by air conditioning, windy days, ceiling fans, airplane travel and computer use.

## **What Are the Types of Dry Eye?**

The two main forms of dry eye disease are Aqueous Deficient Dry Eye (ADDE) whereby the aqueous tear volume produced is reduced and Evaporative Dry Eye (EDE) whereby there is a normal aqueous tear volume however an increased evaporation of the tear film occurs. Patients can have any form or sometimes combinations of both forms causing their symptoms.

## **What Causes Dry Eye?**

Whilst many factors can cause dry eye disease, the most common is Meibomian Gland Disease, which causes Evaporative Dry Eye. The Meibomian Glands are the oil glands within our superior and inferior lids that make the meibum (oil) for our eyes. This stops our tear film from evaporating at an accelerated rate. Left untreated this condition will continue to worsen to the point where the meibomian glands will suffer chronic changes affecting the quantity and quality of the oil they produce and eventually Meibomian Gland dropout.

## **What Treatment Options are Available?**

Until relatively recently the standard treatment has only brought about an improvement for some patients with the condition. Recent developments, many of which are available at Eyecare Plus Clifton Beach, have seen excellent results for a wider spectrum of affected patients.

## **E Eye Intense Pulsed Light Treatment**

The advent of Intense Pulsed Light technology which emits polychromatic light extending from the visible (515nm) to the infrared spectrum (1200nm) has shown remarkable results translating to improvement in quantitative analysis of the non-invasive tear break up time (of the order of 85%), however more importantly, a corresponding significant reduction in ocular discomfort due to dry eye disease.

Please note that for 15% of patients who undergo therapy there is no improvement in symptoms. It is unfortunately not possible to identify these patients at the outset of treatment.

Treatment protocol involves 4-5 flashes of Intense Pulsed Light under the eyelids of both eyes with the patient having protective goggles on. The procedure is very safe with your optometrist going through a comprehensive checklist of other conditions and medications that can cause potential photosensitivity. Potential patients will have a precautionary skin test with the IPL applied to the underneath of their forearm with follow up evaluation in 48-72 hours to check if any signs of photosensitive reaction have taken place.

Whilst many patients report lasting benefits from therapy, some will benefit from follow up treatments if symptoms return or a yearly or 2 yearly top up treatment to keep the glands flowing optimally.