

# Technological Dry Eye treatment

Intense Regulated Pulsed Light Technology (IRPL®) provides a long-lasting solution to improve visual comfort by restoring the function of meibomian glands, improving the secretion from the glands and stabilizing the lipid layer of the tear film: a state-of-the-art treatment with time-efficiency and a modern way to manage Dry Eye.

IPL has become firmly established as favourable treatment option for MGD in recent years, with remarkable growth in its usage within the Dry Eye community.



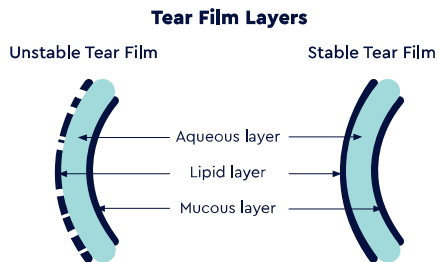
# Meibomian Gland Dysfunction

There are 60-80 Meibomian Glands located in the upper and lower eyelids.(6) These glands produce the oils that form a lipid layer on the outermost part of the tear film, aiding to protect the eyes from tear evaporation.

The tears serve to overcome the micro-irregularities of the eye's surface and offer an optically smooth surface.

Dry Eye Disease, which can arise from multiple factors, starts off with tear film instability that is accompanied by increased tear osmolarity which activates stress signaling pathways in the ocular surface and immune cells.

This in turn triggers production of innate inflammatory molecules that initiate a vicious self repeating cycle that may lead to further deterioration in tear function and worsening of symptoms. The numerous environmental and internal factors that can contribute to this inflammatory cycle make Dry Eye a multi-factorial Disease.



**Professor Dr. Jennifer P. Craig**, who leads investigator-initiated randomised placebo-controlled clinical trial research at the University of Auckland in New Zealand, has confirmed clinical benefits of IRPL®.



Scan to view further clinical studies online.



# Clinical Studies

Findings:  
IPL therapy effected improvements in Dry Eye symptomology, tear film lipid layer thickness and Meibomian Gland capping in participants with MGD.

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Keep your eyes fit with Eye-Eye



Stinging eyes



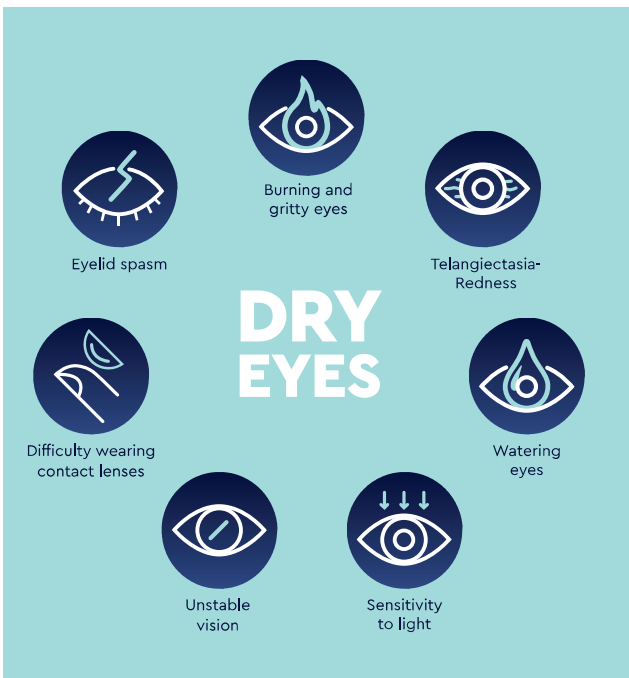
Red eyes



Constant watering

# Itchy Irritated Dry Eyes?

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## Signs & Symptoms

Dry, burning, red, permanently fatigued, and paradoxically also watery eyes are symptoms of Dry Eye Disease. Patients might also face problems with wearing contact lenses and have pronounced sensitivity to light.

Apart from experiencing eye pain, your patients may have more serious complications such as infections, styes, or corneal ulcers.

Signs of Dry Eye Disease include reduced non-invasive tear breakup time, elevated or large intereye disparity in osmolarity, and ocular surface damage indicated by dye staining.



## Conventional therapies

The common problem of tear film dysfunction has resulted in the development of temporary solutions such as eye drops. This solution reduces the discomfort felt by patients, however, the underlying problem with dry eyes is untreated.

Meibomian dysfunction is the primary cause of dry eye. Tearstim IRPL provides long-lasting solution to improve visual comfort by restoring the function of Meibomian Glands.



Temporary relief



Long lasting solution

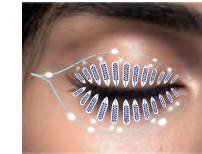
## Mechanism of action

What truly sets E-Eye apart is its neurostimulatory component made possible through IRPL® technology. The flashes emitted are directed to the parasympathetic nerve which is located in the zygomatic and bulborbital area and supplies the Meibomian Glands.

- A neurological stimulation of the parasympathetic nerve:
- Leads to the regeneration of the Meibomian Glands
  - Improves the quality of the glandular secretion
  - Stabilizes the lipid layer

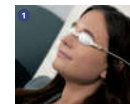
Additionally, the following effects have been proposed to explain the clinical benefits observed with IRPL:

- Warming and liquifying effect facilitating meibum expression
- Photomodulation stimulating mitochondria of Meibomian Glands, also enhancing collagen synthesis
- Vascular thrombosis aiding to decrease inflammation
- Antibacterial and antiparasitic effects
- Connective tissue rejuvenation with fibroblast-collagen synthesis and remodelling reducing eyelid- epithelial turnover and decreasing gland obstruction.

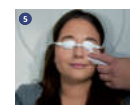


Scan to view how E-Eye IRPL works

## Simple, fast & highly efficient



The treatment only takes a few minutes per session:



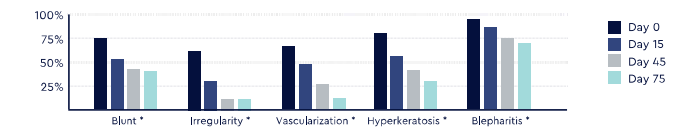
1. An eye mask is adjusted on the patient's eyes.
2. Then, a specific treatment gel is applied on the cheekbone and the temporal areas.
3. A series of flashes is applied under each eye.
4. Flashes are applied in the lower zone - starting on the inner canthus - and flash in the temporal area to stimulate the upper glands.
5. The same process is repeated under the other eye.
6. The gel is wiped off and the treatment is complete.

## Efficacy quantified

Since 2013, more than 16 clinical studies related to have been conducted on over 550 patients in Europe, Asia and Australasia. These studies have shown:

A considerable improvement in the symptoms perceived by patients with a 90% satisfaction rate after the first 2 treatments. This improvement may be clearly felt from the initial session for the first couple of days and increases with time after the following treatments.

Clinical percentage measurements. Source: Clinical Study<sup>(1)</sup> \* Significant margin of improvement.



Perceptions of patients, rated from 1 to 10. \* Significant margin of improvement.

