



eye-light[®] Therapy for Dry Eye

Light Modulation LLLT[®] and Optimal Power Energy[®] IPL

What are LLLT and OPE IPL and what are they used for?

LLLT stands for low-level light therapy, OPE IPL for optimal power energy intense pulsed light. LLLT was originally used to treat NASA astronauts' wounds in space, whereas IPL's initial use was in dermatology for skin rejuvenation (such as in rosacea) and hair removal. These technologies are now also used in the treatment of dry eye.

How do LLLT and OPE IPL work?

Both LLLT and IPL improve the production of meibum oils from the meibomian glands of the eyelids. The mechanism of LLLT is to trigger a warming of the eyelids from within, whereas OPE IPL works by stimulating the contraction of these glands. LLLT is applied via a mask device around the eye and cheekbone areas, and IPL is applied to the lower eyelid area in a number of short bursts.

Who is suitable for LLLT and OPE IPL and when should it be used?

LLLT and OPE IPL is generally not used as a first-line treatment for patients suffering from meibomian gland dysfunction (MGD) and consequent evaporative dry eye. It is preferable to employ basic remedies for dry eye before using LLLT AND IPL, not least because this is likely to improve the effectiveness of LLLT and OPE IPL treatment. LLLT and IPL are advanced treatment options for those who have not obtained satisfactory relief from basic remedies. Depending on the severity of the MGD, either or both of these technologies may be employed, usually in a course of between two and four treatments. IPL tends to be particularly appropriate in patients who also have rosacea or who have signs of inflammation around the eye lids.

What are the risks and contraindications for using LLLT and OPE IPL?

Like any other treatment of pulsed light, OPE IPL may have side-effects. The most common are generally transient and include redness, itching, swelling and changes in pigmentation. LLLT and OPE IPL are contraindicated by pregnancy, epilepsy, herpetic disease, metallic piercings near the area to be treated, the use of photosensitising drugs, or known photosensitivity to red or yellow light.

Are there alternatives to LLLT and OPE IPL?

Other than more basic remedies for meibomian gland dysfunction, the main alternative in-office treatment is LipiFlow, which more directly applies heat to the glands. LipiFlow also precisely applies pressure to the glands to express oils and/or help unblock those glands that are congested.

How much does LLLT and OPE IPL cost?

The fee for LLLT treatment is \$840. The fee for OPE IPL is also \$840. If both technologies are employed, the fee is \$1,180. This covers a course of up to four treatment sessions. Single treatments are generally ineffective and multiple sessions are required to achieve satisfactory results.

When should I start to feel the effect of LLLT and OPE IPL and how long does it last for?

As noted above, LLLT and OPE IPL usually involves two to four treatments, typically performed five to ten days apart. You will not feel the full effect of LLLT and OPE IPL until the entire course of treatments is completed, and sometimes not for some weeks after the last treatment.

Some patients find that a single course of treatments enables them to then manage their dry eye symptoms using relatively simple measures at home. Others with more severe meibomian gland disease may need to return for more regular repeat courses of LLLT and OPE IPL, sometimes up to every year or two.

What do I need to do before and after LLLT and OPE IPL?

As noted above, it is important that both before **and after** LLLT and OPE IPL treatment you undertake basic remedies to improve the health and function of your meibomian glands. These may include some or all of attention to lid hygiene, taking omega-3 supplements such as fish oil, lid warming, the use of lubricants and/or Manuka honey drops, and exercises to improve blinking.

For 15-20 days before treatment, exposure to sun, solar lamps and self-tanning products should be avoided. During the period of treatment chemical, physical or enzymatic peels should not be performed. Contact lenses **MUST** be removed when the treatment is performed. During the treatment period it is recommended not to have any aesthetic medical procedures performed on the face. After the treatment exposure to the sun should be avoided for 15-20 days and sunblock applied when outdoors.

Where can I find out more about LLLT and OPE IPL?

Further information on LLLT AND IPL for dry eye can be found on the Espansione Group website at <https://www.espansionegroup.it/ded/>, manufacturer of the eye-light[®] LLLT and OPE IPL machine.