

# Patient Information Leaflet

## LED Light Therapy



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### LED Light Therapy

If you are considering **LED light therapy**, we recommend that you read the following information. This will help you to be fully prepared and know what questions to ask. Prior to treatment, you should have a face-to-face consultation with your treating practitioner or therapist to ensure that LED light therapy is right for you. Before proceeding, make sure you have had all your questions answered and you have confidence in the procedure and your practitioner or therapist.

### What is LED Light Therapy?

LED (Light-Emitting Diode) light therapy or phototherapy is a non-invasive skin treatment that uses different wavelengths of light to promote skin healing, reduce inflammation and improve overall skin health. It is a painless and relaxing procedure suitable for all skin types and for several skin concerns.

LED light therapy delivers clinically proven light energy for rejuvenation and corrective benefits. Specific wavelengths are absorbed by the skin to stimulate cell renewal, collagen production, accelerates skin healing and can help resolve problem skin conditions such as acne and redness. These specific wavelengths interact with biological systems and activate key cell receptors as well as energising cells. It is a safe and pain-free treatment without downtime. Light therapy signifies a real advancement in phototherapy and anti-ageing photo-modulation with a mechanism of action like that of photosynthesis seen in plants. It is ideal as a standalone treatment but equally beneficial to be used in combination with other therapies to promote healing and enhance results.

Ask what LED device and technology your practitioner or therapist is using and why?

### What areas can be treated?

LED light therapy can be used on the face and body to treat a variety of skin problems, often using a combination of wavelengths and energies for maximum results.

Different wavelengths of LED light penetrate the skin at different depths, stimulating natural cellular processes to enhance skin rejuvenation and repair. Unlike lasers, LED therapy does not generate heat or cause damage to the skin.

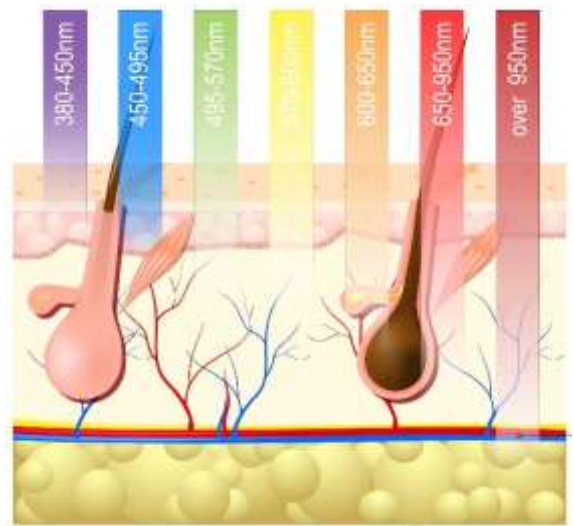
- ✓ Acne and breakouts
- ✓ Fine lines and wrinkles
- ✓ Redness and rosacea
- ✓ Sun damage and pigmentation
- ✓ Dry or sensitive skin
- ✓ Wound healing and scar reduction

## How does it work?

There has been considerable research on LED light therapy. Photons of light can penetrate the skin and are converted into energy triggering photo-biochemical reactions within the skin cells. By providing the cells with more energy, increased collagen and elastin production can occur and damage and inflammation may be reduced. As well as this, LED light can help control damaging free radicals, can increase production of beneficial growth factors and can stimulate new blood vessel growth and increase blood flow which all help to regenerate and maintain the skin.

Different colours of light target specific skin concerns:

- ✓ **Blue Light (415nm):** Penetrating the epidermis, blue light works at a more superficial level and is proven to help with the treatment of acne and pigmentation. It has been shown to have an anti-inflammatory effect within the skin cells, decreases gland size and sebum production in the sebaceous glands responsible for acne and selectively destroys the acne causing bacteria by the production of singlet oxygen.
- ✓ **Red Light (633nm):** Penetrating the dermal layer, red light is perfect for skin rejuvenation, anti-ageing and to reduce inflammation post-procedure. Red light is absorbed in the cell mitochondria (the powerhouse of the cell) leading to greater energy production and super-charging the cells. Skin cells that are energised function better and can regenerate up to 200% faster. Red light has been proven to stimulate the production of collagen and elastin to improve skin tone and texture. It can activate the lymphatic system to help carry waste products out of the body, improve blood flow and circulation leading to better oxygenation of the skin and can help restore damaged connective tissue.
- ✓ **Near Infrared Light (833nm):** This offers maximum penetration of the subcutaneous layer, near infrared light increases blood circulation bringing oxygen and nutrients to help modulate inflammation, accelerate wound healing, calm irritation and reduce redness and is perfect to use post-treatment for other aesthetic procedures. As well as stimulating repair, it is also proven to help with pigmentation and is ideal for sensitive skins. Near infrared light has been used to treat wounds, ulcers and even cellulite and is often used in conjunction with other frequencies of LED light.



LED light therapy follows the inverse square law, meaning that if the distance from the light source doubles, the intensity decreases to one fourth. Most LED light therapy devices recommend staying within a few centimetres to a few inches from the skin to ensure effective results and more professional devices set a preset optimal distance with some automatically measuring this and only operating if the correct parameters are met. Being too close does not necessarily improve results but may cause mild skin irritation and excessive warmth. There are home devices available which are worn as a mask or rolled over the face or body, where the LED light source is in immediate contact with the skin and the intensity of the light therapy is set appropriately for this.

Make sure eye protection is worn for LED light therapy treatments.

## Is it painful?

LED light therapy is not painful and many people find the treatment relaxing, similar to lying under a warm light or in the sun. There will be a slight warming sensation, but this should not be uncomfortable and the procedure can actually help reduce pain and inflammation. Rarely, people with sensitive skin may experience a light tingling sensation, but

no pain. LED phototherapy does produce a very bright light which could be unpleasant and harmful to the eyes. However, eye protection should be worn for facial treatments which will block out potentially damaging light.

Depending on the IPL light therapy machine being used, the device or canopy may be in close proximity to the skin or it may be in the form of a moulded mask and can cause a feeling of claustrophobia. If you suffer from this phenomenon, it is important to discuss this with your practitioner or therapist and you may wish to try it without the LEDs being turned on to check that you can tolerate it before committing to a course of treatments.

## Is it safe?

LED light therapy is considered very safe when used correctly, using the right wavelengths, intensity, distance, duration and interval between treatments. It is non-invasive, does not emit harmful UV rays and does not cause burns like some other forms of light therapy, such as laser or intense pulsed light.

Side-effects may be more likely due to the following factors:

- ✓ **Patient factors:** Unrealistic expectations, skin type, medical conditions, medication (including photosensitising).
- ✓ **Practitioner factors:** Training, years of experience, number of procedures performed.
- ✓ **Premises factors:** Suitability of the premises, infection control procedures for cleaning the device.

Ensure that you are provided with an out of hours number in case of an emergency.

Most patients experience little to no side-effects. However, some individuals may experience:

- ❖ **Mild Redness:** There may be some temporary redness of the skin, if this does occur, it usually resolves within a few hours and a day or two at most.
- ❖ **Warm Sensation:** Some people feel mild warmth, this is a normal sensation and it should not be painful. If you experience pain during the procedure, make sure your practitioner or therapist is alerted to this.
- ❖ **Dryness or Flakiness:** Some experience temporary dryness, especially in sensitive skin types. It is important to be well hydrated and drink sufficient fluids after treatment.
- ❖ **Eye Sensitivity:** If goggles or other suitable eye protection are not worn, exposure to bright light may cause eye discomfort or damage.
- ❖ **Skin Irritation or Sensitivity:** Overuse or prolonged exposure may cause mild irritation in sensitive individuals. It is essential that the correct protocols are followed according to skin type and condition being treated.
- ❖ **Hyperpigmentation or Hypopigmentation:** People with darker skin tones or those with a history of pigmentation disorders should use LED therapy with caution, as excessive exposure may trigger pigmentation changes.
- ❖ **Photosensitivity Reactions:** Certain medications (e.g., antibiotics, retinoids and some antidepressants) can make the skin more sensitive to light, increasing the risk of irritation and pigmentation.
- ❖ **Headaches or Eye Strain:** Prolonged exposure to bright LED lights without proper eye protection may cause headaches or eye discomfort.
- ❖ **No Effect or Delayed Results:** Not everyone responds to LED light therapy the same way. Some conditions may require multiple sessions before results become noticeable and some may not obtain any perceived benefit.

While side-effects are rare, being proactive about skin care and following the correct procedure guidelines can significantly reduce the risk of complications and help you achieve the best possible results.

If you develop any unexpected side-effects after treatment, it is important to contact your practitioner or therapist for a review as soon as possible, as they may be able to offer some corrective treatment. Although you may be contacted by telephone or video call initially or you may send your own photographs, this is no substitute for a face-to-face review to provide an accurate diagnosis.

Not all devices are equal. Cheaper, unregulated and some home use LED light therapy may lack the correct wavelengths and intensity to provide benefits. Ask about the evidence and science for the device being used and if it is claiming to have medical benefits, it should have a UK CE Mark.

Prior to your treatment you should have a consultation, which includes a comprehensive skin assessment, complete a medical questionnaire and be offered a cooling off period to enable you to make an informed decision with full disclosure of the anticipated benefits, alternative options, possible risks and side-effects specific to you. You should also be given an indication of the cost of the treatment. Before you receive any treatment, you may be required to sign a consent form, this may be on paper or electronic and be given the opportunity to ask any further questions. Photographs may be taken and kept as part of your medical record. These should not be used for any other purpose without your explicit permission.

Ensure treatment is carried out in a clinical or salon setting.

Before treatment, the skin should be cleansed to remove all makeup and oils and you may be required to wear protective eyewear to shield your eyes from the LED light energy. Although not typical, a gel or serum may be applied to enhance the light's effectiveness, depending on the treatment goal. The correct parameters will be set, including duration and LED light colour, this may be a single colour or combination depending on the condition being treated. The LED device will be positioned over your face or body at a safe distance. You should remain still while the light is applied for approximately 10–30 minutes, depending on the treatment plan. The light may feel slightly warm, but the procedure is painless.

After the session, your skin may appear slightly flushed, but this usually subsides within a few hours. Otherwise, there is no downtime, so you can resume normal activities immediately. Sunscreen and gentle skincare products are recommended to protect and nourish the skin and your practitioner or therapist should apply a high factor SPF to the skin before leaving the clinic or spa.

A course of treatments will usually be recommended for optimal results, depending on the indication:

- ✓ **Acne Treatment:** Mild to moderate acne generally requires 2-3 sessions per week for 4-6 weeks. More severe acne usually requires a longer duration of treatment.
- ✓ **Anti-Ageing and Collagen Stimulation:** The protocol for fine lines and wrinkles requires 2-3 sessions per week for 8-12 weeks and a maintenance treatment every 2-4 weeks.
- ✓ **Hyperpigmentation & Skin Tone Improvement:** It is recommended to have LED light therapy 2–3 times per week for 6–8 weeks with a monthly session as needed.
- ✓ **Wound Healing & Inflammation Reduction:** A more intensive protocol is required with the procedure occurring every day or every other day for 2-4 weeks. Long term treatments may be required for chronic conditions.
- ✓ **Pain Relief & Muscle Recovery:** Daily for 1–2 weeks, then reduce to 2–3 times per week.

Once the desired results are achieved, many people switch to monthly or biweekly maintenance sessions to prolong the benefits.



A high factor SPF should be applied post-treatment.

## Am I suitable for treatment?

LED light therapy is generally safe but may not be suitable for everyone. You should avoid or consult a healthcare professional before undergoing LED therapy if you:

- ✓ **Are pregnant, trying to conceive or are breastfeeding:** Limited research is available on safety during pregnancy or breastfeeding, so it is best to consult a medical practitioner first.
- ✓ **Have epilepsy or a history of seizures:** Flashing or bright lights may trigger seizures in some individuals, if you have photosensitive epilepsy, you should avoid this treatment.
- ✓ **Are taking photosensitizing medications:** Some medications can make your skin more sensitive to light, increasing the risk of irritation and pigmentation. These medications include antibiotics (e.g. tetracyclines, fluoroquinolones), retinoids (e.g. isotretinoin, Roaccutane®), certain diuretics/water tablets, chemotherapy drugs, some antidepressants and anti-inflammatory drugs. If unsure, speak to your treating practitioner or therapist who should be able to inform you whether your medication is safe for IPL light therapy.
- ✓ **Have active skin infections or open wounds:** Although LED therapy may promote healing, it can worsen infections or interfere with natural healing in some cases.
- ✓ **Have a history of skin cancer or are prone to melanoma:** Consult a doctor before treatment if you have concerns about skin cancer risks.
- ✓ **Have lupus or other autoimmune diseases:** Some conditions make the skin more sensitive to light, leading to adverse reactions.
- ✓ **Have severe rosacea or photosensitivity disorders:** Conditions, such as porphyria, may result in excessive sensitivity to light.
- ✓ **Are undergoing recent laser treatments or chemical peels:** Allow the skin to heal before starting LED therapy to prevent excessive irritation.

It is important to be honest about your medical history, previous aesthetic treatments, skincare products used and any medication taken, so that you can have a safe and effective treatment.

## Pre-treatment advice

- ✓ Discontinue any photosensitising medications or over the counter remedies that can cause photosensitivity 2 weeks prior to treatment (if safe to do so, seek medical advice if unsure).
- ✓ Avoid exfoliating skin products, such as retinoids, AHA/BHAs, and other aesthetic treatments, such as chemical peels, for 48 hours prior to your LED light therapy, unless otherwise advised by your practitioner or therapist.
- ✓ Avoid excessive sun exposure or tanning beds for at least 1 week before your treatment.
- ✓ Ensure you are well hydrated and your skin is well-moisturised to enhance light absorption.
- ✓ Arrive with clean, product-free skin and wear loose, comfortable clothing.
- ✓ Ensure your practitioner is informed if there are any changes in your medical history or medication taken before receiving any treatment.

## Post-treatment advice

Many practitioners advise the following:

- ✓ Expect some mild redness and warmth, this can be helped with a cool compress.
- ✓ Avoid makeup for 12 hours after treatment to allow the skin to breathe.
- ✓ Apply at least a SPF 30 factor sunscreen immediately after LED light therapy.
- ✓ Avoid excessive sun exposure and tanning for at least 48 hours.
- ✓ Do not rub or scratch the skin in the treated area.
- ✓ Use a gentle, hydrating moisturiser to help calm the skin and keep well-hydrated.
- ✓ Avoid vigorous exercise for 24 hours to prevent excessive sweating.

- ✓ Avoid hot baths, saunas and steam rooms until the skin has completely settled.
- ✓ Do not use harsh skincare products, such as retinoids and exfoliants, until advised to do so.
- ✓ Follow your practitioner's or therapist's recommended skincare routine to support healing and enhance results.
- ✓ Contact your practitioner or therapist if you experience any prolonged redness, swelling, blistering, discomfort or other unwanted side-effect.

Following your aftercare instructions will result in a lower risk of complications and a better result.

## Choosing your practitioner/therapist

Ensure you know the following information:

- ✓ Practitioner's or therapist's full name
- ✓ Practitioner's or therapist's qualification
- ✓ Practitioner's or therapist's contact details (address, telephone number, and email)
- ✓ An emergency contact number in case a complication occurs.



Practitioners and therapist are legally required to have indemnity insurance in place for all the treatments they perform, and you can ask for them to provide evidence of this prior to commencing any procedure.

If you are not happy with your treatment outcome, you should attempt to resolve this with your treating practitioner or therapist in the first instance. If you need to see a different practitioner or therapist, you are entitled to receive a copy of your treatment record outlining the device used and settings, as well as any photographs that were taken, to have your concerns addressed safely. However, remedial treatment may not always be possible and sometimes it may be necessary to allow time for the treatment to wear off.



ACE Group World was formed to help improve patient safety in medical aesthetics by producing evidence-based, peer-reviewed guidelines for the management of a wide variety of complications in non-surgical aesthetic practice. We also aim to provide help and advice for practitioners who encounter a problem.

ACE Group World hosts a forum for practitioners to share advice on the management of complications. It also provides an Emergency Helpline, email support and on-line educational modules for its members. The members also benefit from workshops, conferences, and a faculty of national and international experts.

ACE Group World works with aesthetic organisations, professional bodies, media, pharmaceutical companies, patient groups, insurers and regulatory bodies to provide professional advice and benefit for its members. Our mission is to improve regulation in the medical aesthetics sector and to provide ACE Group World Patient Information Leaflets to inform the public about what to expect and what questions to ask. We constantly strive to raise standards and improve patient safety.

Check your practitioner is a member of ACE Group World:

[uk.acegroup.online](http://uk.acegroup.online)

