

# INFORMATION SHEET 5

**The JCCP is committed to raising public awareness of the risks associated with various non-surgical and hair restoration treatments. As part of this process the JCCP will publish regular 'Information Sheets' in key areas.**

---

## Laser and light therapy (LIPLLED) / Energy based devices

---

Lasers are a medical device that emit light, but unlike a light bulb which has a rainbow of colours, lasers produce light at a single colour with a specific wavelength and direction. Many patients consider lasers and light therapy for a variety of skin conditions that can have cosmetic implications. Lasers and IPL stand for 'Light wave Amplification by Stimulated Emission of Radiation' and 'Intense Pulsed Light' respectively.

Lasers can have different mediums to give different wavelengths:

- Fluid – organic dyes
- Gas – CO<sub>2</sub>, Argon
- Solid – Ruby, Alexandrite, Nd:YAG, diode

Different wavelengths can be used to target different depths within the layers of skin and therefore used to treat a wide variety of different skin problems and conditions.

Light-emitting diode (LED) therapy is an increasingly popular methodology for the treatment of sun damage and for the signs of aging. It can be used to help soften lines and aid in a more youthful look.

The JCCP seeks to regulate lasers used for treating cosmetic procedures such as hair removal, skin resurfacing / rejuvenation, treatment of vascular / pigmented/ scar / acne lesions and tattoo removal.

### Effects/Benefits

The effects and benefits of laser and light treatments are as diverse as the devices used. However, they all have in common the highly effective ability to remove unwanted cosmetic concerns.

# INFORMATION SHEET 5

## Laser Skin Revitalisation

Laser resurfacing is a very controlled procedure in which a laser removes superficial layers of facial skin. It can remove not only wrinkles and lines caused by sun damage and facial expressions, but also acne scars. Cosmetic lasers work by heating tissue which stimulates the new growth of tissue for example new collagen in the skin. Skin resurfacing can be performed via ablative or non-ablative methods. Ablative lasers visibly remove layers of skin which poses greater risk and recovery time.

## Vascular Lesion Removal

For laser vein removal, the blood within a blood vessel is heated and the resulting injury of the blood vessel wall makes it eventually disappear. This is how cosmetic lasers can be used to remove superficial blood vessels on the face e.g. in rosacea, leg veins and many other areas of the body.

## Hair Removal

Laser hair removal is a treatment that uses a laser or IPL to remove unwanted hair. IPL (intermittent Pulsed Light) uses a wider range of wavelengths, so it is less focused and may require more treatment.

This laser heats and destroys hair follicles in the skin, disrupting hair growth. Common areas to treat are the face, legs, arms, underarms and bikini line. It can be helpful for women with hirsutism (excessive hair growth).

## Laser Scar Treatment

Laser scar treatment uses laser to reach deep into the skin's layers in order to break down the thick scar tissue present. Often ablative lasers can be used for this.

## Tattoo Removal

Cosmetic lasers can target tattoo ink pigment with a high intensity and focused light beam causing the ink to break up into smaller molecules. The ink is then naturally absorbed by the body, and potentially fading the tattoo.

## Pigmentation Treatment

Although, some types of pigmented lesions exist at birth, often new pigment can represent one of the first signs of aging. Lasers can be set to an optimal wavelength of light to remove pigmented lesions by targeting melanin. The laser treated lesion is then naturally removed by the skin's healing process.

# INFORMATION SHEET 5

## LED Therapy

Low-Level Light Therapy (LLLT) has numerous applications and the benefit depend on the wavelength of the light being absorbed. Differing wavelength of the light energy applied there are numerous reported benefit such as reducing inflammation, helping tissue repair and regeneration.

## Treatment/Procedure

There are many different varieties of lasers and the different energy levels and depths they penetrate to will vary according to each. Your practitioner will discuss with you which is suitable for your particular requirements and also how any results and recovery times might differ.

On the day, your skin will be cleaned and you will wear specially designed goggles to protect your eyes during the procedure.

Local anaesthetic injections are not necessary however you may have some topical numbing cream applied. The practitioner usually applies a cool gel or cooling air spray to the area of skin.

They then press a hand-held device to your skin and trigger the laser. This may feel like an elastic band snapping at your skin.

For LED goggles are worn as you lie under the light source.

## Adverse effects

Cosmetic lasers treatments do come with risks: risks for the laser operators and the patients undergoing therapy. As with any medical procedure, patients must be aware that they might experience certain complications which could be temporary or permanent. These could include:

- Prolonged redness of the skin
- Bleeding
- Discomfort and/or pain
- Tenderness
- Skin reddening
- Changes in skin's pigmentation / skin colour changes
- Scarring
- Burns or other injuries from the laser's heat
- Bacterial infections
- Triggering of cold sores if you suffer from them
- Incomplete treatment of the problem

**Tip:** For lesions that may be caused by sun damage, ensure your practitioner can diagnose the lesion or that they refer you to a specialist before treatment.

**Tip:** Make sure you know the recovery time needed with the laser being used

# INFORMATION SHEET 5

**Tip:** Make sure you know if a course is needed and get the complete course costs upfront

**Tip:** You should always have a patch test (a small testing area with the laser) prior to any treatment to ensure you do not have an adverse reaction to the lasers and to ensure your treatment will be performed at optimal settings.

**Tip:** Beware of clinics and practitioners advertising procedures on offer website at a reduced rate. They may not have the appropriate device or training

**Tip:** Ask if the device being used if you do not know it is CE marked.

**Tip:** If you have a darker skin type you are more at risk of burns and changes to pigmentation e.g. lighter or darker patches on the skin which can be irreversible – we advise consulting with a GMC registered doctor

**Tip:** Ensure that you follow the pre and post care given (ensure these have been explained to you!) You will probably need to avoid sun exposure or use sunblock for several weeks following treatment.

## Restrictions

Lasers and light-based devices do not have advertising restrictions; however, statutory regulated professionals consider that promotions which are seen to entice the public, are unethical, and as such, contrary to their regulations. This standard is applied by the JCCP and CPSA.

The JCCP considers best practice that before any laser procedure you have a face to face consultation with a qualified practitioner. It is important to understand the risks that can be lifelong with lasers and also how and who to contact if you have an adverse effect.

Some conditions require more than just laser treatments (e.g. scar from burn or surgical wounds) and may require different treatment types. In these setting it is best to consult with a GMC registered doctor.

## Cooling off period

The JCCP advises a consultation prior to treatment and a cooling off period of two to five days before treatment. LED procedures do not have a suggested cooling off period.

## About you

It is important to recognise what treatment you are about to have when enquiring about laser treatments. Most ablative lasers are associated with longer recovery times e.g. 1 to 2 weeks with redness and crusting which can have a negative psychological impact in the short term before the longer-term potential benefits come out. Be sure you know what the recovery times is and tailor your diary to your needs.