

## **Vascular Lasers**

### **What are Vascular lasers?**

“LASER” stands for Light Amplification by the Stimulated Emission of Radiation. Vascular lasers selectively target unwanted or abnormal blood vessels in the skin, whilst minimising damage to surrounding normal skin structures.

Modern vascular lasers are very safe and effective when used by professionally trained staff. They are generally more effective on the face than on other areas of the body, and multiple treatments are often required to achieve the best results.

### **Types of Vascular lasers**

Vascular laser technology has progressed significantly over the past few decades. There are many different types and combinations of lasers which can be used to treat vascular lesions including:

#### **Continuous or quasi continuous wave lasers**

- Argon laser
- Argon pumped tuneable dye laser
- Krypton laser
- Copper vapour and copper bromide laser (now rarely used)
- Potassium Titanyl Phosphate (KTP) laser

#### **Pulsed lasers**

- Pulsed dye laser (PDL)
- Long-pulse dye lasers
- Frequency-doubled Q-switched Nd:YAG laser

**IPL stands for Intense Pulsed Light** which is not a true laser but can be used to treat vascular lesions by using filters to deliver an appropriate wavelength of light.

### **Which conditions can be treated with a vascular laser?**

Vascular lasers can be used to treat the following conditions:

- Port wine stain birthmarks
- Broken capillaries or telangiectases
- Redness of the face and neck
- Rosacea
- Spider naevi
- Cherry angiomas
- Infantile haemangiomas
- Venous lakes
- Some leg veins
- Early scars
- Red stretch marks
- Warts.

### **What is involved in vascular laser treatment?**

A laser practitioner will assess your condition and its suitability for vascular laser treatment. Multiple treatments spaced apart over time are usually required to achieve the best results. You may be advised to stop any non-essential blood thinners (such as aspirin) or supplements (such as fish oil) for 1 to 2 weeks prior to treatment to minimise the risk of bruising. Anaesthetic (“numbing”) creams may be used prior to treatment to minimise discomfort in the area being treated.

During treatment, most individuals are reclined or lying down, depending on the area being treated. Both you and your laser practitioner will be wearing protective eyewear (usually goggles or eye shields for the person receiving treatment). Laser parameters will be set according to your specific condition, skin type and other individual factors. Many lasers have a bright “flash” during treatment and feel like a hot elastic band being snapped against the skin.

You may be given cold or ice packs to cool the area after treatment to reduce swelling and discomfort. As with any laser treatment, it is extremely important to protect the skin from sun exposure afterwards. You may be advised to avoid physical activities such as vigorous exercise which can cause blood vessels to dilate. Port wine stains in children over the age of 6 months are treated under general anaesthetic in a hospital by a specialist trained dermatologist.

### **Are vascular lasers safe?**

Vascular lasers are safe if used by experienced and professionally trained staff. Pulsed dye lasers have been used since the 1980s to treat port wine stain birthmarks in babies and children. They are NOT associated with an increased risk of cancer in the long term.

### **What are the potential side effects of vascular lasers?**

Possible side effects may vary according to the type of laser used. Common side effects are usually temporary and may include redness, bruising, swelling and crusting.

Rare side effects may include blistering, skin lightening or darkening, thinning of the skin and scarring. Risks can be minimised by using cooling devices.

It is best to avoid laser treatment when the skin is heavily tanned as this treatment increases the possibility of colour changes in the skin.

It is very important that you follow your practitioner’s pre and post treatment instructions.

### **Are there any reasons not to treat with vascular Lasers?**

Vascular laser treatment may not be suitable if you:

- are pregnant or breast feeding
- have an active infection at the site of treatment
- have a history of keloid scars
- have taken a drug called isotretinoin in the past 6 months
- are taking medications or have a medical condition that causes increased sensitivity to light
- have unrealistic expectations.