



EUROPEAN  
ACADEMY OF  
DERMATOLOGY &  
VENEREOLOGY

Information Leaflet  
for Patients

# Laser-and light-assisted procedures to treat facial telangiectasias



## The aim of this leaflet

This leaflet is designed to help you understand more about the treatment of facial telangiectasias using lasers and other similar procedures. It tells you what can be expected with these procedures and includes answers to frequently-asked questions.

# Laser-and light-assisted procedures to treat facial telangiectasias

## What are facial *telangiectasias*?

Facial *telangiectasias* (also known as “spider veins”) are extremely common, benign skin alterations. They can be *linear* (straight) or *arborising* (repeatedly branching). They progressively increase in number with ageing. Some inflammatory skin conditions such as rosacea, chronic sun damage, long-lasting *excoriated acne* (where the skin is typically worn off from scratching), slow-healing surgical scars, and prolonged application of topical steroids may also be associated with these clinical findings. Occasionally, isolated forms of *telangiectasias* can have a “star-burst” shape. These peculiar *telangiectasias* are commonly described as “spider angiomas.” All these lesions can be easily removed with modern laser and intense pulsed light devices.

## What are laser and intense pulsed light devices?

Laser and light-assisted micro-coagulation of facial *telangiectasias* is a commonly performed procedure with the aim of eliminating visible facial capillaries and small veins. Laser and Intense Pulsed Light (IPL) can selectively coagulate dilated facial vessels minimizing collateral damage to surrounding tissue without damaging the superficial skin layers when specific Laser and IPL wavelengths and pulse duration are used. Red and blue facial vessels are different in colour because they contain different forms of haemoglobin, the oxygen-carrier contained in our erythrocytes. Both colours are able to absorb specific types of laser and IPL lights such as green light at 532 nanometers (nm, the wavelength/colour of the laser), yellow light at 585-595 nm, near infrared light at 755 nm, 1064 nm). These powerful forms of light energies “travel” across the superficial components of the skin until they reach the vessels we want to eliminate. Heat is produced each time laser and intense pulsed light hit the two forms of haemoglobin contained in circulating blood. By selecting adequate treatment parameters, the temperature generated within exposed vessels induces their *micro-coagulation*. One or two treatment sessions are usually necessary to achieve good clinical results.

## Are there any other techniques I should consider?

Lasers and intense pulsed light (IPL) sources should be considered the treatment of choice to eliminate facial *telangiectasias*. *Micro-electrocoagulation* (micro-needles connected to a radiofrequency device) may be used as an alternative, less specific treatment strategy. This approach is more operator-dependent requiring greater manual precision during treatment. Higher percentages of unwanted, possible collateral damage to surrounding tissue may lead to inferior clinical outcomes and potential pinpoint scarring.

## How is a typical procedure performed?

Laser and intense pulsed light-assisted *micro-coagulation* of facial *telangiectasias* is usually well tolerated. Cold air, contact cooling (e.g. simple ice cubes or chilled metal plates, transparent sonographic gel) provide adequate comfort during treatment. Laser and intense pulsed light energies are potentially dangerous to the eyes, therefore you will be asked to wear protective eye-shields or goggles during the entire duration of the procedure. Should you suffer from claustrophobia, eye shielding could generate uncontrollable panic reactions. It is advisable to discuss this specific problem with your dermatologist, before planning this kind of procedures.

At the end of the procedure, treated skin will look moderately swollen and red. Isolated, dark bluish, round, and *linear micro-discolorations* are usually observed where capillaries have been photo-coagulated. You will experience moderate irritation and a mild burning sensation due to the acute inflammatory reaction induced by the treatment. These alterations are normal findings, and will progressively fade away in 4-6 days. Simply cooling the area with ice packs and applying soothing creams will easily control post-treatment irritation at the end of the procedure.

You will be asked to follow a specific skin care regime for a few days in order to obtain a faster local recovery. High SPF (sun protection factor) sunscreen (50+) must be applied every day to prevent *post-inflammatory hyperpigmentation* (skin darkening potentially associated with all kind of skin treatments) until skin is fully recovered. Follow-up visits will be scheduled to monitor the evolution of the healing process and to assess treatment efficacy.

### What can I expect?

Facial *telangiectasias* will progressively disappear in 10-20 days. However, never expect a 100% clearing. Even though highly sophisticated laser and intense pulsed light technologies are used by expert dermatologists, complete clearing of facial capillaries and small veins cannot be always guaranteed. Variable

degrees of clearing are usually observed in different individuals according to many of their intrinsic biological characteristics. Multiple sessions may be occasionally needed to obtain good clinical results. Skin tissues continue to change with time due to many internal and external factors. Proper preventive skin care can contribute to minimize these effects but not eliminate their influence to the skin. Facial *telangiectasias* can therefore recur and/or new dilated vessels may be observed. The need of personalized periodic treatments should be discussed in advanced with Patients as part of a satisfactory management of facial *telangiectasias*.

### Is there any risk involved in these procedures?

This is usually a safe procedure, as long as the correct laser and intense pulsed light devices are selected, effective technique is used, and post-treatment care is implemented. Wrong laser and intense pulsed light selection can induce transient *hyperpigmentation* or long-lasting *hypopigmentation* (skin lightening) since superficially-located melanin (brown pigment) also absorbs some light and therefore may increase the risk of collateral damage. Insisting too much on trying to clear isolated vessels may also induce excessive non-selective heat in surrounding tissues potentially leading to textural changes and scarring. Recurrence of facial

*telangiectasias* is also possible, and should be considered as a natural evolution of underlying skin diseases such as *rosacea* or *other chronic relapsing inflammatory skin alterations*. Periodic treatments are necessary in these cases.

### What are frequently-asked questions about these procedures?

#### Can I shower during the days following the procedure?

Yes, provided that you do not use extremely hot water on treated areas, and that you apply post-treatment topical products as instructed.

#### Can I go to the pool during the days following the procedure?

Yes, swimming in chlorinated water is safe, as long as some protective cream is applied immediately before and after.

#### Can I practice sports in the days following the procedure?

Yes, though sweating may irritate and redden the area. Topical application of protective gels and creams will reduce symptoms.

#### Can I sunbathe once the skin is healed?

Yes, but with extreme caution, provided you apply high SPF (50+) sunscreen 30 minutes before and every two hours afterwards. Early skin exposure after facial treatment can increase the risk of post-inflammatory



Pre-treatment telangiectasias



Post-treatment telangiectasias

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hyper-pigmentations. Ideally prolonged and intense sun-exposures should be avoided until all inflammatory changes disappear.

## **Can I use any topical products on the treated area(s) without consulting with the dermatologist who performed the procedure?**

No, application of any topical products should be discussed with your dermatologist before laser and IPL photo-coagulation procedures in order to avoid potential irritant/allergic reactions which may interfere negatively with proper skin repair.

## **Can I undergo laser and light-assisted *micro-coagulation* of facial telangiectasias when I am pregnant or breastfeeding?**

Theoretically **YES**, because we are talking about a very superficial light-based treatment. However, in practice, **NO** light or energy-based treatments should be performed during these particularly vulnerable periods of life. No data supporting the safety of these procedures during pregnancy and breast-feeding has been published. Should any problem arise with the foetus immediately after treatment or delivery, it would be an extremely difficult legal matter.

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While every effort has been made to ensure that the information given in this leaflet is accurate, not every treatment will be suitable or effective for every person. Your own clinician will be able to advise in greater detail.