

Laser, lights and acne

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Lasers are more and more proposed and used by dermatologists as a help in the treatment of acne: to overcome inflammatory outbreaks, to reduce the production of sebum causing acne lesions or to treat marks and scars.

There isn't one laser treatment of acne but several possibilities of action of different lasers depending on the severity of acne.

For inflammatory lesions (red, more or less raised):

The main interest compared to antibiotic or isotretinoin (roaccutane and generic) treatments is to treat only the affected area (s), without any general side effects. Some patients are now opposed to general treatment or have contraindications to these treatments (allergies, dry skin and eczema, cholesterol, liver disease, depression ...) and laser or light therapy can help. But we must not fall into the opposite extreme: the laser is not indicated for the beginner or less severe forms of acne for which the local treatment must be sufficient. The laser is not also a magic wand that will erase alone and forever acne, which is a chronic pathology often transient but sometimes prolonged, hormonal ... These are just new tools, effective and safe, although not reimbursed by the social security, within our dermatological therapeutic range against moderate to severe acne. In general, your dermatologist will initially prescribe topical treatments, skin cleansings or peelings to begin the treatment. Simple principles and common sense in life and skin hygiene should always be recalled: skin cleansing, no over-covering foundation (non-comedogenic care products), a suitable pill (rather anti-androgenic than progestative). Attention is also paid to implants, rings and IUDs (they promote acne) and balanced diet without excess of sugars (sweets, soda, cakes ...) or fat or dairy products of animal origin.

Lasers and lights helpful with acne management:

There is no reimbursement by social security for this type of act.

Against the inflammatory component of acne

- Pulsed dye laser or Nd-YAG laser
- Pulsed polychromatic light
- Blue and red LEDs but also yellow and infrared, if possible in combination: to have endogenous photodynamic therapy, anti-inflammatory and healing effects.

Against excess sebum

- Infra-red lasers (Aramis or Smoothbeam): This is a deep penetrating laser that acts on the sebaceous gland and could decrease its secreting activity. It is necessary to carry out 4 sessions spaced by 1 month and sometimes (hormonal acne) maintenance sessions every 6 to 12 months. Some fractional micro-needle radiofrequencies may also be effective. The data are more recent in the literature.

- Photodynamic therapy (PDT) with red or blue LED, IPL or pulsed dye laser.

Be careful, these PDT treatments are very expensive because the only photosensitizer authorized in France called Metvixia costs 205 euros / tube of 2 g (to be purchased with a prescription at the pharmacy). The sessions are very effective but with heavy aftermaths (pustules, redness, swelling and erosions) for 8 to 10 days, preventing any social life. We can modulate their intensity to have fewer side effects but the effectiveness will be also less important...

- Sebacia: a new treatment under study in Europe and the World since 2016 that could improve acne from 40 to 60% in 6 months after 3 to 4 sessions. It consists of applying a solution of silica microparticles coated with a thin gold film that penetrates well into the sebaceous follicles, and then use a simple depilatory laser to activate it and destroy the sebaceous glands responsible for acne. The price, not reimbursed, is not yet known.

Against scars

- Prolonged red or brown marks: if possible, abstention and surveillance as they are always transient. Otherwise pulsed dye laser or pulsed light for red marks, active depigmenting cream or preparation and sun protection for pigmentation.
- Atrophic scars: fractional laser techniques (ablative and non-ablative sometimes combined) and fractional micro-needle radiofrequencies are currently the reference treatment for the majority of cases. For very severe cases, it is always necessary to use lifting or excision surgical techniques followed by conventional dermabrasion by CO2 laser or Erbium and sometimes also supplement by filling injections.

Contraindications:

- Pregnancy: **this is not a contraindication** and lasers are often proposed in case of severe acne during pregnancy, when the patient can't take medication or apply certain creams dangerous for the fetus.
- Black skin and dark skins: they will be more difficult to treat, LEDs and Smoothbeam (by lowering fluences) can be used.
- Medications can interfere with the treatments: you will need to notify the doctor of any medications or healing difficulties.

Side effects :

They are extremely variable according to the techniques used.

Almost non-existent for LEDs, purple purpura for lasers and some vascular IPL, redness and swelling for other pulsed lights and infrared lasers, more painful during the session. Transient worsening of acne (more or less marked depending on the type of laser) as every beginning of acne treatment, since the deep cysts are progressively eliminated. It is particularly interesting to work from the beginning on a skin already "cleaned" by peelings and microcyst extractions to facilitate the passage of light and decrease these transient aggravations.

Practical consequences: post-operative care

Application at least 2 times / day of a non-comedogenic and soothing moisturizing cream

Total sun protection

Possible application of a non-irritating depigmenting cream for dark phototypes

Methods of treatment

The patient is wearing adhesive protective eye shields.

The sensation goes from a simple temperature increase of 1 ° C for the LEDs to a sensation of tingling or transient burn for the other devices. The PDT is very painful during the illumination and the hours that follow.

This information sheet recommended by the French Laser Society can be given to you by your dermatologist. Even if it is not sufficient to have an estimate, it helps to give the patient a clear information.

The information consultation provides clear explanations on expected outcomes, side effects and possible complications. There are not any reimbursement from social security or medical leave for these aesthetic treatments. Prices are mainly based on the area to be treated. The total cost is to be evaluated with the patient and is the subject of a signed quote.

A post-operative order and an advice sheet are given to the patient with the doctor's contact information.