

## CELLULITE

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### DEFINITION

Cellulite is a cosmetic problem that affects 85 to 98% of women after puberty. This is the phenomenon of orange peel: several stages are described according to the Nürnberger-Muller classification:

Stage 1: appearance of orange peel only when pinching the skin,

Stage 2: appearance of orange peel in standing position,

Stage 3: visible cellulite in standing and lying position.

It does not exist in men except in the case of androgenic deficiency or estrogen therapy for cancer.

Depending on the cycle, genital life (method of contraception) and aging, cellulite is associated with water retention (related to venous insufficiency), increased volume of adipose lobules (related to weight gain) and fibrosis of the spans between the adipose lobules forming dimples in cupuliform depression (often after injections).

Skin aging with loss of density and elasticity explains hernias of the hypodermis in the dermis, visible by ultrasound (shark mouth images).

Suction or massage techniques work temporarily on water retention but are useless for the main problem, the stiffening of spans (perpendicular to the skin in women) of collagen fibers between fat lobules of hypodermis. That's why we use lasers and radiofrequency.

### THE TECHNIQUE

For more than 10 years, new lasers (Nd: YAG 1064 nm, 1060 nm hyperthermic laser, 650 nm low energy lasers, among others) and mono or bipolar radiofrequency (deeper action) allow to act directly in the heart of the problem by a gradual remodeling of the quality of the collagens of the skin and underlying tissues between the adipose lobules. The increase in density and the improvement of the skin texture are associated with an adipocyte purging action due to the increase of the temperature for a determined time. Finally vacuum is often associated in devices to improve drainage by a purely mechanical action.

### PRINCIPLE OF ACTION OF LASERS

The application on the surface of the skin of light particles, of variable wavelengths (infra-red and near infra-red) and of different pulse times creates an increase of temperature that diffuses into the dermis and subcutaneous tissues inducing the synthesis by fibroblasts of collagen and elastic fibers of great quality (principle applied in the former techniques of rejuvenation of the facial skin).

### PRINCIPLE OF ACTION OF RADIO FREQUENCY (RF)

The application of 2 electrodes more or less distant (mono or bipolar RF) induces an increase in depth temperature (deep action equal to half of the distant between the electrodes), leading also to neocollagenesis.

The machines can combine RF and laser, RF and pulsed electromagnetic fields (known to stimulate healing) as well as suction to increase the results.

## THE PROCEDURE

It is well codified and it is necessary to maintain this increased temperature for a prolonged period (about ten minutes) in order to trigger the process of neocollagenesis and final skin retraction. The new machines are equipped with an interactive display and real-time temperature measurement.

Other techniques such as focused ultrasound and cryolipolysis may be associated in case of localized fat deposits.

These laser and radiofrequency techniques also improve the quality of the skin before or after surgical techniques.

## INDICATIONS AND CONTRAINDICATIONS

The first consultation will evaluate the stage of cellulite as well as the associated diseases (diabetes mellitus, obesity) and therefore contraindications such as pregnancy, active dermatological and general diseases, deep and retractile scars, implanted or portable electrical devices.

To obtain optimum results, it is crucial to advise regular physical activity and food hygiene. A moderate attitude towards the sun remains essential. Some precautions need to be respected before the session: avoid scrubs, creams based on fruit acids which modify the conductivity of the tissues, self-tanning in case of laser treatment.

Dark skins can be treated without problems by radiofrequency (which is not absorbed by the melanin of the skin).

## THE SESSION

The temperature is gradually increased and it should not be painful. The skin remains red a few minutes after the treatment. Staying outside under the sunlight is not recommended the same day. These treatments can be performed in any season.

Blisters and crusts are exceptional and can be seen if the skin has been previously wounded. This treatment needs a medical supervision.

The number of sessions varies from 5 to 10 sessions depending on the age and the importance of the signs, and the machines used. The interval between sessions must be respected: 8 to 10 days.

Maintenance sessions are recommended once or twice a year depending on age.

## THE RESULTS

The appearance of the skin improves gradually in 3 to 6 months. The results for stages 1 and 2 of cellulite are better on thighs and abdomen and longer to obtain on arms. Fibrotic and aged cellulite (stage 3), especially on buttocks and after mesotherapy (generating harmful bruises) first need more aggressive and invasive methods (subcision of the fibrous spans).

According to the latest published studies, the variety of hypertrophic and hyperplastic white adipose tissues explains the variability of the results.

***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.*