

PATIENT INFORMATION

FRACTIONAL CO₂ LASER



Cutis Clinic



ABOUT THE TREATMENT

CO₂ laser is an ablative laser, meaning that the laser removes the surface layers of the skin. With fractional CO₂ laser treatment, only a portion of the skin—typically 10–20%—is treated, while the surrounding tissue remains intact.

Fractional CO₂ laser currently constitutes the majority of CO₂ laser treatments, as it is less aggressive, associated with shorter downtime, and carries fewer side effects compared with full-field CO₂ laser resurfacing.

Laser energy is absorbed by the skin, causing controlled heating and evaporation of tissue. Thousands of microscopic, pinpoint channels are created in the skin. Heat spreads laterally from these channels, coagulating small blood vessels and triggering a healing response. During healing, new blood vessels form, and growth factors are released, stimulating the production of new connective tissue and hyaluronic acid in the skin.

Modern CO₂ lasers create very fine channels, typically around 0.15 mm in diameter. These fine channels reduce damage to the epidermis and shorten downtime compared with older laser technologies, which often caused more extensive skin injury. With fractional CO₂ laser, the overall risk of complications is reduced compared with full ablative resurfacing, although results may be less dramatic.

Fractional CO₂ laser is used for the treatment of:

- wrinkles and fine lines
- enlarged pores
- scars
- stretch marks
- selected cases of sun damage, including pigment irregularities and redness

The effect can be explained by both superficial and deeper mechanisms.



Superficial exfoliation

- Partial removal of the epidermis, replaced by new skin cells
- Stimulation of epidermal renewal, reducing sun damage and pigment irregularities

Deep stimulation

- Increased collagen and elastic fiber production, improving skin firmness and structure
- Increased hyaluronic acid production, enhancing hydration and skin glow

The recommended number of treatments depends on baseline skin condition and treatment goals. Younger patients may achieve satisfactory results after a single treatment, whereas more mature skin or pronounced changes typically require a course of multiple treatments.

Fractional CO₂ laser may be combined with other aesthetic treatments, which is discussed during the consultation.

CONSULTATION

After reading this written patient information, you must attend a consultation where it will be assessed whether the treatment is appropriate for you. Your wishes, expectations, and treatment options will be reviewed, and an individual treatment plan will be created.

The treatment plan, selected intensity, consent, and any relevant risk factors are documented in the medical record in accordance with applicable regulations.

During the consultation, you will receive oral information and have the opportunity to ask questions. You are welcome to bring a companion.

For cosmetic indications, a mandatory reflection period of at least 7 days applies before informed consent can be given, in accordance with Danish law.

Laser treatment may be combined with other cosmetic procedures, which can be discussed during the consultation.





CO₂ laser treatment is not performed in the following cases:

- Pregnancy
- Patients under 18 years of age (cosmetic indication)
- Known hypersensitivity to local anesthetics (lidocaine)
- Infection in the treatment area
- History of keloid scarring

Photographic documentation prior to treatment is used as part of medical record-keeping and documentation of the treatment course.

PREPARATION FOR TREATMENT

You are advised to attend the clinic approximately 90 minutes prior to treatment for application of topical anesthetic cream. The skin is cleansed, and a thick, occlusive layer of anesthetic cream is applied (as a full-face mask where relevant).

At least one hour before treatment, take:

- Paracetamol 1000 mg
- Ibuprofen 400 mg (if tolerated and not contraindicated)

Additional pain relief may be prescribed if needed.

- SPF 30+ should be used consistently for at least 4 weeks before and after treatment
- Active skincare ingredients (vitamin A/retinoids, AHAs, etc.) should be paused 1 week before treatment if they cause irritation

History of herpes simplex (cold sores):

- Always inform the clinic
- Collect antiviral medication from the pharmacy
- Begin antiviral prophylaxis on the morning of treatment:
 - Valaciclovir 500 mg, one tablet morning and evening for 5 days

Please collect prescribed medications from the pharmacy:

- Locoid® cream
- Fucidin® ointment
- Valaciclovir tablets if prescribed

Topical anesthetic cream does not need to be collected from the pharmacy.

International patients will receive any prescribed medication directly from the clinic.

THE TREATMENT

The anesthetic cream is removed prior to treatment. Facial treatment typically takes 20–25 minutes; larger areas require more time.

Cooling air may be applied during treatment to reduce discomfort. Smoke evacuation is used, as treatment produces a characteristic odor.

Treatment may be performed at low, moderate, or high intensity. Downtime and effect are proportional to the selected intensity.

After treatment, a thin layer of antibiotic ointment is applied and may remain on the skin until the evening.

Selection of treatment intensity is based on baseline skin condition and treatment goals. Higher intensity may produce greater effect but is associated with longer healing time and increased risk of side effects.





AFTER TREATMENT

Immediately after treatment, small white dots and mild swelling are visible. Redness and swelling increase over several hours. With higher intensities, oozing or bleeding may occur. A burning sensation typically subsides within 1–2 hours.

The first morning after treatment, swelling—especially around the eyes and mouth—can be pronounced. Swelling usually decreases during the day and is less noticeable the following day. Mild swelling may persist for up to one week.

After 2–3 days, a thin film forms on the skin, and fine crusting may develop, shedding after 5–10 days, depending on treatment intensity. Do not pick or scratch the crusts. Itching and stinging during healing can be relieved with Locoid® cream.

General precautions

- Avoid strenuous exercise, sauna, and intense heat for the first 48 hours
- Keep the skin as clean as possible
- Paracetamol may be taken if needed, though usually unnecessary after the first day

Skincare days 1–3

- Cleanse gently 2–3 times daily with mild cleanser
- Pat dry with a clean towel
- Showering and hair washing are permitted
- Apply Fucidin® ointment in a thin layer three times daily
- Do not apply other creams unless prescribed

Skincare from day 4

- Discontinue Fucidin®
- Continue gentle cleansing 2–3 times daily
- Apply moisturizer several times daily
- Apply Locoid® cream thinly 1–2 times daily if itching, stinging, or bumps occur

Failure to follow aftercare instructions may increase the risk of complications and negatively affect results.

Active skincare ingredients may be resumed no earlier than 2 weeks after treatment.

Avoid direct sun exposure without protection for 30 days after treatment. Use SPF 30+ consistently and consider sunhat and sunglasses.

Patients with melasma or a tendency to develop hyperpigmented scars may be advised to use pigment-reducing skincare after treatment based on individual assessment.

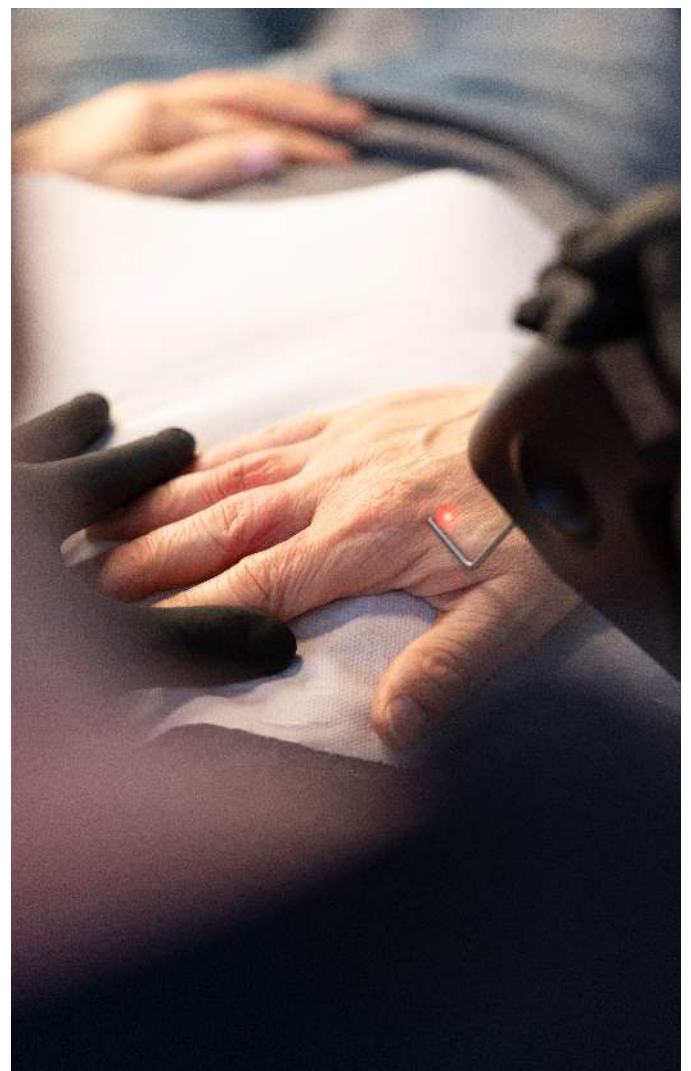
It is generally possible to resume social activities and work immediately after treatment, although most patients choose to take 3–4 days off or work from home.

SIDE EFFECTS

Fractional CO₂ laser is generally a safe treatment with a low risk of serious or long-term side effects. The occurrence of side effects or complications does not in itself indicate malpractice.

Common side effects

- Pain or discomfort (typically subsides within 1–2 hours)
- Redness, warmth, and swelling resolving over several days
- Oozing or bleeding resolving within approximately 24 hours
- Temporary visible transition between treated and untreated skin
- Folliculitis or acne-like eruptions resolving over weeks



Rare side effects

- Prolonged redness or skin sensitivity
- Long-lasting or permanent pigment changes
- Post-inflammatory hyperpigmentation, particularly in darker skin types or with insufficient sun protection
- Wounds or infection requiring urgent assessment and treatment
- Scar formation, which in very rare cases may be permanent

Contact the clinic or seek medical care in case of increasing pain, fever, redness, discharge, or other concerning symptoms.

RESULT

The outcome of cosmetic treatments varies between individuals and cannot be guaranteed. Results depend on biological factors, lifestyle, and the skin's individual healing capacity. This treatment does not replace surgery where surgery is indicated.

For certain conditions such as scars, stretch marks, and wrinkles, improvement may be limited, and complete correction cannot be expected.

Skin remodeling occurs gradually after treatment. The final result is often assessed only after 6-12 months. Results may be enhanced with repeat treatments at intervals of at least 3 months, although longer intervals do not negatively affect outcomes. There is no fixed maximum number of treatments; treatment intervals are determined individually based on clinical response.

INFORMATION AND CONSENT

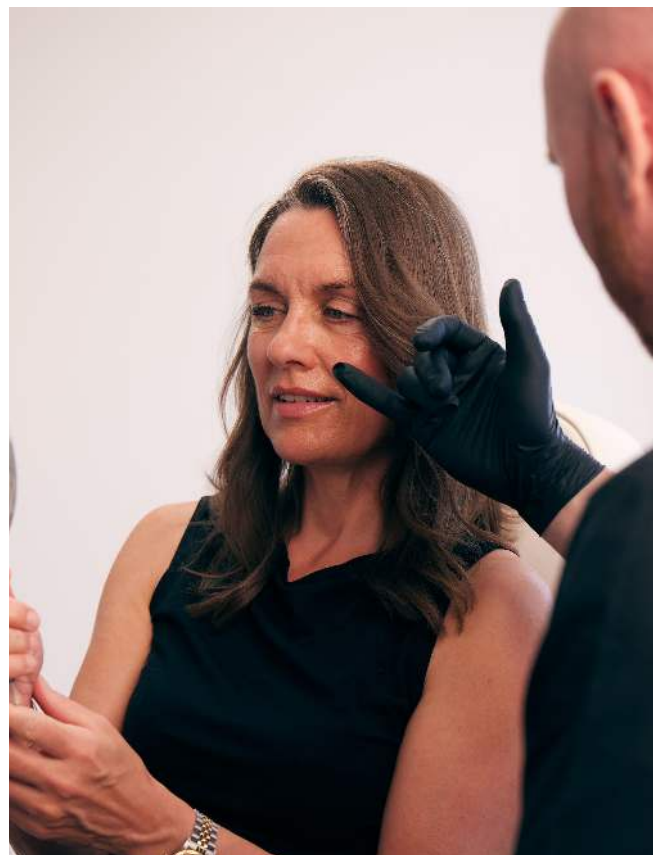
After reading this information, you must attend a consultation with oral information and the opportunity to ask questions.

For cosmetic indications, a mandatory reflection period of at least 7 days applies before consent can be given. For medical indications (e.g. scarring), no mandatory reflection period applies. The indication and medical assessment are documented in the medical record.

Questions and Contact

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REVISION OF PATIENT INFORMATION

Cutis Clinic ©

Version: 3.0

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This document will be reviewed no later than January 1, 2028, or earlier if required due to significant changes in clinical practice, treatment protocols, or applicable regulatory requirements.

