

Phoenix CO2 Laser System



Indications for Fractionated CO2 Laser Systems

- Sun-damaged skin
- Aging skin
- Skin Texture irregularities
- Pigmented dyschromias & scars
- Skin striations
- Early Rhytids
- Wrinkles
- Ablation and resurfacing of soft tissue



Phoenix CO₂ Laser System

- The Phoenix Co2 laser system Features
- 80mj per pulse(10,600 nm)
 - 100 µm for cutting or vaporization
 - Micro Thermal Zone CO₂ Scanner
 - Adjustable pattern size from 5mm up to 30mm
- Advantages of Fractional 120 μm Micro-Thermal Zone
 - Better penetration
 - Minimal pain during procedure
 - Minimal pain post procedure



Fractional Technology: How it Works

- The Phoenix CO2 laser emits light at a wavelength of 10,600nm that is absorbed strongly by water down to the lower dermis.
- Each pulse of CO2 energy ablates a vaporized column of tissue. As ablation occurs, deep heating stimulates collagen growth and remodelling.
- The laser energy is distributed in an even pattern, leaving little areas of untreated skin in-between spots. This facilitates the healing process and reduces patient downtime.



Spot Size and Depth of Ablation

CO2 Fractional Spot Size = 120 microns



Phoenix CO2 Laser Resurfacing Depth: ~ 100 - 750 µm

Not to scale

Scan Area (Footprint) = Speed

The UltraFine-FS Fractional Scanner features unique scanning Technology that makes it possible to graduate the fractional treatment to the requirements of individual patients. The UltraFine-FS provides the operator full adjustment flexibility.



Anesthesia for Phoenix



Topical

Chiller

No need for sedation

Nerve blocks may be required for sensitive areas.

Benefit of small micropulse size

Phoenix Treatment Method

Treatment approach:

- Remove all make-up and visible hairs from the area to be treated
- Examine the treatment area carefully for any signs of carcinoma
 proceed only if you are sure that no signs exist
- Both operator and patient must wear protective eyewear
- Apply topical anesthetic and wait (~45-60 min)
- Thoroughly remove topical anesthetic

Post-treatment Instructions

Day 1 (1st day after treatment):

- Sun burned appearance with tight feeling
- Avoid direct sunlight and excessive heat
- Begin washing face as needed with tepid water and gentle cleanser (use your hands only)
- May take tepid shower and wash hair
- Re-apply ointment/cream to treated area as needed (ensure skin remains constantly moist)

Day 2:

- Swelling should subside and skin may bronze and feel gritty
- Itching (particularly along the jaw-line) tends to begin on this day
- Continue applying ointment/cream (and cool compresses, if needed)
- Continue washing face with gentle cleanser and tepid water
- For extreme itching, hydrocortisone cream (OTC 1%) may be applied
- AVOID picking and/or scratching

Post-treatment Instructions

Day 3:

- Facial skin should begin peeling between days 3 and 5
- Continue washing face with gentle cleanser and tepid water
- Itching may persist
- The central aspect of the face should begin to exfoliate today leaving behind soft pink tissue
- Continue applying ointment/cream, especially on sides of face by hairline

Day 4 - Day 7:

- Itching has usually subsided
- May start more aggressive washing with fingertips to promote further exfoliation (do not pick)
- If using an occlusive ointment, may transition to a cream and spot-treat drier areas that may still have some rough skin with occlusive ointment
- Use non-irritating sunblock SPF 30+ with zinc oxide (7-9%) and/or titanium dioxide when going outside
- If needed, may apply mineral make-up (powder)

Post-treatment Instructions

Day 7-28

- Continue appropriate moisturizer until skin has hydrated back to its normal level (3-4 weeks)
- May start regular skin care program as long as treated area is healed (no exfoliation)
- Continue applying non-irritating sunblock (SPF 30+) and use mineral make-up (powder) to protect treated areas (Do not use liquid foundation as it may clog pores and irritate new skin)
- Avoid exposure to excessive sun for up to 4 weeks (hat or clothing must be used to protect treated areas)
- May return to exercise programs

Healing will vary based on individual and on intensity of treatment

Complications

Laser skin resurfacing complications include:

- Hypopigmentation
- Scarring (generally resolves over time with steroid treatment)
- Induration that generally resolves over time with steroid treatment
- Formation of fibrotic tissue that generally resolves over time with steroid treatment
- Preauricular flap necrosis
- Post auricular skin slough/loss

Outcome and Prognosis

Results of laser resurfacing are good to excellent depending on the indication for which the procedure was performed.

Patient satisfaction is based on the delivery of natural results with minimal downtime and a low incidence of complications.

Actinic changes are improved to the greatest degree. Wrinkles typically are improved by 60-80%, while scars are improved to a lesser degree.

Improvement can be seen in deeper skin folds of the cheeks, forehead, and neck, malar bags, and even in the excess skin of the upper eyelid (pseudo blepharoplasty effect), but their improvements are less predictable.

Static lines are improved to a greater degree than dynamic lines. Treatment of these dynamic lines with botulinum toxin A provides significant improvement.

Heat stimulates the sub dermal collagen to regenerate over 60 - 90 days. Patients should be reassessed and/or retreated at 3 - 6 months.

Typical Fractional CO₂ Healing Process



Pretreatment

Day 2



Typical Fractional CO₂ Healing Process



Pretreatment

Day 2

Day 4



Before



After fractional resurfacing



Pretreatment

Post Treatment





3 Months Post Treatment

Pretreatment



Before

14 Days Post-Op







