



skin cooling
feel the difference

Zimmer

Cold air for increased patient comfort

The skin cooling system designed for superficial laser skin procedures.

The Zimmer Cryo cold air device is intended to minimize pain and thermal injury during laser and dermatological treatments and for temporary topical anesthetic relief for injections.

Unlike other cooling methods, such as contact cooling, cryogen spray or ice packs, the Cryo device can cool the epidermis before, during and after laser energy has been applied, without interfering with the laser beam.



Zimmer MedizinSysteme Cryogenic Competence, Made in Germany

Cold air cooling is widely used with dermatological laser therapy.

We studied the effect of cold air cooling at different skin temperatures with pulsed dye laser treatments of facial telangiectasia.

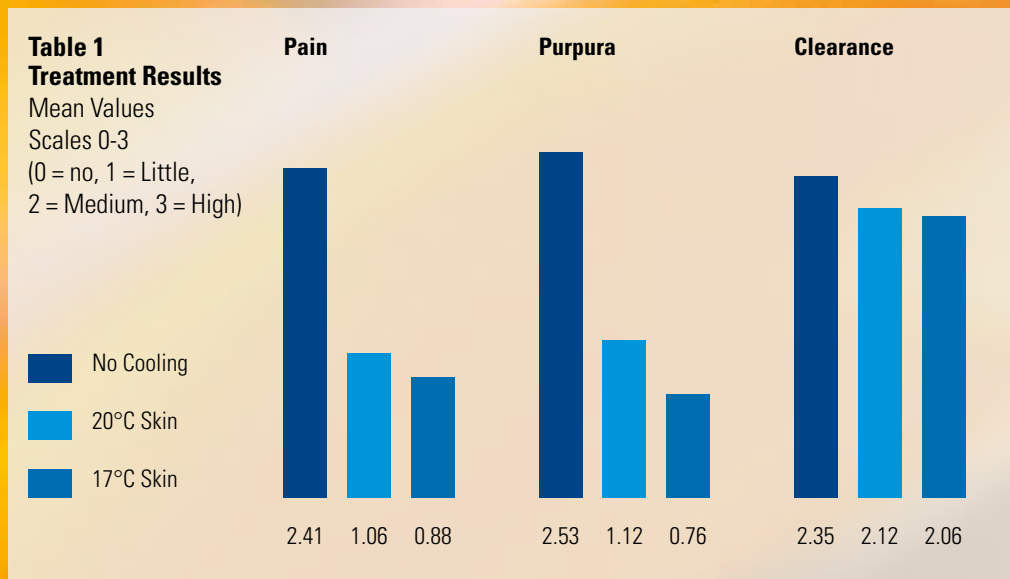
The studies showed the positive effects of skin cooling with cold air on therapeutic outcome and on side effects.



Evaluation of different temperatures in cold air cooling with Pulsed-Dye Laser

Stefan Hammes and Christian Raulin, MD* Laserclinic Karlsruhe, Karlsruhe, Germany

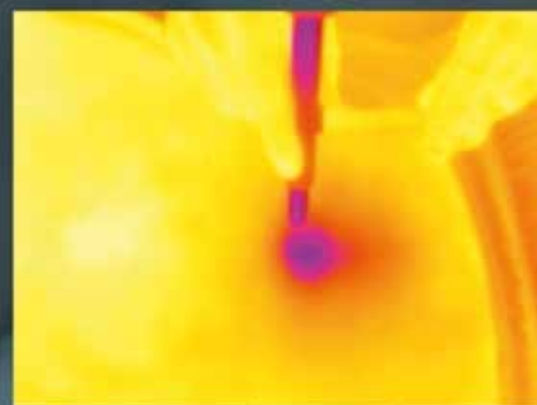
Lasers in Surgery and Medicine 9999:1–5 (2004)



Results

Without cooling, purpura (2.53), pain (2.41), and clearance (2.35) were rated medium to high. Cooling to 20°C reduced purpura (1.12) and pain (1.06), whereas the clearance (2.12) was only slightly effected. Cooling to 17°C reduced purpura (0.76) and pain (0.88) even more. The clearance (2.06) was lowered marginally. Most patients preferred cooling to a skin temperature of 20°C.

Thermal Image



recommended temperature range between 10°C and 15°C

Study Design / Materials and Methods

From September 2002 to February 2003, 17 patients with previously untreated facial telangiectasia underwent a single treatment session with a flash-lamp pulsed dye laser (3.5 J / cm², 585 nm, 0.45 milliseconds pulse length, 10 mm beam diameter, Cynosure 1 V). The treatment area was divided into three subsections, with varied degrees of cold air skin cooling: no cooling, cooled to 20°C, and cooled to 17°C.

Skin temperature was monitored by a prototype infrared sensor system that controlled the temperature of the cold air stream (Cryo 5).

In a prospective study, we collected data on purpura, pain, clearance, and patient satisfaction on numerical analog scales (NAS) from 0 (none) to 3 (high).

Conclusion

During laser therapy treatment of facial telangiectasia, the use of cold air can significantly reduce side effects and increase patient satisfaction, while only slightly affecting clearance.

Cooling the skin to a temperature of 20°C proved to be a well-balanced course. For practical application, we recommend cooling the skin to a level that can be easily tolerated by the patient and then increasing energy densities.

Pain reduction during skin injections with cold air

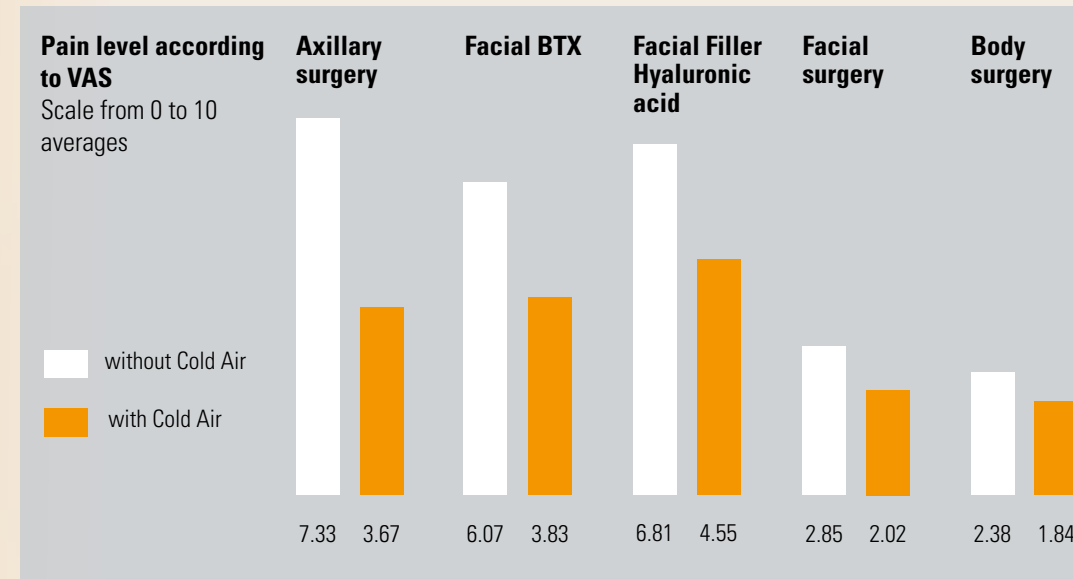
Dr. Markus Steinert, Laserclinic Dr. Steinert, Biberach, Germany

Material and Method

A treatment with and without cold air application was conducted in a side-by-side comparison.

The force of the air current was set to level 5 on the Zimmer Cryo 6 device. (The device offers level settings from 0 to 9.)

Each patient monitored himself/herself as the treatment was performed symmetrically on both halves of the body. Cold air was applied only on one half. Injection needles were then applied, either to inject BTX, Hyaluronic acid or a local anesthetic. Pain from the needle was subjectively measured by the patient by means of a visual analog scale from 1-10. (1 indicated no pain and 10 indicated the most severe pain imaginable.)



During the total duration of the treatments (approx. 1 – 2 minutes), level "5" cold air was applied using the Zimmer Cryo 6 device.

Cool air was delivered through a nozzle opening of 5 mm.

The distance between the cool air nozzle opening and the skin surface was 3 cm on average.



Results

All patient groups had significantly less pain after the treatment with cold air than without cold air. This also corresponds with the well-studied pain reduction effect of cold air. Cold air relieves pain reliably with cosmetic dermatological treatments. Especially significant was the pain relief during non-surgical injection treatments with Botulinumtoxin and Hyaluronic acid-fillers. Cold air effectively reduces the pain and allows for painless injections of BTX, Hyaluronic acid or a local anesthetic.

Cryo 6



Cold Air Skin Cooling

- Standby mode enables instant user operation
- Skin cooling is immediate
- 9 fan speeds for optimum air flow selection

Easy to operate

A large display clearly indicates all treatment parameters. A tactile glass keyboard enables quick selection for 6 preset programs.

Select a program. Press Start. That's it!

Optional articulating arm facilitates hands-free operation.

The light weight hose can be connected to select laser hand pieces. Air flow can be easily directed and controlled during treatment.

User Defined Programs

Cryo 6 allows you to maintain three custom programs. You can simply save your parameters and recall them at any time with the simple push of a button. When the device is started, the first user-defined program is automatically loaded. This means that your most frequently used programs are immediately ready to use.



Economic

Cryo 6 filters and cools room air to as low as -30°C.

- Cost efficient: no consumables or additional costs
- Powerful: full day operation with no down time
- Practical: a custom-designed glass shelf just where you need it – for a laser, smoke evacuator or accessories.

Easy Maintenance

An internal monitoring system measures the condensation water level and alerts you when it's time to empty. The defrosting feature provides smooth-running daily operation. The air filter is easy to access. Just vacuum it once a week and change it once a year.

Compact - small footprint Lightweight - easily transportable

The *CryoMini* cold air system was created to meet the needs of shorter duration aesthetic procedures.

Cryo Mini



Plexiglas Shelf

The customized Plexiglas shelf provides a compact location for accessories, IPL laser systems or a smoke evacuator.

CryoMini uses ambient air, which is filtered and chilled to -10°C.

There are no consumables or additional costs.

Quick & Efficient Application

Using the laser hand piece adapter, cold air can be more selectively directed onto localized treatment areas.

An optional support arm is available to hold and smoothly guide the air tube, providing the operator with hands-free operation.

Easy Operation

The large display ensures ease of operation. One button start-up. Nine fan speeds available to accommodate procedure requirements.

Treatment time can be adjusted with the push of a single button.

-30°C

-10°C

Cryo 6 shown with optional articulating arm

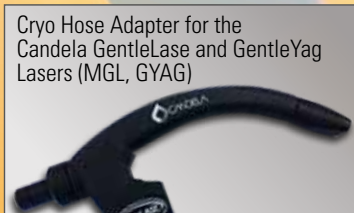
Cryo Mini shown with optional articulating arm



specs



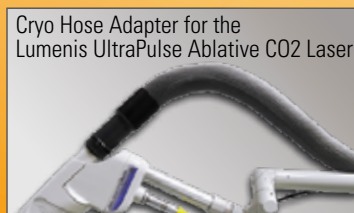
Cryo Hose Adapter for the Candela GMAX Laser (Gentle Max Pro)



Cryo Hose Adapter for the Candela GentleLase and GentleYag Lasers (MGL, GYAG)



Cryo Hose Adapter for the Lutronic LaseMD Non-Ablative 1927 Fractional Thulium Laser



Cryo Hose Adapter for the Lumenis UltraPulse Ablative CO2 Laser



Laser Adapter & Clamp



Extended Treatment Hose - 9 feet



Articulating Arm

Cryo 6

Delivers Cold Air As Low As	-30°C
Power supply	100-120 V / 50-60 Hz
Power input max.	1 kW
Stand-by function	260 W / h
Protection according to IEC 601-1	Class I, Type B
MDD / MPG	Class IIa
Programs	6 programs 3 user defined programs 1 favorite user defined program
Treatment hose length	6 feet
Cooling Fans	9 levels, max. 1000 l / min
Housing dimensions	H 25" / W 15" / L 27"
Weight	132 lbs. (including glass shelf)

Cryo Mini

Delivers Cold Air As Low As	-10°C
Power supply	120 V / 50-60 Hz
Power input max.	1000 VA
Stand-by function	100W
Protection according to IEC 601-1	Class I, Type B
MDD/MPG	Class IIa
Treatment hose length	6 feet
Cooling Fans	9 levels, - 1300 l/ min
Housing dimensions	H 25" / W 13" / L 23"
Weight	75 lbs. (including Plexiglas shelf)

options

Call for additional adapter options.

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