

LOCALIZED CRYOTHERAPY MACHINE





Local Cryo stimulation is a procedure geared towards a particular body part that involves short exposures to air temperatures up to -160°C or -320°F . With nitrogen vapor, skin is being cooled down sufficiently to encourage vasoconstriction, followed by fast vascular renewal and activation of optimal body defenses. During the short session, only surface of the skin is cooled down, and the body reacts with temperature rising caused by increased microcirculation across the treatment area. Metabolic boost persists for more than 4 hours after each treatment. Localized cryo stimulation is frequently used to achieve pain relief, post surgery recovery, rehabilitation from injuries and reduction of inflammation in particular body parts. The analgesic effects of cryo stimulation may last up to 3-4 days, that is why this therapy method is highly popular in sport rehabilitation, rheumatology and

dermatology. Cryo stimulation can be applied along with (in conjunctions with) physiotherapy programs to speed up healing process and shorten timeframes of recovery from injuries. Cryotherapy is widely used on whole body to visibly reduce appearance of cellulite and helps with weight loss as well as skin aging and facial plastic surgery.

Since cryotherapy shows rejuvenating and anti-ageing effect, so called 'cryofacial' method has become very popular within beauty industry. Localized cryo stimulation of the area that underwent plastic surgery significantly reduces postoperative edema and facilitates skin healing. Low temperature treatments minimize wrinkles, stretch marks, swelling, and make skin more supple and resilient.



Iceberg localized cryo stimulation

- Relieve pain
- Reduce inflammation
- Decrease swelling
- Muscle tension reduction
- Joint function improvement
- Increase range of motion
- Speed recovery
- Quick return to training (zero down time)
- Local muscle fatigue reduction
- Increase of blood circulation
- Effective course of postoperative rehabilitation
- Inflammation, bruising and swelling reduction (in the course of recovery)
- Reduction of muscle and ligaments deformities
- Treatment of tendon injuries (rapture, sprain, tendinosis, tendinopathy)
- Facilitates treatment of overweight and obesity accelerating cell metabolism
- Helpful in clearing the skin from bacteria and in other dermatologic applications
- Ensures cryo facial improvement of facial skin condition and other aesthetic functions
- Slows down skin aging processes, ensures general rejuvenation
- Hair and scalp treatment
- Cryo Shaping (works as a) detox therapy that strengthens skin, reduces cellulite and facilitates weight loss.
- Aesthetic cryo stimulation is designed to control cellulite (especially effective when combined with deep pressure massage)





HOW DOES ICEBERG CRYO STIMULATION MACHINE WORK?

Skin thermoreceptors are stimulated with an intensive vapor flow of extremely low temperature. Strong signals are sent to the brain, being faster than pain receptors. The process of immediate regeneration of the treatment area starts as soon as skin is cooled down to the necessary temperature. Local cryo stimulation triggers vasoconstriction followed by rapid vasodilatation providing the patient with a natural analgesic effect alongside ongoing blood and lymphatic micro-circulations around the treatment area. Natural analgesic effect reduces tension, provides pain relief and increases the range of muscular and joint motion. Vasodilatation causes increasing oxygen circulation in blood, enhancing metabolic processes, detoxicating and reducing inflammation, as well as releasing hormones flow to the blood.

NATURAL HEALING

Cryo stimulation involves activation of natural body defenses making it totally safe. The short time exposure to extreme low temperatures does not affect the core temperature of the body. The treatments are environmentally friendly.

PAIN RELIEF

Cryo stimulation has a natural analgesic effect on the body, therefore the feeling of pain is significantly reduced post treatment. Lower levels of pain encourage natural movement. It is crucial to increase the strength and flexibility of joints and bones in order to boost metabolic processes, as inflammation stays in joints.

TIME SAVING

Unlike other 'cooling' treatments such as ice packs applications where the patient is resting for a long period of time, each cryo treatment generally lasts up to 5 minutes for each area. Cryo stimulation reduces injury recovery timeframes so that athletes can be rehabilitated earlier and lower their medicine usage.

PLEASURE

Bathing in the streams of cold air feels much more comfortable compared to usual methods involving cold water, because at super low temperatures the stream contains almost zero moisture. As a bonus, the cold triggers production of endorphins, which induce feelings of euphoria. This encourages return visits.

The results are immediate, becoming even more noticeable within several days after the first treatment. The session of localized cryo stimulation taken after training (at least 1 hour after) will immediately reduce muscle fatigue and pain. Sport injuries also react immediately, as each session relieves pain and inflammation, which facilitates application on faster and more effective protocols of kinesitherapy.

HOW MANY TREATMENTS ARE REQUIRED?

- The number of treatments varies depending on what the patient is trying to achieve and how the body responds to the treatment. Using Cryo stimulation for muscle recovery is a routine method of support and may be carried out in cycles of 10 sessions to gain the full long lasting benefits of the treatment.
- Injuries vary in severity, so the number of treatments is difficult to quantify in advance. The physiotherapist and the patient should assess when they feel that the injury has been fully rehabilitated.
- One cycle of localized cryo stimulation procedures usually includes 5-30 sessions taken daily or every other day. The number of sessions may vary as severity of injuries and conditions are unique to each case. The patient may feel fully recovered after 3 or 4 sessions, however it is more beneficial that the patient undergoes a cycle of a 10-20 sessions to gain the persistent effect of the treatment. This will help to prevent recurring injury and to strengthen the treatment area further.
- If patient needs to return to regular training as soon as possible, sessions can be carried out twice a day. However there should be a 4-6 hour break between treatments. The reason why Cryo stimulation treatments are recommended daily or every other day is because Cryo stimulation causes increased rate of blood flow in the treatment area lasting for several hours. By having treatments close together the patient experiences a consistently higher rate of blood flow and a natural analgesic effect for a longer period of time. This speeds up the healing and rehabilitation process and makes the treatment even more effective than spacing out treatments.



When Cryo stimulation is used in combination with physiotherapy or Cryoshaping treatment, the patient should exercise post treatment. This is due to the fact that improving the strength and flexibility of joints and bones is key to recovery. Post treatment exercise entails a series of exercises or mobilization movements as advised by a physiotherapist, which focus on strengthening the joints and muscles on the treatment area. Sometimes patients can feel great after the first few sessions and then a few days later they may suddenly feel pain or aching. This is a good sign that cryo stimulation is working effectively because the joints and muscles have been exercised and moved more freely during recovering. After 6-7 days these symptoms should be completely gone. To maintain the results of

Cryoshaping treatments, it is necessary that exercise protocols are carried out (the patient can bring activewear to the treatment). The patient should work out afterwards to archive the effects of the treatment further. Local cryo stimulation releases a lot of anti-inflammatory proteins in the treatment area and by exercising the blood flow is increased, which distributes them better around the body. Heart rate increases, so does the blood flow all around the body not only on the treatment area. Therefore, metabolic processes are working at a higher rate and the micro-circulations being driven around the body create an energy deficit. Post treatment exercise can consist of a 20-minute run or a series of exercises that increase the patient's heart rate



WHAT IS ICEBERG LOCALIZED CRYOTHERAPY MACHINE BASED ON NITROGEN?

ICEBERG is a device for local cryo stimulation that can be used for treatment on particular parts of body. ICEBERG machine for local cryo stimulation is equipped with a sensor located in its cap for remote measurement of the patient's temperature during a cryotherapy session. The sensor informs the operator if the treatment area is of the right temperature to cause cryo stimulation, and helps to avoid excessive overcooling on the particular area.



ICEBERG machine for localized cryo stimulation is an innovative device for local cryo stimulation using liquid nitrogen. Thanks to its design, ICEBERG provides safer and more effective treatments. This is a new way of reaching low temperatures, called evaporation, where liquid nitrogen vapor improves the effectiveness of our devices for 40% compared to our competitors. The machine is controlled through a remote controller located on the handle and through a big sensor panel with LCD display showing processing parameters. The flow force is regulated smoothly, allowing choosing appropriate processing parameters adapted to the treatment area. There are 4 levels of outgoing cooling flow force that help to regulate cryo stimulation of the patient's skin in a best possible way. There is no other producer that achieved creation of a machine with such strong functionality and reasonable price that Vacuactivus did.

WHO ARE VACUACTIVUS?

Vacuactivus is a global manufacturer and wholesaler of cryo saunas, portable local cryotherapy machines and equipment for sport rehabilitation.

Vacuactivus is one of the largest producers of equipment for cryotherapy and rehabilitation in the world, which manufactures a huge range of innovative equipment.

Vacuactivus provides innovative equipment and solutions for cryogenic recovery applications. We have created the science of using low temperature gases to deliver healing benefits.

Vacuactivus focuses on delivering cryotherapy recovery solutions and other customized installations allowing you to thrive in healthcare, sports, and beauty industry.

Vacuactivus is a manufacturing company whose devices



WHAT IS ICEBERG LOCALIZED CRYOTHERAPY MACHINE BASED ON NITROGEN?



are recommended by doctors and professors for usage in hospitals, clinics, private medicine, SPA and aesthetic centers all over the world.

Vacuactivus produces very innovative, high-quality and reliable equipment that is well-liked around the world. This is why our equipment is highly appreciated by many physiotherapists, sport rehabilitation therapists, elite sports teams and gyms, as well as by doctors and healthcare providers.

HOW COLD DOES IT GET?



ICEBERG Local Cryo Therapy Machine can reach temperatures of up to -184 - 194°C or -360 - 370°F . This temperature is suitable for maximum Cryo stimulation. Therefore, the operator can treat patients at this temperature and lower forcing the patient's skin to achieve the temperature required to gain healing benefits.

Skin temperature screening sensor will show the operator temperature of the patient's skin in order to prevent overcooling. It is not recommended to drop skin temperature below $+46^{\circ}\text{F}$ ($+8^{\circ}\text{C}$). The machine scans the temperature and gives signals in case any signs of overcooling arise, so the operator can quickly switch to another skin area. Nitrogen vapor has zero moisture, so the client will only feel.

DO YOU FEEL COLD AFTERWARDS?

The patient will feel relaxed and warm as soon as treatment is finished, because there is almost no moisture in the stream meaning there is little tissue penetration. Also during cryo stimulation, the blood temperature in the treatment area rises and the increased blood flow provides a light skin redness and big boost to the body's micro-circulations.

DOES THE CRYO STIMULATION TREATMENT HURT?

No, not at all. It is not a penetrating cold as nitrogen vapor is of extreme cold temperature and contains almost zero moisture. Rather than shiver, the patient will feel a dry cold that is comfortable to the skin. Cryo stimulation is a shock therapy, therefore the patient will experience a slight 'dull ache' due to the constriction of blood vessels, which fades immediately after treatment. A minute after the session is over, the area will feel warm and show visible red glow due to micro-circulations being driven around the treatment area. There is no tissue damage or down time.

The gas we use in our machine is nitrogen, and it is perfectly safe. It is the same nitrogen that makes up the air we breathe. In case of a slightest discomfort, the operator can remove the jet pipe from the treatment area or decrease the flow intensity.

The aim is to cryo stimulate the area so that the skin temperature is cooled down to around 0-10°C (30- 50°F). As soon as this has been reached, the jet pipe should be moved to another area. If the jet pipe is uncontrollably held above one area for a long time, this can potentially burn the skin, which is an extreme and unacceptable case. Iceberg machine for local cryotherapy constantly informs the operator, but the client should notify the operator in case of any discomfort as well. All the operators should complete training to avoid any unexpected consequences. Localized cryo stimulation forces body to react to low temperatures with vasoconstriction followed by vasodilatation. These micro circulations are superficial, so they do not impact deeper processes.

In view of this, local cryo stimulation will not impact or affect internal organs. As during any other treatment, there are some conditions that make it impossible to conduct sessions of localized cryo stimulation. The main precautions for the treatment are:

- Cold intolerance
- Open wounds and ulcers
- Gangrenous lesions
- Hypothyroidism
- Skin Cancer and other types of cancers
- Any other doctor's prescriptions

ICEBERG DESCRIPTION

- Smart interface with a new generation 11-inch LCD touch screen
- Modern design created by Hollywood design bureau
- Ergonomic handle cap with control start-buttons
- Temperature sensor with LED indicator
- Power button located on the handle
- Mobile 25L or 50L built in liquid nitrogen tanks
- Nitrogen vapor temperature on the way out of jet pipe reaches up to -256-270°F (-180-192°C)
- Sensor of liquid nitrogen level in reservoir
- Emergency button



- Indicator of an empty nitrogen tank
- Control with the handle and display
- Fixation of LED lasers for detection of optimal distance between the handle and the skin
- Inbuilt wheels for mobility and transportation of the machine
- 4 power levels of cryo stimulation
- Variety of automatic programs for cryo stimulation of different parts of body and face. Manual program with manual fitting
- Menu in different languages are available to download
- Flexible hose of up to 1.5m in length
- Power supply - 220B/50Hz (version with 110B/60Hz for the US and Japan are available)
- Possibility to place the client's logo on the equipment body (custom order)

VOLUME OF INBUILT NITROGEN TANKS

The equipment has inbuilt 50L vessel. There is also a version of Iceberg machine for local cryotherapy with inbuilt 25L nitrogen tank. Iceberg uses liquid nitrogen and is compatible with 50L and 25L tanks.

Rate of evaporation inside the tank - liquid nitrogen dissipates at approximately 0.7-3 liters per week.



DIMENSIONS OF ICEBERG MACHINE FOR LOCAL CRYOTHERAPY 25L AND 50L



WHAT ARE THE ROOM REQUIREMENTS?

According to most common safety regulations, owning an oxygen monitor and remote warning alarm system is a standard requirement for nitrogen supply. It is also important that the premises have ventilation that leads from the treatment room to an outside escape route unless the room is large enough to store the desired quantity of liquid nitrogen safely. As nitrogen is initially heavier than air when it falls to the ground, ventilation is required to be installed low down such a vent at the bottom of the door in the treatment room. Most rooms in premises are suitable to locate the machine.

WHAT ARE THE ROOM REQUIREMENTS?

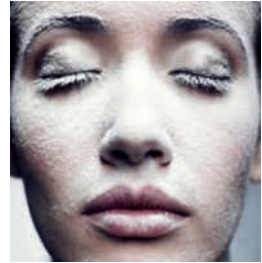
Iceberg Local Cryo Stimulation Machine is extremely economic in terms of electricity consumption, because we used the newest energy saving technologies to create this machine.

It could be plug-in to any regular outlet (120V America/Japan or 240V Europe/Asia/Australia depends on version). The average device energy consumption is 540W, with the maximum load of 1.5kW.

HOW LONG ARE THE CRYOTHERAPY TREATMENTS?

Physiotherapy sessions of cryo stimulation range from 2 to 30 minutes. This is fully depends on the number of areas and body parts that are to be exposed to the cryo stimulation. Cold sensitivity varies by age, muscle mass and fitness levels therefore trained

Cryotherapists will be able to figure out necessary treatment times. Every patient is different in terms of desired outcomes, body type and injury severity so each treatment is tailored individually.



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HOW LONG IS THE WARRANTY?

Iceberg machine for local cryotherapy has 1 year warranty and it is possible to obtain extra warranty plan for 3 years. Also Vacuactivus provides unlimited post-warranty technical maintenance around the globe. You can find standard warranty conditions at the Vacuactivus manufacturer's web-page using this link: www.vacuactivus.com

SAFETY RULES

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initially heavier than air when it falls to the ground, ventilation is required to be installed low down such a vent at the bottom of the door in the treatment room. Most rooms in premises are suitable to locate the machine. Ventilation must be adequate to maintain oxygen at 19.5% (normal oxygen concentration in the atmosphere). If the room size is not sufficient for nitrogen storage, ventilation is required for air flow to escape the building. This may mean installing vents at the bottom of the treatment room door or fitting ventilators. If the treatment room has windows that open at waist height or lower, then this may also be sufficient.

All cryogenic dewar vessels are unpressurised, so gas will slowly evaporate heated by the atmosphere. Generally 1% to 2% of the liquid content is converted to gas in 24 hours. When dewar vessels are in use, the vapor being released through the tank's valve to the atmosphere is not hazardous as long as the area is well ventilated.

- Alarm Systems

For peace of mind and higher level of safety it is recommended that all operators of Iceberg have oxygen sensor monitor with warning alarm. The alarm will monitor oxygen levels within the treatment room to keep the room safe at all times. A regular oxygen level monitor could be ordered from MedStarCom or from local nitrogen supplier.

HOW DO I GET LIQUID NITROGEN?

MedStarCom has a partnership with many nitrogen suppliers all around the world. On client's request MedStarCom will recommend few available local nitrogen suppliers which could provide nitrogen delivery service to your facility. Liquid nitrogen costs around \$0.5-1.5 per liter depending on area and supplier. Local nitrogen supplier could apply delivery fee up to nitrogen cost. Iceberg has 25L and 50L inbuilt nitrogen tanks, around \$50-200 to refill (not including delivery costs). Nitrogen costs could be negotiated with a local nitrogen supplier by purchasing more refillings per month.

Physiotherapeutic treatments A full 50L tank is enough to serve 60-65 patients (5-6 minutes per session on average). A full 50L tank delivers 12-25 session minutes (around 1-1.25 US dollars per session). This is approximately 0.5-1L per session of localized cryo stimulation. Therefore, the nitrogen cost will pay off after only 2 or 3 treatments.

Aesthetic recovery

For aesthetic procedures the time of treatment varies significantly depending on the size of the treatment area. Skin condition recovery can



Take 2-4 minutes, treatment can take 2-10 minutes, facial cryo - 12 minutes, cryo shaping - 10 -25 minutes.

A full 50L tank is enough to serve around 15-30 clients (5-12 minutes per session on average). A full 50L tank delivers 30-55 session minutes (around 1.5-2 US dollars per session). Therefore, the nitrogen cost will pay off after only 1 or 2 treatments. The rate of evaporation inside the tank without usage is 0.7-5L per week.

WHERE CAN YOU TRY AND TEST OUR MACHINES?

Please contact sales department of Vacuactivus via e-mail: vacuactivus@gmail.com to request information about closest location or soonest trade show where it is possible to try and review Iceberg Cryo Machine and other Vacuactivus products.

WHAT IS THE PRICE FOR SESSIONS OF PHYSIOTHERAPY?

Physiotherapy Cryo Stimulations are designed to support physiotherapists in faster rehabilitation of patients. Physiotherapists tend to raise standard treatment price up to 50 or 100 US dollars, implementing cryo stimulation to all the treatment sessions. With such treatment a physiotherapists can spend less time with each patient, freeing time for more patients daily.

WHAT IS THE PRICE FOR LOCAL CRYOTHERAPY?

Cryo stimulation treatment prices have numerous variables depending on location, reputation and whether the treatment is carried out in combination with Physiotherapy.

	Price per session	Price per 20 sessions package	Price per 1 month of cryo stimulation
Simple cryo stimulation	\$35	\$500-600	\$1000-1200
Cryofacial	\$50	\$700-800	\$1200-1500
CryoShaping	\$40	\$500-600	\$1000-1200
Cryo massage combined with physiotherapeutic treatments	\$60	\$800-1000	\$1200-1500
Hair cryo stimulation	\$35	\$500-600	\$1000-1200
Dermatological problems treatment	\$35	\$500-600	\$1000-1200
Skin rejuvenation with Cryo	\$50	\$700-800	\$1200-1500

The price of Iceberg with 50L built in tank version is 18,999 US dollars. The price of Iceberg with 25L inbuilt tank version is 15,999 US dollars. On EXW conditions, manufacturer's warehouse

Payback calculation	A	B
Sessions per week	6	9
Income per week	\$405	\$590
Costs per week	\$37.6	\$56.80
Profit per week	\$367.40	\$533.20
Profit per month (4, 5 weeks)	\$1,653.30	\$2,399.40
Profit per year (52 weeks)	\$19,104.80	\$27,726.40
Iceberg Machine cost	\$15,999	\$15,999
Payback of machine cost	9 1/2 months	6 1/2 months

	Per month
Gross turnover gain	+\$10,420
Liquid nitrogen costs	-\$900
Other monthly costs	-\$5000
Net turnover gain	\$4,520
Iceberg cost	\$15,999
Payback period	Less than 4 months

Here are some examples of calculations based on the data provided by our real clients, who use Iceberg local cryotherapy machine in physiotherapeutic clinics and beauty studios and have fantastic payback.

	Past	Current
Number of patients per week	43	61
Number of patients per month	172	244
Average treatment price	\$80 per session	\$85 per session
Total monthly gross yield	\$10,320	\$20,740



World
Leading
Manufacturer

www.vacuactivus.com

+13 104 679 723

+61 731 033 833

+48 884 191 520

vacuactivus@gmail.com

+44 203 289 19 59

+7 495 128 39 22

+36 21 252 5277

