

HILOTHERAPY®

Against swelling, pain and haematoma.

examined
quality product
of Germany



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What is HILOTHERAPY®?

HILOTHERAPY® relieves and avoids

- swelling
- pain
- haematoma

When is HILOTHERAPY® used?

- after operations
- with fresh injuries
- and also with chronic pain and inflammation

Professional temperature management

HILOTHERAPY® works with physiologically-measured temperatures in the range of 10°C to 30°C.

Effective treatment

Once the temperature has been set, it stays constant for hours or even days thereby providing continuous pain relief as well as the quick reduction of swelling and haematoma.

With post-operative application, swelling, pain and haematoma can even be completely prevented. The taking of pain relief medication can be reduced to a minimum and is frequently not necessary at all.

Wide range of application

You can obtain anatomically-formed cuffs for almost every part of the body. HILOTHERAPY®'s areas of application know hardly any bounds.

Indications for HILOTHERAPY®

Medical fields

- Traumatology / Orthopedics
- Oral and Maxillofacial Surgery
- Ear, Nose and Throat Medicine
- Plastic / Aesthetic Surgery
- Physiotherapy / Rehabilitative Medicine
- Sports medicine
- Rheumatology
- Dermatology
- Emergency medicine

Applications

Surgery:

- Orthopedic and Bone Surgery
- Oral and Maxillofacial Surgery
- Plastic / Aesthetic Surgery
- Implantology
- Vascular Surgery
- Micro-Surgery
- General post-operative wound healing

Sport and other injuries:

- Sprains, muscle strain, myorrhexis, luxation, tendon strain
- Haematoma
- Oedema

Functional Rehabilitation:

- Improvement of mobility
- Pain relief
- Relaxation of the muscles

Rheumatic Illnesses:

- Inflammatory rheumatism
- Ischias

General:

- Fever
- Migraine headaches



The cuffs

Examples of use

Powerful

Up to two cuffs per device can be connected and used via connective lines and fittings which are included in delivery.

Flexible

The cuffs are manufactured of polyurethane, a material that is especially soft and gentle to the skin and therefore can easily be adapted to the different parts of the body.

Reliable

Tempered water held exactly at the selected temperature flows constantly through the high-capacity capillaries.

Simple

Cleaning and disinfection are easily carried out with commercially available disinfection sprays (wiping disinfection) or in disinfection baths.

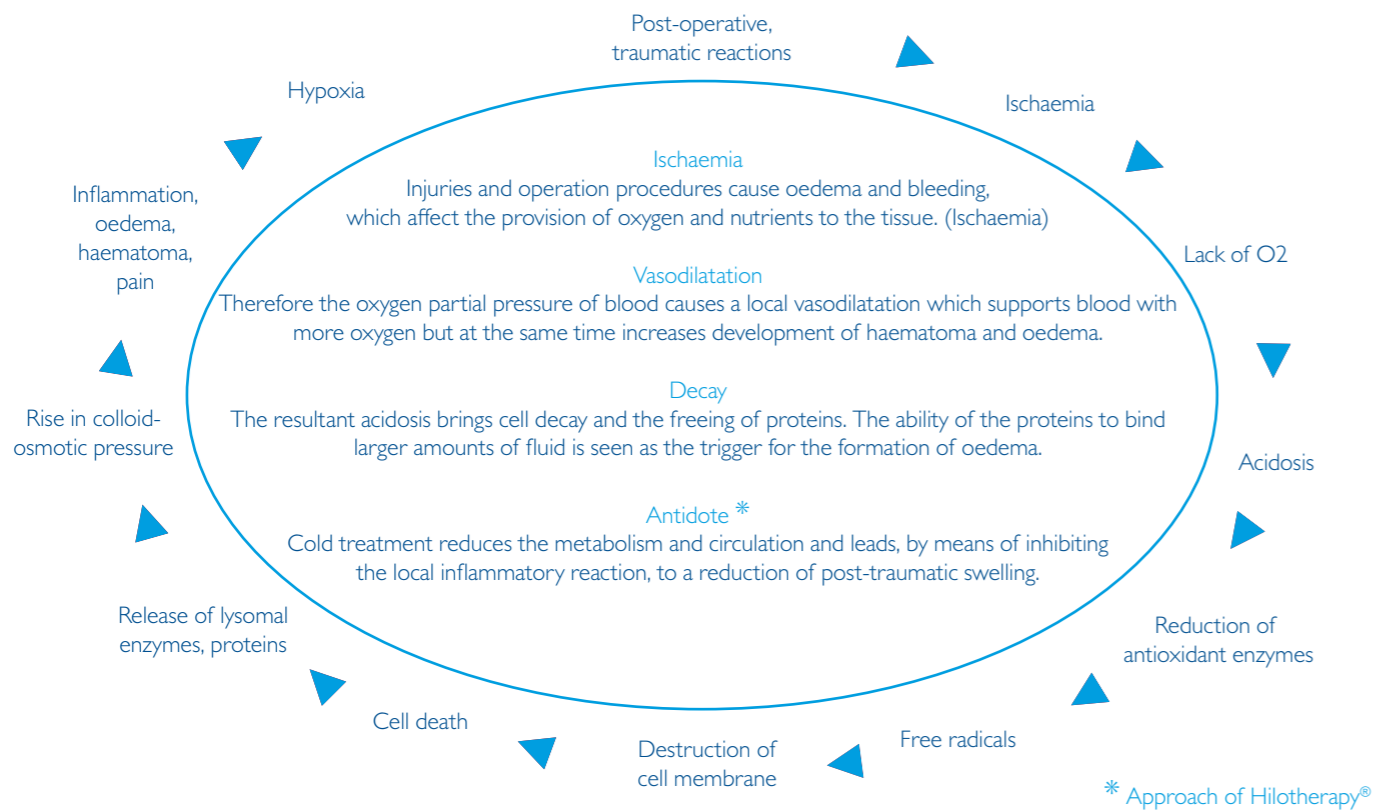


Find a complete cuff overview on the internet at www.hilotherapie.com/english/manschetten.php



Scientific background

From trauma to hypoxia damage



Hilotherapeutic effects

Slower metabolism

A drop in temperature of 10°C reduces the metabolic speed by about 50%. This reduces the oxygen demand and adapts it to the post-traumatic, reduced local oxygen supply in the tissue. In comparison, an increase of plus 3°C leads to a fourfold increase of the enzyme activities, e.g. collagenase. Every injury results in a comparable inflammatory overheating.

Reduced tissue damage

Local hypothermia affects a reduction of the hypoxia damage (caused by ischaemia) in that it interrupts the circulus vitiosus due to lack of oxygen, acidosis, destruction of the cell membrane and death of the cell and moreover, slows down the activity of the lysosomal enzymes (released from the dead cells).

Reduced swelling

The result is a lower concentration of free cell parts (primarily proteins) and less water deposit in tissue by lowering colloid-osmotic pressure combined with the normally positive capillary filtration pressure.

Immediate analgesic effect

Less release of pain producing substances occurring naturally in the body (mediator). Biochemical and physical desensitization of nociceptors plus lowering of neural transmit rapidly.

Quicker recovery

During the cold therapy, the healing of the wound is slowed as well as the remaining metabolism without this having a negative effect on the completion of the wound healing. In fact due to the lower degree of tissue damage, the cold therapy leads to a quicker recovery.

Problems and danger with traditional coolants

Traditional coolants such as ice compresses and gel pads have, with an effective temperature of approximately 0°C, decisive disadvantages:

- Aggressive cold treatments can seriously damage skin and tissue (frostbite / paralysis) and, in combination with a short-term application, always lead to a reactive hyperaemia.
- The temperature can neither be regulated nor maintained on a constant level.
- The coolant has to be replaced regularly.

At below 15°C in the tissue: ... the lymphatic drainage is disturbed

At below 10°C in the tissue: ... the proprioception is disturbed
... the creation of fibroblasts is disturbed
... the microcirculation is disturbed

At below 5°C in the tissue: ... the nerves no longer conduct any impulses