

## Indications for moderate hyperthermia

Due to fever's central role as a body's defense reaction, there are multiple indications for whole-body moderate hyperthermia as a therapeutic measure, such as:

- Muscle tensions, especially deep lumbar muscles
- Chronic back pain
- Recalcitrant neuralgia
- Fibromyalgia syndrome
- Ankylosing spondylitis
- Subacute, sometimes masked, chronic inflammation
- Rheumatic diseases (degenerative and subacute inflammatory)
- Bronchial asthma
- Systemic scleroderma
- Neurodermatitis and other allergic diseases
- Allergic respiratory infections (hay fever)
- Detoxification in environmental medicine
- Arterial hypertension
- Homogenization of chemotherapy
- Pain management and immunotherapy in oncology
- Regeneration or rehabilitation in sports
- Support measure in weight loss

Moderate hyperthermia should not be carried out in patients suffering from severe acute inflammations and infections. It may be performed in certain cases in patients with cardiac failure and/or cardiac arrhythmias, but close follow-up of circulatory parameters is mandatory.

Moderate Hyperthermia is a private, out-of-the-pocket medical service, charged in line with the Physician Fee Schedule (GOÄ).

## Forms of whole-body moderate hyperthermia

Moderate hyperthermia can be used either by itself or as an oxygen-IRATHERM® process in combination with the inspiration of oxygen-enriched air. The selection of the optimal type depends on the disease presentation and the findings of the initial examination. Other therapy modalities can also be selected individually for each patient. The use of therapeutic series (e.g. 12 sessions in 4 weeks) is particularly effective.

For more than 20 years, the **gisunt**® clinic has had extensive experience in the application of whole-body hyperthermia in the moderate and extreme range. These experiences are a plus for you as a patient as far as safety is concerned. Few side effects are expected. Our physician team presented research work at international congresses and, over the years, investigated the advantages of the water-filtered infrared-A radiation of the IRATHERM® systems over the competing systems.

Compared to the simple heating (bath, sauna), as well as the unfiltered heat radiation (infrared B and C), this feature brings numerous advantages. It proves to be an interesting therapeutic modality in skin diseases such as neurodermatitis, various types of eczema and psoriasis.



**International hyperthermia centre**

Muehlenweg 144 • 26384 Wilhelmshaven, Germany  
Phone: 0049(0)4421-774140-0 • Fax: 0049(0)4421-774140-10  
Email: [info@gisunt.de](mailto:info@gisunt.de) • [www.gisunt-klinik.de](http://www.gisunt-klinik.de)

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# Moderate Hyperthermia



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## The basic principles of hyperthermia

"Give me a means to create a fever and I will heal any disease." This quote by Parmenides dates back 2,500 years and has regained its great relevance in the treatment of modern-day chronic diseases. Since fever is the body's natural defense mechanism, it should not be suppressed as long as it is not life-threatening. Fever acts to stimulate the immune system; this "training" makes the immune system much more active.

The heat generated expands the vessels, stimulating blood circulation, also in previously poorly-perfused areas. With a simultaneous increase in the oxygen content of the inspired air, as is the case in the therapeutic modality of "oxygen IRATHERM® process," the described processes during hyperthermia potentiate the health effects of oxygen.

In addition, the intense perspiration during fever activates the excretion of various toxins accumulated in the body, resulting in detoxification and improvement of metabolism. Furthermore, warmth causes relaxation of tensed muscles.

Moderate hyperthermia is one of the most important ways to create a fever in the body in a controlled manner, using this natural reaction of the body for therapeutic purposes. A combination with oxygen inhalation acts synergistically to bolster the positive therapeutic effects.

## Moderate hyperthermia: The technique

There are various ways to create an artificial fever. A very easy, effective, safe and well-tolerated procedure is the IRATHERM® process. It uses radiation to warm up the patient, which mimics radiation of the sun after filtering in the water vapor-containing atmosphere. This heat radiation, obtained by filtering with water (infrared A), can penetrate particularly deep into the human tissue. Since heat energy is absorbed by a well-perfused skin layer (dermis) and since blood circulation enables fast distribution of warmth, the upper skin layer (epidermis) is hardly burdened in this process.



IRATHERM®1000 hyperthermia system developed for whole-body thermal treatment (Von Ardenne Institute, Dresden, Germany)

## Effects on the body

- Blood circulation is increased.
- Metabolic processes and excretion functions are accelerated with increasing temperature.
- Muscle tone is reduced.
- The signal propagation in nerve cells is accelerated.
- Chronic inflammation becomes acute and hence recognized by the body. Endogenous defense mechanisms lead to healing.
- The course of allergic and rheumatic diseases is positively affected by the beneficial effects exerted on the immune system.
- The release of hormones such as cortisol is similar to the reactions of natural fever with healing effects on the whole organism.

## Therapeutic course

During the initial examination, the optimal therapeutic modalities will be determined for your disease. During the treatment, you will rest unclothed on a small-meshed net under tension and covered with a sheet and a reflective foil (except for the head). The heat radiation is conducted through the net from the bottom. During therapy, your pulse, blood pressure, body and skin temperature will be monitored. The mild warming occurs over a period of 60 – 90 minutes. If the clinical picture of disease indicates it, the target temperature level ranges from 38.5 °C up to the core temperature of 40 °C. Our medical staff will monitor the rise in temperature and adjust the radiation activity accordingly. After the warming phase, the patient rests for half an hour and showers, if desired. A final medical exam concludes the series of therapeutic treatments.