



Breakspear Medical Group



Whole-Body Hyperthermia Treatment

This booklet provides an introduction to our Whole-Body Hyperthermia equipment and explains how it affects the body and benefits patients. It also includes comments from our patients who have used the IRATHERM[®] as well as references and further resources for more information.

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Introduction

For over two thousand years, the idea of increasing the body's temperature has been associated with healing, preventative, and cleansing properties.

Fever is the body's natural defence system that raises its temperature above normal in an attempt to destroy invading organisms and sweat impurities out of the system. For centuries, sauna has been used to create the same effect. Sauna is also used to boost

metabolism, as when pulse rates increase, blood

vessels become much more flexible, extremities benefit from increased circulation and toxins are excreted through sweat and on the breath.

Increasing the body's temperature helps the body's immune system to fight infection. It is well known that in a number of infectious illnesses the body temperature rises. This is partly because substances called pyrogens, released from the tissues, alter the temperature control mechanisms of the body and set the thermostats at a higher level. This automatic control of body temperature can be overridden by using external heat supplies to increase the body temperature. Whenever the

temperature of the body is caused to rise, then metabolism and secretion are accelerated.

Breakspear's IRATHERM[®] whole-body hyperthermia bed not only raises body surface temperature, as does a sauna, but also raises body core temperature, which can have a major therapeutic effect.

Using the hyperthermia infrared-A bed at Breakspear, we have a means by which the whole body

can be heated, which can cause the core temperature of the body to be raised by several

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degrees centigrade. Most other forms of heat therapy raise the core temperature by only tenths of a degree. It is clear that using infrared-A as a source of heat is much more effective than conventional means.

The IRATHERM[®] was developed by the German-based Von Ardenne Institute of Applied Medical Research. For over forty years, Von Ardenne has been undertaking research, development and application of systems for warming up the whole body.

Breakspear is the first facility in the United Kingdom to offer this method of treatment.

How the IRATHERM[®] 1000 works

Using the IRATHERM[®] 1000, the whole body can be heated from a water-filtered infrared-A source. The IRATHERM[®] reproduces the equivalent part of infrared sun radiation, which is filtered through the water-containing atmosphere.

Infrared-A radiation can be called “deep-acting heat”, whereas infrared-B and infrared-C are only surface

heat. Water is the obvious choice of filter to eliminate infrared-B and infrared-C radiation, because water, like skin, has a selective transmission of infrared radiation. Water allows infrared-A to be transmitted while infrared-B and infrared-C are almost completely absorbed. With the IRATHERM[®], when a water filter is placed in front of the halogen

lamps, the result is heat radiation with a spectral distribution nearly equal to the spectral transmission of the skin.

Using the IRATHERM[®] means that because the infrared light is

filtered through water, the individual will be exposed only to infrared-A frequencies. Once the heat penetrates the skin, to where the blood

circulates readily and freely, there is a rapid distribution of warmth to the whole of the body. This causes the core temperature of the body to be raised by several degrees centigrade.

Hyperthermia deliberately creates a temporary fever in the patient in order to utilise this natural healing process.



Who can be helped by hyperthermia?

Mild and moderate whole-body hyperthermia, to which the body has a high tolerance, is able to increase the micro-circulation, which speeds up the metabolism in a similar way to natural pyrexia (fever).

Because heating is encouraged, there is a wide spectrum of treatment indications:

- Huge increase in metabolic rate
- Fat mobilisation
- Stimulation of the hormone system
- Stimulation of the immune

system

- Enhancement of the body's natural detoxification pathways such as respiratory, renal, gastrointestinal and cutaneous (via the skin)
- Reduction of chronic inflammation
- Acceleration of nerve conduction
- Increased perfusion in organs and tissues
- Increased supply of oxygen and nutrients to cells
- Elimination of end-products of metabolism

IRATHERM[®] can help:

- Arterial hypertension
- Allergy and rheumatic diseases
- Muscle tension
- Multiple chemical sensitivity
- Chronic back pain
- Eczema
- Fibromyalgia syndrome
- Heavy metal intoxication
- Neuralgia
- Migraine
- Anti ageing
- Chronic inflammatory disorders
- Chronic rhinitis
- Bronchial asthma
- Weight loss
- Seasonal Affective Disorder (a depressive disorder, which can occur in the winter)
- Rehabilitation in sports medicine
- Detoxification after exposure to pollutants such as pesticides
- Chronic viral illnesses
- Muscle spasm
- And many other conditions

10 steps of Hyperthermia Treatment



1 The patient has an initial consultation and full medical examination. The patient can then book an appointment by contacting Reception.

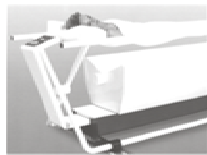
2 On the day of the treatment, the patient should drink plenty of water and eat only light meals *It is very important to be properly hydrated.*



3 Prior to the treatment, a consent form is completed by the patient and the patient's height and weight will be measured and recorded by Hospital staff. The maximum net load is 135kg (298 pounds/21 stone 4 pounds).



4 After the consent form has been completed and the patient details have been taken, an attendant will accompany the patient to the treatment centre. The patient undresses in the private changing room, removing all jewellery including body piercings, and then walks to the IRATHERM[®] room in a provided robe.



5 The patient's data, which determine the customised programme, is then entered into the IRATHERM[®]1000 computer by trained operating personnel. Any scars or tattoos on the back surface of the patient's body are covered with gauze to protect against overheating. The attendant then switches on the IRATHERM[®] with low power to warm the bed before the patient lies down.



6 The attendant leaves the room and the individual then lies on the IRATHERM[®] bed which is made of net, like a hammock, suspended over the source of heat. (The nets are replaced between patients.) The patient then covers him/herself with a towel. The head and heels are supported on a small pillow and/or folded towels.

7 The attendant returns, ensures the patient is comfortable and covers him/her with a clean

heat-retaining blanket. The monitoring sensors are put in place and the IRATHERM[®] is switched on at the recommended power setting. The uncovered head is not exposed to the heat source, therefore the patient's eyes are not stressed.



The clinical staff may recommend oxygen during IRATHERM[®] treatment. (Oxygen is particularly beneficial for patients with migraine or cardiovascular conditions.)



Throughout the therapy, temperature, pulse and oxygen saturation are displayed and recorded on the computer and the individual is continuously monitored by the Hospital attendant for the whole treatment, which usually takes an hour. The patient is able to move freely under the cover and can easily be observed at all times.



- 8 During treatment the patient is asked to tell the attendant of any discomfort and the heat to any area can be adjusted, if required. Filtered drinking water is available at all times.
- 9 At the end of the treatment session, the patient cools down and rests on the net for a few minutes, then puts on a robe to sit and cool down for a further 15 – 20 minutes. When the patient is feeling ready and sufficient time has passed, he/she returns to the changing room to have a shower with provided unscented toiletries and towels and to dress.
- 10 Supplemental intravenous drips are often recommended after IRATHERM[®] treatment to replenish essential nutrients. Patients should not exert themselves or drive for 1 hour after treatment. The computer-recorded vitals record is printed out and filed in the patient's medical records.



What to expect

Working towards getting rid of years of built-up pollutants, viruses, bacteria and other invading organisms from the body is not an easy, quick procedure.



We have asked patients who have used the IRATHERM® for feedback to help others prepare for the experience.

Our data shows that most patients' impressions of the procedure were good. It is normal to experience sweating at any setting of the IRATHERM®. At moderate to fever-range temperatures thermoregulatory stress may occur.

Most patients have stated that the heat feels very intense and some have mentioned that at times this intense heat was uncomfortable. Be sure to let the attendant know if you are uncomfortable so that the heat level can be adjusted. Some patients felt rejuvenated

and refreshed after their sessions. Many patients reported feeling very tired after the experience and a few felt worse later. This after-effect is normal; you have started a detoxification process and the harmful pollutants are being forcefully expelled from your body. If your after-experience is very uncomfortable, please speak to your physician before your next treatment session.

The most important thing to remember is that IRATHERM® sessions are an intense, accelerated method of detoxifying the body by rapidly releasing toxins stored in fat cells. Many patients may not feel better immediately.

Therapy sessions (such as 9 therapies within 3 weeks) show more generalised effects than single therapies. Studies have proven that this method of treatment is beneficial (see section "Studies of Hyperthermia"). The first few visits are just small steps in a life-altering treatment programme.

Patients' IRATHERM[®] experiences



“The first and second treatments were the worst. After 3 treatments, I started improving and after 6, I was much better than I had been in over a year...”

“I realised how important it was to keep hydrated afterwards when my eyes felt dry.”

“When I had completed my first session, it was like after a hard gym workout. I felt exhausted and my legs felt like noodles but at the same time I felt elated and high all evening.”



“I feel much fresher and confident of further improvements in energy levels.”



“The heat didn't seem too bad except near the end of the 100% section... But as the heat was reduced, I returned to normal quickly.”

“It's like exercise; not very pleasant while you're doing it but good for you in the long term.”

Studies say...

“ ... [it] is known that fever is mediated by the release of cytokines that, in turn, can significantly modulate various aspects of the immune system. Interferons are members of the cytokine family, having diversified biological functions including antiviral, antiproliferative and immunoregulatory activities.”
Payne J, Nair MPN, Ambrus JL, Chadha KC. Mild hyperthermia modulates biological activities of interferons. *Int J Hyperthermia* 2000;16:492-507.

“It is believed that artificial hyperthermia induced by physical means exerts an effective mobilization of body defenses against disease.” Wakim KG. Bodily reactions to high temperature. *Anesthesiol* 1964;25:532-48.

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Summary

At Breakspear, we offer treatments using various types of medical equipment which add to our doctors' armoury of possible therapies for a wide variety of conditions.

We have been advocating sauna therapy for years because increasing the body's temperature has been proven effective in detoxification programmes.

The IRATHERM[®] bed is a new and exceptional way of raising the body's temperature to levels that traditional sauna just cannot provide.

For more information on the benefits of hyperthermia treatment, please refer to the "References and further reading"

section on pages 10-11.

Feel free to discuss any thoughts or concerns with your physician especially if you have conditions such as heart problems, Type 1 diabetes, acute infections or pregnancy.

After your IRATHERM[®] experience, please complete an IRATHERM[®] Patient Questionnaire. We appreciate receiving feedback and will consider all comments and recommendations.

We hope this booklet has helped explain the treatment and procedures to you.

We anticipate you will enjoy the benefits of your state-of-the-art IRATHERM[®] experience.



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