

# **Iyashi Dôme® and Infratherapy:**

## **An Innovative Approach to Preventive Health and Longevity**

**Dr. Philippe Blanchemaison**

### **Abstract**

Infratherapy with Iyashi Dôme®, a Japanese technology based on far infrared rays, aligns with a comprehensive approach to wellness and preventive health. Its applications range from cellular detoxification and improvement of skin parameters to metabolic support, muscle recovery, and the mitigation of visible signs of ageing. Drawing on a 2012 clinical study and two earlier publications, this article synthesises the physiological and clinical benefits of this technology within the framework of a modern vision of active longevity.

### **Introduction: from treatment to preventive lifestyle**

In a context where population ageing and the rising prevalence of chronic diseases challenge current lifestyles, preventive health has become a priority. Programmes commonly referred to as “detox”, once considered marginal, now find legitimacy as complementary practices within preventive medicine. Iyashi Dôme infratherapy exemplifies this evolution, combining the wisdom of Japanese tradition with Western evaluation standards.

Inspired by Suna Ryoho, an age-old Japanese ritual of sand bathing using sand with unique properties found in certain regions of Japan, the Iyashi Dôme® technology is based on the emission of far infrared rays via a plant-based carbon system (B-Carbon technology). This radiation penetrates up to 4 cm beneath the skin, stimulating microcirculation, cellular detoxification, and tissue regeneration mechanisms.

### **1. Infratherapy and heavy metal elimination: experimental data**

The term “heavy metal” refers to any compound such as cadmium, lead, mercury, aluminium, nickel, or thallium classified as hazardous. The term “**trace metallic elements**” or **TME** is increasingly used to replace “heavy metals”.

A growing number of published studies report concerningly high concentrations of heavy metals in human blood and tissue cells (1).

In the June 9, 2025 edition of *Que Choisir*, one could read: “Cadmium accumulates in the human body through our diet, notably pasta, bread, potatoes, and certain vegetables. Contamination levels in France, particularly among children, have reached a worrying threshold, with a suspected link to the rising incidence of pancreatic cancer” (2).

In Japan, burying oneself in the hot sands of certain regions has been a tradition for centuries. The heat is diffused through the sand, which is itself warmed by the sun’s infrared rays, reactivating its unique properties. The presence of nearby hot springs further enhances the process, allowing purification and toxin elimination.

Today, this tradition is revived and amplified by the *Iyashi Dôme* technology, whose efficacy in promoting heavy metal elimination has been demonstrated.

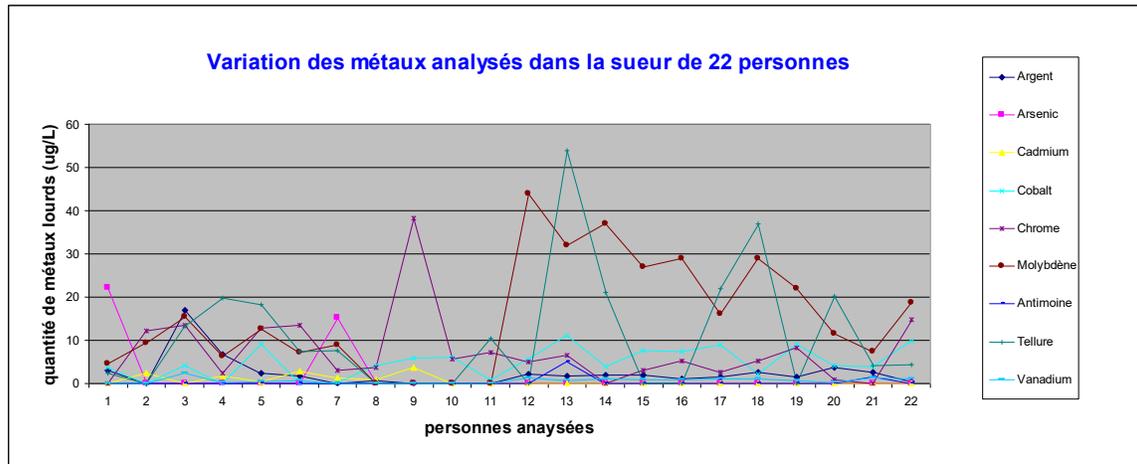
In the 1980s, the first far infrared emission devices made from ceramic were developed in Japan. From that period onward, infrared domes became increasingly widespread in Japan, and the *Iyashi Dôme* device was subsequently conceived, notable for its innovation of replacing ceramic – a mineral material – with an organic, plant-based one. This is how “B-Carbon” technology was born.

Two successive publications (3,4) demonstrated the contribution of *Iyashi Dôme* to the elimination of heavy metals through sweat.

Sweat samples from 22 patients subjected to a 25-minute *Iyashi Dôme* session were compared with those from 25 control patients. As soon as perspiration appeared in large drops, it was collected using a Pasteur pipette from the chest and arms.

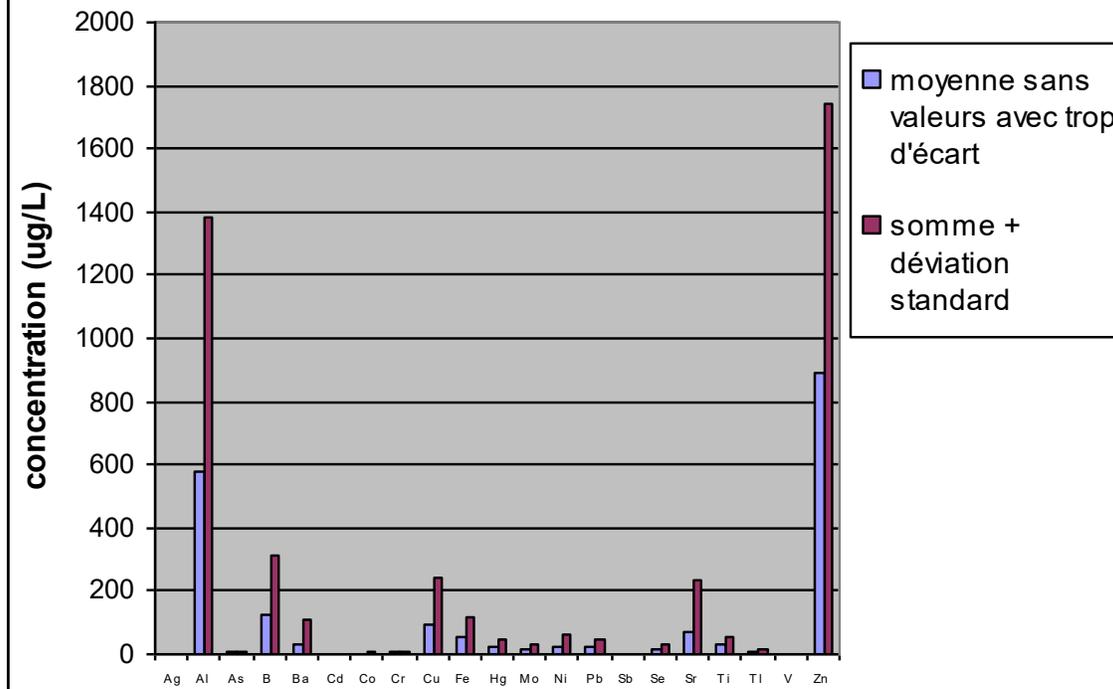
For each participant, possible exposure to heavy metals was noted, taking into account occupation, place of residence, water pipe materials in the home, number of daily cigarettes or cigars, use of cosmetic products, number of dental amalgams, and dietary habits.

Some individuals showed high concentrations of aluminium (1,420 µg/L), cadmium (560 µg/L), lead (84 µg/L), titanium (1,911 µg/L), and chromium (38 µg/L). These values were compared with the relative amounts excreted via urine.



Sample analysis was carried out using the ICP method (Inductively Coupled Plasma), requiring heating of the sweat, followed by chromatographic quantification of each detected heavy metal. The detection threshold was 1 µg/L, with a minimum analysable volume of 1.5 mL. Some patients exhibited high cadmium concentrations.

**Figure 3: moyenne des métaux lourds excrétés dans la sueur avec la déviation sommée sur la moyenne, les valeurs extrêmes sorties**



The data demonstrated that Iyashi Dôme increases the elimination of toxic heavy metals such as cadmium, aluminium, barium, nickel, lead, molybdenum, chromium, and cobalt.

Analysis of 2 mL of sweat from patients subjected to 25-minute far-infrared sessions with the Iyashi Dôme demonstrated a clear effect on the elimination of heavy metals. Parallel urine analysis showed that heavy metals were predominantly excreted through sweat rather than urine. The effect was particularly significant for aluminium and cadmium.

## 2. Clinical study 2013: effects on skin and cutaneous parameters

An in vivo observational study was conducted on 11 women aged 31 to 63 years, undergoing eight 30-minute Iyashi Dôme sessions over four weeks. Measurements were taken with high-precision instruments (Visioface®, Cutometre®, Corneometre®, Mexametre®, high-frequency Doppler ultrasound) (4).

## **Skin results**

- **Wrinkles:** up to -18% reduction in wrinkle volume (mean: -10%), decreased visibility of fine lines in 90% of participants.
- **Complexion radiance:** increased luminosity (up to +12%), decreased pigmentation (-24%), significant improvement in 80 to 90% of participants.
- **Skin texture:** mean roughness reduced by 13%, complexion homogeneity improved by up to 33%.

## **Tissue and functional results**

- **Dermal thickness:** +39% on the face, +27% on the body.
- **Elasticity:** gains up to 60% on the face, 22% on the body (Cutometre®).
- **Hydration:** mean improvement of 39%, effective in 100% of participants.
- **Vascularisation:** tissue haemoglobin levels increased by up to 72%, indicating microcirculatory activation.

## **Subjective Data:**

Self-assessment questionnaires confirmed perceived improvements in skin quality, deep relaxation, more restorative sleep, and an overall increase in vitality from the fourth session onward.

### **3. Hsp70: a biomarker of longevity activated by infratherapy**

**Heat Shock Proteins (Hsp70)** play a fundamental role in cellular protection. These molecular chaperones assist in correct protein folding, prevent protein aggregation, support the repair of intracellular structures, and positively modulate inflammatory and apoptotic processes (5).

A Japanese study by Itoh et al. (7) demonstrated that whole-body exposure to moderate far-infrared hyperthermia (40 - 42°C for 40 minutes) results in a significant increase in Hsp70 expression in human lymphocytes: a 2.6-fold increase at 48 hours and a sustained 2.1-fold increase after 96 hours.

The production of Hsp70 is naturally induced by moderate thermal stress. In the context of Iyashi Dôme, the progressive increase in temperature,

combined with the depth of infrared penetration, appears to activate this mechanism without damage or side effects.

In practice, the induction of Hsp70 contributes to:

- strengthening cellular resistance to aggressions (toxins, UV radiation, oxidants);
- improving the repair of damaged tissues;
- reducing chronic oxidative stress;
- positively regulating immunity.

Thus, Hsp70 activation represents a **biological marker of cellular longevity**, aligning with a non-pharmacological preventive health approach.

#### **4. Iyashi Dôme and preventive health: towards an integrative approach**

##### **Clinical integration: towards comprehensive care pathways**

Today, the Iyashi Dôme is incorporated into several thalassotherapy and medically supervised wellness centres, such as Roz Marine and Thalazur. There, it is used in combination with remineralising baths, algotherapy, postural realignment sessions, and nutritional counselling.

This therapeutic synergy lies at the heart of **integrative and preventive medicine**, which aims to reinforce the body's natural defences while optimising essential functions: recovery, sleep, detoxification, skin and muscle regeneration, and neurovegetative balance.

For athletes, infratherapy supports post-exercise recovery, injury prevention, and reduction of Delayed Onset Muscle Soreness (DOMS). For older adults, it improves joint comfort, peripheral circulation, and overall vitality. For stressed or physically weakened individuals, it provides an interval of active and restorative recovery.

The technology's strengths are reproducibility, safety, adaptability, and objective medical evaluation.

The Iyashi Dôme® approach thus fits squarely within Lifestyle Medicine, which combines physical activity, nutrition, stress management, and toxin

elimination. By integrating this technology into personalised prevention programmes, certain establishments (thalassotherapy centres, medical wellness centres) have enriched their treatment offerings with a unique regenerative dimension.

The complementarity with thalassotherapy is particularly noteworthy: combining the benefits of seawater therapy (remineralisation, drainage, and relaxation) with the deep effects of infratherapy (detoxification, dermal stimulation, metabolic activation) creates a synergy that promotes active longevity.

## **5. Clinical perspectives and research**

Current data suggest that Iyashi Dôme acts at multiple physiological levels:

- stimulation of cutaneous and dermal metabolism;
- mobilisation of intracellular toxins;
- activation of microcirculation;
- indirect effects on neurovegetative homeostasis (relaxation, sleep, muscle recovery).

In a world increasingly exposed to oxidative stress (heavy metals, micropollutants, psychological pressures), regular physiological support via infratherapy appears highly relevant. Further definition is needed regarding its primary indications (chronic fatigue, overweight, accelerated ageing, inflammatory states), optimal frequency, and the expansion of study cohorts.

## **Conclusion**

Iyashi Dôme infratherapy represents a novel, validated tool in modern preventive health. Its ability to promote detoxification via sweating, improve skin hydration, elasticity, and radiance, and foster a general state of wellbeing makes it a valuable modality for supporting active longevity.

Rooted in a Japanese philosophy of holistic care, this technology is now adopted by both healthcare professionals and discerning wellness centres. It

offers promising perspectives for mitigating the effects of ageing, managing oxidative stress, and sustaining vitality.

## References

1. Les effets des métaux lourds sur l'environnement et la santé, **rapport d'information n° 261 (2000-2001) du Sénat en France.**
2. Cadmium: Les médecins exhortent les pouvoirs publics à agir.  
<https://www.quechoisir.org/actualite-cadmium-les-medecins-exhortent-les-pouvoirs-publics-a-agir-n167460/>
3. Blanchemaison P., Morillon F., Clément R., L'élimination des métaux lourds contenus dans la sueur par un appareil de sudation à infrarouges: « le Iyashi Dôme », *Génésis*, 167, 15-19, Mai 2012.
4. Blanchemaison P., Clément R., Un nouveau traitement pour améliorer l'esthétique de la peau: les infrarouges longs, *Génésis*, 179, 22-26, Juin 2014.
5. Nollen E.A., Morimoto R.I.: Chaperoning signaling pathway; molecular chaperones as stress-sensing 'heat shock' proteins. *J. Cell Sci.* 115: 2809-2816, 2002.
6. Itoh Y.: New clinical application of hyperthermia - Preheating therapy. *Rad. Biol. Res. Comm.* 33: 381-398, 1998.
7. Itoh Y. et al., Induction of Hsp70 in Lymphocytes by Whole Body Far-infrared Hyperthermia. *Jpn. J. Hyperthermic Oncol.* 21 (4): 2005.