BIOMAT EBOOK -DR. MARK SIRCUS

2018 edition

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Praise for The Biomat eBook

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A New Season

Praise for *The Biomat eBook*

"This book gives you just enough information to show the powerful benefits of far infrared therapy, without being overwhelming. The short informative sections made for a quick read, while showing all the benefits of the far-infrared Biomat. The fact that there are so many different reasons that this technology can help the body means it will help just about everyone! It doesn't matter if you have a scary diagnosis or you just want to sleep better! While the book was easy to read, it does cite research for those that are skeptical and need more information. After reading, rest assured, you will be able to make a well-informed decision about the Biomat."

Stephanie Tyler, ND Springdale, Arkansas

"I received my BIOMAT in July and even though it was hot and humid outdoors, I could not wait to get on my Biomat twice a day. I counted down the hours until I could safely return to that Haven of Happiness!! I felt grounded, calm, and peaceful after every session. My back pain from overdoing it on my morning walks went away. My husband and I have to draw straws to see who gets on it first in the evening!

I am an essential oils user and I applied oils before the sessions to enhance the effectiveness. I have a Zyto Balance scanner that indicates how much my body is detoxing and the first day I did a Biomat session the scanner showed that I was doing some major detoxing! The average range for the scanner is 10-30. My detox score was 1930! It's the happiest way to detox!!

Then I began raving to my friends about the Biomat and I got all tongue-tied! The Biomat eBook is a brilliant explanation, in easy layman's terms, of the science behind this amazing device: Why it works, who it helps, what it helps, safety tips, and why everyone must absolutely own one! Have questions about the Biomat and why to choose THIS far-infrared heating mat? Check. It's all in the eBook."

Colette Polignone, Ph.D Maryland "The Biomat informational mini book was very informative and eye opening. In fact I was reminded of the time I worked in physical therapy. I saw individuals who could not move because of their pain move for the first time with minimal pain or no pain. Heat helps to heal muscle strains and make other ailments like arthritis feel much better. So I believe after reading the article that the Biomat can do so much more, so why not speak to your doctor and give it a try. Most insurance will pay for it. I know my family will be trying one..."

Tammie Conaway, Florida

"Learning about holistic treatments has been an amazing adventure. I like to see the science behind the product, and Mark Sircus certainly delivers that. This book is an amazingly well written compilation of information, the scientific studies to back up the information, and encouraging testimonials that give me even more reason to use my Pro biomat daily. Thanks for putting together a resource I can easily and confidently share with my holistic minded

community." Tammy Boley Tulsa, Oklahoma

"Well written. Organized and easy to understand so much of the amazing benefits of the Biomat!! This is a life changing device."

Melissa Mason
Pensacola, Florida

Introduction

Can light really heal?

Science and experience say yes. There are many studies showing that a certain type of very safe light known as far-infrared light (FIR) has the ability to empower your body to heal itself.

Light and heat have major biological effects on our bodies. Heat has long been used against disease, which is why the body produces a fever- to stimulate the immune system. One of the powerful impacts of far-infrared light is that it transfers to the body as deeply penetrating heat in controlled levels.

The technology offered by Richway in the Biomats is a combination of far-infrared light, negative ion technology, and the healing power of amethyst crystals, making an unique therapy device recognized by the FDA for many diseases and issues. The Biomats are Class II Medical Devices, but you don't need specialized training to operate them. You simply lay the mat out, turn it to the desired heat level, and rest! This creates a completely safe, passive, in-home therapy option. This can also be done in doctor's offices, spas, and wellness centers as a stand-alone therapy or complementary therapy to preexisting services. To ensure you receive an authentic, original Biomat for your home or practice, order at www.biomat7000.thebiomatcompany.com.

There are many far-infrared heating mats on the market, but only the Amethyst Biomat's heat has the ability to penetrate up to 6" into the body and generate intense frictional heat by stimulating our cells to actually move. Other far-infrared systems' heat, such as saunas, only penetrates to a depth of 2-3". The Biomat's deeply penetrating far-infrared heat delivers the benefits of FIR and negative ions into the whole body, making it ideal for a wellness regimen.

Biomat Benefits

The list of diseases that have been named among those helped by FIR is very extensive and can make the skeptical doubt, as it can seem too good to be true. It's important therefore to understand how a Biomat can help with so many diverse problems. Through the tools of FIR and negative ions, the Biomat supports the body in two primary ways: detoxification and immune support.

Detoxification

There has never been a time on earth when our bodies were bombarded

with so many toxins at once as they are today, from herbicides and pesticides in our food, to chemicals in our water, to industrial pollution, synthetic fragrances, medications, synthetics in personal care and home products, and more. These toxins have been linked to virtually every disease known to man. If there were a way to eliminate or reduce these poisons we would expect to see a lessening in the severity on all the diseases caused by them. The body has its own ways of getting rid of toxins, but studies are showing that the sheer numbers are overwhelming our detoxification systems on a daily basis. So our bodies store these toxins, which can build up over time and end up causing a wide variety of disease symptoms. FIR has been shown in many different ways to help the body get rid of these toxins and thereby provide relief for as wide a variety of diseases as are caused, or worsened, by toxic bioaccumulation.

Immune Support

Why is it that one person catches every sickness going around and another never seems to get sick? The answer lies in the health of our immune system. When our immune systems are compromised we become open to every bug and virus around. So it stands to reason that anything that strengthens our immune system will help us to both prevent and fight any disease from the flu to cancer. Modern research shows us that a "1 degree increase in body temperature results in a 40% increase in immunity. Optimal immune response is achieved at 109.4F" (Nobuhiro Yoshimizu, M.D., Ph.D., former director of Yokohama General Hospital). And as you'll read later, the clinical studies on far-infrared are widereaching and impressive.



Chapter 1: What is a Biomat?

The Biomat is a thermo-electrotherapeutic device that generates farinfrared rays and negative ions for your health. Because of its unique construction and the many scientific studies on the mats and FIR, we can make many claims on its abilities. Here are just a few:

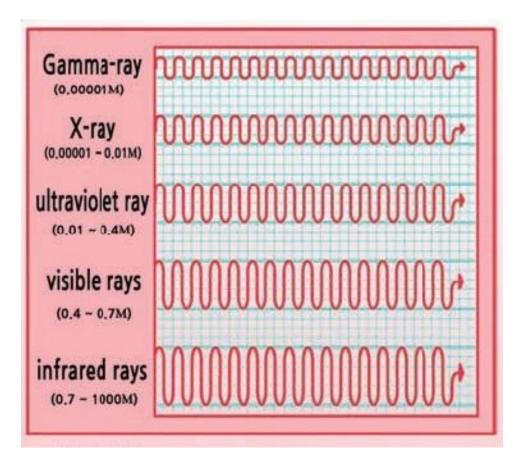
- •Increases blood circulation in areas where applied
- •Reduces stress and fatigue
- •Supports the immune system
- •Temporary relief of minor muscle and joint pain and stiffness
- •Temporary relief of joint pain associated with arthritis

So how does the Biomat do all this and more? The secret lies in the amethyst for far-infrared rays and tourmaline for negative ions.

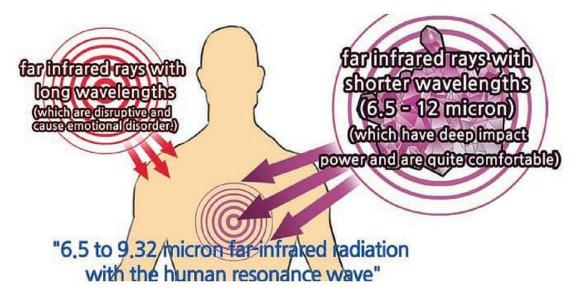
Amethyst - The Healing Stone

Since ancient times, amethyst has been called a "healing stone," as it emits an inherent wavelength of 32,876 KHz, frequencies which enhance vital cellular activity.

Types of light based on wavelength:



All light has its own inherent wavelength. From shortest to longest these light waves are called Gamma-rays, X-rays, ultraviolet rays, visible rays, and finally the far-infrared rays with deep impact and powerful thermo-therapeutic energy. Far-infrared that is passed through amethyst emits even more powerful, shorter wavelength far-infrared rays which have deeper impact, more powerful therapeutic energy, and more comfortable heat than longer wavelengths. This is called the "Amethyst Effect" or "Crystal Infrared."



What is the Difference Between Heat and Far-Infrared Rays?

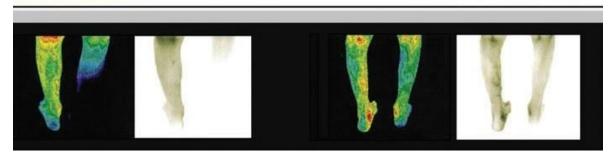
It is difficult for an external heat to penetrate deeper than the skin, but farinfrared rays go deep into our bodies and generate intense frictional heat, which stimulates our cells to move. Effects continue after application of FIR through the change of the body's physical condition.

Excellent Heat Insulation Effects of the Biomat

One of the prominent phenomena of hyperthermia treatment (raising the body temperature above normal ranges) with the Biomat is the change of the body's physical condition to maintain high body temperature by itself. The Biomat warms up the body as the far-infrared rays change the physical condition, generating heat and stimulating the mitochondria (where energy is produced) in our cells, and the body continues this work.

Before using the BioMat.

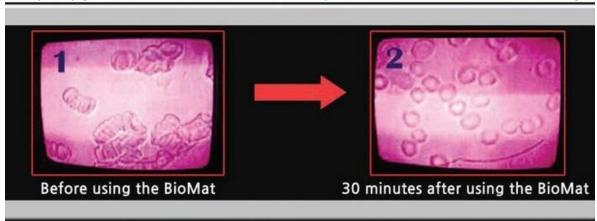
Two weeks after using the BioMat.



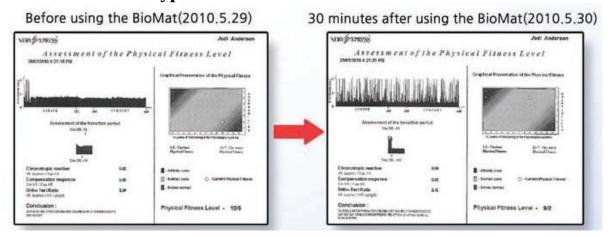
Above is a photo of a patient with a blood circulation problem. After using the Biomat, you can see that not only has his blood circulation improved considerably, these improvements are what his body began to maintain on its

own *after* treatment. It is because the patient has changed his physical condition to maintain high body temperature by himself. Such change of the physical condition facilitates blood circulation and activates more than 3000 essential enzymes, whereby harmful materials in the body are discharged naturally.

The below photo of blood was taken after using the Biomat for 30 minutes. You can see that turbid blood cells were changed to healthy and ideal blood suitable to carry oxygen thanks to the far-infrared rays of the Biomat. Isn't it amazing?



The Biomat Hyperthermia Enhances Cardiovascular Activities

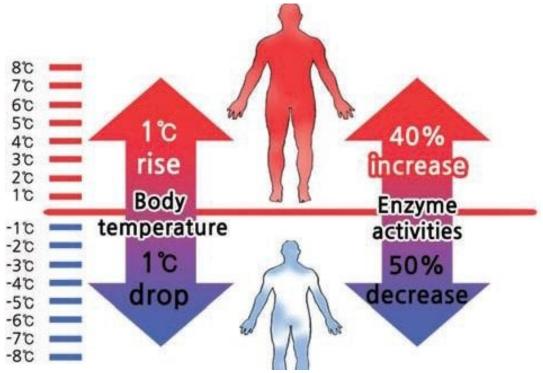


This photo shows the heart of a 57 year-old woman. Her health condition was very poor with reduced cardiovascular functionality and arrhythmia. However, only three minutes after using the Biomat, her cardiovascular system was greatly enhanced.

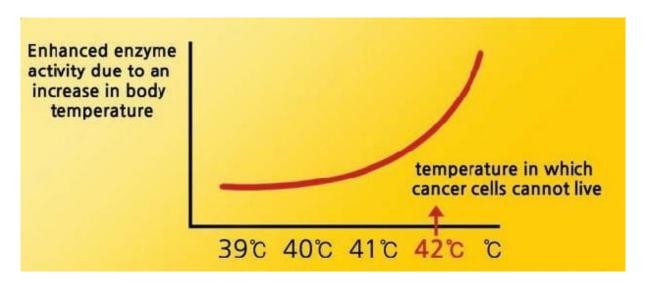
All diseases come from or are influenced by reduced body temperature. Such lowering of body temperature is called "cold hypersensitive." A symptom of cold hypersensitive is having cold hands, feet, and other extremities, and an

overall decrease in body temperature. When this is due to lowering of outside temperature, our bodies' terminal capillary vessels are contracted, and overall blood circulation is hindered.

When your body temperature drops, vital metabolic activities are reduced and more than 3000 essential enzymes cannot perform their functions. These enzymes are responsible for a wide range of biological functions in our bodies, including significantly speeding up chemical reactions and processes in our cells. We want them active!

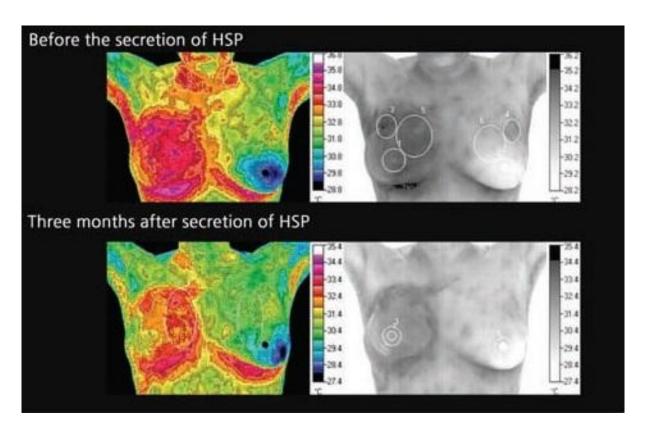


How little of a change does it take? When body temperature rises by 1c` (1.8°F), enzyme activities increase about 40%. Immunity is enhanced by enzyme activity. On the other hand, when body temperature drops by 1c`, enzyme activities decrease by more than 50%. This affects every system and organ in the body. People with cold hypersensitivity tend to get sick easily due to weakened immune and autonomic nervous systems.



It was Harvard Medical School that discovered cancer cells are vulnerable to heat, and are destroyed at temperatures over 42c` (107.6°F). Raising the body temperature weakens the activities of cancer cells, while causing increased enzyme activity.

The Biomat's FIR rays encourage our bodies to secrete Heat Shock Protein (HSP). This protein is secreted by the body to protect cells from heat and plays an important role in producing endorphins and enhancing immune function. A good reason to use the Biomat at high temperature is to facilitate the secretion of HSP.

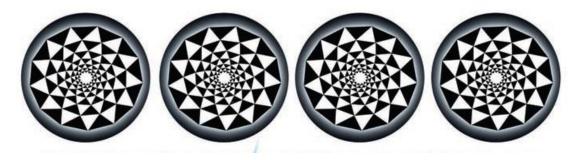


Obvious changes are shown after continual hyperthermia treatment and HSP production. HSP plays an important role in strengthening self healing power. It increases the production of endorphins, NK-cells, T-cells, and lymphocytes, which:

- •Enhance immune system
- •Reduce fatigue
- •Relieve pain

The Biomat has a Hideo Figure Design

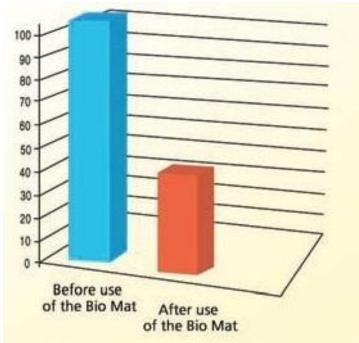
The Biomat is designed to maximize bio-resonance energy utilizing the Hideo figure, which is famous for its bio-resonance energy emission:



The Biomat Reduces Stress Hormones by 78%

Level [mcg/dcl]	Pre Test Results Before use the Biomat	Post Test Results After use the Biomat
Magnetic resonance imaging test [0-100]	68	⇒ 34
Electroencephalogram test [100-1000]	575	⇒ 285
Electrocardiogram test [1-10]	2	⇒ 6
Blood Cortisol test [5-25]	16	⇒ ,

The results of an experiment in which 12 patients used the Biomat for one hour a day showed that stress hormones, including cortisol, are reduced by 78%. Cortisol is the main stress hormone, and it plays important roles in the body. However, when high stress levels cause cortisol to raise too much it can lead to anxiety, memory and concentration issues, problems with digestion, weight gain, and more.



Clinical trial report by Dr. George Grant, a Canadian M.D.

About Tourmaline

Tourmaline is a gemstone famous for its ability to discharge negative ions. Tourmaline comes from granite pegmatite, produced in large quantity in Brazil, India, China, and Africa. Black tourmaline generates an especially powerful electrical field, so it is an ideal generator of negative ions- much more so than other forms of the gem.

What are these negative ions? The "Vitamins of the Air." They are air molecules that have more electrons than protons. They are generated in large quantities in nature, in clean, natural environments. Ideal places to feel the effects of negative ions are around waterfalls, beaches, and pine forests. In these places you may notice especially fresh, clean air. Such freshness comes from negative ions.

How do negative ions affect our bodies? Dr. Ewin Neher and Dr. Bert Sakmann in Germany received the Nobel Prize of Medicine in 1991 for their discovery of the very important role negative ions play in the metabolism. In the human body there are more than 60 trillion cells connected organically, sending and receiving information and nutrients and excreting wastes. Such distribution is possible because of cell channels connecting the cells.

Without negative ions, cell channels do not open.



When cell channels remain closed due to lack of negative ions, nutrients cannot be delivered to the body, and the reduced cellular activity leads to pain. Also, wastes unable to be removed from the cells accumulate in the body, causing adverse health.

You feel pain when your body detects electrical signals of positive ions. One source of positive ions is electronic devices (covered further in chapter two). Negative ions generated by the Biomat will be absorbed into your body through your skin and your breath. They will facilitate cellular metabolism, enhance your vitality, reduce pain, distribute various nutrients and energy throughout your body, cleanse your blood, and they have a tranquilizing effect. Negative ions are also good for recovering from fatigue!

"I was doing roofing on a hot July day in Portland, Oregon. When I went home, I felt fine, but later that evening I started to shiver uncontrollably, even though it was still very warm. I knew I needed to warm up my body to help the shivering. Then I thought I should get on the Biomat. I turned on the Biomat to the high-temperature settings and let it warm up. I laid down on the Biomat a few minutes later. It was the strangest sensation. I was uncontrollably shivering when I lay down, and within 30 seconds, but body completely relaxed. The sensation of my body calming down was something I had never experienced before. I stayed on the Biomat for 30 minutes. When I got up, I felt completely fine. Later when I described my experience to a medical professional, they said it sounded like you experienced heat stroke. If this ever happens again, I'll remember my Biomat. I would not want to be without it."

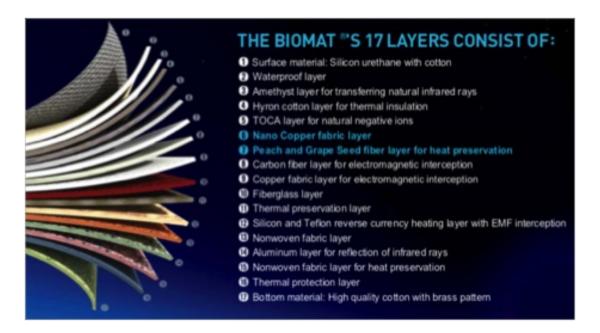
-Mike, Portland, Oregon

Chapter 2: The Original Amethyst Infrared Biomat



Manufactured by Richway, the Original Biomat, made with 17 layers of Space Age materials, combines state-of-the-art far-infrared light and negative ion technology with the healing power of amethyst. The Biomat is a revolutionary healing tool, ideal for health care professionals or anyone interested in improving their overall health and well-being. These Biomats are FDA-registered Class II medical devices (durable medical equipment), and, therefore, may be covered by insurance. The combination of the Amethyst crystals with the infrared generated by the Biomat creates a unique therapeutic response.

Almost everyone can benefit from the use of the Biomat! The healing of farinfrared rays intensified by the amethyst crystal brings relief of pain and healing of tissues, as well as providing safe and cuddly warmth for the young, the elderly, children, and even for pets.



Far-Infrared

Infrared is the light energy we get from the sun that makes us feel warm. The Biomat is different from any other infrared or negative ion-generating device on the market. The Biomat uses NASA technology to generate farinfrared waves through amethysts, using special compounds of alumina and silica, which can convert any normal energy into infrared rays very safely and efficiently at room temperature.

Crystal Infrared

The Biomat utilizes gemstone-quality amethyst crystals, known since ancient times for their calming and healing influence. The "Amethyst Effect" is the change from infrared light to 10 Hz infrared when it is refracted through amethyst crystals. World renowned Chinese scientist Dr. Chian, demonstrated that infrared acts as an information carrier when passed through various materials, such as human and animal DNA, glass, plastics, and gemstones. Included in these tests were Biomats with crystal infrared and a control group of Biomats without crystal infrared. The most potent healing effects occurred only in the group with the crystal infrared.

In these studies, amethyst was found to be the only substance which clearly changed the spectrum of infrared light. According to scientists, the waveforms of amethyst-influenced far-infrared mimicked patterns similar to the human voice. Crystallography shows that far-infrared refracted through amethyst crystals

organizes into geometrical patterns with higher bio-compatibility. Korean researchers propose that the addition of the amethyst allows for greater utilization of light by the human organism. As one Korean Research scientist said, "It appears that with infrared we are talking about energy, but with the addition of amethyst, we are now talking about energy plus healing information. This is the critical difference between the uses of infrared saunas, infrared mats (without crystal infrared or amethyst), and the Biomat." This may explain why so many reports of healing have occurred over the history of the Biomat.

Due to their deep penetration, FIR rays not only benefit the skin and muscle tissue on the surface of the body, but the deeper tissues as well. They reach the lymph glands, blood vessels, nerves, and key organs. The rays optimize the health of these tissues in a number of ways. Scientists propose that among the waves within the energy spectrum coming from the Sun, far-infrared waves are by far the safest and most beneficial electromagnetic energy available for the human body, directly affecting **all** metabolic and cellular functions.

Gamma Ray X-Ray Visible Light Infrared Microwave

Near Infrared Mid Infrared Far Infrared

Vital Rays 6-14 microns

The Vital Rays and Human Infrared

The human body both emits and absorbs infrared. The infrared we emit includes wavelengths between 3 and 50 microns, with the greatest output around 9.4 microns, which happens to be the resonant frequency of water. Within the infrared spectrum, in the 6-14 micron range, are rays known as the "Vital Rays." These rays have been shown to be most beneficial to the body, and are the rays emitted by the crystal infrared of the Biomat. The amethyst modulation of the infrared is what makes the Biomat so unique. It creates soothing and deeply penetrating warmth that the body craves.

The Biomat also produces medium, "Human" infrared at 6.8 microns. According to NASA research, Human infrared normalizes a variety of important physiological functions, especially glandular functions. This Human infrared is just another unique feature of the Biomat.

Biomat vs. Far-Infrared Sauna

The Biomat delivers the benefits of a far-infrared sauna for a fraction of the price and utilizes the far safer, DC current. Traditional infrared saunas and devices utilize 120 volt AC current, which has proven to be detrimental to our health by disturbing the human biological field. The Biomat protects the body from harmful AC current by providing a 5-tiered buffering system in which the AC current is converted to DC, which is bio-electrically compatible with the human body.

Negative Ions

The Biomat also delivers <u>negative ions</u>, which energizes the body for optimal health. The negative ions delivered through the Biomat are delivered directly to the body through the skin's surface via conduction. This greatly differs from ambient air ions delivered through popular negative ion generators used for air cleaning, which NASA reported only positively affect 26% of people. The direct conduction of negative ions allows for an immediate response and change in the body's electrical field for all people, assisting them to achieve an optimal physiological state.

When negative ions are applied to the body, calcium and sodium circulating in the blood are ionized. This increases the blood's pH and has an overall alkalizing effect on the body. Proper blood pH is essential for optimal health. This, along with the increase in inter-cellular communication and metabolism that also occur under the influence of negative ions, support the body in rapidly reviving optimal function.

Indoor environments, city living, automobiles, exposure to electronic devices, EMF's (electro-magnetic fields), and environmental pollution all result in increased positive ions in the body, tilting the ratio of ions towards the positive. This results in a physiological imbalance, which may have detrimental health consequences. Too few negative ions in the body can cause a number of diseases. Some of the health problems associated with an imbalance of ions in the body include: anemia, allergies, shoulder pain, lumbago, rheumatism,

neuralgia, headaches, kidney problems, imbalanced autonomic nervous system function, insomnia, and fatigue.

Highest Quality Construction

Only the finest quality materials are used in the construction of the Biomat. This is quite apparent from simply looking at the mat. This mat is designed to last for years.

The Biomat contains advanced computer technology that monitors and controls all aspects of its performance. If any part of the mat gets higher than the selected temperature, the current is cut off by thermal sensors distributed throughout the mat (this is why the mat should not be stood upon).

The Biomat uses the highest quality bi-metal as a heat sensor to control the internal heating functions of the mats. Low-quality bi-metal can break over time, rendering the mat ineffective. There is only one high quality, long-durable bi-metal sold on the market today. It is manufactured by Texas Instruments, was originally developed for military usage, and Richway is the only company that has access to and uses it in their mats. This means a guaranteed longer life for your mat, reflected in Richway's warranty and repair policies. Although the bi-metal is higher in cost, it is the only kind meeting Richway's exacting standards, and is one more reason the Biomat is the superior mat of its kind.

Summary of the Biomat's Unique Features

Other mat products claim that they are equal to and deliver the same benefits as the Richway Biomat for a lower price, however, this is misleading. The following is a short summary of how the Biomat differs from other mats on the market.

- **6.8 Micron Infrared** The Biomat generates a special spectrum of photon infrared through 6.8 micron sensors which amplify the amount of 6.8 infrared exposures. The unique benefits of 6.8 micron infrared or "Human" infrared can be read above.
- **10** Hz Infrared The Biomat includes another sensor which generates the 10 Hz, "Crystal," infrared (IR).
- **Bi-Metal** Only the high quality, long durability bi-metal manufactured by Texas Instruments is used in our mats. It's environmentally friendly, too, as all of the bi-metal we use is recycled!

FDA Approved – Due to our exacting standards, testing, & certifications, we are recognized by the Food & Drug Administration of the United States as durable medical equipment: a 510K Cleared Class II Medical Device. Both our product, and our manufacturing facility, enjoy FDA Approval. Competitors claim they are FDA Approved, but this is misleading, as only their manufacturing facility is approved, not their products.

EMF Block – The Biomat's 5-tiered buffering system converts AC current to DC, which is bio-electrically compatible with the human body. Testing your Biomat with a Tri-Meter or other EMF measuring device should show that the fields are nearly undetectable.

"As a practitioner, I have the Biomat on my treatment table. My experience has been that ALL treatments, (essential oils, emotional work, cranio-sacral, reiki) are deeper. The client/patient is able to relax and let go faster, easier and deeper. I am also a distributor and many have purchased them for personal and private use. It's certainly one of my favorite "go to" tools and now I adding high voltage PEMF which offers nearly instantaneously pain relief for most everything."

-Sharon Rasa, Rasa Health

Chapter 3: What Benefits Do I Get from My Biomat?

Because the Biomat's far-infrared rays penetrate deeply into the body and address imbalances at the cellular level, studies have shown it can be used to affect a wide range of health issues. The US FDA's Medical Device 510K indications for use are as follows:

- •Relieves minor muscle pain in areas where applied
- •Increases blood circulation in areas where applied
- •Reduces stress and fatigue
- •Soothes and relaxes
- •Eases minor joint pain, and stiffness
- •Supports the immune system
- •Improved sleep (if associated with pain relief)
- •Reduced inflammation (where applied)
- •Increased tissue oxygen (due to increased circulation where applied)
- •Minor muscular back pain
- •Temporary relief of sprains and strains
- •Temporary relief of minor muscle and joint pain and stiffness
- •Temporary relief of joint pain associated with arthritis
- •Temporary relief of muscle spasms
- •Temporary increase of local circulation where applied
- •Relaxation of muscles
- •Promotes relaxation by application of heat
- •Promotes restful sleep for those with occasional sleeplessness

Heals Soft Tissue: For existing injuries and chronic inflammation, heat is the best treatment. The Biomat is uniquely effective because it penetrates deeply and evenly to deliver heat right at the injury site, rather than on the skin.

Relieves Pain: The brain can only accept so many signals at the same time. So, if we activate enough heat receptors in our body, their signals to the brain begin to crowd out the pain signals. This is known as the "gate" effect, because not everything can make it through the brain's gate at the same time. This allows the Biomat to offer relief from a wide range of issues.

Improves Circulation: Using the Biomat expands and relaxes the capillaries, because they attempt to shed excess heat through the skin. This lowers blood pressure, and makes more nutrients and oxygen available to cells.

Improves Skin: Sweating purges clogged pores of deeply embedded impurities and dead skin cells leaving you with glowing skin. An increase in blood circulation encourages a healthy flow of nutrients to your skin and helps relieve acne, eczema, psoriasis, and burns. Rinsing off after using the mat will enhance this benefit.

Increases Metabolism: At the medium and high settings, the Biomat can begin to produce higher body temperatures, better circulation, and more oxygen-rich blood. This all translates into a faster pace of cellular activity which speeds up tissue repair, immune response, and detoxification.

Boosts Immune System: Fevers put our immune system into overdrive, but they can also be scary if left unchecked. Since the Biomat can elevate our body temperature by a few degrees, in a more controlled way, we can give our immune system a safe boost whenever we need it most.

Fights Infection: Many pathogens (conveniently for them) thrive at normal body temperatures. They are adapted to thrive in the conditions of their host. But by changing this internal environment, we can slow them down while at the same time ramping up our own immune system, and turn the tide of infection more quickly.

Detoxifies: Towards the higher settings, the Biomat can produce a considerable amount of heat, and has sauna-like effects. Placing a blanket over top of you can further enhance these effects. But drink water and be careful not to overdo it. The body will work hard to shed heat, and in doing so, it will shed a lot of built-up toxins too. You can rinse off afterwards to fully rid yourself of them.

"I have been using the Biomat for over a year now and am constantly amazed at the benefits. It provides me with increased mobility from back problems, a rapid onset of sleep and decrease in stress (Far-infrared light reduces cortisol stress levels by 78%). There is nothing like using a Biomat right along with Transdermal Magnesium Therapy. Comfort is beyond imagination.

We also have a professional size that my husband sleeps on at night. This has markedly improved a blockage in his leg arteries and has improved circulation to the point where he can now walk without stopping to rest, can drive without stopping the car to get out and rest and does not have leg cramping at night which kept us apart in the bed. He no longer has recommendations for surgery to relieve the blockage!!

Thank you Mark for bringing this to us and I recommend everyone have a Biomat. It will improve your quality of life in so many ways."

-Claudia French, Assistant Director, IMVA

Chapter 4: Far-Infrared Studies

Section 1

Effects of far-infrared acupoint stimulation on autonomic activity and quality of life in hemodialysis patients. Su LH, Wu KD, Lee LS, Wang H, Liu CF. Nursing Department, National Taiwan University Hospital, Yun-Lin Branch, Yun-Lin County, Taiwan.

Abstract

Patients receiving regular hemodialysis sessions have been known to suffer from fatigue and depression. This experiment was designed to determine the effects of far-infrared ray (FIR) stimulation on acupoints of patients suffering from renal failure who are receiving regular hemodialysis. Patients receiving long-term and regular hemodialysis who volunteered for this procedure were randomly selected to undergo either FIR or heat pad (HP) therapy to determine the impact of FIR treatment on these patients. Both the activities of the autonomic nervous system and changes in quality of life were measured before and after treatment to determine the effectiveness of the FIR treatment. Results from this study show that FIR therapy decreases both stress and fatigue levels of these patients. It also stimulates autonomic nervous system (ANS) activity in patients who are diagnosed with end-stage renal disease (ESRD) and are receiving regular hemodialysis (HD). Therefore, benefits of FIR stimulation on these patients are clearly demonstrated in this preliminary study.

Am J Chin Med. 2009;37(2):215-26.

Comment in: Am J Chin Med. 2009;37(5):1011-2.

Far-infrared therapy: a novel treatment to improve access blood flow and unassisted patency of arteriovenous fistula in hemodialysis patients.

Lin CC, Chang CF, Lai MY, Chen TW, Lee PC, Yang WC. Division of Nephrology, Institute of Clinical Medicine and School of Medicine, National Yang-Ming University, Taipei, Taiwan, Republic of China.

Abstract

Vascular access malfunction, usually presenting with an inadequate access flow (Qa), is the leading cause of morbidity and hospitalization in hemodialysis (HD) patients. Many methods of thermal therapy have been tried for improving Qa but with limited effects. This randomized trial was designed to evaluate the effect of far-infrared (FIR) therapy on access flow and patency of the native arteriovenous

fistula (AVF). A total of 145 HD patients were enrolled with 73 in the control group and 72 in the FIR group. A WS TY101 FIR emitter was used for 40 min, and hemodynamic parameters were measured by the Transonic HD(02) monitor during HD. The Qa(1)/Qa(2) and Qa(3)/Qa(4) were defined as the Qa measured at the beginning/at 40 min later in the HD session before the initiation and at the end of the study, respectively. The incremental change of Qa in the single HD session with FIR therapy was significantly higher than that without FIR therapy (13.2 + -114.7 versus -33.4 + -132.3 ml/min; P = 0.021). In comparison with control subjects, patients who received FIR therapy for 1 yr had (1) a lower incidence (12.5 versus 30.1%; P < 0.01) and relative incidence (one episode per 67.7 versus one episode per 26.7 patient- months; P = 0.03) of AVF malfunction; (2) higher values of the following parameters, including Delta(Qa(4) - Qa(3)) (36.2 + - 82.4 versus - 12.7 + - 153.6 ml/min; P = 0.027), Delta(Qa(3) - Qa(1))(36.3 + - 166.2 versus -51.7 + - 283.1 ml/min; P = 0.035), Delta(Qa(4) - Qa(2))(99.2 + - 144.4 versus - 47.5 + - 244.5 ml/min; P < 0.001), and Delta(Qa(4) -Qa(2)) - Delta(Qa(3) - Qa(1)) (62.9 +/- 111.6 versus 4.1 +/- 184.5 ml/min; P = 0.032); and (3) a better unassisted patency of AVF (85.9 versus 67.6%; P < 0.01). In conclusion, FIR therapy, a noninvasive and convenient therapeutic modality, can improve Qa and survival of the AVF in hemodialysis patients through both its thermal and its nonthermal effects. J Am Soc Nephrol. 2007 Mar;18(3):985-92. Epub 2007 Jan 31. Comment in:

Far-Infrared therapy inhibits vascular endothelial inflammation via the induction of heme oxygenase-1.

Nat Clin Pract Nephrol. 2007 Aug;3(8):422-3.

Lin CC, Liu XM, Peyton K, Wang H, Yang WC, Lin SJ, Durante W. Institute of Clinical Medicine, School of Medicine, National Yang-Ming University, Taipei, Taiwan.

Abstract

OBJECTIVE: Survival of arteriovenous fistulas (AVFs) in hemodialysis patients is associated with both far-infrared (FIR) therapy and length polymorphisms of the heme oxygenase-1 (HO-1) promoter. In this study, we evaluated whether there is an interaction between FIR radiation and HO-1 in regulating vascular inflammation. METHODS AND RESULTS: Treatment of cultured human umbilical vein endothelial cells (ECs) with FIR radiation stimulated HO-1 protein, mRNA, and promoter activity. HO-1 induction was dependent on the activation of the antioxidant responsive element/NF-E2-related factor-2 complex, and was likely a consequence of heat stress. FIR radiation also

inhibited tumor necrosis factor (TNF)-alpha- mediated expression of E-selectin, vascular cell adhesion molecule-1, intercelular cell adhesion molecule-1, monocyte chemoattractant protein-1, interleukin-8, and the cytokine-mediated adhesion of monocytes to ECs. The anti-inflammatory action of FIR was mimicked by bilirubin, and was reversed by the HO inhibitor, tin protoporphyrin-IX, or by the selective knockdown of HO-1. Finally, the anti-inflammatory effect of FIR was also observed in patients undergoing hemodialysis. CONCLUSIONS: These results demonstrate that FIR therapy exerts a potent anti-inflammatory effect via the induction of HO-1. The ability of FIR therapy to inhibit inflammation may play a critical role in preserving blood flow and patency of AVFs in hemodialysis patients.

Arterioscler Thromb Vasc Biol. 2008 Apr;28(4):739-45. Epub 2008 Jan 17.

Section 2

Antitumor effect of whole body hyperthermia with alphagalactosylceramide in a subcutaneous tumor model of colon cancer. Hattori T, Kokura S, Okuda T, Okayama T, Takagi T, Handa O, Naito Y, Yoshida N, Yoshikawa T. Inflammation and Immunology, Kyoto Prefectural University of Medicine, Kyoto, Japan.

Abstract

AIM: Whole body hyperthermia (WBH) has been used clinically as an adjunct to radio- and chemotherapy in patients with various cancers. Recently, it has been reported that an activation of the immune system has recently been reported as a possible contributor to the therapeutic effects of WBH. Conversely, the glycolipid alphagalactosylceramide (alpha-GalCer) is recognized by natural killer (NK) T cells together with the monomorphic MHClike antigen, CD1d, in mice and humans. This study investigated the antitumor effects of WBH combined with alpha-GalCer in a mouse subcutaneous tumor model of colon cancer. METHODS: Colon26 cells were inoculated subcutaneously into male BALB/c mice to establish subcutaneous tumor. Colon26-bearing mice were treated with WBH using far-infrared rays three times/week. Rectal temperature was maintained for 60 min at 41 degrees C. In some experimental groups, alpha-GalCer was intraperitoneally injected before WBH. We investigated the therapeutic effects of WBH, alpha-GalCer and combined therapy. RESULTS: (1) Compared with controls, Whole body hyperthermia alone resulted in significant inhibition of tumor growth. (2) No inhibitory effect on tumor growth was seen with alpha-GalCer. (3) The combination of WBH and alpha-GalCer showed significant inhibition of tumor growth and prolongation of survival. (4)

Serum IFN-gamma increased after 3 h and returned to basal levels by 24 h after alpha-GalCer administration. (5) CTL activity was enhanced following combination therapy with WBH and alpha-GalCer. CONCLUSION: Whole body hyperthermia showed antitumor effects in a mouse subcutaneous tumor model of colon cancer. Addition of alpha-GalCer increased the efficacy of WBH, probably via enhancement of immune response. Int J Hyperthermia. 2007 Nov;23(7):591-8.

Waon therapy improves the prognosis of patients with chronic heart failure.

Kihara T, Miyata M, Fukudome T, Ikeda Y, Shinsato T, Kubozono T, Fujita S, Kuwahata S, Hamasaki S, Torii H, LeeS, Toda H, Tei C. Department of Cardiovascular, Respiratory and Metabolic Medicine, Graduate School of Medicine, Kagoshima

University, 8-35-1 Sakuragaoka, Kagoshima 890-8520, Japan.

Abstract

BACKGROUND: We developed a Waon therapy (soothing warm therapy) and have previously reported that repeated Waon therapy improves hemodynamics, peripheral vascular function, arrhythmias, and clinical symptoms in patients with chronic heart failure (CHF). The aim of this study was to investigate the effect of Waon therapy on the prognosis of CHF patients. PATIENTS AND METHODS: We studied 129 patients with CHF in NYHA functional class III or IV who were admitted to our hospital between January 1999 and March 2001. In the Waon therapy group, 64 patients were treated with a far-infrared-ray dry sauna at 60 degrees C for 15min and then kept on bed rest with a blanket for 30min. The patients were treated daily for 5 days during admission, and then at least twice a week after discharge. In the control group, 65 patients, matched for age, gender, and NYHA functional class, were treated with traditional CHF therapy. The follow-up time was scheduled for 5 years.

RESULTS: Recent, complete follow-up data on each patient were obtained. The overall survival rate was 84.5% (Kaplan-Meier estimate). Twelve patients died in the control group and 8 patients died in the Waon therapy group at 60 months of follow-up. Cardiac events due to heart failure or cardiac death occurred in 68.7% of the control group but only 31.3% of the Waon therapy group (P<0.01) at 60 months of follow-up. CONCLUSION: Waon therapy reduced cardiac events in patients with chronic heart failure. This therapy is promising non-pharmacological treatment for CHF.

J Cardiol. 2009 Apr;53(2):214-8. Epub 2009 Jan 18.

Beneficial effects of Waon therapy on patients with chronic heart failure: Results of a prospective multicenter study. Miyata M, Kihara T, Kubozono T, Ikeda Y, Shinsato T, Izumi T, Matsuzaki M, Yamaguchi T, Kasanuki H, Daida H, Nagayama M, Nishigami K, Hirata K, Kihara K, Tei C.Department of Cardiovascular, Respiratory and Metabolic Medicine, Graduated School of Medicine, KagoshimaUniversity, 8-35-1 Sakuragaoka, Kagoshima 890-8520, Japan.

Abstract

BACKGROUND: We conducted a prospective multicenter case-control study to confirm the clinical efficacy and safety of Waon therapy on chronic heart failure (CHF). METHODS: Patients (n=188) with CHF were treated with standard therapy for at least 1 week, and then were randomized to Waon therapy (n=112) or a control group (n=76). All patients continued conventional treatment for an additional 2 weeks. The Waon therapy group was treated daily with a farinfrared-ray dry sauna at 60 degrees C for 15min and then kept on bed rest with a blanket for 30min for 2 weeks. Chest radiography, echocardiography, and plasma levels of brain natriuretic peptide (BNP) were measured before and 2 weeks after treatment. RESULTS: NYHA functional class significantly decreased after 2 weeks of treatment in both groups. Chest radiography also showed a significant decrease of the cardiothoracic ratio in both groups (Waon therapy: 57.2+/-8.0% to 55.2+/-8.0%, p<0.0001; control: 57.0+/-7.7% to 56.0+/-7.1%, p<0.05). Echocardiography demonstrated that left ventricular diastolic dimension (LVDd), left atrial dimension (LAD), and ejection fraction (EF) significantly improved in the Waon therapy group (LVDd: 60.6+/-7.6 to 59.1+/-8.4mm, p<0.0001; LAD: 45.4+/-9.3mm to 44.1+/- 9.4mm, p<0.05; EF: 31.6+/-10.4% to 34.6+/-10.6%, p<0.0001), but not in the control group (LVDd: 58.4+/-10.3mm to 57.9+/-10.4mm; LAD: 46.3+/- 9.7mm to 46.2+/-10.1mm; EF: 36.6+/-14.1% to 37.3+/-14.0%). The plasma concentration of BNP significantly decreased with Waon therapy, but not in the control group (Waon: 542+/-508pg/ml to 394+/-410pg/ml, p<0.001; control: 440+/-377pg/ml to 358+/-382pg/ml).

CONCLUSION: Waon therapy is safe, improves clinical symptoms and cardiac function, and decreases cardiac size in chronic heart failure patients. Waon therapy is an innovative and promising therapy for patients with CHF. J Cardiol. 2008 Oct;52(2):79-85. Epub 2008 Aug 27.

Section 3 Efficacy of Waon therapy for fibromyalgia.

Matsushita K, Masuda A, Tei C. The First Department of Internal Medicine, Kagoshima University Hospital.

Abstract

OBJECTIVE: Fibromyalgia syndrome (FMS) is a chronic syndrome characterized by widespread pain with tenderness in specific areas. We examined the applicability of Waon therapy (soothing warmth therapy) as a new method of pain treatment in patients with FMS. METHODS: Thirteen female FMS patients (mean age, 45.2+/-15.5 years old; range, 25-75) who fulfilled the criteria of the American College of Rheumatology participated in this study. Patients received Waon therapy once per day for 2 or 5 days/week. The patients were placed in the supine or sitting position in a far-infrared-ray dry sauna maintained at an even temperature of 60 degrees C for 15 minutes, and then transferred to a room maintained at 26-27 degrees C where they were covered with a blanket from the neck down to keep them warm for 30 minutes. Reductions in subjective pain and symptoms were determined using the pain visual analog scale (VAS) and fibromyalgia impact questionnaire (FIQ). RESULTS: All patients experienced a significant reduction in pain by about half after the first session of Waon therapy (11-70%), and the effect of Waon therapy became stable (20-78%) after 10 treatments. Pain visual analog scale and fibromyalgia impact questionnaire symptom scores were significantly (p<0.01) decreased after Waon therapy and remained low throughout the observation period. CONCLUSION: Waon therapy is effective for the treatment of fibromyalgia syndrome.

Intern Med. 2008;47(16):1473-6. Epub 2008 Aug 15.

Repeated Waon therapy improves pulmonary hypertension during exercise in patients with severe chronic obstructive pulmonary disease.

Umehara M, Yamaguchi A, Itakura S, Suenaga M, Sakaki Y, Nakashiki K, Miyata M, Tei C. Department of Cardiovascular, Respiratory and Metabolic Medicine, Graduated School of Medicine, Kagoshima University, Sakuragaoka 8-35-1, Kagoshima 890-8520, Japan.

Abstract

OBJECTIVES: Repeated Waon therapy, which uses a far-infrared-ray dry sauna system, improved the vascular endothelial function and the cardiac function in patients with chronic heart failure. In patients with chronic obstructive pulmonary disease (COPD), <u>pulmonary hypertension (PH) is associated with a poor prognosis</u>. We investigated whether repeated Waon therapy improves PH,

cardiac function, exercise tolerance, and the quality of life (QOL) in patients with COPD. METHODS: Consecutive 13 patients with COPD, who met the Global Initiative for Chronic Obstructive Lung Disease criteria and had breathlessness despite receiving conventional treatments, were recruited for this study. They underwent Waon therapy at 60 degrees C in sauna for 15 min following 30 min warmth with blankets outside of the sauna room. This therapy was performed once a day, for 4 weeks. Cardiac function, exercise tolerance, and St. George's Respiratory Questionnaire (SGRQ) were assessed before and 4 weeks after Waon therapy. RESULTS: Right ventricular positive dP/dt at rest elevated significantly from 397 + -266 to 512 + -320 mmHg/s (p = 0.024) after the therapy. While the PH at rest did not significantly decrease, the PH during exercise decreased significantly from 64 + / 18 to 51 + / 13 mmHg (p = 0.028) after Waon therapy. Furthermore, the therapy prolonged the mean exercise time of the constant load of cycle ergometer exercise test from 360 +/- 107 to 392 +/-97 s (p = 0.032). The total scores of SGRQ improved from 59.7 +/- 16.9 to 55.3 +/-17.2 (p = 0.002). In addition, no adverse effects were observed related to Waon therapy.

CONCLUSIONS: Repeated Waon therapy <u>improved right ventricular positive</u> <u>dP/dt</u>, <u>PH during exercise</u>, <u>exercise tolerance and the quality of life in patients with severe chronic obstructive pulmonary disease</u>.

J Cardiol. 2008 Apr;51(2):106-13.

Clinical effects of far-infrared therapy in patients with allergic rhinitis. Hu KH, Li WT.Department of Biomedical Engineering, Chung-Yuan Christian University, Chung-Li, 32023 Taiwan, ROC. drhook@ms68.hinet.net

Abstract

Allergic rhinitis (AR) is the sixth most common chronic illness worldwide, which has a significant impact on patients' quality of life. The actual cost of AR is staggering, approximately \$5.6 billion being spent annually in direct medical costs and other indirect costs. Therefore, it should be taken seriously upon its evaluation and treatment. AR is an IgEmediated inflammation, which symptoms are likely due to increased vascular permeability. Current therapeutic options such as avoidance of allergen, medication and immunotherapy are unsatisfactory. Far-infrared (FIR) is an invisible electromagnetic wave with a wavelength longer than that of visible light. It has been used to treat vascular diseases as a result of an increase in blood flow. The objective of this study was to evaluate the clinical effects of FIR therapy in patients with AR. Thirty-one patients with AR were enrolled in this study. A WS TY101 FIR emitter was placed to face the patient's nasal region at a distance of 30 cm (11.81 inches).

The treatment was performed for 40 min every morning for 7 days. Every day, patients recorded their symptoms in a diary before and during treatment. Each symptom of rhinitis was rated on a 4-point scale (0-3) according to severity. During the period of FIR therapy, the symptoms of eye itching, nasal itching, nasal stuffiness, rhinorrhea and sneezing were all significantly improved. Smell impairment was not improved until after the last treatment. No obvious adverse effect was observed in the patients during treatment and follow-up. We concluded that FIR therapy could improve the symptoms of AR and might serve as a novel treatment modality for AR.

Conf Proc IEEE Eng Med Biol Soc. 2007;2007:1479-82.

Section 4

The effects inhibiting the proliferation of cancer cells by far-infrared radiation (FIR) are controlled by the basal expression level of heat shock protein (HSP) 70A.

Ishibashi J, Yamashita K, Ishikawa T, Hosokawa H, Sumida K, Nagayama M, Kitamura S. Department of Oral and Maxillofacial Anatomy, Medical Science for Oral and Maxillofacial Regeneration, Graduate School of Health Biosciences, University of Tokushima, 3-18-15 Kuramoto, Tokushima 770-8504, Japan.

Abstract

We developed a tissue culture incubator that can continuously irradiate cells with far-infrared radiation (FIR) of wavelengths between 4 and 20 microm with a peak of 7-12 microm, and found that FIR caused different inhibiting effects to five human cancer cell lines, namely A431 (vulva), HSC3 (tongue), Sa3 (gingiva), A549 (lung), and MCF7 (breast). Then, in order to make clear the control system for the effect of FIR, the gene expression concerned to the inhibition effect by FIR were analyzed. In consequence, basal expression level of HSP70A mRNA was higher in A431 and MCF7 cells than in the FIRsensitive HSC3, Sa3, and A549 cells. Also, the over expression of HSP70 inhibited FIR-induced growth arrest in HSC3 cells, and an HSP70 siRNA inhibited the proliferation of A431 cells by irradiation with FIR. These results indicate that the effect of a body temperature range of FIR suppressing the proliferation of some cancer cells is controlled by the basal expression level of heat shock protein (HSP) 70A. This finding suggested that FIR should be very effective medical treatment for some cancer cells which have a low level of HSP70. Still more, if the level of HSP70 in any cancer of a patient was measured, the effect of medical treatment by FIR can be foreseen for the cancer. Med Oncol. 2008;25(2):229-37. Epub 2007 Oct 30.

A new treatment: thermal therapy for chronic fatigue syndrome [Article in Japanese]Masuda A, Munemoto T, Tei C. Masuda Clinic.

Abstract

Thermal therapy using far-infrared ray dry sauna was performed for patients with chronic fatigue syndrome (CFS). Symptoms such as fatigue, pain, and low-grade fever were dramatically improved on two patients. And prednisolone administration was discontinued and became socially rehabilitated 6 months after discharge. On other 11 patients with CFS, physical symptoms such as fatigue and pain improved, too. Furthermore, we reported that repeated thermal therapy had relaxation effect and diminishes appetite loss and subjective complaints in mildly depressed patients. These results suggest that repeated thermal therapy may be a promising method for the treatment of CFS. Nippon Rinsho. 2007 Jun;65(6):1093-8.

Biological effect of far-infrared therapy on increasing skin microcirculation in rats. Yu SY, Chiu JH, Yang SD, Hsu YC, Lui WY, Wu CW.Institute of Molecular and Cellular Biology, Department of Life Science, National Tsing-Hua University, Hsinchu, and Division of General Surgery, Department of Surgery, Veterans General Hospital, Taipei, Taiwan.

Abstract

BACKGROUND/PURPOSE: Insufficient microcirculation of skin leads to acute and chronic tissue ischemia in cases of trauma, reconstructive surgery, diabetes mellitus and peripheral arterial occlusive disease. The autonomic nervous system and nitric oxide (NO) play important roles in maintaining blood perfusion of the skin. Far-infrared (FIR) therapy provides low energy of light emitted from an artificial radiator and has been used to treat many vascular-related disorders. Nevertheless, the mechanisms through which FIR works remain unclear. The present study aims to test the hypothesis that the effect of FIR is through increasing skin microcirculation by a mechanism other than its thermal effect. METHODS: Sixty rats were used in the present study. A WS TY301 FIR emitter was placed 20 cm above the rats. Skin temperature and blood flow were continuously measured by a K-type thermocouple. Under laboratory control, the abdominal skin temperature steadily increased from 38-39 degrees C, and was kept at constant temperature. Skin microcirculation was measured with a continuous laser Doppler flowmeter. RESULTS: There was no significant

change of skin blood flow during FIR treatment. Skin blood flow increased significantly soon after the removal of the FIR emitter. The stimulating effect on skin blood flow was more significant in the rats treated with FIR for 45 min and could be sustained as long as 60 min. These findings suggested a non-thermic biological effect of FIR on skin microcirculation. The promotive effect of FIR on increasing skin blood flow was not influenced by pretreatment of APP (atropine, propranolol and phentolamine), but was suppressed by pretreatment with NG-nitro-L-arginine methyl ester (an endothelial nitric oxide synthase inhibitor).

CONCLUSION: In conclusion, <u>FIR therapy exerts a nitric oxide related</u> <u>biological effect to increase skin microcirculation</u> in rats. This might bring into perspective the clinical application of FIR to treat ischemic disease by augmenting L-arginine/NO pathway.

Photodermatol Photoimmunol Photomed. 2006 Apr;22(2):78-86.

Section 5

Repeated thermal therapy up-regulates endothelial nitric oxide synthase and augments angiogenesis in a mouse model of hindlimb ischemia.

Akasaki Y, Miyata M, Eto H, Shirasawa T, Hamada N, Ikeda Y, Biro S, Otsuji Y, Tei C. Department of Cardiovascular, Respiratory and Metabolic Medicine, Graduate School of Medicine, Kagoshima University, Sakuragaoka, Japan.

Abstract

BACKGROUND: Nitric oxide (NO), constitutively produced by endothelial NO synthase (eNOS), plays roles in angiogenesis. Having reported that thermal therapy up-regulated the expression of arterial eNOS in hamsters, we investigated whether this therapy increased angiogenesis in mice with hindlimb ischemia. METHODS AND RESULTS: Unilateral hindlimb ischemia was induced in apolipoprotein E-deficient mice, which were divided into control and thermal therapy groups. The latter mice were placed in a far-infrared dry sauna at 41 degrees C for 15 min and then at 34 degrees C for 20 min once daily for 5 weeks. Laser Doppler perfusion imaging demonstrated that the ischemic limb/normal side blood perfusion ratio in the thermal therapy group was significantly increased beyond that in controls (0.79+/-0.04 vs 0.54+/-0.08, p<0.001). Significantly greater capillary density was seen in thermal therapy group (757+/-123 /mm2 vs 416+/-20 /mm2, p<0.01). Western blotting showed thermal therapy markedly increased hindlimb eNOS expression. To study possible involvement of eNOS in thermally induced angiogenesis, thermal therapy was given to mice with hindlimb ischemia with or without N(G)-nitro-L- arginine methyl ester (LNAME) administration for 5 weeks. L-NAME treatment eliminated angiogenesis induced using thermal therapy. Thermal therapy did not increase angiogenesis in eNOS-deficient mice. CONCLUSION: Angiogenesis was induced via eNOS using thermal therapy in mice with hindlimb ischemia. Circ J. 2006 Apr;70(4):463-70.

The effects of repeated thermal therapy for patients with chronic pain. Masuda A, Koga Y, Hattanmaru M, Minagoe S, Tei C. Nishi Kyusyu University, Saga, Japan. masudaak@m.kufm.kagoshima- u.ac.jp

Abstract

BACKGROUND: It has been reported that local thermal therapy with a hot pack or paraffin relieves pain. We hypothesized that systemic warming may decrease pain and improve the outcomes in patients with chronic pain. The purpose of this study was to clarify the effects of systemic thermal therapy in patients with chronic pain. METHODS: Group A (n = 24) patients with chronic pain were treated by a multidisciplinary treatment including cognitive behavioral therapy, rehabilitation, and exercise therapy, whereas group B (n = 22) patients were treated by a combination of multidisciplinary treatment and repeated thermal therapy. A far-infrared ray dry sauna therapy and post-sauna warming were performed once a day for 4 weeks during hospitalization. We investigated the improvements in subjective symptoms, the number of pain behavior after treatment and outcomes 2 years after discharge. RESULTS: The visual analog pain score, number of pain behavior, self-rating depression scale, and anger score significantly decreased after treatment in both groups. After treatment, the number of pain behavior was slightly smaller (p = 0.07) and <u>anger score was</u> <u>significantly lower in group B</u> than those in group A (p = 0.05). Two years after treatment, 17 patients (77%) in group B returned to work compared with 12 patients (50%) in group A (p < 0.05).

CONCLUSION: These results suggest that a combination of multidisciplinary treatment and repeated thermal therapy may be a promising method for treatment of chronic pain. Copyright 2005 S. Karger AG, Basel. Psychother Psychosom. 2005;74(5):288-94.

Repeated thermal therapy diminishes appetite loss and subjective complaints in mildly depressed patients. Masuda A, Nakazato M, Kihara T, Minagoe S, Tei C. Psychosomatic Medicine, Respiratory and Stress Care center, Kagoshima University Hospital, Kagoshima City, Japan. masudaak@m.kufm.kagoshima-u.ac.jp

Abstract

OBJECTIVE: We observed that repeated thermal therapy improved appetite loss and general well-being in patients with chronic heart failure. The purpose of this study is to clarify the effects of repeated thermal therapy in mildly depressed patients with appetite loss and subjective complaints. METHODS: Twenty-eight mildly depressed inpatients with general fatigue, appetite loss, and somatic and mental complaints were randomly assigned to thermal therapy group (n = 14) or nonthermal therapy group (n = 14). Patients in the thermal therapy group were treated with 60 degrees C far-infrared ray dry sauna for 15 minutes and were then kept at bed rest with a blanket for 30 minutes once a day, 5 days a week for a total of 20 sessions in 4 weeks. RESULTS: Four weeks after admission, somatic complaints, hunger, and relaxation scores significantly improved (p < .001, p < .0001, p < .0001, respectively) and mental complaints slightly $\underline{improved}$ (p = .054) in the thermal therapy group compared with the nonthermal therapy group. Furthermore, the plasma ghrelin concentrations and daily caloric intake in the thermal therapy group significantly increased compared with the nonthermal therapy group (p < .05).

CONCLUSIONS: These findings suggest that repeated thermal therapy may be useful for mildly depressed patients with appetite loss and subjective complaints. Psychosom Med. 2005 Jul-Aug;67(4):643-7.

Section 6

The effects of repeated thermal therapy for two patients with chronic fatigue syndrome. Masuda A, Kihara T, Fukudome T, Shinsato T, Minagoe S, Tei C. Respiratory and Stress Care Center, Kagoshima University Hospital, 8-35-1 Sakuragaoka, Kagoshima 890-8520, Japan. masudaak@m.kufm.kagoshima-u.ac.jp

Abstract

OBJECTIVE: This paper describes the successful treatment of two patients with chronic fatigue syndrome (CFS) using repeated thermal therapy. METHODS: Two patients with CFS underwent treatment with prednisolone (PSL), with no satisfactory effect. They were subjected to thermal therapy that consisted of a far-infrared ray dry sauna at 60 degrees C and postsauna warming. The therapy was performed once a day, for a total of 35 sessions. After discharge, these subjects continued the therapy once or twice a week on an outpatient basis for 1 year. RESULTS: Symptoms such as fatigue, pain, sleep disturbance, and low-grade fever were dramatically improved after 15 to 25 sessions of thermal

therapy. Although PSL administration was discontinued, the subjects showed no relapse or exacerbation of symptoms during the first year after discharge. The patients became socially rehabilitated 6 months after discharge.

CONCLUSIONS: These results suggest that repeated thermal therapy might be a promising method for the treatment of CFS.

J Psychosom Res. 2005 Apr;58(4):383-7.

Repeated sauna therapy reduces urinary 8-epi-prostaglandin

F(2alpha). Masuda A, Miyata M, Kihara T, Minagoe S, Tei C. Department of Cardiology, Respiratory and Metabolic Medicine, Kagoshima University, Kagoshima, Japan.

Abstract

We have reported that repeated sauna therapy improves impaired vascular endothelial function in a patient with coronary risk factors. We hypothesized that sauna therapy decreases urinary 8-epi-prostaglandin F(2alpha) (PGF(2alpha)) levels as a marker of oxidative stress and conducted a randomized, controlled study. Twenty-eight patients with at least one coronary risk factor were divided into a sauna group (n = 14) and non-sauna group (n = 14). Sauna therapy was performed with a 60 degrees C far-infrared-ray dry sauna for 15 minutes and then bed rest with a blanket for 30 minutes once a day for two weeks. Systolic blood pressure and increased urinary 8-epi-PGF(2alpha) levels in the sauna group were significantly lower than those in the non-sauna group at two weeks after admission (110 +/- 15 mmHg vs 122 +/- 13 mmHg, P < 0.05, 230 +/- 67 pg/mg x creatinine vs 380 +/- 101 pg/mg x creatinine, P < 0.0001, respectively). These results suggest that repeated sauna therapy may protect against oxidative stress, which leads to the prevention of atherosclerosis. Jpn Heart J. 2004 Mar;45(2):297-303.

Promotive effects of far-infrared ray on full-thickness skin wound healing in rats. Toyokawa H, Matsui Y, Uhara J, Tsuchiya H, Teshima S, Nakanishi H, Kwon AH, Azuma Y, Nagaoka T, Ogawa T, Kamiyama Y. First Department of Surgery and Regeneration Research Center for Intractable Diseases, Kansai Medical University, Moriguchi City, Osaka, 570-8507, Japan.

Abstract

The biological effects of far-infrared ray (FIR) on whole organisms remain poorly understood. The aim of our study was to investigate not only the hyperthermic effect of the FIR irradiation, but also the biological effects of FIR

on wound healing. To evaluate the effect of FIR on a skin wound site, the speed of full-thickness skin wound healing was compared among groups with and without FIR using a rat model. We measured the skin wound area, skin blood flow, and skin temperature before and during FIR irradiation, and we performed histological inspection. Wound healing was significantly more rapid with than without FIR. Skin blood flow and skin temperature did not change significantly before or during FIR irradiation. Histological findings revealed greater collagen regeneration and infiltration of fibroblasts that expressed transforming growth factor-beta1 (TGF-beta1) in wounds in the FIR group than in the group without FIR. Stimulation of the secretion of TGF-beta1 or the activation of fibroblasts may be considered as a possible mechanisms for the promotive effect of FIR on wound healing independent of skin blood flow and skin temperature. Exp Biol Med (Maywood). 2003 Jun;228(6):724-9

Section 7

Repeated thermal therapy upregulates arterial endothelial nitric oxide synthase expression in Syrian golden hamsters. Ikeda Y, Biro S, Kamogawa Y, Yoshifuku S, Eto H, Orihara K, Kihara T, Tei C.

The First Department of Internal Medicine, Faculty of Medicine, Kagoshima University, Japan.

Abstract

It has been previously reported that sauna therapy, a thermal therapy, improves the hemodynamics [dynamics of blood flow] and clinical symptoms in patients with chronic heart failure and also improves endothelial function, which is impaired in such patients. The present study investigated whether the improvements observed with sauna therapy are through modulation of arterial endothelial nitric oxide synthase (eNOS) expression. Eight male Syrian golden hamsters underwent sauna therapy, using an experimental far-infrared-ray dry sauna system, at 39 degrees C for 15 min followed by 30 degrees C for 20 min daily for 4 weeks. Control group hamsters were placed in the sauna system switched off at room temperature of 24 degrees C for 35 min.

Immunohistochemistry found greater amounts of the immunoreactive products of eNOS in the endothelial cells of the aorta and carotid, femoral and coronary arteries in the sauna group than in the control group. Western blot analysis also revealed that 4-week sauna therapy significantly increased eNOS expression in aortas by 50% in 4 series of independent experiments with an identical protocol (p<0.01). In reverse transcription polymerase chain reaction assay, the eNOS mRNA in aortas was greater in the sauna group than in controls, with a peak at

1-week of sauna therapy (approximately 40-fold increase). In conclusion, repeated thermal therapy upregulates eNOS expression in arterial endothelium. Jpn Circ J. 2001 May;65(5):434-8.

Heat in the treatment of patients with anorexia nervosa.

Gutierrez E, Vazquez R.Departamento de Psicologia Clinica y Psicobiologia, Facultad de Psicologia, Campus Universitario Sur, Santiago deCompostela, Spain.

Abstract

The paper presents the results of heat treatment in three cases of anorexia nervosa (AN), in which marked over activity and/or strenuous exercising were prominent clinical features. Heat was supplied in three ways: continuous exposure to a warm environment, wearing a thermal waistcoat, and sauna baths in an infrared cabin. The outcomes went far beyond what had been expected, as the disappearance of hyperactivity was followed by progressive recovery. Eat Weight Disord. 2001 Mar;6(1):49-52.

Inhibition by whole-body hyperthermia with far-infrared rays of the growth of spontaneous mammary tumours in mice. Udagawa Y, Nagasawa H, Kiyokawa S. Experimental Animal Research Laboratory, Meiji University, Kawasaki, Japan.

Abstract

To evaluate possible therapeutic benefits of irradiation with far-infrared rays (FIR) on breast cancer, we examined combined effects of the chronic exposure to FIR at ambient temperature (26.5-27.5 degrees C) and the whole-body hyperthermia induced by FIR (WBH) (35-41 degrees C) on the growth of spontaneous mammary tumours of mice. A high mammary tumour strain of SHN virgin mice born on the normal rack or FIR rack were maintained on the respective racks until mammary tumour appearance. When the mammary tumour size reached approximately 7 mm, some mice in each group received no further treatment (Control and FIR groups, respectively) and the remaining mice received 3 hours of WBH each of 5 consecutive days (C + WBH and FIR + WBH groups, respectively). There was little difference between the control and FIR groups in the tumour growth over 10 days of examination. On the other hand, the tumour growth was inhibited significantly in both C + WBH and FIR + WBH groups and the degree of inhibition was similar. The data confirmed that the chronic exposure to FIR at ambient temperature has little effect on the

growth of spontaneous mammary tumours in mice. Whole-body hyperthermia with FIR, however, strongly inhibited the tumour growth without deleterious side-effects, while chronic FIR irradiation itself again had little effect in this process. This WBH regimen may serve as a useful animal model for long-term studies of a noninvasive treatment of breast cancer. 1999 Sep-Oct;19(5B):4125-30.

Section 8

Heating the patient: a promising approach?

Van der Zee J. Erasmus Medical Center-Daniel den Hoed Cancer Center, Department of Radiation Oncology, Hyperthermia Unit, Rotterdam, The Netherlands. zee@hyph.azr.nl

Abstract

There is a clear rationale for using hyperthermia in cancer treatment. Treatment at temperatures between 40 and 44 degrees C is cytotoxic for cells in an environment with a low pO(2) and low pH, conditions that are found specifically within tumour tissue, due to insufficient blood perfusion. Under such conditions radiotherapy is less effective, and systemically applied cytotoxic agents will reach such areas in lower concentrations than in well perfused areas. Therefore, the addition of hyperthermia to radiotherapy or chemotherapy will result in at least an additive effect. Furthermore, the effects of both radiotherapy and many drugs are enhanced at an increased temperature. Hyperthermia can be applied by several methods: local hyperthermia by external or internal energy sources, regional hyperthermia by perfusion of organs or limbs, or by irrigation of body cavities, and whole body hyperthermia. The use of hyperthermia alone has resulted in complete overall response rates of 13%. The clinical value of hyperthermia in addition to other treatment modalities has been shown in randomised trials. Significant improvement in clinical outcome has been demonstrated for tumours of the head and neck, breast, brain, bladder, cervix, rectum, lung, esophagus, vulva and vagina, and also for melanoma. Additional hyperthermia resulted in remarkably higher (complete) response rates, accompanied by improved local tumour control rates, better palliative effects and/or better overall survival rates. Generally, when combined with radiotherapy, no increase in radiation toxicity could be demonstrated. Whether toxicity from chemotherapy is enhanced depends on sequence of the two modalities, and on which tissues are heated. Toxicity from hyperthermia cannot always be avoided, but is usually of limited clinical relevance. Recent developments include improvements in heating techniques and thermometry,

development of hyperthermia treatment planning models, studies on heat shock proteins and an effect on anti-cancer immune responses, drug targeting to tumours, bone marrow purging, and combination with drugs targeting tumour vasculature, and the role of hyperthermia in gene therapy. The clinical results achieved to date have confirmed the expectations raised by results from experimental studies. These findings justify using hyperthermia as part of standard treatment in tumour sites for which its efficacy has been proven and, furthermore, to initiate new studies with other tumours. Hyperthermia is certainly a promising approach and deserves more attention than it has received until now.

Ann Oncol. 2002 Aug;13(8):1173-84.

Evaluating thermotherapy using the amethyst Bio-belt and the infrared negative ion amethyst Biomat Dr. George Grant, Ph.D, I.M.D., M.Sc., M.Ed., C.CHEM., R.M.

Abstract

The amethyst Bio-belt was used by 12 subjects for 1 hour three times per week along with the amethyst Biomat during sleep, daily over a 3-month period. The author used two different biofeedback devices to measure pain reduction, body mass index (BMI) to measure fat reduction, and blood cortisol levels to measure stress reduction. The Bio-belt and the far infrared, negative ion amethyst Biomat reduced pain by 18%, reduced BMI by 10%, and reduced stress by 82% in the 12 subjects over 3 months as validated by pre- and post-biofeedback, brain scans, and fasting blood tests to measure the stress hormone cortisol. Thermotherapy was enhanced when the Bio-belt was combined with the use of the Biomat during sleep to reduce stress, pain, and abdominal fat. International Journal of Aesthetic and Anti-Ageing Medicine. 2013, Nov.

Infrared therapy for chronic low back pain: A randomized, controlled trial George D Gale, MBBS FRCA FRCPC DAAPM,1 Peter J Rothbart, MD FRCPC,1 and Ye Li2

Abstract

The objective of the present study was to assess the degree of pain relief obtained by applying infrared (IR) energy to the low back in patients with chronic, intractable low back pain. Forty patients with chronic low back pain of over six years' duration were recruited from patients attending the Rothbart Pain

Management Clinic, North York, Ontario. They came from the patient lists of three physicians at the clinic, and were randomly assigned to IR therapy or placebo treatment. One patient dropped out of the placebo group; as a result, 21 patients received IR therapy and 18 received placebo therapy. The IR therapy was provided by two small, portable units in a sturdy waistband powered by small, rechargeable batteries made by MSCT Infrared Wraps Inc (Canada). These units met safety standards for Food and Drug Administration portability, and are registered with the Food and Drug Administration as a therapeutic device. The unit converted electricity to IR energy at 800 nm to 1200 nm wavelength. The treated group received IR therapy. The placebo group had identical units, but the power was not connected to the circuit-board within the IR pad. Patients attended seven weekly sessions. One baseline and six weekly sets of values were recorded. The principle measure of outcome was pain rated on the numerical rating scale (NRS). The pain was assessed overall, then rotating and bending in different directions.

RESULTS: The mean NRS scores in the treatment group fell from 6.9 of 10 to 3 of 10 at the end of the study [a 50% pain reduction in six weeks]. The mean NRS in the placebo group fell from 7.4 of 10 to 6 of 10. CONCLUSION: The IR therapy unit used was demonstrated to be effective in reducing chronic low back pain, and no adverse effects were observed.

Pain Res Manag. 2006 Autumn; 11(3): 193–196.

"I have had a Biomat for about 6 weeks now. I also have a one-person FIR sauna that I use frequently for its health benefits. I used to use the sauna at least 4x per week since experiencing a low back problem and it always helps a great deal. Since receiving the Biomat I am finding that it provides many of the same benefits, if not more, than the sauna does and I find myself going to the sauna less and less frequently. Now I use the Biomat twice a day with a tremendous amount of back pain relief and increased mobility. As time goes on I am noticing that there is a growing or accumulating effect because I do not need as many other types of pain remedies as I used to and not needing to interrupt my activities to do the sauna and showering.

I find using the Biomat to be addicting; in fact, it seems its FIR heat is reaching deeply into every area of my body, even though it is the small sized Biomat. When I position it on my back, I can feel its penetrating energy all the way down to my toes. It's very comforting yet stimulating at the same time! It is more convenient than going into the sauna because I can use it while sitting in a

comfortable chair and continue working on my computer. The Biomat will cause me to sweat if I increase the temperature and the amount of time spent with it on, but not as much as the sauna will. So both have their benefits but I would never give the Biomat up! I love it.

-Claudia French, Nurse

Chapter 5: How to Choose Your Biomat

There are six sizes of Biomats, with the **Professional Biomat**, **Mini**, and **Bio-belt** being the most popular, plus the Orgone Biomat product line. Each of these Biomats uses the same basic construction, so that size is the main difference. Below is a brief overview of the mats, which may help you in making your selection.

Sizes

This graphic contains an overview that may prove useful in identifying the mat or mats that meet your needs and lifestyle. Be sure to speak with a Richway Distributor concerning your needs, as they will also be able to help narrow down to the right products for you.

	Professional	Mini-Mat	Bio-Belt	Single	Queen	King
Portability	X	X	X	- 111, 000, 000		
Use in a Chair		X	X			
Whole Body Treatment	X			X	X	X
Spot Area Treatment			X			
Full Bed Coverage				X	X	X
Size	28" x 74" x 1"	20" x 34" x 1"	8" x 18" x 1"	35" x 78" x 1"	55" x 78" x 1"	73" x 78" x 1"
Weight	13kg/28lb	3.8kg/8.2lb		15kg/34lb	20kg/54lb	23kg/75lb
List Price	\$1,695	\$670	\$550	\$2,600	\$3,500	\$4,000

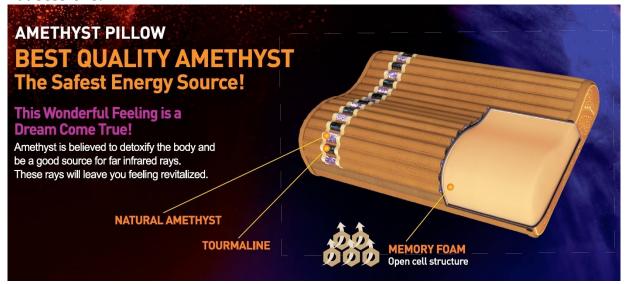
Amethyst Biomat Professional

As the smallest and most portable of the full-body mats, the Biomat Professional size is the most popular for good reason. It's ideal for health care professionals looking for a way to extend and enhance their treatment options, or for home users who want convenient, full-body treatment. The "Pro" measures 6' in length, allowing for full-length body contact and optimal results. The Professional Biomat is the size of a massage table, and was originally designed for massage therapists. This mat is the only one with a year-round discount option of \$100! See chapter eight for qualifications. It contains 17.5 pounds of amethyst crystals which are in clear tubing down the right side of the Biomat. This mat can fold into thirds and be placed in the Biomat suitcase (included with purchase) for superbly simple portability.



Pillow Option

The Pillow is designed to keep the head cool while you are heating the body, while still carrying energy from the mat into the head area. The Biomat Professional may be purchased without the Pillow, but it is recommended, especially for therapy situations. One unique feature of the Pillow is that the gems are inside a sleeve which can be removed from the pillow cushion and wrapped around limbs or joints, or draped over an area for spot treatment during mat sessions.



Amethyst and Tourmaline Mini-Mat

The Mini is the second most popular Biomat. At just 20" x 34" and 8 pounds, the Biomat Mini is ideal for chairs or laying flat for enjoying treatments at the office or on travels. It's also the right size for medical spas, or salon or dental office chairs, making it another great choice for health & wellness

providers. It works perfectly for spot treatments for adults, or full treatments for children or family pets. This mat also has great portability and comes with a hard-shell suitcase. Five pounds of amethyst and tourmaline alternate in rows throughout the length of the mat, so, despite its small size, it generates equivalent amounts of negative ions as the larger mats!



The Bio-belt

The Bio-belt is designed to be used around the waist. However, the belt (strap portion), can be removed, and the Bio-belt is then like a miniature Biomat that can be placed anywhere. It has a mixture of eight gemstones, and produces a slightly different energy than the amethyst Biomats. For a little mat, it's quite powerful. The Bio-belt was designed to reduce belly fat, and is excellent for alleviating headaches, spot treating severe back pain, neck and shoulder pain, or foot pain. The Bio-belt is not designed for sleeping, except for short naps. It has a safety timer to automatically shut off after two hours. Though the jewel portion is 18 x 8", there are two sizes of straps available: the Regular is 55 inches long and the Extra Large is 63 inches long (the XL also comes with a longer plug-in cord).



Amethyst Biomat Single

The <u>Biomat Single</u> is the size of a twin bed (so it's slightly longer and wider than the Pro). We generally recommend this for larger people. For most people, the Biomat Professional is the preferred choice. The Single size Biomat does not have the same portability as the Professional, and would only be used on a bed. This mat weighs 40 pounds. This Biomat is probably preferred by those who are short on space in the home, and will set up their bed as their therapy area for convenience and space-saving. *If you plan to sleep on this mat, it's highly recommended you also purchase the Quantum Energy Pad (some people prefer two) for comfort (next chapter).



Amethyst Biomat Queen and King

The <u>Queen and King-size Biomats</u> are the complete size of queen and king beds. One advantage of the larger mats is the surface area allows it to produce a large volume of negative ions and infrared. The King and Queen Biomats are

unique in that each side of the Biomat can be set at a different temperature-perfect for couples! At 60 and 73 pounds respectively, these mats are not portable, but are perfect for stationary therapy in your home. *If you plan to sleep on this mat, it's recommended you also purchase the Quantum Energy Pad for comfort (next chapter).



Orgone Biomat Queen & King

The Orgone Biomat uses the same technology as the original Biomat but is designed to be placed directly on top of your bed to help you get the sleep you need. The Orgone product line utilizes amethyst shavings within the fabric itself to give you the Crystal Infrared benefits, without the weight, cost, and firmness of using whole gems. It is comfortable, lightweight, and easy to clean. Orgone offers the same levels and amounts of infrared and double the negative ions as the original Biomat. Despite all these fabulous features, the Orgone Queen and King mats are half the price of their Biomat size-counterparts (and also have the dual-heating function), making them ideal for space-saving, value-conscious customers. These mats are 33 and 44 pounds, respectively. *Be aware that these mats have not undergone the FDA Approval process like the Biomats, so they are unlikely to be covered through insurance. **You may still wish to have a Quantum Energy Pad with your Orgone mat for extra softness.



"I used a Biomat at a world-famous healing center I went to and was amazed by the results after just an hour treatment. So then I did my own research on the internet for several months. I finally felt safe enough to make a purchase without anything negative about the product. I started out with the Mini due to financial reasons. The mini is flexible to use and take places yet covers less area of the body. It can be used to sleep on as well to sit on while watching TV or working on the computer to help protect you from EMF's and also heal. It is more portable like a soft-sided garment bag so great for travel then I finally saved for the Biomat pro and have used it for over a year and sleep on it with fantastic results that were much greater covering more of the body as I was dealing with many ailments. Then for sweating out toxins, I 'sandwich' myself between the two now as recommended in the booklets."

-Sharon Shanto

Chapter 6: The Quantum Energy Pads

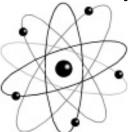


The Quantum Energy Pad is an exciting accessory for your Biomat. The QE Pad is a bridge between the medical industry and the bedding industry. The power of the Biomat, combined with the Quantum technology and new comfort system, brings a new level of therapeutic sleep. The Quantum Energy Pad is designed to be placed on top of your Biomat.

The Quantum Energy Pad Enhances the Body's Frequency

We are proud that the Quantum Energy Pad is an environmentally friendly product! It's composed of raw materials, such as an organic compound extracted from peach and grape seeds, which resonate at the optimum frequency of the human body. Using these ingredients, along with amethyst powder, the QE Pad creates a field that encourages the body to come to a more healthy frequency.

Bacteria Inhibition & Key Features



Another unique ingredient is the BioClay Memory Foam containing ochre, which has anti-microbial enzymes that do not promote the growth of bacteria. Check out this product's numerous, impressive tests & certifications, **HERE**. The Quantum Energy Pad maintains your health by promoting your mat's far-

infrared rays and negative ions, and enhances resistance against harmful germs and bacteria, which contributes to various illnesses.

The superfine hypoallergenic micro fabric aids in the prevention of heat loss, keeping your family healthy and free from the allergenic dyes used in most synthetic fabrics. Its high-density durable 3D mesh material also allows excellent air permeability. The micro fiber cover is even removable and machine washable. This super-soft, fabulously convenient accessory will soon become one of your favorite things!

Available in: King Size Queen Size Single Size Professional Size

"Hi I have been using the Biomat now for while, I have Stage IV NSCLC Lung Cancer, I had been hospitalized twice in two months around Christmas & New Year with Pneumonia and Lung infections, the second time, I had to be on Oxygen, and breathing was difficult, without the Oxygen. My research found Biomat, so purchased the Mini.

This has been a God send, my right lung, was partially collapsed when I was released from Hospital; breathing was not great from my right lung. When the Biomat arrived, I tried a full two hours on Max heat, after this session, I risked a full deep breath, which normally would hurt, I was amazed that I did NOT get any discomfort or pain? From Only One session on the Biomat?? Wow, this result alone made my purchase worth it. I have two sessions a day, for about an hour, on full heat, this suit me fine. I have noticed that I feel generally much better all round in myself.

Hopefully, when I get my next CT scan, the tumor may have reacted favorably to this Thermo Therapy treatment. As a bonus, a long term back injury, which gave me permanent pain, disappeared completely, although I was not trying to treat that problem. Many thanks for this great product, it has helped me tremendously."

-Stephen Croft

Chapter 7: Practitioner's Guide

Professionals of medical practices, spas, gyms, and more are adding Biomats to their practices as an additional or stand-alone service, offering clients wonderful and powerful benefits while increasing revenue to their business. These are just some of the fields utilizing the benefits of the Biomats:

- Massage therapists
- Chiropractors
- Physical therapists
- Spa technicians
- Acupuncturists
- Energy workers
- Personal trainers
- Yoga instructors
- Pain specialists
- Psychotherapists
- Nutritionists
- •Alternative cancer specialists
- •Therapeutic touch
- Meditation
- Osteopathy
- Athletic therapists
- Estheticians
- •And many more!

Though some decide not to charge extra when adding Biomats to their existing services and only market it as a unique service not offered by local competitors, the Biomat can serve as an additional stream of income to your business. Some practitioners incorporate it into their appointments to enhance relaxation or boost the effectiveness of treatments and services. Others charge for stand-alone Biomat sessions or packages. Note that these services, and therefore the income, are almost completely passive and need very little oversight- ideal for generating income without needing to hire additional staff. Some practitioners offer tiers of gift certificates, which may bring in new clients when individuals gift their loved ones with sessions for therapy or relaxation. Some have printed punch cards with a certain number of sessions pre-purchased. For some clients, sessions on the

Biomat can be claimed on their insurance as Infrared Radiation Therapy, Hyperthermia, etc. (This is covered more in-depth in our Insurance Claims document, which is available upon request.) Below you can find some suggested prices for client solo session packages:

1 Session: \$30 per session 5 Sessions: \$135 (10% off) 10 Sessions: \$255 (15% off) 25 Sessions: \$600 (20% off)

Of course, prices will vary based on your area and the intended benefits to the individual. The chapters, "Getting Started Guide" and "Best Practices" in this book will assist you in designing sessions based on your client's needs and the field your practice operates within.

Another way Biomats can generate income is through product sales to individuals or other practitioners. You have the opportunity to become a distributor with Richway and make additional commissions off the sale of Biomats to those enjoy the experience in your practice and want to take it home. This includes clients who purchase personal Biomats through insurance. It's very easy to be a Distributor as you do not need to keep any inventory. Every order is delivered directly to the customer via UPS. This makes it simple to develop the Richway business as an occasional income or a strong, passive income. Distributors earn commissions, product certificates (to be redeemed for Richway products), and binary bonuses for their sales.

To be a distributor, you simply need to purchase the Independent Sales Agreement (ISA) which is a one-time \$80 fee and make a personal purchase of \$1,500 or more to move up in commissionable ranks. Seek advice from your accountant or financial advisor regarding placing your Richway business in your name or the name of your practice. We will set you up with a free website where your clients can purchase products through Richway.

We recommend the <u>Professional Biomat</u> as a starting product. There is a \$100 US discount on the Professional Biomat when you provide your health-related certification documents (more detail in the next chapter). If the Professional isn't right for your business, such as when your clients will receive sessions in chairs rather than beds or massage tables, we recommend the <u>Mini</u> as an ideal alternative. Depending on your practice, accessories like the Waterproof Cover,

Quantum Energy Pad, Aroma Stand, and Amethyst Pillow may be important for your clients.

With the Richway Biomats, you'll bring a new level of service and health to the customers you love.

Chapter 8: Are Discounts Available?

Biomats are manufactured by Richway, which sells them through a network of distributors. Distributors are not allowed to discount the retail price of the mats, but under certain circumstances the company does. Ask your distributor if there are any sales or promotions currently happening, and check out the year-round discount on the Professional size below.

Professional, First Responder, & US Veteran Discount

The Biomat Professional was initially designed for Massage Therapists, which is why Richway offers a year-round \$100 discount to professionals with certificates or licenses in the health care & wellness fields. To express our honor and appreciation for those who serve our country, this same discount may also be claimed by first responders & veterans! This applies to all fire, law enforcement, and emergency medical personnel with proof of first responder certificate, and to veterans with proof of military service in the form of: DD Form 214, WD AGO 53, WD AGO 55, WD AGO 53-55, NAVPERS 553, NAVMC 78PD, or NAVCG 553.

To receive the discount, your certificate must be provided at the time of purchase of the "Biomat Professional with License" (which has the discount pre-applied). If a digital copy of your license or certificate is not available, a photo or photocopy of the original will be fine. Simply attach the digital in the designated area at the time of purchase.

Other Financial Options

- •Insurance- as an FDA Registered 510K Class II Medical Device, the Biomat 7000x products are approved for many illnesses, symptoms, and issues. Talk to your health care providers about a prescription for an in-home therapy Biomat to take your health care to the next level! (Full insurance claim instructions available upon request.)
- •Consider those of your friends and family who may need or desire a Biomat of their own. Invite them to take a look at this or other resources on the products, or to visit your home for sessions on your mat. When they see how this product would be revolutionary for their health, and purchase mats of their own, you can make commissions on those sales. This could offset or completely cover the cost of your own! Connecting people with this revolutionary healthcare tool can even

become a part- or full-time income if you so choose. Whether you choose to pursue covering the cost of your mat this way, or the Richway Biomat business, it's worth educating yourself on the potential of this lifestyle to unleash financial freedom into your family for generations to come.

"I was guided to Dr Sircus after being diagnosed with cancer and began to apply his protocols. The Magnesium Bicarbonate increased my energy and raised my PH level to 8.5. When I added the Biomat I started to notice a reduction in tumor size, my circulation improved as did my athlete's foot infection. Two friends who use the Biomat are also noticing reduced asthma problems and less use of the inhalers. The combination of the Dr Sircus protocols and in particular Heart Health and learning to dissolve internal conflicts has not only created an environment that encourages repair and recovery from illness but has also helped me gain an inner peace and an acceptance that this was meant to be."

-Martin Walker

Chapter 9: How to Order

- 1) Visit the "How to Choose" chapter, speak with your Richway Distributor, and, if applicable, your doctor about selecting the right products for you.
- 2) Go to www.biomat7000.thebiomatcompany.com, click "Order Now." (This process may be easier to complete on a computer than a mobile device.) If you'd prefer to place your order over the phone or with a physical order form, contact your Richway Distributor.
- 3) Under each item you choose, click "Add to Cart." After each item is added, you'll be scrolled to the top.
- 4) When your cart is full, click "Go to Checkout."
- 5) Review your cart for accuracy, then enter your billing (it is very important that your billing information is exactly as it appears on the card) and shipping information. Once you're finished with these, click "Place Order."
- 6) You'll have another opportunity to confirm your selections. If everything is accurate, click "Submit Order to Richway."
- 7) After submitting your order, you'll be taken to a confirmation page. Be sure to write down the Order Number (RI Number) from the top of the page. It's important to have on hand for your records. Your Biomat is on its way! You'll receive an order confirmation by email, and UPS will contact you with your shipping information very soon.

To learn more about your Biomat, join <u>Biomat Family</u>- a large Facebook group of Biomat customers and practitioners who share experiences, protocols, answer questions, and crowdsource valuable information on health and wellness. Also, educators from our team will be reaching out to you directly so you have contacts additional to your Sponsor to will lend support on your Biomat journey.

Chapter 10: Best Practices, Safety, & Contraindications

Almost everyone can use the Biomat safely. The Biomat has been tested many, many times over the years, not only in the US but all over the world by Americans, Japanese, and Koreans, and also has FDA approvals and numerous ISO, KETI, and CE safety certifications. Richway has gone the extra mile to make this a safe product!

It is always recommended to consult with your physician before the use of the Biomat, and to hydrate very well before and after sessions.

Contraindications:

Only a handful of people should NOT use the mat. If you have one of these three conditions, use of the mat is not encouraged.

Organ Transplants — recipients who have had any type of organ transplant (Kidney, Heart, Liver, etc.) should not use the Biomat. After an organ transplant, patients will need to take immunosuppressant (anti-rejection) drugs to help prevent their immune system from attacking, or rejecting, the new organ. The use of the Biomat's Far Infrared Rays increases immune system function, which will tell your body to attack the new organ. *If more than two years out from transplant, consult your physician on the use of immune-supporting therapies.

External Pacemaker – we recommend anyone who uses an <u>external</u> pacemaker that they should not use the Biomat. Read below for Internal Pacemakers.

Renal or Kidney Failure — we recommend anyone who has Renal or Kidney failure that they should not use the Biomat. The use of the Biomat increases circulation of the blood, which may increase blood flow to the kidneys, causing extra workload for already taxed organs. However, there are many studies (as seen in the previous "Studies" chapter) on the benefits of FIR for patients undergoing hemodialysis. Speak with your doctor to learn more.

Use with Caution:

If you have any of the following conditions, use of the Biomat is permissible, but caution and limiting to specific temperature levels is recommended.

Heat Sensitive MS — we recommend anyone with Heat Sensitive MS to use the Biomat with no heat and negative ions only. Anyone with other types of MS can use the Biomat at any setting.

Radiation Therapy/Chemotherapy — we recommend that anyone who is currently receiving radiation treatments or chemotherapy use the Biomat with negative ions only. Consult your physician before using the Biomat with any heat settings (see Studies).

Brain Tumor – we recommend anyone with a brain tumor to use the Biomat on low heat only (95F-113F).

Bypass Surgery – we recommend anyone who has undergone bypass surgery to use the Biomat on low heat only (95F- 113F). The use of the Biomat increases circulation of the blood, which can cause normal blood vessels to expand. Some people who have gone through bypass surgery, experience discomfort since their blood vessels can't expand.

Internal Pacemaker – we recommend anyone who uses a pacemaker to use the Biomat on low heat only (95F-113F). The use of the Biomat increases circulation of the blood, which can cause an increase in heart beat. Some people who use a pacemaker, experience discomfort since their heart beat is being controlled.

Diabetics – we recommend anyone with Diabetes to use the Biomat on low heat only (95F-113F). Diabetics' skin is weak, which can cause "low heat burn" during use of the Biomat.

High Blood Pressure (Hypertension) – we recommend people with chronically high blood pressure (hypertension) to use the Biomat with caution before and after use, and on low heat only (95F-113F). Sudden changes in temperature can cause an increase in blood pressure.

Newborn Babies – we recommend parents with newborns to wait until their baby is at least 6 months old before using the Biomat on low heat only (95F-104F) or negative ions only.

Infants – we recommend that infants using the Biomat should use it on low heat only (95F-113F) and with adult supervision over the heat level. Please use with caution.

Pregnancy – we recommend pregnant women use the Biomat on low to medium heat (95F-131F).

Surgical Implants – recipients of Titanium, Metal, Ceramic, or Plastic implants can use the Biomat. Surgical implants generally reflect infrared rays and are not heated by an infrared heat system. Anyone who experiences pain in those areas should check with their physician.

Silicon -

Silicon implants may be warmed by infrared rays. Silicon is known to melt at over 200 degrees Celsius / 392 Fahrenheit, so it should not be adversely affected by infrared rays. It is advised that you consult your surgeon before use.

Patches –

Any external patches use on the body should be removed while on the Biomat, as it will increase the body's uptake from the patch. This includes nicotine patches.

Pain:

Pain should not be experienced when using the Biomat. However, the infrared heat will go to areas of disease or discomfort so some people may perceive this as pain and others as a sensation. If pain is persistent, discontinue use.

Worsened Condition:

If there are any worsened conditions when using the Biomat, discontinue use. Some temporary symptoms may occur, which can be attributed to the detoxification and healing process. For more information, please see the stages of improvement in Richway's Ions and Infrared Rays booklet.

More Good Information

- •If Incontinent, use the Waterproof Cover that can be bought from Richway to protect your mat.
- •Use only natural fibers on the Biomat: Cotton, wool, flax, silk, and bamboo. Synthetic fibers heat up very quickly and intensely, and block negative ions. The body absorbs toxins from synthetic fabrics, which diminish the benefits of your therapy sessions.
- •Hydrate well. Drink a glass of water before and after using the mat.
- •Always use the all-natural cotton pad that comes with mat. This enables the mat to heat evenly and maintain the temperature setting you selected.

Follow This Guide

•Anyone who wants to maintain optimum health, as they are already fit

- and healthy, can run the whole gamut of temperature levels with great success. For example, 131 degrees is a very comfortable setting, gets you in the theta and delta states very quickly, and is very relaxing. This is also good for pain relief. However, it's always a safe bet to introduce anyone to the mat slow and easy-such as with the Green heat settings. Slow and Easy wins the Race!
- •The Green settings are very mild temperatures, perfect for anyone to adjust to the mat and let their body attune to the frequencies in an enjoyable manner. These temperatures can be used extensively and be slept on as well. Once someone has experience with the mat on these lower settings for at least a couple of days and feels good, they can go ahead and slowly work their way up to progressively higher temperatures. The Greens are good for those with more serious health issues to stay long term.
- •Those with health issues such as diabetes, high blood pressure, allergies, asthma, or who are very toxic from smoking, drinking, medications, etc... should start slow at no higher than the second Green temperature for 20 to 30 minutes. It's especially important for them to drink water and monitor how they feel afterwards.
- •If desired, a therapeutic sweat can be an excellent weekly practice (or more often if necessary or desired). Here are some tips: Wear natural fibers. Do no more than half an hour to one hour on high. Wrap yourself in terry cloth wrap, sweats, cotton sheet, a mylar sheet, etc... anything to raise the body temperature. Protect the mat from sweat with the waterproof cover or layering with cotton towels. Monitor yourself and have plenty of water and natural mineral sources to replenish afterwards.
- •To make the mat softer, layer with cotton beach towels, wooly fleece, down comforter, or a folded Egyptian cotton blanket. The Quantum Energy Pads are designed for this as well, and will not hamper the energy from the mat from reaching you. With layers, the heat might need to be bumped up a notch; it won't feel as intense once it reaches you through the fabrics.
- •The main purpose of Biomat is to bring body back into biological balance. One way to do that is through detoxing. The Biomat helps the body to produce a sweat by encouraging and awakening the lymph glands so body fluids move. You might experience going to the bathroom more which is a sign your body is releasing toxins and another reason to hydrate well.
- •Some signs that you detoxing "too much, too soon, too quickly" are: headache, cramps, belly ache, diarrhea, vomiting, nausea, breaking out in sweats all of a sudden. This means too strong of a detox has been initiated at one time. Everyone is different and everyone detoxes differently. Turn down the temp or do less time. 99% of people say when they press on gently past the

uncomfortable detox symptoms, they come through with flying colors.

•Remember to drink water to hydrate yourself before and after every session on the mat. Maintain hydration at all times.

How to Maintain Your Mat

Gently vacuum with upholstery brush, or wipe with a damp cloth. Do not use water or dry clean- this can damage the electrical components of the mat.

Final Recommendations

- •For the best results, use the Biomat daily. Its effects are cumulative!
- •If you want to cleanse the mat for sanitation reasons, turn the temperature control to the highest red setting and let it "bake" for 30 minutes.
- •If you need support under your knees to keep your lower back comfortable, place a pillow under the mat. Your knees will remain in direct contact with the mat and will receive all of the mat's therapeutic benefits. Finally, Enjoy Your Biomat and Prosper!

This information is not intended to cure, diagnose or treat medical conditions, nor is it a substitute for the product User's Guide. Please consult with a Physician before beginning this or any other new healthcare program. Any information with regard to personal testimonies about RichWay International's products do not reflect or represent RichWay International's product claims. These statements have not been evaluated by the FDA.

"I am fortunate to have been blessed with good health, but have noticed many positive changes in my body using the Biomat despite my good fortune. The changes noticed have been, literally, from head to toe: the hair on my head has started growing! At first, I thought it was wishful thinking, but my parents commented about this on my annual visit to Omaha last year."

Chapter 11: Getting Started Guide

- **1)** Roll the Biomat out on a flat surface, with gem side facing up. Attach fitted cotton cover or the Quantum Energy Pad with elastic corner straps. If applicable, attach the Waterproof Cover.
- 2) Connect the tan cable from the control box into the mat. Push in firmly using two hands.
- 3) Plug the control box into a wall outlet, and make sure the power switch on the back is set to the "On" position.
- 4) If this mat has never been used, allow it to run on high heat for one hour before first use. Otherwise, preheat the Biomat for 15 to 20 minutes by setting the temperature to the top red, then lowering it to the desired temperature (i.e., third gold setting at 131°F for a 30 minute power nap) when you are ready to lie down. Set the timer to desired length.
- 5) Place a pillow under your head, and a cotton sheet over your body. If possible, keep ambient light low and play some relaxing, meditative music. Enjoy!
- 6) When you are ready, get up and drink a glass of water. Experiment with different temperatures and durations to find your ideal regimen in this season of life.

Temperatures & Time Settings



Professional Biomat Settings:

Power Only

No Temperature: Negative Ions Only

Blue Settings: Broad Spectrum Cool Vitality 95° - 104°

Safest for sensitive individuals and extended use. For overall general healthcare, immune stimulation, boosts energy, relieves headaches, indigestion and jet lag, provides regenerative sleep...

<u>Green Settings</u>: *Dynamic Subtle Warmth* 113° – 122°

Cycles of 2 Hours or More. Used for athletes, flexibility training, cardiovascular support, blood pressure, sugar regulation...

Orange Settings: Deeply Penetrating Warmth 131° – 140°

Up to 90 Minute Sessions. Used to relieve joint pain, reduce stress and trauma, relaxation, elevates mood...

<u>Red Settings</u>: *Deep Heat and Max. Therapeutics* $149^{\circ} - 158^{\circ}$ Power Sessions of No More Than 1/2 to 1 Hour. This range promotes detoxification, weight loss, improves skin tone, stimulates metabolism, improves

blood circulation, and sanitizes bedding.

Mini Biomat Settings:

Correspond to Above Temperature Settings 95° – 158°

Bio-belt Settings:

Correspond Similarly to Above Temperature Settings $95^{\circ} - 149^{\circ}$

"I've been using my Biomat for six months. I have them on all my Spa Massage tables at my business and I sleep on the pro at home. My 9 year old sleeps on the mini. I've had less pain and deeper sleep by sleeping on my mat. It's seriously the best thing ever especially when it's cold outside. I set it to high, lay on it for an hour, then turn it down and fall fast asleep."

-Jamie Rhone, Jamie's Therapeutic Touch Day Spa

Chapter 12: What to Expect: Daily Biomat Sessions

Detoxification and Healing Crisis

As the Amethyst Biomat helps the body to cleanse and detoxify, some users will experience one or more symptom of detoxification— sometimes referred to as a "healing crisis" or "detox reaction." These symptoms may include more frequent bowel movements and urination, slight nausea, mild headaches, various discharges, mucus, skin breakouts, or acne.

As the body receives a constant stream of light wave energy that it needs to strengthen itself, the body's vital force increases. This enables the body to liquefy accumulated waste and toxins that have been lodged in the tissues, cells and organs of the body for many years, and to eliminate them as phlegm, mucus, etc. It is important to go through this detoxification, because, although you may feel slightly uncomfortable during the process, afterwards you experience a new level of vitality.

The famous homoeopath, Constantine Hering, made a clear distinction between the symptoms of a healing crisis and those of a disease crisis. Unfortunately, we often confuse a healing process with a disease process, and suppress it with medication. This only makes the body weaker and more vulnerable to disease.

When you experience a healing crisis, assist the process by drinking lots of liquids, keeping warm, resting and exercising for circulation and lymphatic movement. This promotes the rapid elimination of any toxins and disease elements that are manifesting themselves as phlegm, catarrh, mucus, running nose, enlarged tonsils, fever, etc. This is nature's way of righting some internal wrong. It is also known as the "reversal process." Whatever has been suppressed in the body for years liquefies and is eliminated through the normal elimination channels.

Another good practice when experiencing detoxification is the use of "binders." These are fibers or compounds that "bind" to toxins as they are mobilized and eliminated by your body. They can limit the discomfort experienced during detoxification and speed the overall process. Some specific binders are Chia seeds, Flax seeds, Activated Charcoal, ICP (Intestinal Cleansing Power from Young Living Essential Oils), bentonite clay, and more. These are important wellness tools to have on hand for regular use and emergencies.

Initially, during a healing crisis, you may feel a lack of energy. This is almost always because your body is cleansing, restoring, etc. at deep cellular levels, and is using a lot of energy for this.

By continuing this cleansing program and drinking lots of liquids, you will assist your body to easily go through the healing crisis.

After the healing crisis, you should feel more energetic than ever! If the healing crisis persists for more than 2 weeks, consult with a Health Practitioner who is experienced in the processes of detoxification and healing crisis.

With regular use of the Amethyst Biomat, the body gets stronger and healthier, and its vital force increases. Remember, though, that the Amethyst Biomat may initiate still deeper healing crises over a period of time. Each time, more accumulated and stored toxins are eliminated, after which you can experience higher levels of vitality and well-being.

No Results

Sometimes you might be unaware of the "work" that is facilitating at deep cellular levels, where there is a priority in the body. Because you may not be consciously aware of what is happening, you may think that this is not working for you.

People, who at first reported "no results," later, after having undergone regular medical check-ups, reported that their cholesterol and blood pressure levels had dropped significantly. There are similar accounts regarding the normalization of blood-sugar levels, and the improving of the immune system, without the user being aware of the process.

Highlighting of Weaknesses

Because this works with priorities in the body, it often highlights some area of weakness of which you were previously unaware. As it starts its work of assisting the body in cleansing, balancing, restoring, etc., you may then become aware of this area of weakness.

Many people report having to gradually decrease medication dosages as the body cleanses, and becomes more balanced. If in doubt, always consult with a Health Practitioner who understands the processes of cleansing and detoxification. And never quit medications suddenly, which can cause serious

side effects- do it safely with the support and oversight of a doctor.

"Just some feedback on the Biomat. Firstly, the hip pain reduced greatly particularly when on the mat at night. I have it at four notches for 8 hours. The overall hip pain reduced from a seven on the Glasgow pain scale to say three. I hope it continues to improve. 2. Numb and stiff fingers particularly right hand reduced symptoms. Still stiff in morning but after less than a minute all working normally. 3. I have had a virus. Pain in the back. Severe actually hardly able to move on day one. Use of mat on high for 2 hours, for two days, in conjunction to my usual sleeping use, has seen my symptoms almost disappear. I am now in day four and almost recovered. I am sure if I had no Biomat, the pain would have been intolerable without painkillers. I also notched up my Vit C to 20g a day, which I seem to be able to tolerate 4x5g doses. Taking the selenium and bicarbonate and sulfur. Nascent iodine and colloidal silver."

-Mike

Chapter 13: FAQs & Warranty

Can anyone use a Biomat?

Yes, the Biomat is safe and effective for people of all ages, including children, the elderly, and even pets. The only precautions involve excess heat. For example, while pregnant, treat the mat as you would a warm bath with shorter sessions at lower temperatures. The same applies to anyone who is sensitive to heat. Please consult your physician before using the mat on infants, if you are pregnant, or if you have heat sensitivity.

Can I sleep on the Biomat?

Yes, the mat is safe to sleep on. It is recommended to sleep on the lower settings. Sleeping on the mat can help improve sleep problems and insomnia, especially when related to stress, tension, or pain.

Can I put it on my bed?

Yes, any of the Biomat sizes can be used in the bed. The Biomat is safe due to the heat reflecting layers on the back, but for an added precaution, it is recommended to put an additional layer of padding, such as a folded quilt, in between the Biomat and the mattress.

Can I add extra padding over the Biomat?

Yes. Since far-infrared rays penetrate deeply into the body, extra padding will not interfere with the functionality of the mat. You may want to try increasing the temperature setting if you have an inch or more of padding. Natural fibers, such as cotton, are best.

Do I need the amethyst pillow?

It depends. It is a good idea to use some type of pillow while using the mat to keep the head cooler than the rest of the body. The benefit of the amethyst pillow is that it is ergonomically designed to provide traction for the neck and increased comfort. Although the pillow is not electronic, it provides the benefits of amethyst and tourmaline crystal therapy. Many people do not find it comfortable for sleeping but do find it comfortable for shorter sessions. If using for professional treatments, your clients may like to have the option.

How often should I use the Biomat?

You can use the Biomat as often and as long as you like. It is recommended that you use the Biomat for a minimum of 20 minutes at each session, but you have

the option to use it for longer if you wish. Most people use the Biomat daily or for multiple sessions each day and see great benefits, however intermittent use for a specific reason, such as relieving back pain, can also be sufficient. Please refer to the settings guide for more detail.

How long before I see results?

Results should be seen very quickly for those using the mat for pain relief, stress level, and mood improvement. However, results may vary depending on frequency of use and the nature of the problem being addressed. Although many people see results in as little as a day, for others it may take several weeks to notice improvement.

How should I use the mat for treatment of an injury (or post-surgery)?

If there is swelling, it is better to use cold to reduce the swelling and prevent further injury, and to use the mat with negative ions only or the lowest Green setting. But once the swelling has gone down, heat will speed up the rate of tissue repair and FIR light is the best way to deliver heat straight to the injury site. For this purpose, it is best to use the mat for 20-30 minutes, multiple times a day.

Are there any negative side effects associated with infrared rays and negative ions?

Although all effects on the body are positive, some people experience slight fevers, headaches, and nausea when beginning to use the Biomat. This is not a direct reaction to the infrared rays or negative ions, rather it is the effects of detoxification as built up waste and toxins are being removed from your system. These effects are temporary and will vary depending on the level of toxins in the body and your personal level of sensitivity and responsiveness to this cleansing modality.

The Biomat is an electrical device - is it safe to lie on?

Whenever electricity moves through a wire, an electromagnetic field (EMF) is produced. There is some concern that frequent exposure to these EMFs may have adverse health effects. In particular, there is concern about alternating current, since it creates a rapidly alternating EMF. The Biomat is designed with these concerns in mind. It converts AC electricity to DC at the control box, and then incorporates further measures to lessen the strength of the EMF around the mat itself. It is possible to test your Biomat with a Tri-Meter, or other EMF measuring device. The fields should be nearly undetectable.

Warranty

Please find below the information from the manufacturer about their Three Year Warranty policy: If Richway & Fuji Bio determines that goods are defective within the period of the three year warranty, they will repair or replace the parts free of charge for the first year. Repair or replacement for the second and third year requires a fee.

Two months from the date of delivery, Richway will pick up the product, repair it, and send it back to the customer at no charge. From three months after the date of delivery, the customer is responsible for shipping the product to Richway. Richway International will cover the cost of shipping the product back to the customer.

Richway International has a trade-in program for up to 30% of your original purchase to apply towards another product. Visit richwayandfujibio,com to access the trade-in informational document.

Only the original buyer of the product can call to get the warranty service. For full information on the warranty and repair policy, and for instructions on enacting the policy, read here:

https://www.richwayandfujibio.com/welcome/index.php/product-warranty

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