



Far Infrared Saunas

For Whole-Body Regenerative Radiant Therapy

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Why Is The *Sauna Health Store* Sauna Unique?

It uses infrared radiant energy to directly penetrate the body's tissues to a depth of over 1 ½ ". Its energy output is tuned to correspond so closely to the body's own radiant energy that our bodies **absorb close to 93% of the infrared waves that reach our skin.**

A conventional sauna must rely only on indirect means of heat: First, on convection (air currents) and then conduction (direct contact of hot air with the skin) to produce its heating effect on us. In a *Sauna Health Store* sauna, less than 20% of the infrared energy heats the air, leaving over 80% available to be directly converted to heat within our bodies. Thus an IR based system can warm its user(s) to a much greater depth and much more efficiently than a conventional sauna, as its energy output is primarily used to convert energy directly to heat in us and not create excessively hot air that then only heats the skin superficially. This crucial difference explains many of the unprecedented benefits reported to be available through a *Sauna Health Store* sauna that are **not** attainable through the use of a conventional sauna.

The infrared energy applied in these thermal systems may induce up to 2-3 times the sweat volume of a hot-air sauna while **operating at a significantly cooler air temperature** range of **110° to 130°** vs. 180° to 235°F for hot-air saunas. The lower heat range is safer for those concerned about cardiovascular risk factors that might be adversely affected by the higher temperatures encountered in old-style hot-air saunas. Researchers report beneficial effects from hour long whole-body infrared exposure in two groups of hypertensive patients that they studied, including 24-hour long increase in peripheral blood flow and decreases in high blood pressure.

It is also distinctly more pleasant to breathe air that is from 50°-125°F while taking a sauna. Due to its "user-friendly" nature, **people naturally prefer to use the *Sauna Health Store* saunas and will continue to do so on a regular basis due to the ease of breathing much cooler air while feeling warm as they choose, and to a distinctive feeling of well-being reported by users as an after effect.** These *Sauna Health Store* saunas may even be used with the door fully open if the only effect desired is infrared penetration or if a very cool no-sweat experience is desired as in a pre-activating warm-up while fully clothed. This approach might be used in warming up prior to stretching, working out, running or exposure to cold weather.

These *Sauna Health Store* saunas are **easier as well as more comfortable to use** than old-fashioned hot-air saunas. Hot-air saunas require extensive warm-up periods of 30-60 minutes, making them much less practical than the modern *Sauna Health Store* sauna which **warm up in only 15-20 minutes from room temperature.** Consistent and convenient at-home use is thus, much more likely with a *Sauna Health Store* sauna. Significantly lower operating costs make the *Sauna Health Store* sauna more desirable than a regular sauna. A 20-minute session, including a 10-minute warm-up in the infrared sauna, **costs about 5 cents of electricity.** A comparable session with a full warm-up in a conventional sauna costs \$1.00 or more per session..

Daily usage of a *Sauna Health Store* sauna **will raise your electricity bill by about \$2 a month compared to at least \$30.00 a month in a conventional sauna, if each is used for 20 minutes after warm-up.** These infrared saunas bring you the **same infrared rays experienced in the traditional American Indian sweat lodge** and bring them to you in a much more convenient and easily used form, the privacy of your own home. The **cleansing and purifying benefits** attributed to the traditional sweat lodges are now available for **daily purification** without the time-consuming and extremely labor-intensive set-up process that a sweat lodge requires.

Safety of Infrared Radiant Energy

Is the Far Infrared Sauna Safe for me?

What exactly is radiant heat? No need to worry- it has nothing to do with either ultraviolet radiation (which gives you sunburn and damages your skin) or atomic radiation (the kind from a nuclear bomb).

Radiant heat is simply a form of energy that **heats objects directly** through a process called conversion, **without have to heat the air in between**. Radiant heat is also called infrared energy (IR). The infrared segment of the electromagnetic spectrum is divided into 3 segments by wave length, measured in microns or micrometers (a micron = 1/1,000,000 of a meter): 0.076-1.5 microns = near or close; 1.5-5.6 = intermediate; 5.6-1,000 = far or long wave infrared. The infrared segment of the electromagnetic spectrum occurs just below or “infra” to red light which we perceive as heat. **Our sun produces most of its energy output in the infrared segment of the spectrum**. Our atmosphere allows IR rays in the 7-14 micron range to safely reach the earth’s surface. When warmed, the earth radiates infrared rays in the 7-14 micron band with its peak output at 10 microns.

The **sun is the principal source of radiant energy** that we experience daily. Have you ever been outside on a partly cloudy spring day of about 50° and felt quite comfortable when suddenly the sun was obscured by a cloud? Although the air temperature had not had time to drop, you felt chilled, as the cloud would not let the warming infrared rays through to reach you. **The infrared heat in this sauna is just like the heat from our sun or that which our own bodies produce as they burn fuel to keep us warm.**

Recent books such as **Cross Currents**, by Robert O. Baker, M.D., have detailed the hazards of exposure to certain kinds of electromagnetic fields such as those encountered under high tension power lines or while working at computer display terminals. Researchers have reported that **infrared radiant heat antidotes the negative effects of such toxic electromagnetic sources**. *Sauna Health Store* saunas have been tested and found to be free of such so-called “toxic” electromagnetic fields.

Rank of Solar Waves or Energy

- Gamma, shortest rays, most destructive to life
- X-rays = Penetrate tissues, carcinogenic
- Ultraviolet = sunburn, corneal and lens damage
- Visual wavelength
- Infrared: contains at the lowest end of spectrum, far infrared = lowest = 1000-5.6 microns; the rays most vital to healing are 4-14 microns, also are the majority of sun energy or photons (safest and most beneficial) responsible for photosynthesis; lowers lactic acid, stimulates brain, kills organisms, penetrates tissues, stops swelling, improves lymphatic flow, attracts calcium to cell membranes; detoxifies by vibrating ionic bonds and reducing the size of water clusters; by creating a resonance dance between water and chemical molecules, it facilitates water in moving stored toxins out of the cell and into sweat.
- Short wave radio waves
- Broadcast radio wavelength

Benefits Reported

Outstanding Caloric Consumption and Weight Control Weight Loss:

Burns 600 to 1200 calories in just one 30 minute session!

In Guyton's **Textbook of Medical Physiology**, we find that producing one gram of sweat requires 0.586kcal. The JAMA citation referred to above goes on to state that: "A moderately conditioned person can easily sweat off 500 gm in a sauna, consuming nearly 300kcal – the equivalent of running 2-3 miles. A heat-conditioned person can easily sweat off 600-800 kcal with no adverse effects. While the weight of the water loss can be regained by dehydration with water, the calories consumed will not be." Since a *Sauna Health Store* sauna helps generate two to three times the sweat produced in a hot-air sauna, the implications for increased caloric consumption are quite impressive. Assuming "a sauna," as mentioned in JAMA, to last for 30 minutes, some interesting comparisons may be drawn.

A *Sauna Health Store* sauna can, thus, play a pivotal role in both **weight control and cardiovascular conditioning**. This would be easily valuable for those who don't exercise and those who **cannot exercise** yet want effective weight control and fitness maintenance program and the benefits that regular exercise can contribute to such a program.

Here's how many calories a 150 pound person normally burns up in 30 minutes of exercise:

<u>Activity</u>	<u>Calories burned:</u>
Marathon Running	590
Vigorous Racquet Ball	510
Rowing (peak effort)	600
Swimming (crawl stroke)	300
Jogging	300
Tennis (fast game)	265
Chopping Wood	265
Cycling (10 mph)	225
Golfing (without a cart)	150
Walking (3.5 mph)	150
Bowling	120

Passive Cardiovascular Conditioning Effect

The *Sauna Health Store* sauna makes it possible for people in wheelchairs, or those who are otherwise **unable** to exert themselves or who **won't** follow through on an exercising and conditioning program to **achieve a cardiovascular training effect**. This also allows for more variety in any ongoing training program.

“Many of us who run do so to place a demand on our cardiovascular system, not to build big leg muscles. Regular use of a sauna may impart a similar stress on the cardiovascular system and with regular use may be as effective as a means of **cardiovascular conditioning and burning of calories and regular exercise.**”
As reported in the Journal of American Medical Association, August 7, 1987.

Due to the **deep penetration** of the infrared rays generated by these *Sauna Health Store* saunas (**inches deep into the skin**), there is a heating effect deep in the muscular tissues and the internal organs. The body responds to this deep-heating effect via a hypothalamic-induced increase in both heart volume and rate. This beneficial heart stress leads to a sought-after cardiovascular training and conditioning effect. **Medical research confirms the use of a sauna** provides cardiovascular conditioning as the body works to cool itself and involves substantial **increases in heart rate, cardiac output and metabolic rate**. As a confirmation of the validity of this form of cardiovascular conditioning, extensive research by NASA in the early 1980's led to the conclusion that infrared stimulation of cardiovascular function would be the **ideal way to maintain cardiovascular conditioning in American astronauts during long space flights**. Blood flow during whole-body hypothermia is reported to rise from a normal 5-7 pints per minute to as much as 13 pints per minute.

“The 1980's was the decade of high-impact aerobics classes and high-mileage training. Yet there was something elitist about the way exercise was prescribed: only a strenuous workout would do, you had to raise your heart rate to between X and Y, the only way was to ‘go for the burn’. And such strictures insured that most ‘real’ exercisers were relatively young and in good shape to begin with. Many, many Americans got caught up in the fitness boom, but probably just as many fell by the wayside. As we've reported, recent research shows that you don't have to run marathons to become fit – **that burning just 1,000 calories a week...is enough**. Anything goes, as long as it burns the calories.” Reported in the **Wellness Letter**, October 1990, from the University of California Berkeley.

Beauty: Excellent for increasing blood circulation to the skin which is essential for **beautiful, youthful, glowing skin!** A new “*inner glow*” as the skin is free of accumulated dirt and dry skin cells, due to **deep cleansing of impurities!**

- Help **acne, eczema, psoriasis, burns** and any **skin lesions** or **cuts**.
- Open wounds heal quicker with **reduced scarring**.
- Removes roughness, leaving **skin baby smooth and soft** again.
- Firms and **improves skin tone and elasticity**.

Scars on Skin: Scars fully formed, even keloids may be gradually softened. Burns and other wounds or incisions may heal with significantly reduced scarring.

Cellulite: Cellulite is a gel-like substance made up of fat, water, and wastes which are trapped in pockets below the skin. A *Sauna Health Store* sauna can assist this condition, as profuse sweating helps clear this form of unwanted debris from the body.

Some weight loss authorities believe that our bodies use fat to dilute toxins. Saunas are an unsurpassed expeller of toxins; it is also a great way to get rid of any fat our bodies are using to dilute toxins we are storing.

European Beauty Specialists confirm: A sauna will greatly speed any anti-cellulite program!

Due to at least twice the depth of heat penetration into cellulite combined with up to 10 times the level of heating in these tissues a *Sauna Health Store* sauna can be significantly more effective than any conventional sauna.

Relieve Pain: Effective for **arthritis, back pain, muscle spasm, headache, etc.**

Injuries: Radiant heat helps with **sprains, strains, arthritis, muscle spasm and pain.** If you are an athlete, a *Sauna Health Store* sauna is all good news. It allows oxygen-debt to be repaid more quickly. That's likely to lead to **improved and quicker healing of sprains and muscle pain for you!**

Runners: The *Sauna Health Store* sauna is the perfect solution for keeping up your cardiovascular fitness while avoiding a run on a **difficult weather day**- days you may want to just skip a workout or when you **need a rest to allow an injury to heal.** Also, the *Sauna Health Store* saunas are great for warming up before stretching or starting any vigorous activity. You simply get in the sauna with your clothes on and allow the infrared rays to pour right through your clothing until you just begin to break a sweat. Now you are pre-warmed for stretching, skiing, running in cold conditions, etc. For the maximal stretching benefit from the system you will need a 40 minute sauna before your stretching. Research indicates that stretching after a 40 minute sauna session should produce a ½ % permanent increase in your flexibility. Even one 20 minute session may create temporary increase in your flexibility of up to 10%. As a warm-up, a *Sauna Health Store* sauna should help to prevent injuries and enhance your ability to stay with your training program or enjoy any outdoor activity. A *Sauna Health Store* sauna is also a great cold weather post-activity warm-up, especially for any frostbitten areas.

Relaxation & Enjoyment:

Remove stress in the comfortable warm temperature with **fresh air vents for easy breathing.**

Musculoskeletal Cases – success reported with infrared treatments by medical researchers:

- TMJ Arthritis
- Brain Contusion – *accelerated healing*
- Spinal Cord Shock – *post traumatic shock reversed*
- Shoulder Pain – *relieved or eliminated*
- Muscle Spasms – *reduced or eliminated*
- Compression Fracture – *Example: pain stopped for 3 days with only a single treatment*
- Post-exercise Muscle Pain – *vital to competitive athletes*
- Arthritis: Gouty, Rheumatoid, DJD – *each substantially relieved or improved*
- Adhesions – *lengthened or more easily broken; they are common in competitive athletes, trauma and repetitive stress syndromes*
- Traumatic Arthritis
- Disc-protrusion Related Neuralgia
- Tight Shoulders- *relaxed*
- Muscle Tension- *relaxed*
- Bursitis- *eliminated*
- Low Back Pain- *relieved*

“Medical practitioners make use of infrared saunas to treat sprains, bursitis, peripheral vascular diseases, arthritis, and muscle pain...”
according to the McGraw/Hill Encyclopedia of Science & Technology.

Dr. Rubin P. Lysiak M.D. of the O&P Medical Clinic has reported great success with the use of infrared treatment for:

- Whiplash
- Acne
- Ear Diseases
- Arthritis
- Gastro enteric Problems
- Menopause
- Shoulder Stiffness
- Rheumatism
- Sciatica
- Insomni

The Following is summarized from **Therapeutic Heat and Cold**, 4th Edition, ED. Justus F. Lehmann M.D., Williams and Wilkins, Chapter 9 or concluded from the data therein. Generally it is accepted that heat produces the following desirable therapeutic effects:

1) It increases the extensibility of collagen tissues.

- Tissues heated to 45°C and then stretched exhibit a non-elastic residual elongation of about 0.5-0.9% that persists after the stretch is removed which does not occur in these same tissues when stretched at normal tissue temperatures. Thus 20 stretching sessions can produce a 10-18% increase in length in tissues so heated and stretched.
- This effect would be especially valuable in working with ligaments, joint capsules, tendons, and fasciae that have become scarred, thickened or contracted.
- Such stretching at 45°C caused much less weakening in stretched tissues for a given elongation that a similar elongation produced at normal tissue temperatures.

- The experiments cited clearly showed that low-force stretching can produce significant residual elongation when heat is applied together with stretching or range-of-motion exercises, which is also safer than stretching tissues at normal tissue temperatures.
- This safer stretching effect is crucial in properly training competitive athletes so as to minimize their “down” time from injuries.

2) It decreases joint stiffness directly.

- There was a 20% decrease in stiffness at 45°C as compared with 33°C in rheumatoid finger joints, which correlated perfectly to both subjective and objective observation of stiffness.
- Any stiffened joint and thickened connective tissues should respond in a similar fashion.

3) It relieves muscle spasms.

- Muscle spasms have long been observed to be reduced through the use of heat, be they secondary to underlying skeletal, joint, or neuropathological conditions.
- This result is possibly produced by the combined effect of heat on both primary and secondary afferents from spindle cells and from its effects on Golgi tendon organs. The effects produced by each of these mechanisms demonstrated their peak effect within the therapeutic temperature range obtainable with radiant heat.

4) It produced pain relief.

- Pain may be relieved via the reduction of attendant or secondary muscle spasms.
- Pain is also at times related to ischemia due to tension or spasm which can be improved by the hyperemia that heat-induced vasodilatation produces, thus breaking the feedback loop, in which the ischemia leads to further spasm and then more pain.
- Heat has been shown to reduce pain sensation by direct action on both free-nerve endings in tissues and on peripheral nerves. In one dental study, repeated heat applications led finally to abolishment of the whole nerve responsible for pain arising from dental pulp.
- Heat may both lead to increased endorphin production and a shutting down of the so-called “spinal gate” of Mel Zach and Wall, each of which can reduce pain.

5) It increases blood flow.

- Heating of the area of the body produces reflex-modulated vasodilatations in distant-body areas, even in the absence of a change in core body temperature; i.e. heat one extremity and the contra lateral extremity also dilates; heat a forearm and both lower extremities dilate; heat the front of the trunk and the hand dilates.
- Heating of muscles produces an increased blood flow similar to that seen during exercise.
- Temperature elevation produces an increase in blood flow and dilation directly in capillaries and arterioles through direct action on their smooth muscles. The release of bradikinin, released as a consequence of sweat-gland activity, also produces increased blood flow and vasodilatation.
- Whole-body hypothermia, with a consequent core temperature elevation, further induces vasodilatation via a hypothalamic-induced decrease in sympathetic tone. Vasodilatation is also produced by axonal reflexes and by reflexes that change vasomotor balance.

6) It assists in resolution of inflammatory infiltrates, edema and exudates.

- The increased peripheral circulation provides the transport needed to help evacuate the edema which can help end inflammation, decrease pain and help speed healing.

Blood Circulation

All of the following ailments may be associated to some degree with poor circulation and, thus, may respond well to the increased peripheral dilation associated with infrared application:

- Arthritis
- Hemorrhoids
- Children's Overtired Muscles
- Bursitis
- Fatigue
- Upset Stomachs
- Ulcers – failing to heal using conventional approaches.
- Postoperative Edema – treatment with infrared has been so successful that hospital stays were reported to have been reduced by 25%.
- Peripheral Occlusive Disease – “The goal is to maintain an optimal blood flow rate to the affected part... In general the temperature should be maintained at the highest level which does not increase the circulatory discrepancy as shown by cyanosis and pain.” Therapeutic Heat and Cold pp.456-7.
- Sciatica
- Nervous Tension
- Varicose Veins
- Stretch Marks
- Backaches
- Diabetes
- Neuritis
- Strained Muscles
- Menstrual Cramps
- Rheumatism

Can Cure Mysterious Cases

Dr. Sherry A. Rogers reports in her book “Detoxify or Die” that people with the most severe forms of heart disease and resistant to all medications, tolerated infrared saunas with no side effects. Most importantly, it improved their heart health in a Mayo Clinic study within *3 short weeks*. Of course, it is recommended to continue longer, say a year or longer of daily or every other day saunas for an hour or less to more completely lower stored chemicals that cause disease.

She also reports that mysterious joint pain in war veterans exposed to Agent Orange also disappeared, as did a host of other pain syndromes. Schnare of the U.S. EPA (Environmental Protection Agency) also showed that not only did a sauna reduce body levels of HCB and PCBs in electrical workers, for example, but it did this even though the men were continually exposed at work.

General Rules for Use of a *Sauna Health Store* Sauna

Dr. Rogers also recommends the following simple rules for using an infrared sauna.

Start using the sauna at 100°F, in short 10-20 minute increments at first, building up a feel for your body's tolerance. Use less heat if you feel discomfort initially. The older and sicker who feel initial discomfort should proceed at a much slower pace and even lower temperatures. An infrared sauna wavelength penetrates 1 ½ inches into the body, generally enabling chemicals to come directly out of subcutaneous fat storage sites and into the sweat. This avoids a worsening of symptoms seen when high heat saunas pull chemicals out of safe storage, then directly into the bloodstream on their way to the sweat. For once the chemicals are in the bloodstream, you can duplicate some of your worst old symptoms.

If you are pregnant, have metal parts in your body, take important medications whose levels should not change (like insulin, seizure or heart medications), or are within 48 hours of an acute injury (still in the swelling phase), definitely check with your doctor first. In fact, any time you embark on a health program, his/her input should be included in your decision-making.

If you weigh less after a sauna, you did not drink enough water to compensate for the loss. A good rule of thumb is to weigh your towels before and after the sauna, drinking the difference in weight in spring water. That is, if your towels gained 3 pounds of water, drink 3 pounds of water.

If you are very apprehensive, start with 10 minutes daily at 100-110°F. Then slowly advance over the weeks to an hour. After you tolerate this, you may wish to slowly advance to 140°F. However, many people stay below 120 degrees Fahrenheit indefinitely. There is no requirement to go higher to achieve desirable effect. Some people will start out at 140°F and as soon as they sweat within 10-15 minutes, then they drop the temperature down to 100, 110 or 120, wherever they are comfortable. If at any time you feel uncomfortable, you can stop or just open the door and towel off, cool down for a few seconds and then close the door again.

***Contact us to sweat your way
to better health and well being!***

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