

WARNING

The Health Articles,
Research Materials,
& Lab Reports
contained in this
packet of information
are the result of testing with
true FAR Infrared Saunas
with solid, ceramic heaters such as
the unique and patented
TheraSauna®.

This information & results
cannot be applied to or
achieved with
carbon “infrared” saunas.

PORTABLE INFRARED THERMAL SYSTEM

The Whole-Body Radiant Thermal System — A Breakthrough in Regenerative Radiant Therapy provided by a unique type of Portable Infrared Thermal System

SAFETY OF INFRARED RADIANT ENERGY

Is the Infrared Thermal System safe for me?

What exactly is radiant heat? No need to worry — it has nothing to do with either ultraviolet radiation (which gives you a 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 having 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 wavelength, measured in microns or micrometers (a micron = $1/1,000,000$ of a meter); $0.076 \sim 1.5$ microns = near or close; $1.5 \sim 5.6$ = middle or intermediate; $5.6 \sim 1,000$ = far or long wave infrared. The infrared segment of the electromagnetic spectrum occurs just below or "infra" to red light as the next lowest energy band of light. This band of light is not visible to human eyes but can be seen by special cameras that translate infrared into colors visible to our eyes. We can, however, feel this type of light that we perceive as heat. **Our sun produces most of its energy output in the infrared segment of the spectrum.** Our atmosphere has a "window" in it that allows IR rays in the $7 \sim 14$ micron range to safely reach the earth's surface. When warmed, the earth radiates infrared rays in the $7 \sim 14$ micron band with its peak output at 10 microns.

According to Dr. Tsu-Tsair Oliver Chi in his summation on the mechanism of actions of infrared devices tuned to the human body, **these rays are selectively absorbed by the tissues needing a boost in their output.** The internal production of infrared energy that normally occurs within our tissues is associated with a variety of healing responses and may require a boost to a maximal level to insure the fullest healing response possible in a tissue under repair. harmlessly. This phenomenon is called "resonant absorption."

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 the sun was suddenly 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 Infrared Thermal System is just like the heat from our sun or that which our own bodies produce as they burn fuel to keep us warm.**

Our bodies radiate infrared energy out through the skin at $3 \sim 50$ microns, with most of their output at 9.4 microns. Our palms emit infrared energy at between $8 \sim 14$ microns. Palm healing, which has a 3,000 year- old tradition in China, has been based on the healing properties of these natural infrared rays. The Yogis of India also use such palm healing and recommend it especially for relieving eye strain. Sauna use has been popularized by the Finns whose old religion used it as a ceremony for mental, spiritual and physical cleansing. This religion came with the Finns when they migrated from an area northwest of present day Tibet, between 5,000 \sim 3,000 year BC, to their present location in Finland.

Dr. Tadashi Ishikawa received the patent on the zirconia ceramic infrared heaters used in these thermal systems in 1965, after five years with Fuji Medical R & D department. The Infrared Thermal Systems based on these heaters were used exclusively by medical practitioners in Japan until they were released for public use in 1979. The idea has now been further refined into the Infrared Thermal System that has been sold in the United States since 1981. Panels that produce similar infrared rays are used in hospitals to warm newborn babies.

The heaters in Infrared Thermal System emit about one-third of their output in the middle infrared band, from $2 \sim 5.6$ microns, for super-deep penetration and the other two-thirds in the long band, from $5.6 \sim 25$ microns with that part of the output evenly spread around the 9.4 micron pivot point of peak human output. This distribution maximizes the higher penetration of the middle-band waves and combines then with the long waves that produce a resonant absorption amplification of healthy tissue output. The Chinese researchers consider the band from $2 \sim 25$ microns as the most therapeutic.

Recent books such as *Cross Currents*, by Robert O. Becker, 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. Japanese researchers have reported that infrared radiant heat serves as an antidote to the negative effects of such toxic electromagnetic sources. Infrared Thermal System has been tested and found to be free of such so-called "toxic" electromagnetic fields. The Swedish National Institute of Radiation Protection has concluded that the heaters in Infrared Thermal System are not dangerous.

ONLY ONE OF ITS KIND AVAILABLE

Why is this Infrared Thermal System unique?

It uses infrared radiant energy to directly penetrate the body's tissues to a depth of over 1.5". Its energy output is tuned to correspond very closely to the body's own radiant energy that our bodies absorb as much as 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 healing effect on us. In an Infrared Thermal System, 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 infrared 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 to create excessively hot air which only heats the skin superficially. This crucial difference explains many of the unprecedented benefits reported to be available through an Infrared Thermal System not attainable through the use of a conventional sauna.

The infrared energy applied in the Infrared Thermal System may induce up to 2 ~ 3 times the sweat volume of a traditional hot-air sauna while operating at a significantly cooler air temperature range of 110° to 130°F 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. German researchers report beneficial effects from an hour-long whole-body infrared exposure in two groups of hypertension patient that they studied in 1989, including a 24 hour-long increase in peripheral blood flow and a decrease in high blood pressure.

It is also distinctly more pleasant to breathe in Infrared Saunas with air temperatures about 50° to 125°F cooler than in traditional hot-air saunas. Due to its user-friendly nature, people naturally prefer to use the Infrared Sauna Systems and will continue to do so on a regular basis because of the ease of breathing the much cooler air while feeling as warm as they choose, and the distinctive feeling of well-being reported by users as an after-effect. These Infrared Sauna Systems may even be used with the door fully open if the only effect desired is infrared penetration, or if a very cool, minimal-sweating experience is desired as a pre-activity warm-up while fully clothed. This approach might be used in warming up prior to stretching, working out, running, or exposure to cold weather.

Infrared Saunas are easier and more comfortable to use than old-fashioned hot-air saunas. The conventional hot-air saunas require extensive warm-up periods of 30 ~ 90 minutes, making them much less practical than the modern Infrared Saunas that warm up in about 5 minutes at a room temperature. Consistent and convenient at-home use is thus, again, much more likely with an Infrared Sauna System. Significantly lower operating costs make the Infrared Sauna System more desirable than a regular sauna. A 20 minute session, including a 5 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 about \$.75 ~ \$1.00. Daily usage of the Infrared Sauna System will raise your electrical bill by only \$1.50 a month compared to \$22.50 to \$30.00 a month in a conventional sauna, if each is used for 20 minutes after warm-up.

Infrared Sauna Systems bring you the same infrared rays experienced in the traditional American Indian sweat lodge in a much more convenient and practical form, and in 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 processes that a sweat lodge requires.

HEALTH BENEFITS ATTRIBUTED TO INFRARED RAYS

Over the last 25 years, Japanese and Chinese researchers and clinicians have done extensive research on infrared treatments and reported many provocative findings. In Japan there is an "Infrared Society," composed of medical doctors and physical therapists, to further research and support the health benefits of infrared as a healing method. There have been over 700,000 infrared thermal systems sold in the Orient for whole-body treatments, and an additional 30 million people have received localized infrared treatment in the Orient, Europe and Australia with lamps tuned to the same 2 ~ 25 micron waveband as employed in these whole-body thermal systems. Whole-body infrared therapy has been used for over 80 years by German physicians in an independently developed form.

Passive Cardiovascular Conditioning Effect

The Infrared Thermal System 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 impact a similar stress on the cardiovascular system, and its regular use may be as effective, as a means of cardiovascular conditioning and burning of calories, as regular exercise." – *Journal of the American Medical Association* 8/7/81.

Due to the deep penetration, over 1.5" into the skin, of the infrared rays generated by the Infrared Thermal System, there is a heating effect deep in the muscular tissues and the internal organs. The body responds to this deep-heating effect via an hypothalamic-induced increase in both heart volume and rate. This beneficial heart stress leads to a sought-after cardiovascular training and conditioning effect. Medical researches confirm that 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 quarts per minute to as much as 13 quarts 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 strenuous workouts would do, you had to raise your heart rate to between X and Y, and the only way to go was to go for the burn. Such strictures insured that most 'real' exercisers were relatively young and in good shape to begin with. 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 these calories." – *Wellness Letter*, 10/90, University of California, Berkeley.

Outstanding Caloric Consumption and Weight Control

In *Guyton's Textbook of Medical Physiology*, we find that producing one gram of sweat requires 0.568 kcal. The *Journal of American Medical Association (JAMA)* states; "A moderately conditioned person can easily sweat off 500 grams in a sauna, consuming nearly 300 kcal, which is equivalent to 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 drinking water, the calories consumed will not be." Since an Infrared Thermal System helps generate two or 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 might be drawn. Two of the highest calorie-consuming forms of exercises are rowing and marathon running. Peak output on a rowing machine or during a marathon run burns about 600 calories in 30 minutes. An Infrared Thermal System may enhance this effect from "just slightly" up to as much as 250%, by burning about 900 ~ 2,400 calories in a 30 minute session. The Infrared Thermal System might then simulate the consumption of energy equal to that expended in a 6 ~ 9 mile run during only a single session. An Infrared Thermal System can, thus, play a pivotal role in both weight control and cardiovascular conditioning. This would be very valuable for those who don't exercise and those who can't exercise yet want an effective weight control and fitness maintenance program and the benefits of a regular exercise.

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

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

"Medical practitioners make use of Infrared Radiant Heat to treat sprains, strains, bursitis, peripheral vascular diseases, arthritis and muscle pain..." – McGraw/Hill Encyclopedia of Science and Technology

Dr. Masao Nakamura of the **O & P Medical Clinic** in Japan has reported great success with the use of infrared treatment for:

- Whiplash
- Sciatica
- Menopause
- Arthritis
- Shoulder Stiffness
- Rheumatism
- Acne
- Gastroenteric Problem
- Ear Diseases
- Insomnia

Rheumatoid Arthritis

A case study was reported in Sweden of a 70 year old man with Rheumatoid Arthritis secondary to acute rheumatic fever. He had reached his toxic limit on Gold injections and his Erythrocyte Sedimentation Rate was still at 125. Within 5 months of undergoing an infrared treatment, his ESR was down to only 11. In the case of rheumatic arthritis of a 14-year old Swedish girl who couldn't walk comfortably downstairs due to knee pain since she had been eight years old, her rheumatologist told her mother that her child would be in a wheelchair within 2 years if she refused gold corticosteroid therapy. However, after 3 infrared sauna treatments, she began to become more agile and subsequently took up folk dancing, without the aid of the conventional approach in her recovery.

A clinical trial in Japan reported the successful solution in seven out of seven cases of Rheumatoid Arthritis treated with whole-body infrared therapy.

These case studies and clinical trials indicate that further study is warranted on the usage of whole-body infrared therapy in the care of patients with Rheumatoid Arthritis.

The following is a summary 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. It does not occur in these same tissues when stretched at normal tissue temperatures. Thus 20 stretching sessions can produce around 10 ~ 18% increase in length in tissues heated and stretched.
- This effect would be especially valuable in working with ligaments, joint capsules, tendons, fasciae, and synovium that have become scarred, thickened or contracted.
- Such stretching at 45°C caused much less weakening in stretched tissues for a given elongation than a similar elongation produced at normal tissue temperatures.
- The cited experiments clearly show that low-impact stretching can produce a 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 neuro-pathological conditions.
- This result is possibly produced by the combined effect of heat on both primary and secondary afferent 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 produces 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. This then breaks 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 eventually led to abolishment of the whole nerve response responsible for pain arising from dental pulp.
- Heat may lead to both increased endorphin production and a shutting down of the so-called "spinal gate" of Melzack and Wall, each of which can reduce pain.

5. It increases blood flow.

- Heating of one area of the body produces reflex-modulated vasodilatation in distant-body areas, even in the absence of a change in core body temperature; i.e. heat one extremity and the contralateral 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 level similar to that seen during an exercise.

- Temperature elevation produces an increase in blood flow and dilation directly in capillaries, arterioles, and venules, probably through direct action on their smooth muscles. The release of bradykinin, released as a consequence of sweat-gland activity, also produces increased blood flow and vasodilatation.
 - Whole-body hyperthermia, with a consequent core temperature elevation, further induces vasodilatation via a hypothalamic-induced decrease in sympathetic tone on the arteriovenous anastomoses. 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 transportation needed to help evacuate the edema, which can help stop inflammation, decrease pain and help speed healing.
7. More recently, it has been used in cancer therapy.
- This is a new and experimental procedure.
 - It shows a great promise in some cases when used properly.
 - American researchers favor careful monitoring of the tumor temperature; whereas, the successes reported in Japan make no mention of such precaution.

Infrared healing is now becoming the leading edge in the care of soft tissue injuries to promote both relief in chronic or intractable "permanent" cases, and accelerated healing in newer injuries.

Localized infrared therapy using lamps tuned to the 2 ~ 25 micron waveband is used for the treatment and relief of pain by over 40 reputable Chinese Medical Institutes.

Researchers reported over 90% success in a summary of Chinese studies that assessed the effect of infrared therapy on:

- | | |
|---------------------------------|-----------------------------------|
| ▪ Soft tissue injury | ▪ Diarrhea |
| ▪ Lumbar strain | ▪ Cholecystitis |
| ▪ Periarthritis of the shoulder | ▪ Neurasthenia |
| ▪ Sciatica | ▪ Pelvic infection |
| ▪ Pain during Menstruation | ▪ Pediatric Pneumonia |
| ▪ Neurodermatitis | ▪ Tinea |
| ▪ Eczema with infection | ▪ Frostbite with inflammation |
| ▪ Post-surgical infections | ▪ Facial paralysis (Bell's Palsy) |

Japanese researchers, as reported in the book **Infrared Therapy** by Dr. Yamajaki, have produced the following provocative results.

- Burns: relieves pain and decreases healing time, with less scarring
- High Blood Pressure: safe in 40 ~ 50°C range and regular use helps to lower it
- Low Blood Pressure: sauna trains body to raise it
- Brain Damage: accelerated repair in brain contusions
- Short-term memory improved
- Cancer of the tongue reversed
- Toxic Electromagnetic Fields: effects neutralized
- Cerebral Hemorrhages: recovery is both sped up and significantly enhanced
- Auto Accident: related soft tissue injury – daily sessions were used until best healing was attained; the Infrared systems were used to deal with permanent residuals. The pain control effect on the chronic residuals from such injuries lasted three days before another treatment was necessary.
- Arthritis, acute and chronic: was greatly relieved
- Gouty Arthritis: relieved
- Rheumatoid Arthritis: relieved

- Menopause Symptoms: relieved chills, nervousness, depression, dizziness, head & stomach aches
- Weight Loss: first, through sweating and the energy use needed to produce the sweat and second, through direct excretion of fat

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
- Sciatica
- Backaches
- Hemorrhoids
- Nervous Tension
- Diabetes
- Children's Over-tired Muscles
- Varicose Veins
- Neuritis
- Bursitis
- Rheumatism
- Strained Muscles
- Fatigue
- Stretch Marks
- Menstrual Cramps
- Upset Stomachs
- Leg and Decubitus Ulcers: failed to heal using conventional approaches
- Post-Operative 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 ~ 457**

Coronary Artery Disease, Arteriosclerosis and Hypertension

Finnish researchers, talking about the regular use of conventional saunas state that there are abundant evidences to suggest that blood vessels of regular sauna-goers remain elastic and pliable longer due to the regular dilation and contraction of blood vessels induced by sauna use.

German medical researchers reported in "Dermatol Monatsschr" in 1989 that a single whole-body session of infrared-induced hyperthermia lasting over one hour had only beneficial effects on subjects with stage I-II essential hypertension. Each subject experienced a rise in core body temperature to a maximum level of 38.5°C (101.3°F). All of the subjects in one experiment had significant decrease in arterial, venous and mean blood pressure that lasted for at least 24 hours and was linked, according to the researchers, to a persistent peripheral dilation effect.

An improvement in plasma viscosity was also noted. Another group of similar hypertension patients was also studied under the same conditions of infrared-induced hyperthermia, with an eye toward more carefully evaluating the circulatory system effects induced by this type of whole-body heating. During each infrared session, there was a significant decrease of blood pressure, cardiac ejection resistance, and total peripheral resistance in every subject.

There was also a significant increase during each session of the subjects' heart rates, stroke volumes, cardiac outputs and ejection fractions. The researchers cite these last three effects as evidences that the stimulation of the heart during infrared-induced hyperthermia is well compensated, while the prior list of effects clearly show the microcirculatory changes that lead to the desired result of a lowering of blood pressure.

Problems often accompanying aging that are reported to have been alleviated or reduced by Infrared Therapy in Japan:

- Menopause
- Cold hands and feet: A physical therapist found 20~50% improvement was maintained
- High Blood Pressure: Example - Case of a diabetic with a systolic decrease from 180 to 125 and a concurrent 10 lbs. weight loss after infrared use
- Rheumatoid Arthritis: 7 out of 7 cases successfully resolved in one clinical trial
- Radiation Sickness: relieves signs and symptoms
- Cancer Pain: relieved pain in later stages of cancer extremely well
- Sequelae of Strokes: Example - Hemiparesis relieved over time
- Benign Prostatic Hypertrophy: reduced
- Duodenal Ulcers: eliminated
- Pain: which prevented sleep or limited useable sleeping positions were relieved
- Compression Fracture Pain: Example - pain gone for 3 days after each treatment in steoporotic compression fractures
- Hemorrhoids: reduced
- Cystitis: gone
- Cirrhosis of Liver: reversed
- Gastritis: relieved
- Hepatitis: gone
- Asthma & Bronchitis: cleared up (like moving to Arizona's dry air)
- Chron's Disease: gone
- Post Surgical Adhesions: reduced
- Leg ulcers: healed when previously static and resistant to other care
- Keloids: significantly softened and, in some cases, completely gone

Ear, Nose and Throat conditions relieved with Infrared treatments in Japan:

- Chronic middle-ear inflammation or infection: in one clinical study of chronic serousotitis media no pathogenic bacteria were isolated in 70% of the subjects studied
- Sore throats
- Tinnitus: chronic severe case cleared with 10 Infrared treatments
- Nose bleeding

Skin conditions benefited by Infrared treatments in Japan and China:

- Nettle rash
- Clogged pores are unplugged of cosmetics creating a skin texture and tone of unexcelled quality. Mikkel Aaland's book Sweat (Capra Press, 1978) quotes a Finnish doctor to the effect that: "The best dressed foreigner can come into a doctor's office, and when his skin is examined, it is found to be rough as bark. On the other hand, as a result of the sauna, the skin of any Finnish worker is supple and healthy"
- Poor skin tone is restored to a more youthful level.
- Scars and pain from burns or wounds are decreased in severity and extent. Infrared therapy is used routinely in burn units throughout-Asia.
- Lacerations heal quicker and with less pain and scarring.
- Acne: Three or four infrared treatments may open pores that have not been functioning in years, forcing out clogging cosmetics and loosening dead outer skin. The sauna is thus a boon to teenage skin, clearing acne and blackheads.
- Body odor: by improving the function of the skin, the infrared treatments may eliminate the cause of offensive body odor. It definitely reduces body odor induced by occupational exposure to odorous chemicals.
- Eczema and Psoriasis: reported to have responded extremely well to infrared treatments
- Sunburn: according to the 9th edition of Clayton's Electrotherapy, "infrared is the only antidote to excessive ultraviolet radiation."
- Keloids forms at a reduced rate in those prone to their formation with infrared treatments and may be softened by use of infrared systems if they have formed.

CONTRA-INDICATIONS

- As you can see, the segment of the infrared spectrum emitted by the Infrared Thermal System is reputed to offer an astounding range of possible therapeutic benefits and effects in research conducted around the world. The data presented is offered for reference purposes only and to stimulate further observation. **Infrared Thermal Systems creating a cure for or treating any disease is neither implied nor should be inferred.**
- If you have a disease, be certain to consult with a primary-care physician concerning it.
- If you are using any prescription drugs, check with your physician or pharmacist for any possible change in the drug's effect due to any interaction with infrared energy.
- It is considered inadvisable to raise the core temperature in someone with **adrenal suppression and systemic lupus erythematosus or multiple sclerosis**, by some authorities.
- If you have a recent (acute) joint injury, it should not be heated for the first 48 hours after an injury or until the hot and swollen symptoms subside. If you have a joint or joints that are chronically hot and swollen, these joints may respond poorly to vigorous heating of any kind. Vigorous heating is strictly contra-indicated in cases of enclosed infections be they dental, in joints or in any other tissues.
- If you are pregnant or suspect you may be, discontinue your sauna use. Finnish women use their saunas, which don't throw heat as deeply into the body, for only 6~12 minutes and reportedly leave at that time, due to perceived discomfort. Their usage at this low level of intensity is not linked to birth defects. Infrared Thermal System usage may be 2~3 times more intense, and comparatively shorter 2~6 minute sessions hardly seem worth any minimal risk they may present.
- Metal pins, rods, artificial joints or any other surgical implants generally reflect infrared rays and thus are not heated by this system, nevertheless you should consult your surgeon prior to using Infrared Thermal System. Certainly, the usage of Infrared Thermal System must be discontinued if you experience pain near any such implants. Silicone does absorb infrared energy. Implanted silicone or silicone prostheses for nose or ear replacement may be warmed by the infrared rays. Since silicone melts at over 200°C (392°F), it should not be adversely affected by the usage of Infrared Thermal System. It is still advised that you check with your surgeon and possibly a representative from the product manufacture to be certain.
- Heating of the low back area of women during the menstrual period may temporarily increase their menstrual flow. Once a woman is aware that this may occur, she can choose to allow herself to possible experience this short term effect without worry or to simply avoid Infrared Thermal System usage at that time of her cycle.
- Hemophiliacs and anyone predisposed to hemorrhage should avoid Infrared Thermal System usage or any type of heating that would induce vasodilatation, which can potentate the tendency to bleed.
- Obviously, should any condition worsen with use of an Infrared treatment, the use of the system should be discontinued.
- People do not experience pain using Infrared Thermal Systems unless such is contraindicated. If you do, the use of radiant heat is clearly inappropriate for you at that time.
- **DO NOT attempt to self-treat any disease with this Infrared Thermal System without direct supervision of a certified physician.**

REPORTED BENEFITS OF INFRARED RAYS

❖ *Weight Loss*

Burns up to 900 & more calories in just one 30-minute session.

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

<u>Sport</u>	<u>Calories</u>
Rowing (peak effort)	600
Swimming (crawl stroke)	300
Jogging	300
Tennis (fast game)	265
Chopping Wood	265
Cycling (10mph)	225
Golfing (without a cart)	150
Walking (3.5mph)	150
Bowling	120
Vigorous Racquet Ball	510
Marathon Running	593

Some weight loss authorities believe that our bodies use fat to dilute toxins. As an Infrared Thermal System is 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.

❖ *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.
- Improves the conditions of acne, eczema, psoriasis, burns and any skin lesions and 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. An Infrared Thermal System can assist this condition, as profuse sweating helps clear this form of unwanted debris from the body.
- European beauty specialists confirm that 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, an Infra Therapist System can be significantly more effective than any conventional sauna.

❖ *Relieve Pain*

- Effective for arthritis, back pain, muscle spasms, headache, etc.

❖ *Injuries*

- Radiant heat helps with sprains, strains, arthritis, muscle spasm and pain.
- If you are an athlete, an Infrared Thermal System is all good news. It allows oxygen debt to be repaid more quickly. This is likely to lead to improved and quicker healing of sprains and muscle pain for you.

❖ *Relaxation & Enjoyment*

- Removes stress in the comfortable warm temperature.