

**ALTERNATIVE HEALTH & REHAB. CENTRE, PLLC**  
**Alternative, Complimentary and Preventive Health Care Services**  
A Treatment Centre with a Holistic Personal Approach.

Open: 8am-8pm Monday-Friday, 9am-6pm Saturday, by appt.  
2284 S. Ballenger Hwy, Suite F, Flint, MI. 48503.  
Ph: (810) 235-5181.

**So what is an Infrared Heat Sauna, and what is it good for? (Summary)**

The Infrared Sauna is like Arizona dry sun heat. The heat helps stress and tension melt away while you relax, improve your health and enhanced radiant appearance to your skin. Traditional saunas, stream baths, hot tubs and exercise are widely known means of increasing circulation, reducing fat, increasing metabolism, detoxifying, increasing healing and sweating. Steam and hot water saunas can operate at over 170 degrees and are difficult to tolerate for more than a few minutes. Infrared saunas remain at 110 - 120 degrees, which allow you to spend longer periods of time in the heat, while relaxing, detoxifying your body, reducing stress and releasing fat without over heating.

Infrared heat is a simple form of energy that is directly transmitted onto objects. This type of heat warms the entire body up to 1.5 inches deep and heat like the sun does. With the infrared sauna, skin impurities are released out of the body using lower and more comfortable temperatures. Infrared saunas are proven effective at the temperature range of 105 -125 degrees. Physicians recommend 20-30 minute sessions.

**Benefits of Infrared Saunas:**

- 1) Help remove toxins and mineral waste from the body by increasing blood circulation and opening up the sweat glands,
- 2) Burn calories and help weight loss by expending energy to produce sweat. Calories burned are equal to jogging for the same time. Fat becomes more fluid like, thus easier to be used and released.
- 3) Relieve pain by increasing peripheral blood vessels dilation, bring increased blood and oxygen to the muscles and soft tissue for healing and repair.
- 4) Ease arthritis and joint stiffness by relaxing the muscles and increasing joint mobility. In Europe, infrared heat is used to treat sprains, neuralgia, bursitis, muscle spasms and many other muscular-skeletal ailments.
- 5) Reduce cellulite by penetrating up to 3x's the depth as traditional saunas and softening lumps of fat, water, waste products and debris trapped in pockets beneath the skin and increasing circulation, thus allowing the body a better ability in eliminating the fat.
- 6) Improves skin tone and flexibility by relaxing the muscles and caring off impurities via the sweating. Which helps clear the skin, increases the blood flow, elasticity, texture and color.
- 7) Strengthen cardiovascular by relaxing blood vessels, increasing blood flow without increasing blood pressure, thus helping to increase oxygen availability to all cells.
- 8) Strengthen immune system by stimulating production of white blood cells.

\* Here at the Centre, we can enhance all of the above benefits by pumping in concentrated oxygen, from the oxygen bar. Thus assisting the bodies metabolism, healing and repair systems in responding quicker.

Normal sessions are 30 minutes in length: \$5.00, \* add 25 minute of Oxygen Bar => \$10.00.

The sauna has curtains, light for reading, music (radio/CD player), fresh towels and a fountain.  
You will feel quite energized after the session.

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### **What is the Infrared Heat sauna? (Details)**

Infrared heat is a form of energy that heats objects directly through conversion without heating the air between. The Sun produces most of its energy in the Infrared Spectrum of light. This band of light is not visible to the human eye. We can, however, feel this type of light, which we perceive as heat. Our atmosphere has a window that allows infrared rays in the 7 to 14 micron range to reach Earth's surface. The Sun is the principal source of infrared heat. "Remember how warm you feel from the Sun on a cold winter day while sitting in your car."

Our bodies produce infrared energy to keep us warm and for tissue repair. Infrared heat energy is radiated through the skin at 3 to 50 microns, with most out put at 9.4 microns.

### **Benefits of Infrared heat on the Human Body**

The human body absorbs infrared heat in the 3 to 50 micron range, The Infrared waves between 7 to 14 microns have proven to have special regenerative effects on the body, with an optimum absorption at the 9.4 micron frequency. Our sauna's emits the greatest amount of Infrared in the 9.4 micron range. When any cell or tissue in the body is exposed to these levels of Infrared Heat, response mechanisms stimulate the healing process in the body.

Infrared Heat waves do the following:

Dilate blood vessels and capillaries providing increased flow of rich oxygenated blood to muscles and joints, Reduce muscle spasms and promote healing of injured and sore muscles fibers, Improves flow of Lymph System to reduce swelling and inflammation, Stimulates cellular and enzyme activity, Promotes the adhesion and osmosis of water molecules across the cellular membrane.

Medical uses of infrared heat technology.

Doctors in Europe and Japan have conducted extensive research on the therapeutic uses of infrared. Infrared treatments have shown Medical Benefits in a variety of illnesses. *Infrared heat waves speed removal of toxins from the body*, which are often a major contributor to various health problems. Numerous toxins are absorbed and stored in our bodies. Toxic gases like Sulphur Dioxide, Carbon Dioxide, and substances like Lead, Mercury, Chlorine are encapsulated by large water molecules. When toxins are present in the body, blood circulation is blocked and cellular energy is impaired. The bodies immune system is inhibited, which makes it difficult for the body to fight disease.

However, when 10 microns of Infrared heat is applied the large water molecules vibrate and breakdown the ion bond to release the encapsulated gases and toxic materials. "Infrared heat has been used in the treatment of clogged capillary vessels, this heat expands the capillaries and skin pores to expel toxins from the body. The infrared therapy stimulates the cellular metabolism and breaks up the water molecules that hold toxins within the body, thus allowing the body to void these toxins through perspiration. These treatments have vastly improved, restored and rejuvenated many of my patients."  
**Dr. Ron Colbert M.D.** Longwood, Florida

### Health Improvements From Infrared Heat Therapy

- **Musculoskeletal Improvements:** TMJ, Arthritis, Traumatic Arthritis, Bursitis, Rheumatoid Arthritis, Low Back Pain, Disc-Protrusion Related Neuralgia, Gout, Shoulder Pain, Compression Fractures, Muscle Spasms, Adhesion, Soft Tissue Injury, Whiplash and Fibromyalgia.
- **Nerve Pain Improvements:** Sciatica, Migraine Headaches, Pain During Menstruation, Neurodermatitis, Facial Paralysis and Neurasthenia.
- **Skin Improvements:** Eczema, Psoriasis, Seboria, Acne and Boils.
- **Illness & Aging Improvements:** Menopause, Duodenal Ulcers, Insomnia, Hemorrhoids, Cystitis, Cirrhosis of the Liver, Gastritis, Hepatitis, Asthma, Bronchitis, Chron's Disease, Keloids, Allergies, Constipation and Insomnia.

### Safety of Infrared Radiant Energy

What exactly is infrared radiant heat? 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).

Infrared 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 ~ 1.5 microns = near or close; 1.5 ~ 5.6 = middle or intermediate; 5.6 ~ 1,000 = far or long wave infrared. The infrared segment of the electromagnetic spectrum occurs just below 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 ~ 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. 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 degrees 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 an 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 ~ 50 microns, with most of their output at 9.4 microns. Our palms emit infrared energy at between 8 ~ 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.

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### Sauna cont.

This religion came with the Finns when they migrated from an area northwest of present day Tibet, between 5,000 ~ 3,000 year BC, to their present location in Finland.

Dr. Tadashi Ishikawa received the patent on the zirconia ceramic infrared heaters in 1965, after five years with Fuji Medical R & D department. The Infrared Thermal heat 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 heat System that has been sold in the United States since 1981, 36 years.

The heaters in the sauna's Infrared Thermal System, emit about one-third of their output in the middle infrared band, from 2 ~ 5.6 microns, for super-deep penetration and the other two-thirds in the long band, from 5.6 ~ 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 ~ 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.

#### ***Why is Infrared 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.

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 that then only heats the skin superficially. This crucial difference explains many of the unprecedented benefits reported.

The infrared energy applied in our Infrared Thermal Heat 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.

It is also distinctly more pleasant to breathe in Infrared Saunas with air temperatures about 115-120. 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.

Modern Infrared Saunas warm up in about 5-10 minutes. Significantly lower operating costs make the Infrared Sauna System more desirable than a regular sauna.

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.

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 IN REPORTED FROM AROUND THE WORLD**

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 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 another 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 by burning about 900 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, Low 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, Spinal Cord Shock - post traumatic shock reversed, Muscle Tension - relaxed, Post-exercise Muscle Pain - vital to competitive athletes, Arthritis: Gouty, Rheumatoid, DJD, Shoulder Pain and Bursitis.

*"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, and 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 (120F) 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 and an increase in range of motion at 45°C (120F) as compared with 33°C (80F) in rheumatoid finger joints, which correlated perfectly to both subjective and objective observation of stiffness.

## **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 increase in tensile elasticity and blood supply. 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 venuies, 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 an hypothalamic-induced decrease in sympathetic tone on the arteriovenous anastomoses.

Vasodilatation is also produced by axonal reflexes and by reflexes that change vasomotor balance.

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Sauna cont.

### **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.

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 heat therapy over specific areas is showing increased healing rate and pain relief in 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, Lumbar strain, Periarthritis of the shoulder, Sciatica, Pain during Menstruation, Neurodermatitis, Eczema with infection, Post-surgical infections, Diarrhea, Cholecystitis,

Neurasthenia, Pelvic infection, Pediatric Pneumonia, Tineas, Frostbite with inflammation and 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,
- Blood Pressure: helps normalize
- Brain Damage: accelerated repair in brain contusions
- Short-term memory improved
- Toxic Electromagnetic Fields: effects neutralized
- Cerebral Hemorrhages: recovery is both sped up and significantly enhanced
- Auto Accident: related soft tissue injury repaired 25% quicker
- Arthritis, acute and chronic: was greatly relieved
- Menopause Symptoms: relieved chills, nervousness, depression, dizziness, head & stomach aches
- Weight Loss: first, through sweating and direct excretion of fat

**Blood Circulation** - All of the following ailments may be associated to some degree with poor circulation and, may respond well to the increased peripheral dilation associated with Infrared application:

Arthritis, Sciatica, Backaches, Hemorrhoids, Nervous Tension, Diabetes, 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% and 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

## ALTERNATIVE HEALTH & REHAB. CENTRE, PLLC

### Sauna cont.

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 have been reported to have been alleviated or reduced by Infrared Heat Therapy in Japan:** Menopause, Cold hands and feet, High Blood Pressure, Rheumatoid Arthritis, Radiation Sickness, Cancer Pain, Sequelae of Strokes, Benign Prostatic Hypertrophy, Duodenal Ulcers, Compression Fracture Pain, Cirrhosis of Liver, Gastritis, Hepatitis, Asthma & Bronchitis, Chron's Disease, Post Surgical Adhesions, Leg ulcers and Keloids,

**Ear, Nose and Throat conditions relieved with Infrared heat treatments:** Chronic middle-ear inflammation or infection, Sore throats and Tinnitus.

**Skin conditions benefited by Infrared heat treatments:** Nettle rash, Clogged pores, Poor skin tone, Scars and pain from burns or wounds, Lacerations, Acne, Body odor, Eczema and Psoriasis, Sunburn and Keloids.

### CONTRA-INDICATIONS

**As you can see, the segment of the infrared spectrum emitted by the Infrared Saunas are reputed to offer an astounding range of therapeutic benefits and effects. There are some conditions that are counter indicated.**

- 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, by some authorities, inadvisable to raise the core temperature in someone with adrenal suppression and systemic lupus erythematosus or multiple sclerosis, .
- If you have a recent (acute) joint injury, it should not be heated for the first 72 hours after an injury or until the hot and swollen symptoms subside. If you have a joint that is 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.
- If you are pregnant or suspect you may be, do not use the sauna.
- 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 the Sauna. The usage of Infrared Heat must be discontinued if you experience pain near any such Implants. Silicone does mildly absorb infrared energy. Implanted silicone or silicone prostheses for nose or ear replacement will only be mildly warmed by the infrared heat.
- Heating of the low back area of women during the menstrual period may temporarily increase their menstrual flow by increasing blood flow. The use of the sauna is an individual choice.
- Hemophiliacs and anyone predisposed to hemorrhage should avoid Infrared Thermal heat 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 heat treatment, the use of the saunas should be discontinued.

## ALTERNATIVE HEALTH & REHAB. CENTRE, PLLC

Sauna cont.

### **REPORTED BENEFITS OF INFRARED RAYS**

#### **1. Weight Loss**

**Burns up to 600 & more calories in just one 20-minute session. Here are how many calories a 150-pound person normally burns up in 20 minutes of exercise:**

#### **SPORT : CALORIES**

- |                                  |                                 |                         |
|----------------------------------|---------------------------------|-------------------------|
| o Rowing (peak effort) : 400     | o Swimming (crawl stroke) : 200 | o Jogging : 200         |
| o Tennis (fast game) : 185       | o Chopping Wood : 185           | o Cycling (10mph) : 150 |
| o Golfing (without a cart) : 100 | o Walking (3.5mph) : 100        | o Bowling : 80          |
| o Vigorous Racquet Ball : 340    | o Marathon Running : 390        |                         |

Some authorities believe that our bodies use fat to protect us from toxins. As an Infrared Sauna is an unsurpassed expeller of toxins and activator of fat, lots of water should be drank.

#### **2. Beauty:**

Excellent for increasing blood circulation to the skin, which is essential for beautiful, youthful, glowing skin, Skin pores are opened to help free accumulated dirt, dry skin cells and 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.

#### **3.Scars on Skin**

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

#### **4. Cellulite:**

Cellulite is a gel-like substance made up of fat, water and wastes, which are trapped in pockets below the skin. Our Infrared Heat System can assist the reduction of this condition, as profuse sweating helps clear this form of unwanted fat 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 Infrared heat System can be significantly more effective than any conventional sauna.

#### **5. Relieve Pain**

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

#### **6. 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.

#### **7. Relaxation & Enjoyment**

Stress reducing, Calming of the nerves, Meditation, Assist in inner peace.