

# Sauna Rooms VS Infrared Cabins

There is much confusion today among consumers who are shopping for Saunas. In the US, many products are called Saunas — steam baths, heat lamps, exercise suits, heated domes, etc. have all been called Saunas. However, much of the confusion has been created by infrared products which originated in the Orient. The companies who market them capitalize on the well-advertised name and popularity of Sauna and sell the products here in America as Saunas. The infrared products

make many claims, including many medical claims and cure-alls, which sound great for the customer, but which are very misleading, can not be substantiated, and might even be harmful for the user. The infrared manufacturers have used the real Sauna research and benefits to their own advantage; yet they promote their products as superior to Saunas, with much negative and false information. You might want to contact the American Medical Association concerning some of the infrared claims.

## Sauna

### What is a Sauna?

Sauna (which is the only Finnish word to be found in the English dictionary) is a type of bath in which steam is provided by pouring water over hot stones (according to Webster's Dictionary). Of course, a Sauna can also be used dry, if one chooses not to use water. The Sauna room is built from softwood, it is insulated and one electric Sauna heater filled with stones provides heat. Humidity is regulated by the amount of water, which is poured by dipperfulls over the hot stones. The temperature ranges from 165° F to 194° F, when measured with a Sauna thermometer placed on the wall 6" down from the ceiling directly over the Sauna heater (after at least 30 min. of heat-up time). The Sauna temperature varies from about 80° F at floor level to 200° F at ceiling level, as heat naturally rises. The humidity level can range from 12% in a completely dry Sauna room to 30-40% when water is used.

## Infrared

### What is Infrared?

Infrared heat is described by one of the manufacturers (in their literature) as "a form of energy that heats objects without heating the air in between." This is a misleading statement, as the same brochure states that the room temperature measures 110° F to 130° F after about 20 to 30 minutes heat-up time (so the air is definitely heated). As there are no stones, there is no means of using water to obtain humidity, so the humidity level is very low. The infrared room is made out of wood, the room is not insulated, and the heating method is a series of open metal boxes with 120v. cal rod elements, built into the wall in various places.

# COMPARISON OF SAUNA TO INFRARED HEAT ROOM

Finlandia Sauna Room — 63" x 87" x 83" (Inside Dimensions) Western Red Cedar Room  
vs. Health Mate Infrared Room 34" x 45" x 66" (Inside Dimensions)

## RADIATION AND THE ELECTROMAGNETIC FIELD.

Electric elements produce radiation which can be dangerous to your health. Eg. A normal TV screen measures under 13%. Newer computers measure 0%.

**Finlandia Sauna** — A large supply of rocks filters any radiation produced from the electric elements. A tester measured 0% radiation at the metal heater casing when the heater had been on for 30 minutes.

**Health Mate** — Radiation level was tested at the metal safety grille which surrounds the cal rod heating element. The radiation level measured 33.4%. The bather's body would be affected by this high radiation level, as the body is about 1-1/4" away from the element when the bather reclines against the wooden grille. Surface temp. of the actual cal rod heating element measured 590° F to 625° F.

(Note! Radiation readings were measured with a Sperry EMF 200A electromagnetic field radiation tester.) Infrared has been compared to the heat of the sun. As we know that direct sun rays can be dangerous to a person's skin, what might the effect of Infrared be on a bather's skin?

## HUMIDITY-HOW IMPORTANT IS IT?

When humidity is added to the dry, hot air, the atmosphere becomes more comfortable, it is easier to breathe, and it is a valuable aid to the perspiration process in flushing toxins out of the pores.

**Sauna** — Humidity range is from 12% in a dry, heated room to 35% when 2 to 3 dippers full of water are poured over the heated stones. The humidity in the Sauna can be adjusted to the bather's liking by the amount of water that is poured over the stones.

**Infrared** — Humidity is low as the room is totally dry. There are no heated stones, there is no facility for water, so the benefits of humidity are lost. As humidity is a major requirement of a Sauna, the infrared cannot be called a Sauna.

## COST OF HEATING

is controlled by many factors — size of room, height of ceiling, insulation of room, location of room, etc.

**Sauna** — An average residential Sauna requires about a 30 min. heat-up time. A 6' x 6' x 7' room (4 person size) requires a 220v 6 k.w. electric heater. If the cost per kwh is 10¢, the heating cost per hr. is about 60¢. As the

heater cycles off and on, cost would actually be less.

The Sauna rocks store heat, which makes the operation even more economical. If the Sauna is used every day for an hour, and the EverReady Sauna heater (by Finlandia-Harvia) is used, the cost per hr. at the rate of 10¢ per kwh is only 2.5¢ per hr.

**Infrared** — Cabin size of 34" x 45" x 66" (1 to 2 person size) with a power source of 120v, has a total output of 1.6 k.w. If the cost per kwh is 10¢, the total heating cost per hr. is 16¢. There is no heat storage, no insulation, and the elements are on all the time.

## WIRING

**Sauna** — Operates on 240v 1ph to 208v 3ph power with a dedicated service from its own breaker (very small rooms use 120v 1ph). Heat-up time is about 30 minutes to 175° F.

**Infrared** — Operates on 120v heating unit which is plugged into wall outlet. Heat-up time is about 30 min. to maximum temperature of about 131° F. If the average infrared room uses about 1600w of service, it draws 13.3 amps which should have #12 wire and 20 amp breaker — a dedicated service. Check with the National Electric Code, as your service must be 20% higher than the actual draw of your product. Many new homes are wired with only #14 wire and 15 amp service. If an Infrared is plugged into a wall outlet, it should be the only electric appliance using that service.

## COMFORT LEVEL

**Sauna vs. Infrared** You can enter the Sauna in comfort through a door high enough to walk through rather than bowing your head to enter through the 59-1/2" Health Mate door. A normal 7' ceiling gives full standing room compared to the 5-1/2' infrared ceiling. Two levels of benches in the Sauna let you choose your heat level. You may recline or sit on the upper bench for greatest heat advantage, or you may sit on the lower bench at a cooler temperature. You are pampered with air heated to your own comfort level, and with humidity adjusted to your own comfort level. Infrared offers only semi-hot, dry air. In the Sauna your body is far away from the electric heater, while in the Infrared, your body is 1-1/2" away from hot elements. You can use the Sauna for aroma therapy but that is not a possibility with the Infrared.

# COMPARISON OF SAUNA TO INFRARED HEAT ROOM

Finlandia Sauna Room — 63" x 87" x 83" (Inside Dimensions) Western Red Cedar Room  
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	Finlandia Sauna Room	Health Mate Infrared Room
<b>FRAMING</b>	2" x 2" Douglas fir	1" x 2" Pine
<b>INSULATION AND FOIL VAPOR BARRIER</b>	3-1/2" Fiberglass insulation and foil vapor barrier	No insulation, no foil
<b>PANELING</b>	1" x 4" (3/4" thick) Western Red Cedar wall and ceiling boards on interior; 1/2" x 4" Western Red Cedar boards on exterior	1/4" x 4" Western Red Cedar interior and exterior, proform pattern
<b>ASSEMBLY SYSTEM</b>	Unique locking system sealed within walls for easy assembly and strong construction; Sections are 2' wide and 7' high — easy to handle	Trunk latch system at corners; each wall is one section — awkward and heavy to handle
<b>BENCHES</b>	2" X 2" VG Western Red Cedar bench tops with 7/16" spacing and 2" x 4" Western Red Cedar facing — 2 bench levels	1/2" x 4" Western Red Cedar bench top with no spacing; 2" x 2" fir framing — 1 low bench only
<b>DOOR</b>	24" x 80" solid fir 2" x 5" rails, 16" x 60" tempered, insulated glass; prehung with three 4" x 4" butt hinges, ball catch, two wooden handles	23" x 59-1/2" light weight, hollow core with 1" x 2" framing, 1/4" x 4" paneling interior and exterior; cabinet hinges, 2 wooden door knobs; 13-1/2" x 21-1/2" plexiglas sliding window
<b>FLOOR</b>	Bacteria, mold, mildew resistant Superdek flooring — interlocking squares to cover walking area of concrete or tile floor (or) Eurodeck sanitary matting	Solid cedar floor in one piece — 1/4" x 4" material — not sanitary
<b>VENTS</b>	4" X 10" metal or wooden vent — register and grille — for upper location; lower vent cut into base (for free air flow)	Metal ceiling vent 4" x 8" — upper vent; 1" round hole cut into plexiglas window — lower vent
<b>LIGHT</b>	Wall-mounted, vapor proof light	Wall-mounted, not vapor proof
<b>HEAT SOURCE</b>	One wall-mounted electric Sauna heater with 240v elements (8 kw), 50# stones	Five 120v electric cal rod units built into wall (1.6 kw), no rocks
<b>ROCKS</b>	50# peridotite stones from Finland — to fill Sauna heater cavity; can be used wet or dry	No stones; dry heat only
<b>HEATER GUARD</b>	Wooden fence around heater made of 2" x 4" cedar	Wood grille over cal rod units
<b>ACCESSORIES</b>	Water bucket and liner, dipper, thermometer included with room	No accessories included except radio with tape deck
<b>TEMPERATURE</b>	Average room temp. after preheating for 30 min. 165°-180° F when thermometer is placed on wall over Sauna heater 6" down from ceiling.	Average room temp is 120° F after preheating for 20 min. when Sauna thermometer is placed above a row of elements 6" down from the ceiling
<b>PREHEATING TIME</b>	Room temp. 72° F when Sauna was cold. After 30 min. heat-up time, room temp. was 175° F when measured by a Sauna thermometer. After 40 minutes room temp. was 194° F.	Room temp. 72° F when room was cold. After 10 min. heat-up time, room temp. was 88° F, after 20 min. 119° F, after 30 min. 142° F, after 40 min. 142° F
<b>HEAT LOSS</b>	Exterior wall of Sauna measured only 72° F, same as room temp. when inside room temp. was 175° F	Exterior wall of room measured 105° F when inside room temp was 142° F (wallboard temp. was 112° F). Heat loss is great because there is no insulation within walls and ceiling to retain heat in room (and wallboard is thin)

(Note! Temperatures were measured with an accurate Fluke 51 II thermometer.)

# What Infrared Says About Saunas

Health Mate's (infrared) literature states, "*Traditional Saunas rely on a stove to heat the air to as hot as 220° F.*"

**Actual Facts** — an average Sauna temp can be 160° F to 190° F. In fact, UL testing limits the upper limit to 194° F. 220° would be very hot, and too hot and uncomfortable for most people.

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Infrared — "*The energy they require can as much as double your electricity bill.*"

**Actual Facts** — The 220v Sauna heater has double the speed in heating compared to the slow 110v infrared. During 1 hr. of heating, the infrared 1600w heating units stayed on the entire time, whereas the Sauna heater's thermostat cycled the heater off (after about 30 min. heat-up time) and on again to maintain the temperature. Refer to Cost of Heating.

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Infrared — "*This superheated air (in the Sauna) must remain tightly enclosed, resulting in a stifling, suffocating environment.*"

**Actual Facts**—there are always two 4" x 10" vents in a Sauna (one upper and one lower) and there are 0 to 2 vents in an infrared room. The vents can be opened or closed.

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Infrared — "*Radiant heat is more efficient because it warms you, not the air.*"

**Actual Facts** — Any direct heat source heats your body directly such as the heating element of the infrared or even a heat lamp, but they are spot heaters as they heat only part of your body (the part closest to the heating element. The air in the room is also heated, but only to a low temp of about 130° F (not hot enough for maximum perspiration). The Sauna air is heated and is hotter, the entire body is heated, so the entire body benefits from over-all perspiration. The air is pure, there is no radiation, and it is safe.

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Infrared — "*It's radiant heat reaches deep — while producing 2 to 3 times more sweat than other saunas.*"

**Actual Facts** — A 65 year old man with body weight of 200# sat in the Health Mate infrared room for 30 min. when room was 120° F. He lost 12 oz. of body weight (water) while perspiring only from the neck and back when leaning against the wooden grille 1-1/2" away from 600° F elements. The next morning his neck and back felt like a mild case of sunburn. The same man lay down on the upper bench in a Finlandia Sauna for 30 min. when room temp. was 175° F. He lost 16 oz. of body weight (water) while perspiring over the entire body.

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*Please note! Dr. Aaron Flickstein, one of infrared's experts states that the Finnish race migrated from an area northwest of modern day Tibet. He would have us believe that the Sauna (which originated in Finland) is somehow related to Tibet and therefore to the infrared product which comes from the Orient. This could not be farther from the truth, and is news to the 5.1 million Finns in Finland.*

**IF STILL IN DOUBT, SIT IN AN INFRARED ROOM FOR 30 MINUTES AND LEAN AGAINST THE WOOD GRILLE IN FRONT OF THE ELEMENTS. THEN, SIT IN A SAUNA FOR 30 MINUTES. TRY BOTH THE UPPER AND LOWER BENCHES, POUR A LITTLE WATER OVER THE HOT STONES AND EXPERIENCE TRUE FINNISH LÖYLY!\***

\*Löyly is the steam created from pouring water over hot Sauna stones.