

STEAM BATH AND SAUNA

Background

The history of the steam bath can be traced far back into the mists of time. Popular with the ancient Greeks, the steam bath was subsequently adopted by the Romans as the "Sudatorium" which almost invariably formed part of the Roman baths of the period throughout the entire sphere of influence of the Roman Empire. In Turkey, the steam bath, or "Hamam" has survived the thousands of years, and with it our continued use of the term "Turkish bath". The practice spread to northern Russia too, where it was known as the "Banja". While steam baths were also built in Europe, their expansion was probably limited in the first instance by technical problems and because of the high investment costs involved. Today, new developments in steam generating technology have made it possible to install steam baths almost anywhere at reasonable cost.

Definition:

A room that can be filled with steam in which people bath (Fig. 4). World-wide spread of hot bathing originated in the country of Finland. Most of the early research into the physiological effects of hot bathing came from Finnish laboratories which claimed tremendous physical and mental benefits from regular sauna use.

These benefits include relaxation of tense muscles and stiff joints and mental relief from stress and anxiety. The potential hazards of prolonged and repeated hot bathing has led researchers from American and European laboratories

to more fully investigate the physiology involved during sauna, and steam bath.

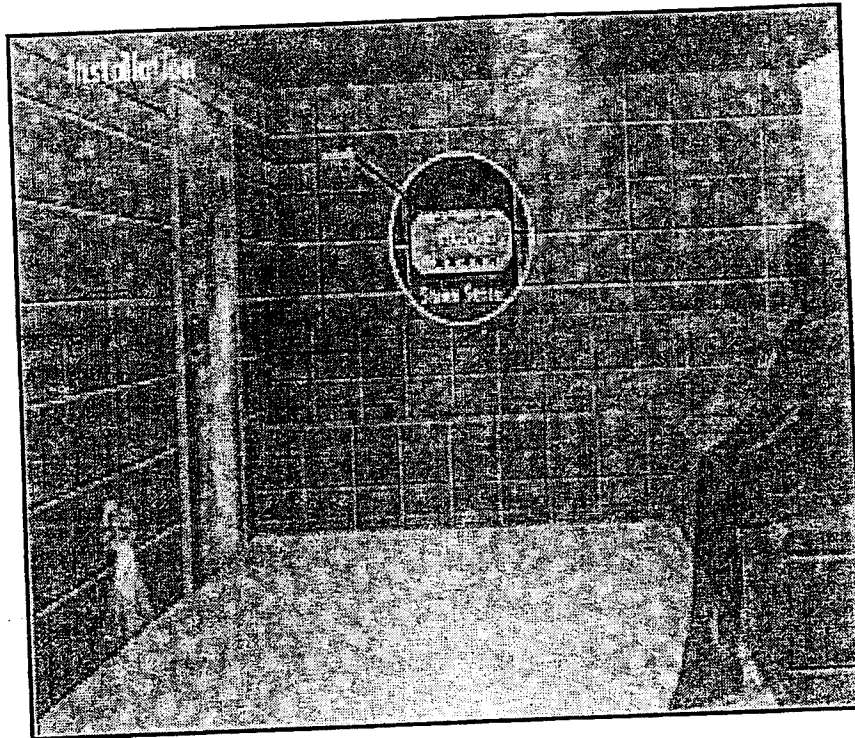


Fig. (4): Steam Room.

Steam baths are similar to saunas but employ air warmed by moist (high humidity) heat. The temperature is held at 110°F to 130°F while relative humidity is maintained at about 95%. Steam rooms feature a wet heat and misty environment, differing greatly from the dry, intense heat of a sauna. Otherwise they're the same, and produce identical physiological responses. The effects of a sauna are more quickly felt, however, because it's hotter. Steam rooms offer the user a less intense experience, and are generally preferred by women. Many people prefer

eam baths over saunas because the high humidity is easier to breathe and has beneficial effects on the respiratory system. Steam bathing has been an integral part of the treatment modalities of natural health systems for a millennia.

Synonyms:

Steam room, Turkish bath, Vapor bath, Vapor bath, Vapor bath.

Physiologic Effects

The body tries to increase its heat loss through all possible avenues-especially the skin and lungs. If the environmental temperature exceeds that of the body, the only way to lose heat is through sweating. The body cannot maintain a constant temperature when the environmental temperature is as high as that reached in a steam bath or sauna, and so the body temperature begins to rise. As the cutaneous circulation increases, heat is accepted more readily by the body from the environment. A reduced skin circulation would reduce the rise of body temperature, but this is not possible. The rise in body temperature depends mainly on (a) the *temperature* and *humidity* content of the steam bath, (b) the *sweating* capability of the bather, and (c) the bathing *time*. Body temperatures have been found to range from 37.6°C (99.6°F) to 40°C (104°F). Thus, the physiologic changes that occur during the bath are due in part to the rise in body temperature and in part to the influence of the reflexes of the hormonal and nervous systems, which attempt to increase the heat loss.

Steam Bath Benefits

As time becomes a premium, more and more people are using their showering space as a personal recreation for 10 minutes instead of a 30-minute bath. During those 10 minutes they want a custom spa-like experience and are demanding higher levels of functionality and design in the bath and shower. This accounts for the growing trend toward showers that feature steam baths.

Step into a steam bath at the local health and fitness center and almost immediately the warmth penetrates the body. It eases tired and aching muscles and can be used in the rehabilitation of certain sports injuries. It can even reduce the stiffness and pain associated with a sedentary lifestyle. Steam bathing also helps relieve stress by relaxing the mind.

It has other health benefits, too. Steam stimulates the immune system by causing the body to produce more white blood cells, which helps the body to fight against common colds and other diseases. Steam also stimulates lymph systems by increasing blood circulation throughout the body. This helps with weight loss while it tones and improves the function of all the body's organs.

Just as important, the warmth opens the pores of the skin, creating a flow of perspiration, which lifts out the impurities of everyday living. The result is a deep cleansing that leaves the skin soft, supple and healthy looking younger inside out. No wonder that steam baths are one of the

oldest healing remedies in the world. They've been used for centuries to promote health and vitality.

Indications of Steam Bath

A steam bath is health giving as well as enjoyable. As a supportive activity, a steam bath is especially recommended to alleviate the conditions listed below by virtue of its high steam content and the general benefits of moist heat. The list was confirmed by the research carried out at the Institute of Medical Balneology and Climatology at the University of Munich: Bronchial asthma, bronchitis, catarrh of the upper respiratory tract, coughs, hoarseness, expectoration (particularly with the assistance of essential oils), non-acute rheumatic complaints and restricted or painful movements of the joints.

In addition, again as a supportive measure the steam bath is beneficial for persons suffering from: Sleeping disorders, particularly through over excitability, poor skin circulation, dry, chapped skin, muscular tension, muscular weakness in the subcutaneous blood vessels, and sensitivity to sudden changes of temperature.

A great advantage of the steam bath lies in its highly beneficial effect on the skin, a feature particularly appreciated by women. The moist heat stimulates the subcutaneous blood flow and cleanses the skin intensively, opening the pores, removing dead skin and impurities and leaving the skin feeling soft, clean and silky smooth.

The best time physiologically to take a steam bath, is in the morning. That's when our bodies are most acidic, after a night metabolizing.

The typical person will expel a liter of water every 15 minutes in a steam room, so consume a lot of fluid beforehand. Since children and the elderly may be adversely affected by extremes in temperature, they should avoid steam rooms.

The skin is the largest organ, and according to some estimates is responsible for eliminating up to 30 percent of body wastes. Chemical analyses of sweat have revealed that it contains almost the same elements as urine.

Contraindications of Steam Bath

Steam therapy is a powerful treatment, so practitioners should keep a number of *cautions* in mind. As most people know, perspiration is the body's means of regulating internal body temperature. It is the evaporation of sweat from under the skin that cools the blood in the outer layers of the dermis, enabling the body to circulate this cooled down blood to the inner organs. The amount of evaporation is dependent upon the air flow over the body; the more the air flow, the greater the cooling effect. If evaporation is blocked, the body will not be able to cool itself quickly enough, and complications, including heatstroke, may result. Therefore, to enhance the body's ability to regulate its internal temperature during a steam bath, make sure that as much of the skin surface as possible is exposed.

Many people find 15 minutes the ideal length of exposure time, but the client's comfort level should be paramount in determining length of treatment. Some people will have had enough after 10 minutes; some might want to go as long as 20. Because of the moist air in a steam bath, sweat does not evaporate as quickly. Some steam units include a steam circulation system to help the evaporation process and thereby facilitate longer exposure time.

Hydro therapists emphasize that the patient should rest for at least 10 minutes after treatment to get best results. Most recommend letting the body return slowly to normal temperature (rather than plunging into an ice-cold bath), as in this way the healing and rejuvenating effects from the raised body temperature will be prolonged.

Steam treatment should not be given right after a person has eaten, as the increased need for circulation at the bodies periphery pulls the blood flow away from the digestive area. The person should drink one to two cups of water before or after the treatment, as the body can lose substantial amounts of liquid during just 15 minutes of perspiration. Don't wait for thirst to kick in, as he generally does not experience thirst until the body water stores have been substantially lowered.

Sweat therapy is demanding on the body. A number of minerals are lost during perspiration, so it's best to limit treatments to once a week. In cases where strong toxicity is suspected, more frequent sweat baths are potentially very useful, but you should be working in conjunction with a

professional health practitioner when undertaking more intensive treatments.

Excessive heat can aggravate a number of medical conditions, and if there is any doubt, patients should first seek the advice of their physician. Generally, steam baths are not advised for pregnant women, small children or the elderly. The cardiovascular system must be strong for people to adjust to high temperatures, or fainting or collapse might result. Steam baths should not be given to people with heart disease. Individuals with high blood pressure or other cardiovascular problems should first consult with their physician. People who take prescription medicine or have open wounds are also considered at high risk for developing problems if exposed to high heat. Never give steam or sauna treatments to people with a fever.

Steam Bath Application

A wide variety of commercial Steam Generators are available to serve the health and leisure marketplace. The knowledge that Steam is on the job gives owners and personnel the feeling of confidence.

These steam generator systems (Fig 5) are configured in a conveniently sized cabinet to provide high volume steam for environments up to 740 cubic feet.

Recommended Guidelines During Steam Bathing:

- 1) An accurate clock should always be used with an audio timer to time the patient's stay in a hot bath. Limit the time to, 6 to 12 minutes in a steam bath. Beginning bathers should stay at the lower ends of these time ranges for the first few times to allow for acclimatization.
- 2) An accurate thermometer should always be kept in all hot baths and monitor the temperature before entering. The ambient temperature should never exceed 130° F in a steam bath.
- 3) Check with the physician before hot bathing if patient is on medication or is elderly. Heart disease, lung

problems, high or low blood pressure, diabetes, and obesity are other complicating conditions that need to be evaluated by a physician prior to take a drip.

- 4) Children, especially those who have not reached puberty, should always be monitored by a knowledgeable adult during and after hot bathing. Children normally have a higher sensitivity to heat stress and fluid loss than adults because of their reduced reserve of fluid for sweating, underdeveloped sweat gland response, and larger body surface area to body mass ratio.
- 5) Pregnant women should avoid prolonged use of hot baths, especially early in pregnancy. Researches have shown that elevation of maternal body temperature above 101° F can adversely effect nervous system development of the fetus, which occurs soon after conception.
- 6) The patient should not be allowed to eat in a hot bath and avoid bathing immediately after meals. Digestion of food requires the redirection of a considerable amount of the total blood volume to the stomach and intestines in a similar manner to which exercise requires the redistribution of blood flow toward the working muscles. An increase in blood flow toward the gastrointestinal tract at the same time that blood is being redirected to the body's surface for cooling in a hot environment can result in reduced blood flow and oxygen to the brain and possible fainting.
- 7) Hyper hydrate patient's body between 1 and 2 hours prior to bathing to prepare your body for the dehydration that will result.

- 8) The patient should be told to take a soap shower before and after taking a hot bath. Thoroughly wash off all cosmetics and body oils before entering a hot bath because this may inhibit the sweating process.. Remove all jewelry because metal heats up very quickly and may burn your skin.
- 9) All hot baths should be cleaned and scrubbed weekly to prevent the growth of hazardous bacteria.