

ROLE OF *TAREEQ* (DIAPHORESIS) BY STEAM BATH IN THE MANAGEMENT OF OBESITY AND ASSOCIATED COMORBIDITIES - A REVIEW

Sabiha Fatima*¹ Tanzeel Ahmad² and Mohd Shahid³

¹Senior research Fellow, AIIMS, Delhi, India.

²Professor, Ajmal Khan Tibbiya College, AMU, Aligarh, India.

³Assistant Professor, Markaz Unani Medical College, Calicut, India.

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*Corresponding Author

Sabiha Fatima

Senior research Fellow,
AIIMS, Delhi, India.

ABSTRACT

The history of a steam bath as a treatment modality can be traced far back into the mists of ancient times to induce perspiration to eliminate morbid matter from the surface of the skin. *Tareeq* (Diaphoresis) is one of the modalities mentioned in Unani literature for the management of obesity which can be done by an amalgamation of the conventional approach with the help of steam bath. The basic concept of diaphoresis, steam bath and its mechanism of action from the holistic point of Unani medicine supported by modern perspective will be described in full length.

KEYWORDS: Steam bath, *Tareeq*, Diaphoresis, Unani medicine, Obesity.

INTRODUCTION

The process of sweating has been evident throughout the world and goes ahead for millennia.^[1,2] Sweat practices have been found across many geographically and culturally distinct regions of the world. The very name of this culture complex varies widely: American Indian Sweat Lodge; Finnish Sauna; Greek Sweat Bath; Irish Sweat House; Japanese Mushi-Buro and Korean Jim Jil Bang Jewish Shvitz; Islamic Hammam; Mayan Sweat House; Mexican and Central American Temescal and Inipi; Roman Balnea and Thermae; Russian Bania; Scythian Sweat-bath, and South African Sifutu.^[3] These are used with a religious aim, for esoteric rites, for medicinal treatment, or simply for social getting together, the cleanliness of the body, if any, being achieved only as a by-product.^[4] Power of free perspiration is a matter of great significance to health and for this peoples have used the steam-bath from time

immemorial.^[2,4] *Amale Tareeq* (diaphoresis action) induced by a bath, is mentioned under the heading of *Istehmam* in Unani classical literature.^[5,6,7,8,9] The term *Hammam* commonly refers to bathe, originated from an Arabic word “Hamm” which mean “warmer” or “steam bath room” and in French, it is identified as “Bain maure”. *Hammam* consists of three sections; each section has a different temperament and specific objective.^[10,11] *Tareeq* induced by *Hammam* has been mentioned a treatment modality for the treatment of different diseases, one among those is to control the progress of *Samne Mufrit*.^[12,13,11,14] Hippocrates writings concerning baths are some of the earliest dictums on the therapeutic uses of water. He wrote more than two thousand years ago of creating artificial fever that “give me the power to create a fever, and I shall cure any disease”.^[15] It is mentioned that obese people should adopt regimens which bring fever.^[12,16] Vapour baths and hot baths break up the collected humour, and make firm the reduced flesh by gentle walks, in order to effect purgation, by restricted diet and by practices that cause leanness.^[17]

Therapeutic Indications

At the general level following classes of illness to respond favourably to the heat of the Steam bath: gastrointestinal (diarrhoeas, abdominal pains and distensions, cholecystitis), urinary/genital (impotence, retention of ejaculate, painful urination), gynaecological/obstetric (postpartum healing, menstrual irregularities, reversal of infertility), arthralgias and myalgias (rheumatism, corporal/musculoskeletal pains), bites and accidents (wounds, bone fractures, sprains, snake bites), oedemas (swelling of limbs due to intrusive cold), weakness and wasting (chronic lethargy), and a form of aggressive madness.^[18] and obesity.^[19] Hot air baths are of utility in a variety of chronic maladies, especially where oxidation and elimination are defective as they stimulate the oxidizing processes.^[2] It maintains the physiological homeostasis in the body by eliminating the morbid factors and retaining the essentials.^[20]

Mechanism of Action

Mainly, *Hammam* brings *tarteeb* (moistness), *taskheen* (calorificent), *tajfeef* (dessication) in the body of the person, along with *tahleel* (dissolution) depending on the temperature of the air, water used and duration of stay in it.^[5,6,7,10,21] Staying in the most internal part of *hammam* initially heats the body, brings the inner moisture of the body toward the periphery and opens the pores and causes profuse sweating resulting in loss of *ratoobat* from body.^[6,7,22,23] The heat of this room resolve the body fluids so much that the water used in this room does not neutralize the dryness produced by heat of this room.^[9,22] While taking

hammam more use of vapour in comparison of water is especially advised for *balghami mizaj* (phlegmatic temperament) people and those who don't exercise as it bring about *tahleel* of *ratoobat* (dissolution of fluids) and removes the accumulated *fuzlat* (toxins) through sweating from their bodies.^[6,7,22] Obese bathers must take bath on an empty stomach.^[24] When taken in a fasting state it causes *tahleel* (dissolution) of *ratoobat asliya* (natural fluids) leading to nonavailability of *badal ma tahallul* (substitute for replenishment) thereby producing dryness.^[22,25] Thus by this it causes leanness of body and helpful in obese people.^[5,6,8] The effect of a bath depends on its temperature and duration which can effect directly upon the skin, and indirectly upon all other parts of the body.^[2,25] Sweating induced by heat exposure inside the bath activate the sympathetic nervous system, the rennin-angiotensin-aldosterone system, and the hypothalamus-pituitary-adrenal hormonal axis.^[2] Steam bath acts on different parts of the body in the following manner.^[26]

Table 1: Effects of Steam vapour.

Effective sites	Steam Vapour
Skin	Moistens, softens, incites easy perspiration
Nervous system	Soothing.
Heart and pulse	Accelerates rate of the beat.
Blood vessels	Dilates superficial, decongests deep.
Blood pressure	Raises lowers slowly.
Respiration	Increases rate not greatly.
Temperature	Tends to rise greatly.
Metabolism	Increases rate

The steam is regulated in quantity so as to keep the temperature inside the cabinet up to about 100 to 120 °F as prescribed. The duration of the application will usually vary from ten to twenty minutes or more, depending on patient's ability to perspire.^[26] In a letter to the Lancet, Mr. H. W. Hallmark has mentioned that all the good effects can be attained by a temperature of 120 °F, no reason to increase beyond that.^[27] The cardinal law in relation to hot baths is that metabolism rises in proportion to the heat and duration of the bath. By taking a steam bath the patient's body is heated internally and externally augmenting endogenous warmth and expelling the "coldness" responsible for the illness.^[18] The key biological systems are affected by toxins involved in obesity can be eliminated by sweating with the help of steam baths effectively.^[28] The perspiration is noxious so long as there are impurities to pass away, and becomes wholesome when they are expelled causing a loss of weight.^[2] Steam bath on empty stomach is beneficial for the prevention of obesity as it induces resolution of causal substances & fat.^[9] For obesity, steam treatment offered as a standalone modality or

combined with other therapies as it produces the desired temperature rise in the body similar to a fever, accelerates metabolic rate and increase the consumption of stored calories and act as an effective detoxifier by inducing sweating.^[9,20,29]

Areas of Research

Le Monnier of Bareges, in 1749, observed that he lost twenty ounces in weight from increased perspiration during eight minutes immersion in the hottest source (112 °F); and on various occasions from seven to twenty-nine ounces during a bath of thirty minutes at 100 °F. Avhen subjected to a course of Turkish baths in persons suffering from defective elimination and obesity, who rapidly lose their excess of weight and improve in general health.^[2] The study conducted on 12 athletes to study the acute effect of steam bath at the temperature of 56 °C for 18 minutes significantly reduces the total body weight and body water in high muscle mass male athletes'.^[29] In an observational study conducted on 30 obese patients to evaluate the effect of *Tareeq* by steam bath, 14 sittings for 30 min each scheduled as 8, 4, 2 sittings in the first, second, and third month respectively insignificant results on body weight was reported by Ansari et al.^[19] In a 2-week study of 25 obese adults, body weight and body fat were reduced after sauna therapy for 15 minutes at 60 degrees Celsius daily, for two weeks, in an infrared sauna. One case report described an obese patient who couldn't exercise because of knee arthritis and who lost 17.5 kg, decreasing body fat from 46% to 35% after 10 weeks of sauna therapy.^[28] Karagülle et al. study conducted on health effects of classic *Hamam* session in 15 healthy subjects reported having statistically significant pain relieving and mental relaxing effect along with a slight increase in heart rate. A thermal condition of *Hamam* ranges between 35-45 °C and relative humidity as high as 100%.^[30]

Researches by Berger & Rounds; Hannuksela & Ellahham; Kukkonen-Harjula & Kauppinen have shown that sweating promotes deeper sleep, pain relief, muscle relaxation, and has been helpful in treating insomnia, arthritis, and as an adjunct to cancer treatment.^[3] Recent studies by Imamura et al. and Tei et al. have found the thermally induce vasodilatation effects of repeated sauna therapy to improve endothelial and cardiac functions in patients with chronic heart failure and coronary risk factors such as atherosclerosis, hypercholesterolemia, hypertension, diabetes mellitus, and smoking. Some studies reported transitory improvements in pulmonary function appear to provide some relief to patients with asthma and chronic bronchitis.^[18] In one of the larger studies, Frankva and Franek found that sweating resulted in improvements in mental satisfaction, energy, relaxation, frustration, and anxiety. Guitierrez,

Vasquez, and Boakes examined the effects of sweating on bulimia anorexia as well as body image and reported positive effects on hyperactivity, depression, and stress levels.^[3]

CONCLUSION

Unani regimen *Amale Tareeq* offered as a standalone modality or combined with other therapies for the management of obesity and its associated comorbidities. Thus attention toward treatment of other mentioned etiologies by adopting this approach can still be of great importance. In order to scientifically validate this regimen, further clinical studies should be performed. We hope that this review encourages some readers to look at this issue from different perspectives.

Conflict of Interest

The authors declare no conflict of interest.

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