



**HAMMĀM (TURKISH BATH) IN UNANI MEDICINE: CONCEPT, MECHANISM AND THERAPEUTIC APPLICATIONS - A REVIEW**

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DOI: <https://doi.org/10.5281/zenodo.19282953>

**How to cite this Article:** Dr. Anish Ahamad Ansari\*<sup>1</sup>, Dr. Mohd. Saeb<sup>2</sup>, Dr. Bushra Aftab<sup>3</sup>, Dr. Nusrat Parveen<sup>4</sup> (2026). Hammām (Turkish Bath) In Unani Medicine: Concept, Mechanism And Therapeutic Applications - A Review. European Journal of Biomedical and Pharmaceutical Sciences, 13(4), 109–115.

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Article Received on 01/03/2026

Article Revised on 23/03/2026

Article Published on 01/04/2026

**ABSTRACT**

*Hammām*, commonly referred to as the Turkish bath, is an important regimenal therapy described under *Ilāj-bil-Tadbīr* in the Unani system of medicine. It primarily involves the therapeutic use of moist and dry heat to modulate *Asbāb-i-Sitta Zarūriyah* for the prevention and management of diseases. Classical Unani texts describe *Hammām* as an effective modality for facilitating evacuation of morbid matter, improving circulation, opening of skin pores, and maintaining humoral balance. *Hammām Bukhārī* is regarded as one of the earliest forms of this therapy practiced since antiquity. The present review aims to explore the conceptual framework of *Hammām* in Unani medicine, its therapeutic applications, and possible mechanisms of action in the light of classical literature and contemporary scientific evidence. Available studies suggest that *Hammām* exerts its beneficial effects through vasodilatation, detoxification, muscle relaxation, and enhancement of psychological well-being, making it useful in musculoskeletal, neurological, and metabolic disorders. Despite its wide traditional and modern acceptance, appropriate patient selection and adherence to safety measures remain crucial. Further clinical research is required to substantiate traditional claims and to develop standardized treatment protocols.

**KEYWORDS:** *Hammām*, *lāj-bil-Tadbīr*, Regimenal therapy, Unani medicine, *Asbāb-i-Sitta Zarūriyah*, Detoxification.

**INTRODUCTION**

The term *Hammam* originates from the Arabic root *Hamm*, meaning the generation or diffusion of heat.<sup>[1,2]</sup> *Ibn Sina* traced its derivation to *Al-Hamīm*, signifying the intensity of summer heat, while another linguistic origin links it to *Al-Hamma*, meaning a hot spring. In common Arabic usage, *Hammām* denotes a bathroom or bathhouse, and the term later entered Persian and Turkish as *Hamam*.<sup>[3]</sup>

In the Unani system of medicine, *Hammām* denotes a therapeutic hot or steam bath that serves purposes far

beyond simple cleansing, as it is intended to promote skin health, enhance the functional efficiency of organs, and prevent humoral imbalances. By inducing sweating and vaporization, *Hammām* aids in the elimination of excess and waste materials from the body, thereby reducing *Imtila* (repletion) and strengthening the body's nutritive and absorptive powers. Traditionally known as a Turkish bath, *Hammām* is designed to provide relaxation and purification through controlled heat and humidity, comparable to a sauna. However, despite its long-standing use and wide acceptance in traditional medicine, scientific validation of its therapeutic benefits

remains limited, with most contemporary studies focusing primarily on hygienic aspects and the risk of fungal contamination rather than on definitive clinical outcomes.<sup>[4,5]</sup>

*Hammām*, along with *Riyazat* (exercise) and *Dalak* (massage), is classified under *Asbab-i-Ghair Zarooriyah*, factors that significantly influence health. *Hammām -i-Bukhari* (steam bath) has been widely practiced since antiquity for health promotion. In *Tibb-e-Unani*, it is particularly used to expel *Mada-i-Balghamia* (fatty phlegmatic matter) through perspiration, making it beneficial in obesity and in correcting *Sue Mizaj Barid* (cold temperament).

Therapeutically, *Hammām* is an important component of *Ilaj-bit-Tadbir* (Regimental Therapy), the primary mode of treatment in Unani medicine. Regimental therapy precedes dietary, pharmacological, and surgical interventions and includes procedures such as sweating, venesection, cupping, massage, exercise, purgation, and steam bathing.

### Historical Background

The practice of steam bathing originated in ancient Greece and later spread westward to Rome, eventually becoming widespread across many regions. The Greeks and Romans are credited with developing elaborate and sophisticated bathhouses that served not only hygienic purposes but also functioned as important social centre where people gathered for conversation, recreation, eating, and other social activities. While bathing is largely a private activity in modern times, in prehistoric and classical periods it was an integral part of communal life and social interaction.

Françoise de Bonneville, in *The Book of the Bath*, notes that by the sixth century BC in Greece, bathing had evolved into a ritualized art involving sequential use of sand cleansing, hot water, heated air within dark vaulted steam chambers, followed by cold immersion and massage with aromatic oils. Many contemporary practices such as steam baths, aromatherapy, and hot-water bathing trace their origins to these ancient traditions. The Greeks and Romans clearly understood the importance of cleanliness for maintaining health.

Literary evidence from Homer (circa 900 BC) describes a wide range of bathing practices, including hot water baths and hot air chambers. The Spartans developed early forms of vapor baths, which can be considered precursors to modern steam showers. Heating methods included burning coal or using heated stones placed outside the bathing chamber. Additionally, the Greeks employed aromatic and essential oils for therapeutic purposes, resembling present day aromatherapy. Sweating was often promoted through oil massage or by consuming warm herbal infusions, such as peppermint or floral teas, prior to entering the steam bath. Hippocrates (circa 360 BC) strongly advocated regular bathing and

massage with fragrant oils as essential components of a healthy lifestyle.

***Hammām in India:*** The *Hammām*, has a long-standing and vibrant presence in India, having been introduced during the medieval period. Under the Delhi Sultanate and later the Mughal Empire, *Hammām* emerged as an important component of royal palaces, religious institutions, and public architecture. Traces of these bathhouses are still visible in different parts of the country, including Kashmir, Delhi, Mumbai, and Bhopal. In Bhopal, a historic Turkish bath known as *Hammām Kadami* survives from the Nawabi era. Modeled on the *Çemberlitaş Hammām* of Istanbul, it was commissioned in the early eighteenth century by Mohammad Khan. Notably, it is considered the only *Hammām* in the Indian subcontinent that continues to function to this day.<sup>[7]</sup>

Classical Unani literature also highlights the therapeutic significance of the *Hammām*. *Al-Qānūn* by *Ibne Sina*, written around 1000 BC, describes how a properly administered *Hammām* regimen can restore vitality and leave an individual feeling renewed, comparable to a newborn. Historical records further note that *Emperor Augustus* was treated for typhoid fever by the Greek physician *Antonius Musa*, who incorporated cold-water baths as part of the treatment protocol.<sup>[8]</sup>

### Types of *Hammām*<sup>[18-23]</sup>

- ***Hammām Hār (Hot Bath):*** In this form of *Hammām* therapy, the water temperature typically ranges between 95°F and 110°F. The application of heat softens the skin, promotes dilation of the pores, and stimulates perspiration. Such effects make it useful in the management of conditions like osteoarthritis, amenorrhea, renal pain, and obesity.
- ***Hammām Bārid (Cold Bath):*** In this type of *Hammām* therapy, water is usually applied at a temperature ranging from 65°F to 75°F. It is particularly beneficial for individuals with a hot (*Hār*) temperament. The cold application encourages the inward regulation of *Ḥarārat-i-Ghariziyah*, thereby improving digestive efficiency. Additionally, it helps fortify the nervous system and cardiac function and is effective in reducing elevated body temperature, especially in cases of hyperpyrexia.
- ***Hammām Bukhārī (Vapor Bath):*** This form of *Hammām* therapy involves the application of steam to the whole body. The exposure to vapor facilitates the opening of skin pores, enhances perspiration, and supports the elimination of toxins from the body. It is widely employed for the relief of pain, especially related to musculoskeletal disorders. Additionally, this therapy contributes to weight reduction and promotes strengthening of the nervous system.
- ***Hammām Baḥrī (Sea Bath):*** This type of *Hammām* therapy makes use of seawater, which is naturally rich in mineral salts. These salts assist in dissolving dense or viscous substances and help improve the

tone, strength, and vitality of the skin, thereby making this therapy particularly beneficial in the management of various skin disorders.

- **Ḥammām Ramlī (Sand Bath):** In this form of *Ḥammām* therapy, certain parts of the body are partially buried or covered with sand, often using sand from the seashore. Owing to the absorbent properties of sea sand, this method is considered effective in the management of conditions such as ascites.
- **Ḥammām Shamsi (Sun Bath):** This form of *Ḥammām* involves exposing the body to natural sunlight. Sunlight serves as a rich source of vitamin D<sub>3</sub>, which helps in better absorption of calcium and promotes bone strength. Generally, exposure to early morning sunlight for about 15–30 minutes is advised for beneficial effects.
- **Ḥammām Labni (Milk Bath):** This type of *Ḥammām* uses milk or diluted milk mainly for cosmetic benefits. It softens the skin, improves complexion, and gently removes dead cells due to its natural lactic acid. The presence of vitamin E and zinc helps delay skin aging and supports skin elasticity.
- **Ḥammām Bawraqi (Borax Bath):** This form of *Ḥammām* involves the use of saline water (*Ma'a-i-Bawraqi*). Due to its anti-inflammatory effects, it is beneficial in conditions like osteoarthritis and gout. It also has antifungal properties.
- **Ḥammām Kibriṭī (Sulphur Bath):** This type of *Ḥammām* uses sulphur-rich water (*Ma'a-i-Kibriṭī*). It acts as a dissolving (*Mohallil*) and soothing (*Mulattif*) agent, helping relieve severe pain and conditions like *Iraq-e-Madani*, *Falij*, and *Rasha*. It is also useful in chronic ulcers and skin disorders such as *Kalf*, *Bahaq*, and *Bars*, and aids in reducing uterine rigidity.
- **Ḥammām Hamiz (Acid Bath):** This form of *Ḥammām* involves adding an acid or salt to the bath water. It is considered beneficial in the management of dyspepsia and certain liver disorders.
- **Ḥammām Saboosi (Bran Bath):** This type of *Ḥammām* uses boiled water prepared from wheat bran mixed with water. The extract is applied during bathing to soften and smooth the skin and is beneficial in relieving itching, eczema, psoriasis, and sunburn.
- **Ḥammām Shibiah-wa-Zajiah (Alum Bath):** This type of *Ḥammām* uses alum-infused water (*Ma'a-i-Shibiah-wa-Zajiah*). It is beneficial in controlling nosebleeds, reducing edema, and managing bleeding from the rectum or vagina.
- **Ḥammām Wahli (Mud Bath):** In this type of *Ḥammām*, mud is applied to the body or the body is immersed in it. It helps absorb toxins, supports disease prevention, promotes healing, improves circulation, and is beneficial in skin conditions like psoriasis and rosacea.
- **Ḥammām Nisfi / Aab-i-Zan (Sitz or Hip Bath):** In this form of *Ḥammām*, the patient sits in medicated,

hot, or cold water up to the hip level, usually in a tub. It is useful in conditions like haemorrhoids, anal fissures, post-rectal surgery care, episiotomy healing, uterine cramps, BPH, vaginal infections, and urinary tract infections.

- **Ḥammām Qadmi / Pashoya (Foot Bath):** This type of *Ḥammām* involves soaking the feet in plain or herb-infused water. It is helpful in conditions like meningitis, epilepsy, high fever, pain relief, deep vein thrombosis, and swelling of the legs.

**Stages of Ḥammām:** A *Ḥammām* typically consists of three connected chambers: a cool or resting room, an intermediate warm room, and a hot room. It is a specialized medicated bath that requires a distinct architectural design.<sup>[15, 16]</sup>

- **First Room (Barid):** This chamber is cool and humid, with temperatures between 22–28°C, providing a cold and moist environment (*Sard Tar / Barid Ratab*).
- **Second Room (Haar):** This is the intermediate room, characterized by a warm and moist atmosphere. The temperature ranges from 28–35°C, producing a hot and moist condition (*Garm Tar / Har Ratab*).
- **Third Room (Bait al-Naar):** This chamber is hot and dry, with temperatures of about 20–25 °C near the floor and 40–50°C at head level, creating a hot and dry environment (*Garm Khushk / Har Yabis*).
- **Fourth Room (Motadil):** Changing room

The use of a *Ḥammām* should follow a specific order, beginning in the first room and gradually moving through the second to the third, allowing the body to adjust to rising temperatures; staying too long in the third room should be avoided as it may disturb the bilious humor. Bathing after meals may support weight gain by increasing food absorption, but taking a *Ḥammām* immediately after eating can cause obstruction (*Sudda*) due to absorption of undigested food, potentially leading to liver obstruction or kidney stones. When taken on an empty stomach, the *Ḥammām* aids in weight reduction but may increase bodily dryness. Improper use can weaken the heart and nerves, cause nausea and vomiting, spread harmful substances to weaker organs, and result in sexual debility, while Hippocrates warned that very cold water may cause intestinal disorders and excessively hot or stagnant water may lead to fever.<sup>[17, 18, 19]</sup>

**Principles of Ḥammām**<sup>[6, 24]</sup>

- To produce moderate warmth and moisture in the body, one should take a bath for a short duration.
- Bathing immediately after meals should be avoided, and cold baths are particularly contraindicated after sexual intercourse.
- *Ḥammām* water should be fresh and free from salinity.
- One should not remain in the bath for a long time.
- Do not enter the bathroom on an empty stomach.

- After taking a *Hammām*, one should enter the room slowly and gradually.
- Pregnant women, elderly people, and individuals with weak temperament should bathe only with moderately warm water.
- Bathing immediately after meals, particularly on a full stomach, may predispose to obesity, whereas bathing on an empty stomach may result in weakness and dryness.
- People suffering from excessive perspiration should not go to the bath.
- Patients with heart diseases should only wash their hands and face instead of taking a full bath.
- Individuals suffering from fever and inflammatory conditions should avoid bathing.
- **Vasodilatation:** Exposure to steam causes expansion of blood vessels, enhancing circulation, which supports improved nutrient delivery and efficient elimination of metabolic waste.
- **Elimination of Morbid Matter (*Ikhrāj-i-Mawād-i-Fāsida*):** Induced sweating opens skin pores and facilitates the expulsion of morbid matter from the body, thereby reducing disease-causing materials and promoting purification.
- **Effects of the *Hammām* on renal system:** Sweating facilitates the expulsion of toxins and uric acid, thereby enhancing kidney activity.
- **Relaxation of Muscles and Nerves (*Taskeen-i-A‘šāb*):** The warm environment calms the nervous system, relieves muscle spasm, and reduces pain, leading to physical and mental relaxation.
- **Enhancement of Metabolism and Digestion:** Heat stimulation increases metabolic activity and supports digestive power, especially when the *Hammām* is taken at an appropriate time.
- **Adaptation Through Gradual Thermal Exposure:** The stepwise movement from cool to hot rooms allows the body to adapt slowly, preventing sudden stress on vital organs like the heart and brain.
- **Effect of Massage in *Hammām*:** Oil massage relaxes organs and helps resolve morbid matter, while dry or vigorous massage aids in dissolving morbid matter and tones the body.

#### Physiological Mechanism of Action<sup>[6, 20, 21, 22, 23]</sup>

- **Humoral Balance and Evacuation (*Istifragh*):** According to Unani medicine, illness develops due to disequilibrium among the four humours- blood, phlegm, yellow bile, and black bile. *Hammām* therapy helps restore this balance by facilitating the removal of *Akhlat-i-Radiyah* (morbid or excess substances) from the body.
- **Detoxification via Perspiration (*Tareeq*):** *Hammām* promotes intensive sweating, which functions as an effective detoxifying mechanism by expelling accumulated toxins from deeper tissues through the skin pores.
- **Diversion of Pathological Matter (*Imala-i-Mawad*):** The therapy operates on the principle of redirecting morbid substances from deeper, vital organs toward the body surface, thereby reducing internal burden and supporting healing.
- **Ta'deel-i-Mizaj (Correction of Temperament):** *Hammām* helps restore normal temperament by correcting humoral imbalances, especially in conditions of *Sue Mizaj Barid Ratab* (cold and moist temperament), such as obesity (*Siman-i-Mufrit*) and joint disorders, by imparting warmth and dryness to the body.
- **Tahleel and Talteef (Dissolution and Softening):** It facilitates *tahleel* (dissolution) of thick, accumulated morbid matter and promotes *talteef* (softening) of tissues, thereby aiding in the evacuation of excess humours (*Akhlat-i-Radi*).
- **Regulation of Heat (*Taskheen*):** *Hammām* etymologically derived from the Arabic term Hamm (to spread warmth) functions by enhancing *Hararat Ghariziyya* (innate body heat).
- **Regulation of Moisture (*Tarteef*):** Depending on the nature and duration of the bath, *Hammām* produces effects of *tarteef* (moistening) or *tajfeef* (drying) within the body.
- **Dissolution of Morbid Matter (*Tahleel*):** The warm and humid atmosphere facilitates *tahleel* (dissolution) of pathological fluids, promotes skin softening, and leads to the opening of cutaneous pores.
- The eminent Unani physician Majoosi, in *Kamil us Sana*, stated that gentle oil massage in the *Hammām* helps in resolving morbid matter and relaxes the organs, whereas a strong massage without oil assists in dissolving morbid matter and makes the body firmer.<sup>[20]</sup>

#### Therapeutic Uses of *Hammām*

- ***Amrāz-i-Mafāsil* (Joint Disorders):** In Unani medicine, *Amrāz-e-Mafāsil* encompasses joint disorders such as arthritis (*Waja' al-Mafāsil*), gout (*Niqris*), sciatica (*Irq al-Nisā*), and other rheumatic conditions, and *Hammām* is an important modality of *Ilāj-bit-Tadbīr* used in their management. These disorders are commonly linked with *Sue Mizāj Bārid* and the accumulation of *Balghamī* or *Saudāwī* morbid matter. Therapeutic bathing, particularly with warm and moist heat, helps correct the altered temperament, restore humoral equilibrium, and strengthen innate heat. It facilitates the resolution and dispersion of accumulated morbid substances, softens rigid tissues, and reduces inflammation through improved circulation. The heat also relaxes muscles and ligaments, relieves pain and stiffness, and promotes sweating, thereby aiding in the elimination of waste products and decreasing joint swelling, especially in gout. Additionally, enhanced blood flow improves nourishment of joint structures, supports healing, and increases flexibility and range of motion.<sup>[22, 25, 26, 27]</sup>
- ***Amrāz-i-A‘šāb* (Neurological Disorders):** In Unani medicine, *Amrāz-e-A‘šāb* includes neurological

disorders such as paralysis (*Falij*), facial palsy (*Laqwa*), sciatica (*Irq al-Nisā*), headaches, and convulsive conditions, which are often linked to *Sue Mizāj Bārid* and accumulation of phlegmatic matter affecting the nerves. *Ḥammām*, as a regimenal therapy (*Ilāj-bit-Tadbīr*), plays an important role in their management by restoring balanced temperament, strengthening innate heat, and resolving morbid accumulations. The therapeutic warmth and steam help relax muscles, reduce pain and spasm, improve blood circulation to neural tissues, and promote perspiration for elimination of waste products. As a result, it supports nerve function, reduces stiffness and heaviness, and enhances recovery.<sup>[22, 25, 26, 27, 28]</sup>

- **Respiratory system health:** The warm, steam-rich atmosphere of the *Ḥammām* helps open the airways and cleanse the lungs, offering relief to people with asthma and other respiratory problems. The use of essential oils such as lavender, peppermint, tea tree, and eucalyptus further enhance its effects, as their anti-inflammatory, antimicrobial, and decongestant properties support healthy breathing.<sup>[30, 31]</sup>
- **Saman-i-Mufrat (Obesity):** In Unani medicine, *Saman-i-Mufrat* (obesity) is attributed to *Sue Mizāj Bārid Ratab* and excessive accumulation of fat due to dominance of phlegmatic matter. *Ḥammām*, as a regimenal therapy (*Ilāj-bit-Tadbīr*), is used to counteract this imbalance by generating warmth, strengthening innate heat, and stimulating metabolic activity. The therapeutic heat and steam help liquefy and mobilize excess fat, promote perspiration for elimination of waste products and retained fluids, and enhance blood circulation, thereby reducing heaviness and improving physical vitality. For better outcomes, it is generally combined with dietary control, exercise (*Riyāzat*), and massage (*Dalk*).<sup>[25, 26, 27, 28]</sup>
- **Skin and Hair:** The *Ḥammām* provides significant benefits for both skin and hair by deeply cleansing and refreshing the body. The heat and steam open the pores, helping to remove dirt and impurities, which leaves the skin clearer, softer, and more radiant. It may also offer relief in certain chronic skin problems such as eczema and acne. Additionally, perspiration from the scalp clears buildup from hair follicles and unclogs pores, thereby supporting healthier hair growth.<sup>[30, 31]</sup>
- **Rāhat-i-Nafs (Psychological Relaxation):** In Unani medicine, *Ḥammām* is regarded as an important regimenal therapy for promoting psychological relaxation and mental well-being. By providing gentle warmth and steam, it helps normalize altered temperament, strengthen innate heat, and maintain humoral balance. The soothing environment relaxes both body and mind, reduces stress, irritability, and mental fatigue, and improves sleep quality. Enhanced circulation to the brain along with perspiration aids in the removal of waste products, producing a sense of lightness and emotional

comfort. Thus, *Ḥammām* serves as a calming and restorative measure within comprehensive Unani care for mental relaxation.<sup>[22, 25, 26, 28]</sup>

- **Rehabilitation (Ta'deed-e-Sehat):** In Unani medicine, *Ḥammām* plays a supportive role in rehabilitation by aiding the restoration of strength and functional capacity after illness or injury. As a regimenal therapy (*Ilāj-bit-Tadbīr*), it enhances *Harārat-i-Gharīziyya*, improves blood circulation, and promotes better nourishment of muscles and nerves, thereby facilitating recovery in neuromuscular and musculoskeletal conditions. The therapeutic heat helps relieve pain, reduce stiffness, and improve flexibility, while induced perspiration assists in eliminating residual morbid matter and reducing bodily heaviness. Additionally, its calming effect supports psychological well-being, which is essential for comprehensive rehabilitation. For optimal results, *Ḥammām* is commonly combined with massage (*Dalk*), exercise (*Riyāzat*), and appropriate dietary measures.<sup>[22, 25, 26, 28]</sup>

#### Indications<sup>[24, 32]</sup>

- *Amrāz-i-Mafāsil* (Joint disorders): Arthritis, gout, sciatica, and other cold-type rheumatic conditions.
- *Amrāz-i-A'shāb* (Neurological disorders): Paralysis, facial palsy, numbness, chronic headache.
- *Saman-i-Mufrat* (Obesity): Excess fat due to *Sue Mizāj Bārid Ratab*.
- *Amrāz-i-Nafsāniyya* (Psychological conditions): Melancholia, insomnia, anxiety, stress.
- *Amrāz-i-Mi'da wa Am'ā* (Gastrointestinal System): Diarrhoea, Abdominal pain, Distention, Cholecystitis etc.
- *Amrāz-i-Baul wa Tanāsul* (Urogenital System): Impotence, Retention of ejaculation, Painful urination etc.
- *Amrāz-i-Niswān wa Qabālat* (Gynaecological and Obstetric diseases): Postpartum healing, Menstrual irregularities, Reversal of infertility etc.
- Rehabilitation & Convalescence: Post-illness weakness, muscular stiffness.
- Certain Skin Disorders: Non-inflammatory conditions requiring cleansing and improved circulation.

#### Contraindications<sup>[24, 29]</sup>

- Patients with a hot temperament (*Sue Mizāj Hār*) should avoid bathing with hot water.
- *Ḥammām* should not be given to patients suffering from wounds, injuries, or infectious diseases.
- In cases of diarrhoea and vomiting, cold water bathing should be avoided.
- After delivery, elderly individuals should not take a bath with cold water.
- People suffering from cold and cough should also avoid bathing with cold water.
- Moreover, it is advised not to visit the *Ḥammām* after undergoing bloodletting (*fasd*).

**Safety, precaution and guidelines**<sup>[24]</sup>

- Enter the bath chambers gradually, moving from one room to another slowly, until you reach the final (hottest) room.
- In the hottest chamber of the bath, remain only until the body becomes warm and sweating begins. Do not stay in the bath for too long. The duration of staying in the bath depends on a person's temperament, habit, and tolerance. One should remain only until a feeling of comfort is achieved and sweating starts.
- After coming out of the bath, do not immediately consume any food or drink. Just as entering the bath chambers gradually is recommended, in the same way, coming out of the bath gradually is also advised.
- If there is a significant difference between the temperature inside the *Hammām* and the outside environment during the winter season, the body should be covered with warm clothing before coming out.

**Complications of *Hammām***<sup>[24]</sup>

- Excessive bathing causes weakness of the heart.
- It sets the bodily humours (morbid matter) into motion and increases the tendency toward infections.
- In a state of empty stomach, staying too long in the bath can also cause fainting.
- It produces nausea and fainting, especially in people with a bilious (*safrawi*) and hot temperament if they remain in the bath for a long time.
- Excessive bathing drives morbid matter toward the weak organs and produces swelling.

**DISCUSSION**

*Hammām*, as described in Unani medicine, represents a structured thermotherapeutic intervention grounded in the theory of humoral equilibrium and regulation of *Harārat-i-Gharīziyya*. Unlike simple hygienic bathing, it is conceptualized as a therapeutic modality designed to induce controlled physiological responses through graded exposure to heat and humidity. The classical objectives of *Istifragh* (evacuation), *Ta'deel-i-Mizaj* (temperamental correction), and *Imala-i-Mawad* (diversion of morbid matter) reflect a systematic attempt to modulate internal homeostasis.

From a contemporary biomedical perspective, many of these traditional concepts can be interpreted through known physiological mechanisms. Heat exposure induces peripheral vasodilatation, increases cardiac output, enhances microcirculation, and stimulates sweat-mediated excretory pathways. Improved circulation facilitates oxygen delivery and metabolic waste removal, which may explain reported benefits in musculoskeletal and neurological disorders. The reduction in joint stiffness and muscle spasm observed in *Amrāz-i-Mafāṣīl* and *Amrāz-i-A'ṣāb* may be attributed to enhanced tissue

elasticity and neuromuscular relaxation under thermal influence.

Similarly, steam inhalation within the *Hammām* environment may improve mucociliary clearance and airway humidification, supporting its traditional application in respiratory conditions. In metabolic disorders such as *Saman-i-Mufrat*, the warming and drying effects described in Unani literature may correspond to transient increases in metabolic rate and fluid loss through perspiration, although long-term weight reduction requires adjunctive measures such as dietary regulation and exercise.

The psychological benefits associated with *Hammām*, including *Rāhat-i-Nafs* and stress reduction, may be linked to autonomic modulation, endorphin release, and improved sleep regulation. These effects align with modern evidence supporting thermotherapy in reducing sympathetic overactivity and enhancing parasympathetic balance.

Despite these plausible mechanisms, the existing scientific literature remains limited in terms of randomized controlled trials specifically evaluating standardized Unani *Hammām* protocols. Much of the available evidence extrapolates from sauna or general steam bath research, which may not fully represent the classical staged structure of *Hammām* therapy. Moreover, the potential risks such as cardiovascular strain, dehydration, electrolyte imbalance, and syncope necessitate careful patient selection and adherence to contraindications outlined in classical texts.

Therefore, future research should focus on controlled clinical trials, biomarker-based outcome assessment, dose–response relationships (temperature, duration, frequency), and safety profiling in specific patient populations. Integrating traditional principles with modern methodological rigor may help establish *Hammām* as an evidence-informed complementary intervention.

**CONCLUSION**

*Hammām* is a comprehensive regimenal therapy within Unani medicine that integrates thermoregulation, detoxification, circulatory enhancement, neuromuscular relaxation, and psychological restoration. Rooted in humoral theory, its therapeutic rationale demonstrates considerable overlap with modern physiological understanding of heat-based interventions. When administered judiciously and in accordance with classical guidelines, *Hammām* may serve as a supportive modality in musculoskeletal, neurological, metabolic, respiratory, dermatological, and rehabilitative conditions. However, standardization of protocols and robust clinical validation remain essential for its wider acceptance in integrative healthcare frameworks.

*Ḥammām* embodies a traditional yet physiologically coherent therapeutic approach whose full potential can be realized through systematic scientific evaluation and interdisciplinary collaboration.

**Conflict of Interest:** Not available.

**Financial support:** Not available.

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