IJAYUSH
International Journal of AYUSH
AYURVEDA • YOGA • UNANI • SIDDHA • HOMEOPATHY
https://internationaljournal.org.in/journal/index.php/ijayush/
ISSN: 2349-7025
OPEN ACCESS
★ PEER REVIEWED ★
MONTHLY

Review Article	Volume 15 Issue 10	October 2026

AN INSIGHT INTO *'ILĀJ BI'L TADBĪR* (REGIMENAL THERAPY) FROM PAST TO CONTEMPORARY INNOVATIONS

***Sayyed Adnan[1*], Shaheen Akhlaq[2], Athar Parvez Ansari[3], Farooqui Shazia[4], Arzeena Jabeen[5]**

[1]Research Officer (Unani), Regional Research Institute of Unani Medicine, Chennai, India
[2]Research Officer (Unani), Regional Research Institute of Unani Medicine, Chennai, India
[3]Research Officer (Unani), S-II, Regional Research Institute of Unani Medicine, Chennai, India
[4]Research Officer (Unani), Clinical Research Unit, Bengaluru, India
[5]Deputy Director (Unani), Regional Research Insti tute of Unani Medicine, Chennai, India

***Corresponding Author:** Sayyed Adnan, Research Officer (Unani), Regional Research Institute of Unani Medicine, Chennai, India

Email: adnan.ccrum@ccrum.res.in, Mob: 9767488918

DOI: https://doi.org/10.5281/zenodo.23929308

Abstract

There are four methods of treatment employed in Unani system of medicine, namely *'Ilāj bi'l Dawā* (Pharmacotherapy), *'Ilāj bi'l Ghidha'* (Dietotherapy), *'Ilāj bi'l Tadbīr* (Regimenal therapy), *'Ilāj bi'l Yad* (Surgery). Pharmacotherapy deals with the use of naturally occurring drugs derived from plant, animal and mineral sources. Dietotherapy aims at treating certain ailments by the administration of specific diets or by regulating the quality and quantity of food. The Regimenal therapy includes regimens such as *Faṣd* (venesection/phlebotomy), *Ḥijāma* (cupping), *Ta'līq al-'alaq* (hirudotherapy/leech therapy), *Dalk* (massage), *Shamūm* (Aromatherapy), *Kaiyy* (Cauterization), *Naṭūl*, (Irrigation), etc., Surgery that has been in use in Unani practice for a long time employs surgical procedures for which certain instruments and techniques have been designed. Regimenal therapy works on the principle of modifying or modulating the *Asbāb Sitta Ḍarūriyya* (six essential factors) for maintenance of health and prevention from diseases. The core of these six factors is dispersion/excretion of morbid matter which is known as *Istifrāgh*. In the last few decades, medical scientists all over the globe have shown immense interest in the Regimenal therapy because of its time-tested efficacy and safety. Scientific studies have proven the safety and efficacy of various regimenal procedures and thus it holds an important place in Unani medicine. Over the years, we are noticing innovations in these therapies by means of incorporating the modern technology. This review demonstrates that Regimenal therapy has undergone a remarkable transition from a classical therapeutic discipline rooted in humoral theory to an evidence-informed, technology-supported healthcare modality. Published clinical studies, systematic reviews, and experimental investigations suggest that several regimenal therapies demonstrate beneficial effects in musculoskeletal disorders, chronic pain syndromes, osteoarthritis, migraine, varicose veins, dermatological disorders, and selected inflammatory conditions. This article summarizes the journey of Regimenal therapy from classical bedside practice to the digital era, and exemplifies how traditional medicine can evolve through innovation while remaining rooted in its original therapeutic philosophy. The authors have gone through the published literature related to the comprehensive review of Regimenal therapy. Sources detailing

innovations in the individual therapies either utilized in Unani or any other traditional systems of medicine or even modern medicine were included. Electronic searches of relevant databases (PubMed, Google Scholar and ResearchGate) were conducted using keywords.

Keywords: *'Ilāj bi'l Tadbīr*, Regimenal Therapy, Contemporary Innovations, Unani Medicine

Introduction

Unani medicine is practiced throughout the world under the name of Unani *Ṭibb*. "*Ṭibb*" is an Arabic word meaning "medicine," Unani medicine is not simply a perpetuation of Greek ideas but a platform for innovation and change. Hippocrates developed the fundamental philosophy of this system of medicine, which was later expanded and enhanced by prominent scholars from Arab and Persian backgrounds.[1] There are four methods of treatment employed in Unani system of medicine, namely *'Ilāj bi'l Dawā* (Pharmacotherapy), *'Ilāj bi'l Ghidha'* (Dietotherapy), *'Ilāj bi'l Tadbīr* (Regimenal therapy), *'Ilāj bi'l Yad* (Surgery).[2] Regimenal therapy, a cornerstone of the Unani system of medicine (USM), constitutes one of its four methods, encompassing the management of ailments and the preservation of health through a number of specific regimens. *Tadbīr* is an Arabic word meaning regimen or systemic plan whereas *'Ilāj* means treatment. Thus, *'Ilāj bi'l Tadbīr* is a treatment through regimen, which is a method, through which care of the sick person and maintenance of general health is attained by the modulation or modification in *Asbāb Sitta Ḍarūriyya* (six essential factors).[1] Six essential factors are basically those six essentials of life without them, human life is not possible. These six factors include atmospheric air, food and drinks, physical movement and rest, psychic movement and repose, sleep and wakefulness, evacuation and retention.[3]

In last about a decade Regimenal therapy has emerged as one of the most applied field in clinical setting of Unani medicine. In last few years, the popularity of acquiring its applied knowledge has been observed not only among practitioners of Unani medicine but also among policy makers of AYUSH system at state as well as central government level. This significant popularity can be attributed to the number of factors. Firstly, dramatic increase in global burden of life style diseases as Regimenal therapy has been found to be most significant solution for prevention, management and control of these diseases. The efficacy of various regimens is very promising which is the reason people are demanding to undergo these procedures.[4] Secondly, the pain management through allopathic system of medicine has certain limitations in terms of cost and safety as it is full of side effects. So, regimenal therapies play a vital role in eradication of pain, as these are easily available, efficacious and safe.[5.] Moreover, the curriculum of Unani Medical education in India has been revived from seven department pattern to fourteen departments as a result of which Regimenal therapy has been established as a full-fledged separate department in colleges of Unani medicine for which earlier it was taught and practiced as a part of *Taḥaffuẓī wa Samājī Ṭibb* (Preventive and Social Medicine).[4] In classical Unani literature, about thirty regimens have been listed based on holistic approach. Commonest regimenal procedures such as *Faṣd* (venesection/phlebotomy), *Ḥijāma* (cupping), *Ta'līq al-'alaq* (hirudotherapy/leech therapy), *Dalk* (massage), *Shamūm* (Aromatherapy), *Kaiyy* (Cauterization), *Naṭūl*, (Irrigation), etc., are usually applied for the management of various ailments.[2] Modern biomedical research has proposed multiple mechanisms underlying benefits of these therapies, including modulation of inflammatory cytokines, improvement in local microcirculation, immune regulation, reduction of oxidative stress, enhancement of tissue perfusion, neuromodulation, and activation of endogenous pain inhibitory pathways etc. Regimenal therapy represents one of the most enduring therapeutic pillars of the Unani system of medicine, successfully bridging centuries of traditional medical wisdom with contemporary scientific advancements. A narrative review was conducted focusing on individual therapies, which emphasizes the evolution of Regimenal therapy from historical practices to contemporary innovations.

Cupping therapy

Cupping is performed by applying cups to selected skin points and creating a sub atmospheric pressure, either by heat or by suction. Eber's papyrus (1550 BC) from Ancient Egypt is one of the oldest medical texts to mention cupping therapy. Cupping therapy is a part of numerous ancient healing systems, such as Chinese, Unani, traditional Korean, Tibetan, and Oriental medicine. The ancient Greek physician Hippocrates compiled extensive descriptions of the cupping application. He described two different types of cups: one with a narrow opening and a long handle and the other with a wider opening. The first type was used to treat deep accumulation of fluids, while the second type was used for pain relief. Cupping therapy was a popular treatment in Arabic countries. It was recommended by Arabic physicians such as Ibn Sina (AD 980-1037), Al-Zahrawi (AD 936-1036), and Abu Bakr Al-Razi (AD 854-925). Cupping therapy practice spread to Italy and, subsequently, the rest of Europe between the 14th and 17th centuries, during the Renaissance. Cupping was a very popular treatment of gout and arthritis in Italy during this period.[6]

Ancient classification of cupping therapy categorized it broadly into dry and wet cupping. Nowadays classification of cupping has been categorized according to several factors. (Figure 1) One of the classifications of cupping therapy was developed in 2013, categorizing cupping into five categories which was updated into six categories in 2016. The first category is "technical types", which includes dry, wet, massage, and flash cupping. The second category is "power of suction", which includes light, medium, and strong cupping. The third classification is "method of suction", which includes fire, manual vacuum, and electrical vacuum cupping. The fourth category is the "materials inside cups", which includes herbal, water, ozone, moxa, needle, and magnetic cupping. The fifth category is "area treated", which includes facial, abdominal, female, male, and orthopedic cupping. The sixth category is "other cupping types", which includes sports, cosmetic, and aquatic cupping. Cupping therapy sets can be classified into three main categories: the first category is "cupping sets related to the types of cups", which includes plastic, glass, rubber, bamboo, ceramic, metal, and silicone cupping sets. The second category is "cupping sets related to the methods of suction", which includes manual, automatic, and self- suction cupping sets. The third category is "cupping sets related to uses", which includes facial, female, male, and massage cupping set.[6] These classifications itself denote the evolution of simple cupping therapy into the technologically driven modified forms. Recently, interest in cupping has re-emerged and subsequently, several studies have begun to investigate the mechanisms of cupping therapy particularly in the context of chronic pain conditions.[7,8] The increasing interest of researchers in CT is evidenced by its application in the treatment of a range of pain conditions, including musculoskeletal pain, migraines, and neuropathic disorders.[8] Notably, cupping therapy possibly produces effects through multiple mechanisms. Although the exact mode of action of cupping to reduce pain is not well understood, three main possible hypotheses and theories might explain mechanisms of pain reduction. These include "Pain-Gate Theory" (PGT), "Diffuse Noxious Inhibitory Controls (DNICs)"and "Reflex Zone Theory" (RZT).[7] In recent studies, CT has been identified as a potential tool in pain management, with progress made in understanding its mechanisms, efficacy, and applications. By bridging traditional practices with modern scientific methodologies, CT research is set to make contributions to integrative medicine, offering new methods for effective, evidence-based pain management strategies.[8] These scientific methodologies may include the use of controlled negative-pressure systems and objective assessment technologies such as near-infrared spectroscopy and infrared thermography. These approaches enable standardization of treatment parameters, including pressure and duration, while allowing quantitative assessment of haemodynamic and thermal responses, thereby providing a scientific basis for optimizing cupping therapy.[9,10]

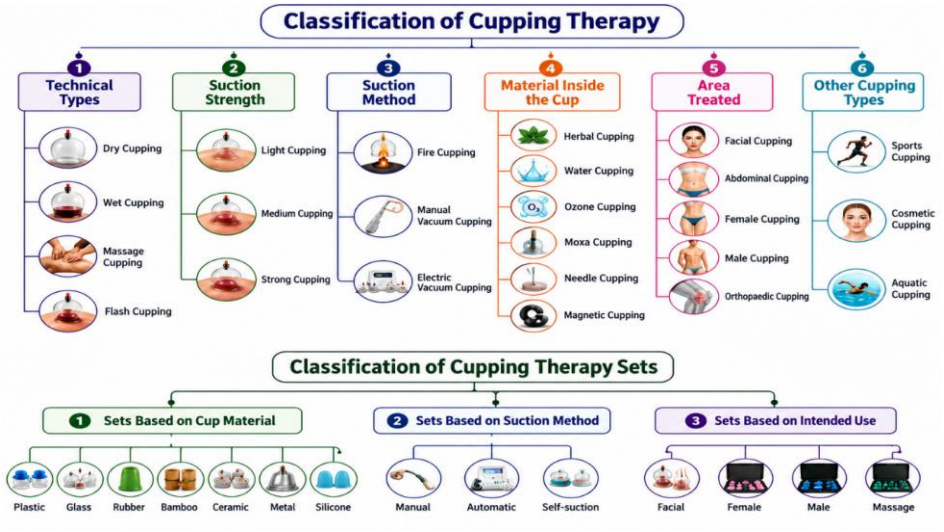


Figure 1: Classification of Cupping therapy and Sets

Phlebotomy

Phlebotomy is also known as venesection and is an important treatment that has been used from ancient times to the present. Several thousand years ago, phlebotomy was used for both preventative and curative purpose. In Unani medicine, this therapy has been indicated for various diseases like headache, meningitis, migraine, epistaxis, haemoptysis, acute gastritis, haemorrhoids, amenorrhoea, menorrhagia, arthritis, gout and low backache etc**.** The main principle behind this therapy is evacuation of morbid humours responsible for the disease.[11] Nowadays, In Unani and modern medicine, phlebotomy is performed in a clinic, at a blood bank, or under the supervision of a doctor in a hospital and is only performed with a prescription that clearly specifies the clinical indication(s) and the required number of bloodlettings. In contemporary medicine, there are currently three major indications for therapeutic phlebotomy: hemochromatosis, polycythemia vera, and porphyria cutanea tarda. Other indications include sickle cell disease and non-alcoholic fatty liver disease (NAFLD) with hyperferritinemia.[12] Venesection remains the mainstay of treatment for HFE (High Iron Fe) associated haemochromatosis. For non- HFE-associated haemochromatosis that is related to hepcidin deficiency, venesection is the preferred treatment. The goal of this therapy is to remove excess iron to prevent any further tissue damage. For ethical reasons, phlebotomy therapy has not been investigated in randomized clinical trials, which has hindered our understanding of the natural history of untreated disease.[13] It is the cornerstone of treatment in Polycythaemia Vera with a Haematocrit target of <45%, and daily low-dose aspirin therapy, in all patients, irrespective of risk category. The antithrombotic value of phlebotomy is supported by both controlled and uncontrolled evidence.[14] Currently, the classical principle of *Faṣd* (venesection) has evolved into technologically controlled therapeutic blood removal techniques such as erythrocytapheresis, which enables selective and efficient removal of red blood cells using automated cell-separation systems while preserving other blood components.[15]

Leech Therapy

Leech therapy has a long history of use, particularly for venous congestion and various ulcer forms, as part of both Ayurveda and Unani medical traditions. Modern explanations for the principles of this therapy are found in leeches' capacity to drain blood, to reduce venous congestion, and bioactive substances found in leech saliva. Such substances have been shown to have thrombolytic, anti-coagulant, anti-inflammatory, antimicrobial and pain-relieving effects, with an associated increase in blood circulation and an inhibition of platelet functions. The impact of leech saliva on wounds' local blood and lymph microcirculation appears an essential feature of wound healing. Despite the published evidence supporting leech therapy's effectiveness in treating chronic wounds, this therapy appears to have been

largely neglected in the western world to date. Additional information on the successful use of leech therapy for venous congestion and the treatment of various ulcer forms, from clinical reports, would bear further investigation using the standards of modern western medicine.[16] "Contemporary innovations in leech therapy have extended the classical application of live medicinal leeches towards the isolation and pharmaceutical formulation of their bioactive salivary constituents. Advances in extraction, characterization and drug-delivery technologies, including nanoliposomal leech-saliva gels, offer opportunities for developing more standardized, convenient and potentially safer therapeutic preparations while retaining the pharmacological benefits of leech-derived bioactive compounds.[17,18]

Massage therapy

The history of massage encompasses a vast number of cultures around the world wherein variety of massage techniques have been used for several thousand years. Massage therapy comprises of range of techniques like stroking, vibration, holding, pressing and each technique represents a unique approach to treatment of the musculoskeletal and other disorders. The basic principle behind massage therapy is to produce certain physiological effects on the musculoskeletal, nervous and vascular system of the body by careful manipulation of soft tissues. Experiments conducted over the world have shown evidences that massage affects the functionality of both animal and organic life. Mechanical pressure created by massage encourages the increase in circulation of blood by increasing the arteriolar pressure.[19]

Stress and fatigue are two common mental health issues in modern life. Stress can affect various aspects of physical and mental health, such as increasing the risk of diseases and sleep disorders. Increased plasma cortisol levels caused by stress affect energy intake, absorption, and utilization, including protein turnover and modulation of protective protein expression, all leading to a decrease in energy available for muscle growth. The use of medications to address stress and fatigue is common, but some people experience undesired side effects. Non-pharmacological methods such as massage therapy and exercise therapy can be effective and safe alternatives in reducing stress and fatigue levels as evidenced by the research.[20] Nowadays, Chinese medicine scholars focus on three primary areas where machine learning intersects with Chinese massage therapy: (1) Automated acupoint localization and identification: Machine learning is applied to automate the identification and localization of human acupoints through image processing and pattern recognition. (2) Intelligent massage assistance system: Integrating machine learning with intelligent sensing technologies, this advanced system provides real-time monitoring and guidance for massage. (3) Personalized massage treatment plan: Machine learning facilitates the creation of customized treatment plans by integrating individual health data and physiological parameters. This system adapts massage techniques and procedures to the patient's specific conditions and feedback, enabling adjustments for more accurate and effective treatments. Reflecting on the research findings and current literature, integrating massage with machine learning technology holds significant potential and promises notable advancements. Machine learning introduces novel perspectives and methods to massage therapy, enabling personalized treatment, efficient diagnosis, and optimization of treatment strategies. This technology facilitates the analysis and collection of clinical data for practitioners, identifies individual treatment factors, and automates the generation of customized treatment plans.[21] Innovations in massage therapy also include the integration of robotic systems capable of delivering controlled and reproducible mechanical stimulation. Robotic massage may facilitate standardization of treatment parameters, reduce therapist-dependent variability and physical workload, and provide measurable therapeutic benefits. Such technologies represent a promising transition from exclusively manual massage towards technology-assisted and potentially more standardized therapeutic interventions, although they should currently be regarded as complementary rather than replacements for skilled manual therapy.[22,23]

Aromatherapy

Aromatherapy has been used for thousands of years. It started around 2800BC as evidenced by Papyrus Ebers in which Aromatic medicine has been mentioned. Resins, balms, and fragrant oils were used in Egyptian culture. Hippocrates, father of modern medicine, advocated the use of aromatherapy due to his belief that aromatic baths and scented massage were key to good health. Westerners found many alternatives to treat medical conditions, such as pain, anxiety, depression, and insomnia, with scented oils from various plant sources. The pendulum started to shift from western medicine to an eastern holistic perspective. Aromatherapy emerged and was embraced as an alternative medicine for many medical conditions.[24] The term "aromatherapy" was coined in the early 20th century by French chemist Ren's-Maurice Gattefoss´e, who discovered lavender oil's healing properties when treating a burn. The ancient Egyptians, Chinese, and Indians, along with contributions from Arab cultures and European herbalism, laid the groundwork for the contemporary understanding application of aromatherapy. Aromatherapy utilizes essential oils for therapeutic purposes, promoting well-being and relaxation. It is divided into two major classes namely topical and inhalation aromatherapy. Topical aromatherapy includes massage therapy, medical application, and cosmetic purposes. Inhalation aromatherapy includes psycho-aromatherapy and olfactory stimulation.[25] Aromatherapy is a fast-growing complementary therapy worldwide. According to the National Institutes of Health National Center for Complementary and Integrative Health, Americans spend more than $30.2 billion annually on this therapy. It is predicted the global market will grow in spending to $5 trillion by 2050.[24] Contemporary innovation in aromatherapy involves its integration with immersive digital technologies such as three-dimensional virtual reality, creating a multisensory therapeutic environment that combines olfactory stimulation with immersive visual experiences. Such technology-assisted approaches may enhance psychological well-being, relaxation and sleep, demonstrating the potential evolution of conventional aromatherapy into digitally supported, multisensory therapeutic interventions.[26]

Water therapy

Water therapies exist since antiquity. The Greeks believed that there is a special healing power in water. The Romans built public baths that became recreational and social centers of the cities which are thought to be precursors of today's health resorts. In the nineteenth century, Vincenz Prießnitz and Sebastian Kneipp in particular emphasized the development of water therapy. Since the middle of the last century, the use of spas as well as water exercises and hot and cold water became very common in medical treatments for relieving pain. Due to the development of new analgesic methods, the popularity declined but is still an important part of the treatment of patients with chronic pain**.** Due to overlapping treatment concepts, a strict differentiation between several types of water therapy is difficult and the therapeutic focus also varies. Three main types of water therapies are Hydrotherapy, Balneotherapy, and Aquatic therapy.[27]

Contemporary innovations have expanded conventional water therapy into technology-assisted rehabilitation through underwater treadmills with controlled water-jet resistance, robot-assisted aquatic rehabilitation systems, and robotic platforms designed to reproduce the biomechanical effects of water. These developments enable greater control over therapeutic parameters such as resistance, movement and temperature, potentially improving the standardization, reproducibility and individualization of water-based rehabilitation. Thus, integration with robotics and automated rehabilitation technologies represents a promising direction in the modernization of traditional water therapy.[28,29,30]

(1) **Hydrotherapy**, a naturopathic therapeutic practice rooted in ancient civilizations including Egypt and China, has long been recognized for its potential to promote health and well-being.[31] Hippocrates in 400 BC documented the use of cold water for analgesic benefits and medicinal purposes and for relieving fatigue. This multifaceted approach involves the external or internal use of water in various forms and temperatures. The diverse range of hydrotherapy techniques, each with distinct applications, has

attracted significant attention from researchers, clinicians, naturopathic physicians and individuals for its benefits. Hydrotherapy includes a spectrum of interventions, like compresses, immersion baths and steam baths, cold showers, cold water immersion and cold water or winter swimming, all of which leverage water's dynamic properties to maintain health and treat diseases.[31] Hydrotherapy includes modalities such as Kneipp water baths and saunas, with therapeutic effects largely determined by water temperature. Cold water promotes vasoconstriction followed by vasodilation, improving circulation, reducing inflammation and pain, and aiding wound healing, whereas warm water induces vasodilation, relaxes muscles, relieves spasms, lowers blood pressure, and helps alleviate chronic back pain.[27]

(2) **Balneotherapy** is the set of practices which, based on scientific evidence, use medically and legally recognized mineral-medicinal waters, muds, and natural gases from natural springs for therapeutic purposes. Muds (or peloids) are maturated muddy suspensions composed of a complex mixture of fine-grained materials of geologic origin, mineral water, and commonly organic compounds from biological metabolic activity. Thus, mud therapy or pelotherapy is a balneological intervention that consists of the external application of mud for therapeutic purposes. It is often used for relieving chronic pain of several illnesses like rheumatoid arthritis or fibromyalgia. Additionally, Balneotherapy contains other bathing forms like moor bathing and is often used in spas for relieving chronic pain.[27,32] Balneotherapy and mud therapy have long been used in traditional medicine and are integrated into healthcare systems in many countries. Strong evidence, including systematic reviews and meta-analyses, supports their effectiveness in osteoarthritis, rheumatoid arthritis, fibromyalgia, and other rheumatic disorders. Current OARSI guidelines recommend balneotherapy as an appropriate option for osteoarthritis patients with comorbidities who have limited treatment alternatives.[32]

(3) **Aquatic therapy** uses water exercises mostly performed in groups with a therapist in a therapy pool. This includes spectrum of the exercise techniques to improve stretching, body strength or movement. In this therapy, the hydrostatic pressure of the water and the buoyancy are used, which may be helpful for people with musculoskeletal pain, orthopaedic complaints or neurological disorders.[27]

Sitz Bath

Ābzan (Sitz bath) is a simple, safe, economic, non-invasive and effective external regimen for various disorders. It is basically a type of bath in which only buttocks and hips are immersed into the water with the upper body, legs and feet out of the water. Plain or medicated water may be used for the therapeutic purpose. Sometimes, a whole body upto shoulder is immersed into the water.[33] It has been practiced for centuries as a natural remedy for various pelvic ailments and discomforts, offering localized relief and promoting healing. *Ābzan* therapy finds its origins in ancient Greece, where esteemed physicians like Hippocrates and Galen pioneered the foundational principles of medical practice.[34] The sitz bath, introduced by Vincent Priessnitz in the early 19th century, is a hydrotherapy technique whose name derives from the German word sitzen ("to sit"). In Unani medicine, it is widely used for gynaecological disorders to improve pelvic circulation, reduce inflammation, relieve pain and itching, and promote wound healing. Scientific evidence suggests that sitz baths enhance circulation, stimulate lymphatic drainage, and support tissue repair.[35]

Contemporary research findings are contributing to the growing body of evidence supporting the use of *Ābzan* therapy in modern healthcare practices especially in conditions such as haemorrhoids, anal fissures, and postpartum recovery. By generating empirical data on its efficacy, safety, and mechanisms of action, these studies help validate *Ābzan* therapy as a valuable therapeutic modality.[34] Contemporary innovations in sitz bath therapy include ergonomically designed hydrotherapy systems incorporating controlled water temperature, continuous water circulation and improved drainage. These technological modifications may facilitate more consistent delivery of thermal hydrotherapy while improving hygiene, safety and patient convenience, thereby representing a modernization of the conventional sitz bath.[36]

Thermotherapy

Heat therapy (HT) is one of the oldest non-pharmacological treatments for pain, acting by increasing tissue temperature, blood flow, metabolism, and pain-relieving receptor activity, thereby promoting tissue healing and regeneration. In contrast, cold therapy (cryotherapy) reduces blood flow through vasoconstriction. Heat can be delivered by conduction (hot packs, paraffin), conversion (ultrasound, radiant heat), or convection (hydrotherapy), making it a simple and widely used therapeutic modality.[37] (Figure 2) The use of heat for cleansing and healing purpose has been practiced throughout human history. Hot springs, saunas, hammams, steam rooms, steam inhalations, baths, hot mud and poultices have been used traditionally in cold, dry climates to prevent and treat respiratory infections and to enhance overall health and wellbeing. Heat therapy is used in modern medicine mainly for symptomatic relief and selected conditions such as cancer treatment using technologies like radiofrequency, ultrasound, and infrared energy. During the COVID-19 pandemic, heat therapy gained attention for supporting respiratory defence by enhancing mucociliary clearance, inhibiting viral activity in the upper airways, and stimulating immune responses through whole-body heating that mimics fever. Enveloped viruses, including coronaviruses, are sensitive to heat, with temperatures of 55–65°C capable of inactivating them under controlled conditions. Owing to its low cost, accessibility, and combined physical and psychological benefits, heat therapy has potential as a supportive therapeutic modality. Integrating traditional heat-based therapies with modern technology may enhance their role in future preventive and integrative healthcare.[38] Contemporary innovations in thermotherapy involve the transition from conventional passive heating methods to smart, wearable and programmable thermal systems. Integration of flexible sensors, peltier elements, closed-loop temperature regulation and smartphone-based control enables more precise, reproducible and individualized delivery of thermal stimuli. These developments have the potential to improve treatment standardization, portability and safety while facilitating real-time monitoring and personalized thermotherapy.[39,40]

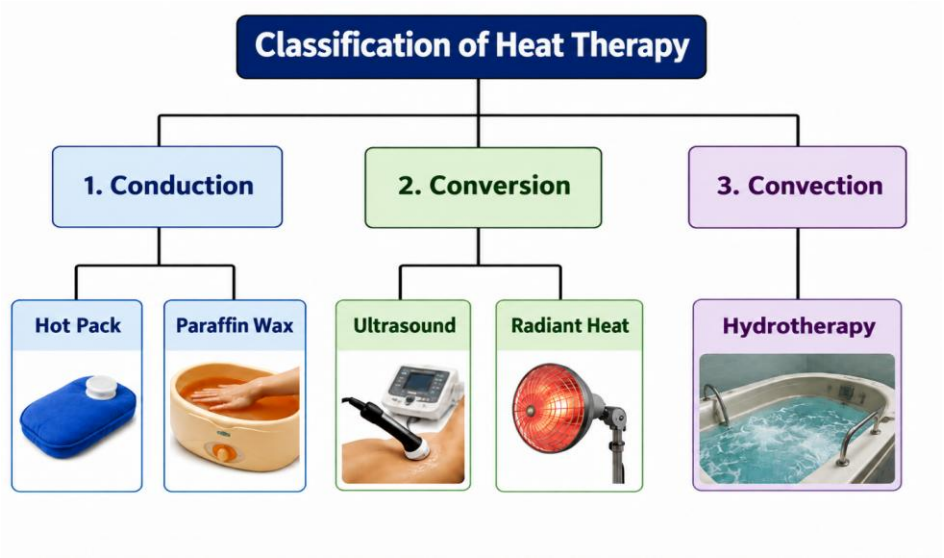


Figure 2: Classification of Heat therapy

Waon therapy

In 1989, a form of thermal therapy was developed for heart failure that uses a dry sauna with temperature maintained at 60°C, which differs from the traditional sauna. In 2007, the name was changed to Waon therapy: "Wa" means soothing, and "On" means warmth, hence Waon or "soothing warmth" is a warmth that comfortably refreshes the mind and body. It is defined as warming the entire body in a uniformly heated chamber for 15 min at a temperature that relaxes the mind and body. After the core body temperature has increased by 1.0–1.2°C, the patient rests outside the sauna for a further 30 min to maintain the soothing effect, and fluids corresponding to the amount of perspiration are supplied to

protect against dehydration at the end of therapy. It was observed that this new thermal therapy offers substantial benefits for patients with cardiovascular diseases, including chronic heart failure (CHF) and peripheral artery disease (PAD), as well as lifestyle-related diseases.[41] Waon therapy represents a contemporary innovation in thermal therapy through the use of standardized, controlled far-infrared dry-sauna heating followed by a defined period of heat retention and hydration. This approach enables more reproducible administration of systemic thermal stimulation than conventional sauna practices and has demonstrated potential benefits in functional and cardiovascular parameters, illustrating the transition of traditional heat-based therapy towards a structured and clinically evaluated therapeutic intervention.[42]

Cauterization

Amal -i- Kaiyy (Cauterization) involves the application of heated metals, oils, or corrosive substances to the affected site to destroy diseased tissue or close wounds. Despite its historical importance, it is less commonly practiced today due to concerns regarding pain and potential side effects. In modern surgical practice, cauterization is used to control haemorrhage, close blood vessels, and remove warts, moles, tumours, or electrocautery is even used to serve fallopian tubes to achieve female sterility. Although this method is rarely used today, it is deeply rooted in the Unani medical tradition. Historical evidence of cauterization can be traced back to the *Surgical Papyrus* dated around 1550 BC, where fire cautery was mentioned. In Ayurvedic medicine, *Sushruta* (800 BC) used cauterization techniques to treat various ailments involving veins and tendons. This therapy is also used in traditional Chinese medicine. In the 19th century, the practice was revitalized with the advent of electrical diathermy, offering a more precise and controlled means of generating heat to control bleeding during surgery. In contemporary medicine, the traditional hot iron has evolved into advanced tools like electrocautery and galvanocautery, now widely used in surgeries to prevent or control haemorrhage.[43] Contemporary innovations in cauterization include low-thermal plasma-mediated electrosurgical systems that employ precisely delivered pulsed radiofrequency energy for tissue cutting and coagulation. Compared with conventional electrocautery, these technologies can reduce collateral thermal injury while maintaining haemostatic capability, demonstrating the evolution of traditional cauterization towards more precise, controlled and tissue-sparing energy-based interventions.[44]

Naṭūl (Irrigation)

In this procedure, liquid medicinal preparation or water is poured over specific part of the body, more commonly over forehead. It is known as *Shirodhara* in Ayurveda. Studies are going on to measure the mechanical effects of this therapy as well as to confirm the efficacy of formulations employed in *Naṭūl*. The study proves that some non-mechanical causes maybe behind the observed results in *Naṭūl*. It is suspected that the time of raise of the force along with its magnitude will play a crucial role in the effectiveness of the treatment.[45] Contemporary innovations in *Naṭūl* involve the integration of automated and precision-controlled technologies, including robotic systems, peristaltic pumps and thermostatic temperature regulation. These approaches facilitate standardized and reproducible delivery of treatment while enabling objective evaluation through physiological and neurophysiological parameters such as ECG and EEG. Such developments demonstrate the transition of conventional *Naṭūl* towards a more standardized, technology-assisted and scientifically assessable therapeutic procedure.[46,47]

Physiotherapy

Physicians like Hippocrates and later Galen are believed to have been the first practitioners of physiotherapy, advocating massage, manual therapy techniques and hydrotherapy to treat people in 460 BC. After the development of orthopaedics in the eighteenth century, machines like the Gymnasticon were developed to treat gout and similar diseases by systematic exercise of the joints, similar to later developments in physical therapy.[48] In ancient medical practice, longitudinal traction was

used to realign overriding bone fragments, the skin traction was then discontinued once the splints had been applied to the limb. There are illustrations of this practice in existence today that detail how these methods were utilised. Hippocrates, a Greek Physician (350 B.C.) described in detail the practice of traction and countertraction and how the use of weights, pulleys and levers harnessed the forces of extension and counter extension for the treatment of fractures of the long bones and spinal disorders. Hippocrates devised the "succussion" or shaking method for patients with spinal deformities. This involved placing the patient in a head down position and tying his ankles to a ladder (the Hippocratic ladder). Hippocrates reduced and treated humeral fractures effectively. Hippocrates also described the use of an appliance for permanent extension of long bones; Some of the methods used to reduce fractures and dislocations are still used today. Centuries later, the Greek physician Galen (130-210 AD), adhering to the medical ideologies of Hippocrates, invented a similar skin traction apparatus known as the 'glossocomium'. The traction force was exerted through a number of pulleys and a windlass was used to adjust the tension. The process helped the physician to achieve alignment of the bone.[49] Modern physiotherapy originated in late 19th-century Britain and rapidly evolved through the use of massage, therapeutic exercise, and rehabilitation, particularly in orthopaedic care. Its development accelerated during the 1916 polio epidemic and World War I, when it became an established profession for restoring physical function in injured soldiers and individuals with disabilities.[48] Physiotherapy has evolved from predominantly manual and therapist-dependent interventions towards technology-assisted rehabilitation incorporating robotics, exoskeletons, virtual reality, sensors and real-time feedback. These contemporary innovations enable more precise, repetitive, measurable and individualized rehabilitation while enhancing patient engagement and monitoring of functional progress. The emerging approach therefore represents a hybrid model in which advanced technologies complement, rather than replace, conventional therapist-led physiotherapy.[50]

Conclusion

This review demonstrates that Regimenal therapy has undergone a remarkable transition from a classical therapeutic discipline rooted in humoral theory to an evidence-informed, technology-supported healthcare modality. Various therapies are utilized in traditional systems of medicine as well as modern medicine with use of technology. Published clinical studies, systematic reviews, and experimental investigations suggest that several regimenal therapies demonstrate beneficial effects in musculoskeletal disorders, chronic pain syndromes, osteoarthritis, migraine, varicose veins, dermatological disorders, and selected inflammatory conditions. This article summarizes the journey of Regimenal therapy from classical bedside practice to the digital era, and exemplifies how traditional medicine can evolve through innovation while remaining rooted in its original therapeutic philosophy.

Author Contributions

Sayyed Adnan: Writing –Original Draft, Resources, Conceptualization, Visualization

Shaheen Akhlaq: Writing – Review & Editing

Athar Parvez Ansari: Conceptualization, Visualization

Farooqui Shazia Parveen: Writing – Review & Editing, Methodology, Formal analysis, Data curation.

Arzeena Jabeen: Supervision

Acknowledgement: None

Funding

This review study did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Declaration of conflicting interests

No conflicting interests have been declared by any of the authors.

Ethical statement

This article is a narrative review based on literature analysis and does not involve any experimentation on humans or animals. Hence, compliance with the Declaration of Helsinki (2013) and EU Directive 2010/63/EU is not applicable.

Informed Consent and Patient Details

The article does not contain any studies involving human participants or patient data. It does not include any personal information that could lead to the identification of individuals. Hence, Informed consent is not applicable.

Ethical Approval

As this study is a review article, ethical approval was not required.

References

1. Zehra A, Beg MU, Mudassir M, Husain M, Mahmood K, Arshad QMA. A panoramic review of Ilaj bit Tadbeer (Regimental Therapy) in the Unani system of medicine. World J Pharm Pharm Sci. 2025;14(8):171-182. doi:10.20959/wjpps20258-30392
2. Ansari AP. Ilāj bi'l-Tadbīr (regimenal therapy): a core mode of Unani treatment. J Complement Integr Med. 2021;18(3):449-458. doi:10.1515/jcim-2020-0048
3. Tipo FA, Khan TN, Khanam B. Conceptual explanation of Asbab-e-Sitta Zarooriya (six essentials), their effect on vital heat and human health: A Unani perspective. Int J Physiol Nutr Phys Educ. 2019;4(1):570-573
4. Khan MQ. Teaching and training of Unani medical officers in Ilaj Bit Tadbeer under State Health Society Scheme of Government of Maharashtra: Significance & impacts. Int J Adv Health Sci. 2017;4(4)
5. Mir IA, Jahan N, Sofi G. Role of Ilaj-Bit-Tadbeer in pain management: a non-pharmacological approach. Int J Herb Med. 2016;4(6):92-94
6. Aboushanab TS, AlSanad S. Cupping therapy: an overview from a modern medicine perspective. J Acupunct Meridian Stud. 2018; 11(3):83-87 doi:10.1016/j.jams.2018.02.001
7. Al-Bedah AMN, Elsubai IS, Qureshi NA, Aboushanab TS, Ali GIM, El-Olemy AT, et al. The medical perspective of cupping therapy: Effects and mechanisms of action. J Tradit Complement Med. 2019;9(2):90-97. doi:10.1016/j.jtcme.2018.03.003
8. Xu R, Liu SL, Xu G, Yan C, Cui Q, Liu S, et al. Trends and hotspots in cupping therapy research for pain: a bibliometric study. Front Med (Lausanne). 2025;12:1559099. doi:10.3389/fmed.2025.1559099.
9. Li Y, Mo PC, Lin CF, Pauly S, Kundal N, Hernandez ME, et al. Using near-infrared spectroscopy to investigate the effects of pressures and durations of cupping therapy on muscle blood volume and oxygenation. J Biophotonics. 2023;16(7):e202200342. doi:10.1002/jbio.202200342.
10. Liu X, Wang Y, Wu Z. Infrared thermal imaging-based skin temperature response during cupping at two different negative pressures. Sci Rep. 2022;12:15506. doi:10.1038/s41598-022-19781-6.
11. Aslam M, Anjum R, Ali SJ, Mazhar SA. Unani concept of Fasd (Venesection): A review. J Integr Community Health. 2022;11(1):25-27. doi:10.24321/2319.9113.202204.
12. Kim KH, Oh KY. Clinical applications of therapeutic phlebotomy. J Blood Med. 2016;7:139-144. doi:10.2147/JBM.S108479
13. Whittington CA, Kowdley KV. Haemochromatosis. Aliment Pharmacol Ther. 2002;16(12):1963-1975. doi:10.1046/j.1365-2036.2002.01371.x
14. Tefferi A, Vannucchi AM, Barbui T. Polycythemia vera: historical oversights, diagnostic details, and therapeutic views. Leukemia. 2021;35(12):3339-3351. doi:10.1038/s41375-021-01401-3.

15. Lukić M, Balint B, Todorović-Balint M, et al. Performance and safety of therapeutic erythrocytapheresis in polycythemia and hemochromatosis treatment: single centre experience. Hematol Transfus Cell Ther. 2024;46(Suppl 5):S103-S108. doi:10.1016/j.htct.2024.05.011.

16. Koeppen D, Aurich M, Pasalar M, Rampp T. Medicinal leech therapy in venous congestion and various ulcer forms: Perspectives of Western, Persian and Indian medicine. J Tradit Complement Med. 2020;10(2):104-109. doi:10.1016/j.jtcme.2019.08.003.

17. Shakouri A, Adljouy N, Balkani S, Mohamadi M, Hamishehkar H, Abdolalizadeh J, et al. Effectiveness of topical gel of medical leech (Hirudo medicinalis) saliva extract on patients with knee osteoarthritis: a randomized clinical trial. Complement Ther Clin Pract. 2018;31:352–359. doi:10.1016/j.ctcp.2017.12.001.

18. Abdualkader AM, Ghawi AM, Alaama M. Development of leech extract as a therapeutic agent: a chronological review. Pharmacol Res Mod Chin Med. 2024;10:100355. doi:10.1016/j.prmcm.2023.100355

19. Liu SL, Qi W, Li H, Wang YF, Yang XF, Li ZM, Lu Q, Cong DY. Recent advances in massage therapy: a review. Eur Rev Med Pharmacol Sci. 2015;19(20):3843-3849.

20. Satia Graha A, Nurhadi FI, Wibafied Billy TP. Innovative approaches: Massage therapy and exercise to reduce fatigue and stress. In: Proceedings of the 7th International Conference on Sport Science, Health, and Physical Education (ICSSHPE 2024). Atlantis Press; 2025. doi:10.2991/978-94-6463-794-7_

21. Shen Y, Wang S, Shen Y, Xing H. Integrating Traditional Chinese Medicine massage therapy with machine learning: A new trend in future healthcare. Prog Med Devices. 2024;2(3):97-104. doi:10.61189/721472czacxf.

22. Kerautret Y, Di Rienzo F, Eyssautier C, Guillot A. Comparative efficacy of robotic and manual massage interventions on performance and well-being: a randomized crossover trial. Sports Health. 2024;16(4):650-660. doi:10.1177/19417381231190869

23. Marín-Méndez H, Marín-Novoa P, Jiménez-Marín S, Isidoro-Garijo I, Ramos-Martínez M, Bobadilla M, et al. Using a robot to treat non-specific low back pain: results from a two-arm, single-blinded, randomized controlled trial. Front Neurorobot. 2021;15:715632. doi:10.3389/fnbot.2021.715632

24. Farrar AJ, Farrar FC. Clinical aromatherapy. Nurs Clin North Am. 2020;55(4):489-504. doi:10.1016/j.cnur.2020.06.015

25. Vora LK, Gholap AD, Hatvate NT, Naren P, Khan S, Chavda VP, et al. Essential oils for clinical aromatherapy: A comprehensive review. J Ethnopharmacol. 2024;330:118180. doi:10.1016/j.jep.2024.118180.

26. Cheng VYW, Huang CM, Liao JY, Hsu HP, Wang SW, Huang SF, et al. Combination of 3-dimensional virtual reality and hands-on aromatherapy in improving institutionalized older adults' psychological health: quasi-experimental study. J Med Internet Res. 2020;22(7):e17096. doi:10.2196/17096.

27. Reger M, Kutschan S, Freuding M, Schmidt T, Josfeld L, Huebner J. Water therapies (hydrotherapy, balneotherapy or aqua therapy) for patients with cancer: a systematic review. J Cancer Res Clin Oncol. 2022;148(6):1277-1297. doi:10.1007/s00432-022-03947-w.

28. Lim CG. Effect of underwater treadmill gait training with water-jet resistance on balance and gait ability in patients with chronic stroke: a randomized controlled pilot trial. Front Neurol. 2020;10:1246. doi:10.3389/fneur.2019.01246.

29. Al-Waeli H, Al-Jumaily A, Al-Kalani H. Design, development and control of a therapeutic robot incorporating aquatic therapy for ankle rehabilitation. Machines. 2021;9(11):254. doi:10.3390/machines9110254

30. Kong K, Moon H, Hwang B, Jeon D, Tomizuka M. Robotic rehabilitation treatments: realization of aquatic therapy effects in exoskeleton systems. In: Proceedings of the 2009 IEEE International Conference on Robotics and Automation; 2009.

31. Kunutsor SK, Lehoczki A, Laukkanen JA. The untapped potential of cold water therapy as part of a lifestyle intervention for promoting healthy aging. GeroScience. 2025;47(1):387-407. doi:10.1007/s11357-024-01295-w

32. Gálvez I, Torres-Piles S, Ortega-Rincón E. Balneotherapy, immune system, and stress response: A hormetic strategy? Int J Mol Sci. 2018;19(6):1687. doi:10.3390/ijms19061687

33. Nayab M. Ābzan (Sitz bath): An effective mode of treatment in 'Ilāj bit Tadbīr (Regimenal Therapy). Pharma Innov J. 2016;5(12):45-49.

34. Hasan I. ABZAN (Sitz Bath) therapy in Unani medicine: Historical roots, therapeutic benefits, and contemporary applications. World J Pharm Med Res. 2024;10(4):112-119

35. Ahmed RK, Shameem I. Role of Ābzan (Sitz Bath) in gynaecological disorders: A comprehensive review with scientific evidence. CellMed. 2022;12(1):e5. doi:10.5667/CellMed.2022.005

36. Johnson SL. Hydrotherapy soaking chair and method for use. US Patent Application US20240115459A1. Published April 11, 2024.

37. Zanoli G, Albarova-Corral I, Ancona M, Grattagliano I, Hotfiel T, Iolascon G, et al. Current indications and future direction in heat therapy for musculoskeletal pain: A narrative review. Muscles. 2024;3(3):212-223. doi:10.3390/muscles3030019

38. Cohen M. Turning up the heat on COVID-19: Heat as a therapeutic intervention. F1000Research. 2020;9:292. doi:10.12688/f1000research.23299.2

39. Sawada T, Okawara H, Nakashima D, et al. Effects of alternating heat and cold stimulation at different cooling rates using a wearable thermo device on shoulder muscle stiffness: a cross-over study. BMC Musculoskelet Disord. 2022;23:645. doi:10.1186/s12891-022-05623-z.

40. Chen J, Shi Y, Ying B, Hu Y, Gao Y, Luo S, Liu X. Kirigami-enabled stretchable laser-induced graphene heaters for wearable thermotherapy. Mater Horiz. 2024;11(8):2010–2020. doi:10.1039/D3MH01884A

41. Miyata M, Tei C. Waon therapy for cardiovascular disease: Innovative therapy for the 21st century. Circ J. 2010;74(4):617-621. doi:10.1253/circj.CJ-09-0939

42. Kihara T, Miyata M, Fukudome T, Ikeda Y, Shinsato T, Kubozono T, et al. Waon therapy for managing chronic heart failure: results from a multicenter prospective randomized WAON-CHF study. Circ J. 2016;80(4):827-834. doi:10.1253/circj.CJ-16-0051.

43. Chatrappa D, Parveen SA, Naveen Kumar MR, Nayab M. The Art of Healing with Heat: A Contemporary Review of Amal-i-Kaiyy (Cauterization) in Unani Medicine. J Drug Deliv Ther. 2025;15(6):253-259. doi:10.22270/jddt.v15i6.7232

44. Ruidiaz ME, Messmer D, Atmodjo DY, Vose JG, Huang EJ, Kummel AC, et al. Comparative healing of human cutaneous surgical incisions created by the PEAK PlasmaBlade, conventional electrosurgery, and a standard scalpel. Plast Reconstr Surg. 2011;128(1):104-111. doi:10.1097/PRS.0b013e31821741ed

45. Meenraj S, Chebolu LR, Venkatesh B. Impact force measurement in Shirodhara. J Ayurveda Integr Med. 2019;10(3):192-197. doi:10.1016/j.jaim.2018.12.006

46. Uebaba K, Xu FH, Ogawa H, Tatsuse T, Wang BH, Hisajima T, et al. Psychoneuroimmunologic effects of Ayurvedic oil-dripping treatment. J Altern Complement Med. 2008;14(10):1189-1198. doi:10.1089/acm.2008.0273.

47. Dhuri KD, Bodhe PV, Vaidya AB. Shirodhara: a psycho-physiological profile in healthy volunteers. J Ayurveda Integr Med. 2013;4(1):40-44. doi:10.4103/0975-9476.109550.

48. Haryana Chartered Association of Physiotherapists. Physio Harcon 2016 souvenir [Internet]. Haryana (India): HCAP; 2016 [cited 2026 Feb 7]. Available from: https://hcap.org.in/wp-content/uploads/2015/05/Physio-Harcon-2016-Souvenir-final.pdf)

49. Flynn S. History of traction. Int J Orthop Trauma Nurs. 2018;28:4-7. doi:10.1016/j.ijotn.2017.08.003

50. Oberoi MD, Barmecha D, Shaikh SZ, Puntambekar AS. From concept to clinic: a scoping review of robotics and virtual reality-assisted rehabilitation protocols in neurological and orthopaedic conditions. Cureus. 2026;18(5):e109222. doi:10.7759/cureus.109222.