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# Unani Medicine Uncovered: Core Concepts and Quality Evaluations

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***Abstract***

*Unani medicine, a traditional healing system primarily reliant on herbal remedies, finds its roots in the ancient wisdom of Greek philosopher Hippocrates (460–377 BC) and his associates. Its evolution and prominence, however, owe much to the support of Persian and Arab empires before making its way to the Indian subcontinent around the mid-14th century. Unani practitioners believe that each individual possesses a unique temperament shaped by the interplay of four fundamental humoral combinations. This temperament is influenced by a variety of factors, including age, mental state, local climate, and environmental conditions. Treatment in Unani medicine revolves around tailoring diet and pharmacological interventions to align with the patient's temperament. The system places great emphasis on promoting health and employs a range of approaches such as regimental therapy, dietetics, and pharmacology to manage diseases. Numerous clinical studies have validated the effectiveness of Unani remedies, often with minimal side effects. Recent efforts have focused on standardizing, quality control, and toxicity assessment of herbal drugs, as well as validating formulations listed in the Unani Pharmacopeia of India. Despite the system's proven benefits in healthcare, it remains underutilized. The present article provides an insight into the core principles and historical context of Unani medicine, while also shedding light on its quality control measures and its valuable contributions to the healthcare landscape in India.*

**Keywords:** *Unani* system of medicine, evaluation, *Akhlat*, *Quwa*, *Mizaj*, concepts and quality

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## INTRODUCTION

### Origin of Unani Medicine

The term "*Unani*" finds its etymological roots in the word "Ionion," which translates to "Greek". Much like Western medicine, the origins of *Unani* medicine can be traced back to the Greek philosopher Hippocrates (460–377 BC) and his colleagues. Hippocrates' foundational principles revolved around the idea of the human body as a holistic and interconnected system. His approach to treatment was broad and didn't fixate on specific sets of symptoms. Instead, he delved into the causal relationships between factors such as climate, water, clothing, diet, and eating and drinking habits in relation to the occurrence of diseases. Furthermore, Hippocrates debunked the influence of magic and superstition that had previously

 

clouded medical concepts of the era. In doing so, he transformed the rudimentary medical knowledge of his time into a science grounded in empirical evidence and data [1, 2].

**The Concept of Health and Disease**

In the realm of *Unani* medicine, the understanding of health and disease hinges on a comprehensive categorization of their underlying causes, known as "*Asbab*." These causes are divided into two primary categories:

1. ***Internal Causes (Asbab-e-Dakhilia):*** These factors are intrinsically linked to diseases resulting from imbalances in an individual's temperament or structural anomalies within their organs and tissues [3].
2. ***External Causes (Asbab-e-Kharjia):*** These causes encompass a broader spectrum, including emotional, physical, and chemical changes, as well as the influence of various microbes [4].

It is crucial to note that these causes are believed to be influenced and modulated by six fundamental factors, collectively known as "*Asbab-e-Sitta Zarooriya*". These factors are:

- *Atmospheric air:* Referring to the impact of the surrounding environment, including air quality and climate.
- *Water and food:* Involving the role of diet and hydration in maintaining health.
- *Sleep and wakefulness:* Exploring the significance of sleep patterns and rest in overall well-being.
- *Bodily movements and repose:* Concerned with physical activity and rest intervals.
- *Psychic movements and repose:* Emphasizing the importance of mental and emotional states on health.
- *Excretion of waste products and/or retention of useful products:* Focusing on the elimination of bodily waste and the retention of essential substances.

From a modern perspective, these factors encompass human physiology and ecological influences, bridging both internal and external environments.

The concept of health in *Unani* medicine is closely tied to the balance of humors (*Akhlat*) within the body. This balance is intricately dependent on maintaining equilibrium among these "six essential factors" . Disease, on the other hand, is viewed as a result of disruptions in the quantity and quality of these factors, leading to an imbalance in the humors.

This imbalance in humors can manifest in various ways, including:

1. *Thinning of humor consistency:* A reduction in the density of bodily fluids.
2. *Thickening of humor consistency:* An increase in the viscosity of bodily fluids.
3. *Plethora:* Characterized by an excessive or overactive presence of humors.
4. *Cacochyma:* Describing the putrefaction or deterioration of humors.

In essence, *Unani* medicine provides a holistic framework for understanding the intricacies of health and disease, acknowledging the dynamic interplay between internal and external factors that influence an individual's well-being**.**

**DIAGNOSIS**

The *Unani* system of medicine places paramount importance on understanding the holistic nature of each patient for the purpose of diagnosis. It perceives every individual as a unique entity with distinct characteristics, including their fundamental constitution, psychological makeup, defense mechanisms, responses to environmental influences, and personal preferences. This system of medicine fundamentally believes in fostering a harmonious coexistence between humans and their natural surroundings. It views human beings as an integral component of the greater cosmos, where any disruption within this interconnected web can impact an individual's overall bio-social-psychological equilibrium—a critical aspect of good health. To arrive at a diagnosis, *Unani* medicine begins by

 

analyzing the patient's temperament. Additionally, diagnosis is corroborated by the examination of pulses, which reveal valuable insights into the patient's condition. In this regard, there exists a multitude of pulses, each associated with specific bodily conditions or internal imbalances [5].

These pulses are assessed based on various characteristics, including:

1. **Degree of expansion:** Determining the extent of arterial dilation.
2. **Impaction on fingers:** Examining how the pulse feels when touched**.**
3. **Duration of movement:** Assessing the duration of the pulsation.
4. **Texture of artery:** Evaluating the arterial wall's texture.
5. **Emptiness/Fullness of artery:** Gauging whether the artery feels full or empty.
6. **Hot/Cold sensation:** Detecting whether the pulse feels warm or cool.
7. **Duration of rest:** Analyzing the intervals between pulsations.
8. **Similarity or dissimilarity:** Noting whether the pulses are uniform or varied.
9. **Regularity or irregularity:** Assessing the consistency of pulsations.
10. **Rhythm:** Evaluating the pattern of pulsations.

These distinctive features give rise to a diverse array of pulses, including the jerking pulse, wavy or undulant pulse, vermicular pulse, serrate pulse, intermittent pulse, hammer-like pulse, spasmodic pulse, tremulous pulse, double stroke pulse, ant-like pulse, and tense pulse, among others. To further confirm the diagnosis, *Unani* medicine may also involve the examination of urine and stool. These comprehensive diagnostic practices enable practitioners to gain a deep understanding of the patient's condition and formulate an appropriate treatment plan tailored to their unique constitution and imbalances.

## MODES OF TREATMENT

In the practice of *Unani* medicine, a fundamental guiding principle is the concept of opposition (*Ilaj biz Zid*). This principle dictates that to combat a disease arising from an abnormal quality or quantity of bodily humors, a remedy with the opposite quality or temperament is necessary. Often, excess humors are altered in consistency and eliminated from the affected organ's tissues through the use of specific medications. Subsequently, the organ is restored to its natural temperament and regains its proper functioning. In cases where the organ continues to function sluggishly even after restoring its normal temperament, it may be invigorated with strengthening medications [6].

*Unani* medicine employs four primary modes of treatment for various ailments viz. regimental therapy, dietotherapy, pharmacotherapy, and surgery.

1. **Regimental Therapy *(Ilaj bit Tadbeer):*** In specific illnesses, morbid substances are either removed from the body or redirected away from vital organs such as the brain, heart, and liver. This is achieved through various methods, including purgation (*Ishal*), emesis (*Qai*), diuresis (*Idrar*), cupping (*Hijamat*), massage (*Dalak*), exercise (*Riyazat*), Turkish baths (*Hammam*), diaphoresis (*Tareeq*), leeching (*Irsale alaq*), venesection (*Fasd*), enema (*Huqna*), irrigation (*Nutool*), inhalation (*Inkabab*), expectoration (*Tanfees*), fomentation (*Takmeed*), diversion (*Imala*), cauterization (*Amle kai*), and foot bathing (*Pashoya*).
2. **Dietotherapy *(Ilaj bil Ghiza):*** This treatment method involves manipulating the actions of the "six essential factors" (*Asbabe Sitta Zarooriya*) through dietary management. It can be employed to maintain overall health, bolster the body's resistance, or address specific diseases.
3. **Pharmacotherapy *(Ilaj bid Dawa):*** *Unani* medicine relies on natural remedies, with a strong emphasis on herbal medicines, although some may be derived from animals or minerals [7, 8]. The preference is for single drugs or their combinations, though complex and chronic disorders may occasionally necessitate compound formulations**.**
4. **Surgical Therapy *(Ilaj bil Yad):*** Surgery is considered as the last resort in *Unani* medicine, reserved for situations where it becomes unavoidable. The system's ancient experts were pioneers in surgical techniques and had developed their instruments and methods. The approach to treating an illness typically progresses through physical regimens, dietary management, and drug therapy, with surgery considered only when all other options have been exhausted.

 

**The Idea of Individualized Healthcare**

The idea of "personalized medicine" or "precision medicine" has gained significant attention recently, but a similar concept was proposed in *Unani* medicine nearly 1000 years ago by Avicenna. He noted that medications could have varying effects on individuals, organs, or even the same person at different times. In *Unani* medicine, the concept of "*Mizaj*" (temperament) recognizes that every individual possesses unique characteristics based on their physiology, psychology, and morphology [9]. This inherent and acquired temperament aligns with the modern concept of personalized medicine, which considers genetic and environmental factors affecting drug responses [10]. *Unani* medicine, guided by a patient's temperament, has always tailored treatment accordingly. While not identical to modern gene-based therapies, both concepts share the fundamental idea that individuals don't respond uniformly to the same treatment [11].

## LOCALIZATION OF *UNANI* MEDICINE IN INDIA

The concept of *Unani* medicine found its way to India primarily through the contributions of Arab and Iranian scholars and physicians. This transfer of knowledge took place around the middle of the 14th century when Central Asia and Persia faced attacks by the Mongols, leading many *Unani* experts to seek refuge in India [12, 13]. In the Indian subcontinent, the *Unani* system is referred to as *Tibb-e-Unani* or *Hikmat*, and its practitioners are known as *Hakims*.

Over the centuries, several eminent *Unani* scholars and physicians have left their indelible marks on this system of medicine:

1. **Zia Mohammad Masood Rasheed Zangi:** He was among the earliest known *Unani* practitioners, active during the rule of the Tughlaq dynasty.
2. **Shahab Abdul Karim Nagauri:** Residing in Nagaur city in Gujarat during the Tughlaq period (1321–1413 AD), he became a renowned physician.
3. **Abul Qasim Farishta:** A famous physician, his book *Dastoorul-Atibba* showcased his deep understanding of *Ayurveda* and earned high regard in Indian medical literature.
4. **Ali Gilani*:*** He served as a court physician to the Mughal emperor Akbar the Great, contributing significantly as a researcher and prolific writer.
5. **Nizamuddin Ahmad Gilani:** He authored numerous books on medicine and pharmacognosy.
6. **S.M. Hashim Alvi Khan*:*** Attached to the courts of Mughal emperors Aurangzeb Alamgir, Shah Alam, and M. Shah Rangila, he was a distinguished physician.
7. **Mohammad Akbar Arzani:** Known for his nine books, he drew from a wealth of clinical experience to contribute to *Unani* medicine.
8. **Azam Khan*:*** An eminent *Unani* physician during British rule in India. He declined offers from the Avadh Sultanate and continued his medical practice, leaving behind prized books such as *Ikseer-e-Azam* and *Muheet-e-Azam.*
9. **M. Kabiruddin*:*** A dedicated scholar of *Unani* medicine, he also served as a popular teacher in various *Unani* medical colleges [12, 14].

The development of *Unani* medicine in India was further facilitated by the establishment of formal institutions, including the Oriental College of Lahore (1872) and several Unani Medical Colleges in different regions. The progress of *Unani* medicine in India was significantly influenced by families such as the Sharifi, Azizi, Usmani, and Hamdard families, who provided substantial support and promotion for the system throughout the Indian subcontinent. Notably, Hakim Ajmal Khan—a member of the Sharifi family—played a pivotal role in advancing *Unani* medicine. He founded the Hindustani Dawakhana in Delhi during 1905, took patents for 84 herbal formulations, initiated the All India Vedic and Unani Tibbi Conference in 1906 to advocate for Indian systems of medicine, and made significant contributions to the field of hypertension treatment by isolating key alkaloids from *Rauwolfia serpentina* [15–18].

The Hamdard family, particularly Hakim Abdul Hameed and Hakim Mohammad Said, also played a crucial role in promoting *Unani* medicine in India and Pakistan. They established Hamdard Laboratories and Hamdard University, emphasizing modern scientific techniques while developing

 

effective *Unani* formulations for various health conditions**.** Overall, the journey of *Unani* medicine in the Indian subcontinent has been shaped by the contributions of numerous scholars, physicians, and visionary individuals who dedicated themselves to its progress and development [19].

## PHILOSOPHY

### Doctrine of Naturals

Throughout history, humans have pondered the composition of their bodies, with various emerging theories. *Unani* medicine, deeply rooted in ancient philosophy, adopted the four-element theory from Greek thinkers such as Empedocles, Hippocrates, and Aristotle [20]. These elements were fire, air, water, and Earth, roughly corresponding to heat/energy, gases, liquids, and solids. Intriguingly, some Muslim and Indian philosophers introduced variations, debating whether fire was a form of air, ultimately suggesting three or five elements [21]. However, the modern definition of "element" in chemistry, referring to substances with a single type of atoms, differs from the ancient concept. In contemporary *Unani* medicine, sticking to the four-element theory has been criticized as outdated [22–24]. Modern science identifies around 80 elements in the human body, with carbon, hydrogen, nitrogen, oxygen, and sulfur being predominant. These elements are categorized as essential, possibly essential or nonessential [25].

*Unani* medicine, rooted in nature's healing properties, views health as the balance of basic body components. It draws from the philosophy of Hippocrates and emphasizes the concept of *Tabiat* (madicatrix naturae), similar in some respects to the modern notion of immunity [26–28]. According to *Unani* medicine, the human body is composed of four elements—fire (representing energy), air (for gases), water (liquids), and Earth (solids). These elements interact to create temperaments, with each individual having a unique balance [29]. Hippocrates' humoral theory identifies four humors (*Akhlat*)—blood, phlegm, yellow bile, and black bile [30]. These humors have varying proportions of the four basic elements and determine an individual's temperament—sanguine, phlegmatic, choleric, or melancholic [31]. The concept of pneuma (*Rooh*) in *Unani* medicine, is often misunderstood as the soul or psyche, is considered a vital energy or force necessary for bodily functions. This concept is divided into physical strength (*Quwwate tabeiyah*), mental strength (*Quwwate nafsania*), and vital strength (*Quwwate haywaniya*), collectively known as *Quwwate Mudabbira Badan*. In summary, *Unani* medicine, deeply rooted in ancient philosophies, incorporates the balance of basic body components, humors, and vital forces in its approach to health and healing [32].

### Progress of Unani Medicine

#### *The Roman Support*

*Unani* medicine saw significant progress under various empires during different historical periods. The Roman Empire played a crucial role in advancing this medical knowledge, having acquired it from ancient Greece.

During the first century AD, Dioscorides—a prominent Roman physician—made substantial contributions to pharmacology with the publication of his influential work. Another noteworthy figure of the Roman era was Claudius Galen, also known as Jalinoos (130–201 AD). Galen was a polymath who excelled in multiple fields, including medicine, anatomy, physiology, surgery, pharmacology, and even gynecology. These Roman physicians and their contributions significantly enriched the field of *Unani* medicine during their time [33].

#### *Persian and Arab Influences*

The development of *Unani* medicine owes a significant debt to the Persian Empire, which played a vital role in its advancement. Several eminent ancient physicians, including Raban Tabri, Zakariya Razi, Ibn Sina, and Rustam Jarjani, hailed from Iran. These scholars made substantial contributions to the field [34]. The introduction of Greek medicine to Arab society occurred around 600 AD, just before the advent of Islam. Islamic medicine was greatly influenced by the teachings of the Holy Qur'an and the practices of the Prophet Muhammad. The Prophet emphasized the medical significance of various

 

edibles and herbs, such as honey, vinegar, date fruit, garlic, onion, figs, Kasni, and Kalonji, as well as therapeutic techniques like cupping. About 95 drugs and diets were mentioned in the sayings of Prophet Muhammad. During the Umayyad (660–750 AD) and Abbasid (750–1258 AD) periods, medical knowledge from different regions was assimilated and integrated with traditional Arab ethics and practices. Emperors such as Abu Jafar Mansur, Harun Rasheed, and Mamun Rasheed of the Abbasid era sponsored extensive translation projects, where Greek, Syrian, Nestorian, Cladian, Sanskrit, and Persian literature were translated into Arabic [12, 14, 35].

### *Arab Contributions*

In the medieval period (6th–13th centuries AD), various systems of medicine converged to create a more comprehensive system, often referred to as Arabic or Islamic medicine. This system, although rooted in Greek fundamentals, was heavily influenced by Persian and Arab concepts and traditions. During this era, Arab rulers officially embraced *Unani* medicine, leading to the development of an official formulary known as Qarabadeen. State patronage supported chemical and pharmaceutical procedures, resulting in the invention of processes such as distillation, sublimation, calcination, and fermentation to enhance the efficacy of medicines and eliminate impurities. Numerous prominent physicians emerged during this period, including Jabir bin Hayyan, Ibne Raban Tabari, Abu Bakar Zakariya Razi (Rhazes), Ali Ibn Abbas Majoosi (Haly Abbas), Bu Ali Ibn Sina (Avicenna), Abul Qasim Zohravi (Abulcasus), Ibn-e-Haisham (Hazen), Ibn-e-Zohar (Avenzoar), Ibn Rushd, Abdul-Latif Baghdadi, Ibne Baitar, and Ibne Nafees. Their contributions encompassed various fields, from chemistry to surgery, and their works played a significant role in shaping *Unani* medicine during this era [12, 14].

## QUALITY CONTROL AND STANDARDIZATION OF *UNANI* MEDICINE

The World Health Organization has defined the standardization and quality control of herbal drugs as “the process involved in the physicochemical evaluation of crude drug covering aspects such as selection and handling of crude material, safety, efficacy and stability assessment of finished product, and documentation of safety and risks based on experience”. The herbal raw material is affected by several factors and requires to be examined carefully for the correct identity of the plants involved; also for the seasonal variation (which has a bearing on the time of collection), the ecotypic, genotypic and chemotypic variations, drying and storage conditions, and the presence of xenobiotic [36]. Standardization of herbal drugs prescribes a set of standards or inherent characteristics, constant parameters, and definite qualitative and quantitative values that carry an assurance of quality, efficacy, safety, and reproducibility. Specific standards are worked out by experimentation and observations, which lead to prescribing a set of characteristics exhibited by the given herbal medicine [37, 38]. Various parameters analyzed to ascertain drug identity, purity, and strength, as mentioned in The *Unani* Pharmacopoeia of India (Part I), are given as follows:

(1) Morphological and anatomical study;
(2) Powder analysis;
(3) Total ash content;
(4) Acid-insoluble ash;
(5) Alcohol-soluble extractive;
(6) Water-soluble extractive;
(7) Loss on drying.

## CONCLUSION

The *Unani* system of medicine traces its origins back to ancient Greece, around 377 BC. It gradually flourished in the Arab and Persian regions before finding its way to the Indian subcontinent. This holistic approach to healthcare focuses on maintaining health, preventing diseases, and providing effective cures through regimental therapy, dietotherapy, and pharmacotherapy. Its foundational principle—*Ilaj biz Zid*—centers on understanding the patient's temperament. Interestingly, this ancient concept of temperament aligns with the modern notion of personalized medicine. *Unani* medicine

 

primarily relies on herbal remedies, offering long-term, cause-based solutions rather than short-term symptomatic relief, often with minimal adverse effects.

Despite its merits, *Unani* medicine faces challenges such as the lack of standardized and well-characterized polyherbal formulations, limited knowledge of their pharmacokinetics and pharmacodynamics, and insufficient data on potential drug–drug and food–drug interactions. These factors sometimes deter individuals from adopting *Unani* treatments. To address these concerns, more preclinical studies and clinical trials are essential to elucidate the molecular mechanisms behind *Unani* drug efficacy in treating acute and chronic diseases, as well as lifestyle disorders. Additionally, certain traditional *Unani* formulations, which use sugar or honey as bases, are unsuitable for diabetic patients. However, there is a growing trend to reformulate these treatments into powder, tablet, or capsule forms to accommodate diabetic individuals. Certain historical hypotheses within *Unani* medicine, like those related to pneuma, blood composition, and oxygenated versus deoxygenated blood supply, have been contradicted by modern scientific research. These outdated concepts may have a place in teaching programs as part of the system's historical evolution. Another critical concern is the preservation of the ancient art of pulse reading, which is gradually fading due to a declining number of skilled *Hakims (Unani* practitioners) specializing in this practice. To address this issue, institutions such as the National Institute of Unani Medicine in Bangalore, Aligarh Muslim University in Aligarh, Jamia Hamdard in New Delhi, Hamdard University in Karachi, and Hamdard University Bangladesh in Dhaka should collaborate on comprehensive projects. These projects could involve experienced *Hakims* and experts in electronics and digital technology to translate pulse signals into digital formats, ensuring the preservation of this valuable knowledge for future generations.

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