

IBN SINA AND THE ROOTS OF THE SEVEN DOCTRINES OF PRESERVATION OF HEALTH

IBN SINA (AVICENA) I KORIJENI SEDAM DOKTRINA ODRŽAVANJA ZDRAVLJA

Murad Ahmad Khan¹, Fauzia Raza², Iqbal Akhtar Khan³

SUMMARY

Ibn Sina, the most eminent Muslim physician, illuminative philosopher, great thinker and a versatile genius is regarded as the “Father of Early Modern Medicine” and as the “Father of Clinical Pharmacology”. The “Kitab al-Qanun fi-al-Tibb”, commonly known as the “Canon Medicinæ” is the most important of his medical works and, at the same time, the most carefully preserved treasury both in original Arabic and in the initial Latin version. It is the final codification of all Greco-Arabic medical thoughts up to his time, enriched and modified with his own scientific experimentations and independent observations. It is considered “The First Textbook of Medicine on the Earth”. The “Canon” surpassed the books of Hippocrates and Galen and remained supreme for more than six centuries, in the West. Ibn Sina described “Seven Doctrines” for Preservation of Health, based on the Mudawa Salookia, in his magnum opus. The roots of these principles can be traced, to a significant extent, to Egyptian Medicine, Hebrew Medicine, Greek Medicine, Roman Medicine, Traditional Chinese Medicine, Ancient Persian Medicine, Ayurvedic Medicine (Hindu Medicine) and Islamic Medicine.

Key words: Avicenna; Canon Medicinæ; Preservation of Health, Seven Doctrines; History of Medicine; Greco-Arabic Medicine; Mudawa Salookia

¹ Department of Pharmacology & Therapeutics RAK College of Medical Sciences RAK Medical & Health Sciences University, Post Box: 11172, Ras Al- Khaimah, United Arab Emirates. Electronic address: murad@zeast.com.

² Department of Medicine RAK Hospital, Post Box 11393, Ras Al- Khaimah, United Arab Emirates. Electronic address: fauziarazamd@gmail.com.

³ Corresponding author: Prof. Iqbal Akhtar Khan, Independent Scholar, Lahore, Pakistan. Electronic address: profiakhan@gmail.com.

INTRODUCTION

“The next time you visit your physician, whisper a prayer of thanks to Avicenna, because many of the foundations of modern medicine - empirical observation, objectivity, and rationalism - surfaced through his towering genius a millennium ago” [1].

(Larry Dossey, MD., author of “Healing Words”)

Abu Ali al-Husayn Bin Abd-Allah Bin al- Hasan Bin Ali Bin Sina (980-1037 CE) was born in Afshana, a village in the outskirts of Bukhara (in what is now Uzbekistan) [2]. Bukhara was capital of the Persian dynasty Samanids in Central Asia and Greater Khorasan [3]. Both Arab and Persian honour him with titles like the “Leader of All Scholars (*Shaykh al-Rai’s*)”, “Pride of the Nation (*Sharaf al-Mulk*) and “Prince of Physicians (*Rai’s al-Attibba*)”, “Embodiment of Truthfulness (*Hujjat al-Haq*) and “Jewel of East” (*Naabgha e Sharaq*). In the West he is better known by his Latin name of “Avicenna” or Hebrew “Aven Sina”.

Ibn Sina was the most eminent Muslim physician [4] and an illuminative philosopher [5]. He was described as “Flower of medieval Arabic culture and learning” [6], having the mind of the renowned German philosopher Johann Wolfgang von Goethe (1749-1832 CE) and the genius of the Italian Renaissance painter, scientist and engineer Leonardo da Vinci (1452-1519 CE) [7]. Geoffrey Chaucer (1343-1400 CE), the Father of English Literature, rated him highly in the Canterbury Tales [8]. Daniel Le Clerc (1652-1728 CE), in “Histoire de la medicene-1696” says “Aven Sina is an intellectual phenomenon. Never perhaps has an example been seen of so precious, quick and wide an intellect, extending and asserting itself with so strange and indefatigable an activity” [9]. The great French Orientalist, Carre de Vaux (1868-1939 CE), acclaims “Never time will present a comparable figure since encyclopaedic knowledge no longer exists” [10]. According to George Sarton (1884-1956 CE), the Father of the History of Science, he is one of the most famous exponents of Muslim universalism and an eminent figure in Islamic learning. And for a thousand years, he has retained his original renown as one of the greatest thinkers and medical scholars in history [11]. Abdul Nasser Kaadan, the Founder President of International Society for the History of Islamic Medicine, asserts “Ibn Sina was a unique phenomenon, not only because of this (Canon) encyclopedic accomplishment in medicine, but also because of the versatility of his genius” [12].

His surviving work consists of around 240 books, treatises and articles in various scientific and literary fields [13]. “*Kitab al-Qanun fi-al-Tibb*”, commonly known as the “*Canon Medicinæ*” (Greek-Principles or Codes of Laws) is by far the largest, the most famous and the most important of his medical works and, at the same time, the most carefully preserved treasury both in original Arabic (Figure 1) and in the initial Latin version [6]. It is the final codification of all Greco-Arabic medical thoughts up to his time, enriched and modified with his own scientific experimentations and independent observations, surpassing the books of Hippocrates; and remaining supreme for more than six centuries in the west [14]. Colin Ronan (1920-



Figure 1- Probably the earliest extant manuscript of “*Kitab al-Qanun fi-al-Tibb*” of Ibn Sina, Vol. 5, dated 444 H/1052 CE. (By courtesy of The Aga Khan Museum, Toronto, Canada) [21].

1995 CE), the renowned British author, described it as “The First Textbook of Medicine on the Earth” [15]. The principles contained therein are still taught at The University of California Los Angeles and Yale University, among others, as part of the history of medicine” [16]. “The Ibn Sino (Avicenna) International Foundation” was established in Tashkent Republic of Uzbekistan, in February 1999, with the objective of holding “Annual International Avicenna Readings in Bokhara” (the mother land of that great scientist) in order to popularize his scientific and spiritual heritage [17].

The First Graduate Student Conference on Ibn Sina, at Yale University, in March 2001 reflected exciting developments in the recent growth of research into the life, times and philosophy of Ibn Sina in the United States, Europe and the Middle East [18]. The International Symposium bridging Culture and Time - “*Kitab al-Qanun fi al Tibb*” held at Istanbul, in June 2013, is a notable example of the emerging interest in Ibn Sinian Medicine [19]. Ibn Sina Academy of Medieval Medicine and Sciences Aligarh India organized “International Conference on Life and Contribution of Ibn Sina”, in

October 2014, to commemorate the 1000th anniversary of the compilation of the “*Kitab al-Qanun fi al Tibb*” [20].

Although extensive research has been conducted on this venerable book, famous for its encyclopaedic character, systematic arrangement and philosophical plan [22], over a span of more than 1000 years, there are certain areas hitherto untapped; “Preservation of Health” being very tempting [23]. According to Ibn Sina, “Medicine is the science by which we learn the various states of the body; in health, when not in health; the means by which health is likely to be lost; and when lost, is likely to be restored. In other words, it is the art whereby health is maintained and the art by which it is restored when lost” [24]. This definition deserves to be saluted irrespective of time and place. Whereas the “Canon” is more logical and systematic than any other medical treatise of that age, the component devoted to public health provides highly systematic knowledge on the definitions of health, disease and those features which are comparable to today’s knowledge [25].

HISTORY OF HEALTH

There is an interesting quote by Greek Jewish political writer Ludwig Borne (1786-1837 CE), “There are a thousands illnesses but only one health”.

The word “Health” is derived from the old English word “Hoelth” which meant a state of being sound and was generally inferred as a soundness of body [26]. According to a famous Arab Proverb, “He who has health has a hope, and he who has a hope has everything”. Hippocrates, The Founder of Medicine as a Rational Science, believed health to be the expression of a harmonious balance between the various components of man’s nature, the environment and life style. The equilibrium was controlled by natural (and hence predictable) causes. The body, itself, struggles to restore its normal equilibrium. He advocated the importance of a natural life style because nature is the great healer. The role of the physician is to aid, not to hinder her [27]. Aristotle (384-322 BC), the Greek Philosopher, believed that “health is excellence of the body, that is, a condition which allows us, while keeping free from disease, to have the use of our bodies” [28]. Claudius Galen (130-circa 200CE) defined health as the condition in which we do not suffer from pain and are not impeded in the activities of life [29].

Shusruta (fl 1500 BC), the Father of Plastic Surgery, defines a healthy person as one in whom there is perfect balance of all bodily functions with tranquillity and equilibrium of the mind, senses and spirit (soul) [30]. The

Ayurvedic Concept of Health, which dates back approximately five thousand years, is based on equilibrium of *Dhatus* (elements) whereas the disease is disequilibrium [31]. Ayurveda (from Sanskrit words; *ayuh* meaning life and *veda* meaning knowledge) invariably links mind and body in health and disease [31]. For the ancient Persian scholars, health is a result of “right” measure of the elements of humour, while sickness is defined by their excess or deficiency. Medicine thus consists of re-establishing the balance [32].

Ali Ibn al-Abbas al-Majusi (949-982 CE), Latinized as Haly Abbas, in his book “*Kamil as sina’ah al-tibbiyah*” (The Complete Book of The Medical Art, also called The Royal Book) asserts that in health the body is in a state of dynamic equilibrium [33]. Ibn Rushd (1126-1198 CE), Latinized as Averroes, in his book “*Kitab al-Kulliyat fi al-Tibb*” defined health as “a state in which an organ performs its natural function or undergoes its normal reaction” [34]. Ibn al-Nafees (1210-1288 CE), renowned for discovery of the pulmonary circulation, defines health, in his book “*Al-moojaz fi al-Tibb*”, as a state of the body in which functions are normal per se, while disease is the opposite state [35]. According to Ibn Sina, “health is a dynamic state in which the temperament and structure of human body are such that all its functions are carried out in a correct and wholesome manner”. He further asserts that the state of equilibrium which, a human being enjoys, has a certain range with an upper and a lower limit. In other words, we can say that it is like a balance which moves between two extreme limits. Disease, he continues, is an abnormal state of human body which primarily and independently, but not secondarily, disturbs normal functions. Disease may, thus, be a disorder of temperament or structure [24]. He has highlighted the key role of life style/behaviour modification (*Mudawa Salookia*) in maintaining and preserving health. Interestingly, Ibn Sina was the first to integrate psychological aspects in theoretical and practical medicine [19].

Before the World Health Organizations’ (WHO) definition of 1946 was adopted, doctors used to define health as the absence of disease, just as someone who defines life as the absence of death [36]. The definition of the WHO dated 22nd July 1946 (entered into force on 7th April 1948) says, “Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity” [37]. It was in 1998 that the Executive Board of WHO recommended to the World Health Assembly (WHA) to modify the preamble of the constitution to change the definition of health as follows: “Health is a dynamic state of complete physical, mental, spiritual and social wellbeing and not merely the absence of disease or infirmity” [38].

The Ottawa Charter for Health Promotion dated 21st November 1986 defines health as “a positive concept emphasizing social and personal resources, as well as physical capacities” [39].

THE SEVEN DOCTRINES OF PRESERVATION OF HEALTH

For preservation of health, Ibn Sina has described the “Seven Doctrines” (*Amoor Saaba*) (Figure 2] which are enumerated as follows [24]:

1. Equilibrium of temperament
2. Selection of articles of food and drink
3. Evacuation of effete matters
4. Safeguarding the composite
5. Maintaining the purity of air respired
6. Guarding against extraneous contingencies
7. Moderation in regard to the movements of the body and the motions of the mind, with which may be included “sleep and wakefulness”



Figure 2 - Page 75 of “Kitab al-Qanun fi al Tibb” (Canon) Volume 1 containing the description of “Amoor Saaba” (Seven Doctrines of Preservation of Health).

Source: By Courtesy of American University of Beirut - SAAB Memorial Medical Library.

The roots of these doctrines have been traced to a significant extent. Limited study of Egyptian Medicine, Hebrew Medicine, Greek Medicine, Roman Medicine, Traditional Chinese Medicine, Ayurvedic Medicine (Hindu Medicine) and Islamic Medicine was well rewarding. As far as principles of hygiene and public health are concerned, Ibn Sina seems to have been influenced by “Nei Ching (or Huang Ti Nei Ching Su Wen) written by Huang Ti (or Huangdi) known as the Yellow Emperor (2698-2598 BC), by the Mosaic Code (1571-1451 BC) of Moses the

Apostle of God, by “Shushruta Samhita”, authored by Shushruta (fl 1500 BC) and by health laws framed by the Chinese philosopher Kong Zi (or Kung-fu-tzu) usually called Confucius (circa 551-479 BC). Also of note in Ibn Sina’s writings are contributions of the great Hindu religious giant Manu (fl 500-300 BC), by the greatest hygienic landmarks of Roman Medicine - the Aqueducts (circa 312 BC) and Cloaca maxima (6th century BC), by the writings of the Father of Physiology Erasistratos of Chios (fl 290 BC), by “Austranga Samgraha”, a classic of Hindu Medicine, authored by Vagbhata (fl 7th century CE) and many more, still to be explored. The philosophical component and the love of the art of healing have been derived from the teachings of Hippocrates the Great (460-377 BC). Broader aspects of the preservation of health have been based on the thoughts of the towering figure of Claudius Galen (130-circa 200 CE). Being a devout Muslim, with in-depth knowledge of the Holy Quran and the Hadith (Sayings of The Holy Prophet SAW), Ibn Sina made extensive use of the principles of health contained therein.

HEALTH PRESERVATION BIOGRAPHY

Nei Ching (or Hua\ng Ti Nei Ching Su Wen), the fundamental doctrinal source for Traditional Chinese Medicine, beautifully links the natural effects of diet, lifestyle, emotions and environments with preservation of health. The three simple but indispensable principles include [40]:

- Being in harmony with nature and the environment
- Protection of the body and the spirit
- Balancing activity and quiescence

The famous Chinese Saying “one should only pay one’s physician when one is well and one should not pay if one is ill”, comes from the philosophy that focuses on maintaining wellness all through life, not just treating illness when it occurs. The study of Hebrew Medicine introduces us to the Mosaic Code of Moses (Apostle of God) who is often called the Father of Sanitation or the First Public Health Engineer. He described principles of personal hygiene, environmental sanitation, rest and sleep, hours of work, disinfection and regulations to check animals before slaughtering and eating. The five principles of preserving health include: pure air, pure water, pure food, pure dwelling and pure body. The Deuteronomic Code (Deuteronomy 23:12-14) contains several sanitation instructions in particular to dispose of human excreta, by burying deep in earth, away from residential areas to

keep the locations holy. There are guidelines for correct hand washing also. Leviticus 11:34-36 declares contaminated water and food unclean and unfit for consumption.

Confucius, the Founder of Confucianism, through “Analects of Confucius” made a great contribution to the development of the science of health preservation. It positively affected the development of the Chinese dietetic culture, nourishing the body and the mind as a whole. Confucius strongly advocated the idea that good health lies in a broad mind. The Confucian Perspective includes, as its primary aim, the necessity of health promotion [41]. The basic principles of general cleanliness, inner and outer purity and food hygiene have been well described in Manusmriti (Laws of Manu) which is the most important and earliest medical work in Sanskrit [42]. According to the German Philosopher Friedrich Nietzsche (1844-1900 CE), “the sun shines on the whole book”. Shushruta Samhita is the greatest medical treatise in Sanskrit which extols the benefits of clean living, pure thinking, good food habits, regular exercise and sound sleep. It explains the origin of disease as an imbalance of vital humours that occur either individually or in combination [30].

Charaka Samhita (Compendium of Caraka), recorded several thousand years ago from teachings of the *Rishi* (Sanskrit-Sage) Punarvaso Atreya (fl 3000 BC), is a gem of practical wisdom which remains to this day the most respected work on Ayurveda (which means complete knowledge for long life) [43]. According to the *Rishi*, the Tripod on which the living world stands is Mind, Self and Body. Healthy daily routine serves to prevent disease, strengthen tissues and sense organs. He advises that the wise should not suppress natural urges. The *Rishi*, when asked “what is the origin of a person And what is the origin of his disease?” replied, “Only the use of wholesome food promotes growth of the person. And only the use of unwholesome food is the cause of disease. This is because the wholesome food endows the body with development, strength, lustre and happy life” [43]. The ancient books Ashtanta Hridya Samhita and Ashtanga Samgraha, authored by Vagbhata (Trinity of Ayurvedic knowledge after Shushruta and Charaka), emphasise provision of a wholesome diet, optimal sanitary practices and regular physical exercise for healthy life [44, 45].

A review of Greek Medicine familiarises us with Hippocrates’ philosophy of the interrelationship between physical and mental health. To him, nature never needed any instruction. He believed that adequate physical

exercise and a healthy diet were integral to bodily health [46]. Another Greek physician Herophilus of Chalcedon (335-280 BC), one of the founders of the Alexandria School of Medicine and well-remembered for distinguishing between veins and arteries, advocated the key role of healthy food habits and moderate exercise in the preservation of health [47]. He asserts “when health is absent, wisdom cannot reveal itself, art cannot manifest, strength cannot fight, wealth becomes useless and intelligence cannot be applied” [47]. Erasistratos of Chios (304-250 BC), the Father of Physiology, known for separating preventive medicine from curative medicine, emphasised the need for general and bodily cleanliness, dietetic hygiene, balanced food and regular exercise for preservation of health [48,49]. Renowned Greek Physician Asclepiads of Bithynia (circa 124-40 BC), the Father of Geriatrics, is well esteemed for his motto “Physician’s mission is to heal safely, rapidly and pleasantly”. His approach to preservation of health was directed towards healthy habits, wholesome food, adequate physical exercise, regular bathing and massage [50, 51]. In Galenic Medicine, the six essential factors for preservation of health include: consumption of wholesome food and drinks, the right amount of exercise, living and working in an environment conducive to wellbeing, getting the right amount of sleep, active care of one’s wellbeing and last, but not the least, maintaining the balance of all five factors [29].

The Roman King Lucius Tarquinius Priscus, (reign 616-579 BC), is credited with having built the world’s earliest sewage system. This was a remarkable service to public health medicine [52]. Moreover, the Romans, in 312 BC, were the first to start working on aqueducts providing every citizen free access to fresh clean drinking water. In addition, public baths were made available to them. The need of healthy water, to keep the body clean internally and externally, was fulfilled this way [53].

IBN SINA’S CONTRIBUTION

Ibn Sina, a fervent Muslim with in-depth knowledge of The Holy Quran and The Hadith, made extensive use of the instructions contained therein in his own practice of medicine; whether academic, preventive or curative. There is an authentic Hadith “Ask Allah (God) for forgiveness and health, for after being granted certainty, one is given nothing better than health” [54]. The objective of preserving this blessing, for humans, is attainable by getting adequate knowledge of the principles of acquiring and maintaining

health, and sticking to the comprehensive and practicable instructions regarding taking wholesome food and drink, abstinence from unhealthy practices, and taking care of personal, general and environmental hygiene. There is a dire need to maintain a balance between the preventive and the promotive components of medicine. The concept of health potential is given in another authentic Hadith, “And store up enough health to draw on during your illness” [55]. Health potential may take the form of proper nutrition, or good immunity or physical fitness enabling a person to cope well with the stress which the body may face [56]. Ibn Sina believes that “the well being of the whole person - emotionally, physically, spiritually and mentally - is necessary for the believer to participate fully in life, fulfilling his/her duties towards a better society” [24].

From the above discussion one may, erroneously, infer that Ibn Sina was just a blind follower of the ancient giants of medicine with nothing original on his part. This impression, of a towering genius with wide ranging brilliance, is wrong. In fact, he did view all the available previous work and ideas but did not follow them slavishly. He seems to have been impressed by the inspiring words of Gautama Buddha (circa 563 or 480--circa 483 or 400 BC), the Founding Figure of Buddhism, “Do not accept anything by mere tradition. Do not accept anything because it agrees with your pre-conceived notions. Do not accept anything because it seems acceptable. Do not accept anything because it accords with your scriptures” [57]. He agreed with the venerable Charaka (fl 800 BC) that “the wise should not accept anything without investigation” [31]. Moreover, he was an admirer of the celebrated Greek Physician Aretaeus of Cappadocia (fl 2nd Century CE), the first one to describe diabetes and Coeliac disease, who advised “one must be fertile in originality of ideas and not be satisfied to apply his mind entirely to the writings of others” [58]. Ibn Sina made a comprehensive attempt at collecting, systematising, as well as updating the data with his personal observations and original research [59]. The remarks of Spanish Jewish Philosopher Shem-Tove ibn Falaquera (1225-1295 CE) about his works are thought provoking describing them as “exact but incomprehensible to those unfamiliar with logic” [60]. Ibn Sina himself said “absence of understanding does not warrant absence of existence”. The renowned medical scholar Galen described three states of the human body: “Health”, “Disease” and “Neither Health nor Disease” (for example old people, convalescence and children). The so-called third state is called the Galenic Notion of Neutrum, an intermediary, indeterminate state between health and disease. Ibn Sina emphatically

refuted that assertion and argued that the states of the body were only two (Health and Disease) and the third one was, in fact, decline in health and, by no means a separate entity. Health, he continues, is a steady state while disease is more of a variable concept [24].

ENDORSEMENT OF IBN SINA'S WORK

Interestingly, Ibn Sina's assertion was attested by Taddeo Alderotti (circa 1210-1295 CE), the Founding Father of Scholastic Medicine at the University of Bologna, who admitted that, according to intellectual judgement, there can be no middle state between health and disease since there is nothing between balance and imbalance [61]. It may be appropriate to cite, at this stage, the renowned scholar Nizami al-Arundi Samarqandi (fl.1110-1161 CE), the author of "*Chahar Maqala* (Four Discourses) who remarked "Could Hippocrates and Galen return to life, it would be proper for them to do reverence to *al-Qanun of Ibn Sina*" [62].

It is hard to describe Ibn Sina in anything but superlatives [6]. Sir William Osler, one of the founding professors of John Hopkins Hospital, declared the Canon as the most famous medical textbook ever written [63]. To be realistic in scientific approach, the previous paragraphs are quite insufficient to cover the vast topic of the Seven Doctrines of Preservation of Health, *an important component of the Canon*. The work needs to be expanded on a larger scale, to do justice to the subject. The "many lines of profitable research concealed within the pages of this *venerable book (Canon)* must be explored" [24]. A fitting closing to this article is the wish of Ibn Sina "I prefer a short life with width, to a narrow one with length". God Almighty was gracious enough to hear to his submission, and raised him to the level of "one of the most famous of all races, places and times" [64], "Father of Early Modern Medicine" [65], and "Father of Clinical Pharmacology" [66] in a total age of only 57 years.

One modern historian described him as a "meteor, which flashed across the sky, illuminating the whole world with his brilliance, and in whose after-glow we still perceive the world around us" [6].

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SAŽETAK

Avicena (Ibn Sina), najugledniji muslimanski liječnik, prosvijećeni filozof, veliki mislilac i svestrani genij, smatra se na polju medicine "ocem rane moderne medicine" i "ocem kliničke farmakologije". Kitabal-Qanunfi-al-Tibb, općepoznat kao Canon Medicinae, najvažnije je od njegovih medicinskih djela te istovremeno najpomnije očuvana riznica i u izvornoj i u prvoj latinskoj verziji. To je konačna kodifikacija grčkoarapske medicinske misli do njegova vremena, obogaćena i dopunjena njegovim vlastitim znanstvenim ispitivanjima i neovisnim promatranjima; smatrana "prvim udžbenikom medicine na Zemlji". Canon je nadmašio Hipokratove i Galenove knjige i ostao vrhovni autoritet na Zapadu više od šest stoljeća. Avicena je opisao "Sedam doktrina" za održavanje zdravlja u svom remek-djelu Mudawa Salookia. Korijeni tih principa mogu se naći u egipatskoj, hebrejskoj, grčkoj, rimskoj, kineskoj, staroperzijskoj, indijskoj i islamskoj medicini.

Ključne riječi: *Avicena; Canon Medicinae; održavanje zdravlja; Sedam doktrina; povijest medicine; grčkoarapska medicina; Mudawa Salookia*