

History of Science & Medicine

Doctors' Doctor: Ibn Sina (Avicenna)

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When the first man and woman descended from heaven, after sometime they might have fallen ill and they might have tried some remedy to cure this illness. Then Greeks came with elaborate philosophies but no hard work, no meticulous observations, no experimentation and no verification. They did not have the required patience, perseverance, and sweat and blood that the great poet Iqbal has described as "Blood of Liver" without which no substantial thing can be achieved. Working in the early hours of the morning and getting in tune with the nature are prerequisite for the balance growth of science and arts. The required selflessness, rising about flesh and materialism is required to reach at the greatest heights. 1200 years ago when the Europe was in utter darkness, the light was shining in the East. Quran, the last and the final version of the divine message kindled the light! The Quran raised the most backward nation to the top in all spheres of human life. It provided the required milieu for hard and sincere work. It removed the rust from the hearts and opened the eyes, ears and minds of the people. As a result great miracles occurred. Rapid advancements were made in all spheres of life. Modern medicine was born. Modern Surgery along with required inhalation anesthesia, antiseptics and catgut sutures were all invented. Modern Chemistry and laboratory sciences were born. Physics, astronomy, mathematics, algebra, geometry all came in to being. An embryo was conceived with numerous facets. This embryo later became an adult in Europe and other places. For many people in the West perhaps the information may appear new and startling due to the fact that they were kept blind due to religious and other prejudices against Islam and Muslims. It is the irony the very people whom Muslims treated rather well and gave faculty positions in the University Hospitals in Spain became very active in maligning Islam through self created

terrorism and false propaganda

Today we will introduce you to a great physician who along with some his contemporary Muslim Physicians can be rightly regarded as father of modern medicine.

Let us meet Ibn Sina whose original and superb work in the fields of medicine, philosophy, mathematics, and astronomy contributed a lot toward starting the modern engine of science. He was born in 986 and physically passed away in 1037. But his 51 years of life had been extended to time immemorial as every doctor; every pharmacist and every patient of today is indebted to his great work and is beneficiary of his planted trees.

Ibn Sina (Avicenna) started his education with Quran. At very early age he had acquired good knowledge of Quran. Then he began studying philosophy by reading various Greek, Muslim and other books on this subject. He had kind help of Abu Abdallah Natili, a famous philosopher of the time. He studied various drug and medicines afterwards. Based on his keen observation, hard work, and superb organizational capacity and capability Ibn Seen had become a famous physician by the age of 17 when he was fortunate in curing Nooh Ibn Mansour, the king of Bukhara, of an illness in which all the well-known physicians had given up hope. On his recovery, the king wished to reward him, but the young physician only desired permission to use his uniquely stocked library.

On his father's death, Abu Ali left Bukhara and traveled to Jurjan where Khawarizm shah welcomed him. There, he met his famous contemporary Abu Raihan al-Biruni. Later he moved to Ray and then to Hamadan, where he wrote his famous book al-Qanun fi al-Tibb.

From Hamadan, he moved to Isfahan, where he completed many of his monumental writings.

Nevertheless, he continued traveling and the excessive mental exertion as well as political turmoil spoilt his health. Finally, he returned to Hamadan where he died in 1037

The Qanun is, of course, by far the largest, most famous and most important of Ibn Sina's works. The main division is into five books;

1. The first deals with general principles
2. The second with simple drugs arranged alphabetically
3. The third with diseases of particular organs and members of the body from the head to the foot
4. The fourth with diseases which though local in their inception spread to other parts of the body, such as fevers
5. The fifth with compound medicines.

The Qanun clearly distinguishes mediastinitis from pleurisy and recognizes the contagious nature of tuberculosis of the lung and the spread of disease by water and soil. It gives a scientific diagnosis of ankylostomiasis (hookworm) and attributes the condition to an intestinal worm. The Qanun points out the importance of dietetics, the influence of climate and environment on health and the surgical use of oral anesthetics. Ibn Sina advised surgeons to treat cancer in its earliest stages, ensuring the removal of all the diseased tissue.

Ibn Sina noted the close relationship between emotions and the physical condition and felt that music had a definite physical and psychological effect on patients.

Of the many psychological disorders that he described in the Qanun, one is of unusual interest: love sickness! Ibn Sina is reputed to have diagnosed this condition in a Prince in Jurjan who lay sick and whose malady had baffled local doctors. Ibn Sina noted a fluttering in the Prince's pulse when the address and name of his beloved were mentioned. The great doctor had a simple remedy: unite the sufferer with the beloved.

In the last 30 years of the 15th century Qanun passed through 15 Latin editions and one Hebrew. In recent years, a partial translation into English was made. From the 12th-17th century, the Qanun served as the chief guide to Medical Science in the West and is said to have influenced Leonardo da Vinci. In the words of Dr. William Osler, the Qanun has remained "a medical bible for a longer time than any other work".

The Qanun fi at-Tibb surveyed the entire medical knowledge available from ancient and Muslim sources. Due to its systematic approach, "formal perfection as well as its intrinsic value, the Qanun superseded Razi's Hawi, Ali Ibn Abbas's Maliki, and even the works of Galen, and remained supreme for six centuries".

In addition to bringing together the then available knowledge, the book is rich with the author's original contribution. Here we find careful description of skin troubles; of sexual diseases and perversions; of nervous ailments."

The Qanun's materia medica in addition to describing pharmacological methods considers some 760 drugs, with comments on their application and effectiveness. He recommended the testing of a new drug on animals and humans prior to general use. The book became the most authentic material medical of the era. He was also the first to describe meningitis and made rich contributions to anatomy, gynecology and child health.

His philosophical encyclopedia Kitab ash-Shifa was a monumental work, embodying a vast field of knowledge from philosophy to science. He classified the entire field as follows:

Theoretical knowledge of;

Physics
Mathematics
Metaphysics

Practical knowledge of ;

Ethics
Economics
Politics.

His philosophy synthesizes Aristotelian tradition, Napoleonic influences and Muslim theology.

Al-Qifti states that Ibn Sina completed 21 major and 24 minor works on philosophy, medicine, theology, geometry, astronomy and the like. Another source (Brockelmann) attributes 99 books to Ibn Sina comprising 16 on medicine, 68 on theology and metaphysics, 11 on astronomy and four on verse.

Most of these were in Arabic; but in his native Persian he wrote a large manual on philosophical science entitled Danish-naama-i-Alai and a small treatise on the pulse.

Ibn Sina also contributed to mathematics, physics, sound and other fields. He explained the "casting out of nines" and its application to the

verification of squares and cubes. He made several astronomical observations, and devised a contrivance similar to the vernier, to increase the precision of instrumental readings.

He studied different forms of energy, heat, light and mechanical, and such concepts as force, vacuum and infinity. He concluded that if the perception of light is due to the emission of some sort of particles by the luminous source, the speed of light must be finite. He propounded an interconnection between time and motion, and also made

investigations on specific gravity and used an air thermometer.

He did not believe in the possibility of chemical transmutation because, in his opinion, the metals differed in a fundamental sense. The views were radically opposed to the prevailing at the time. His treatise on minerals was one of the "main" sources of geology of the Christian encyclopaedist of the thirteenth century. Besides Shifa his well-known treatises in philosophy are An-Najat and Al-Isharat