

History of Ancient Medicines in India and abroad

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Abstract

Ancient medicines in India and abroad have shaped healthcare across cultures. Ayurveda, a system originating over 3,000 years ago, emphasizes holistic health and natural remedies. In contrast, ancient civilizations like Egypt, Greece, and China prioritized empirical observation and natural substances, leading to texts from Hippocrates and Galen influencing Western medicine. Both India and these cultures shared an understanding of diet, lifestyle, and nature in treatment, indicating cross-cultural exchanges that enriched medical knowledge. This article explores the evolution of ancient medicinal practices, emphasizing India's Ayurveda and global traditions, and emphasizes the need for integrating traditional wisdom into modern healthcare for a holistic approach to well-being.

Keyword: *Ayurveda, Dhanvantari, Sushruta, Charaka, Traditional Chinese Medicine, Indian Medicine, Yoga.*

Introduction

Ancient medicine developed in India and abroad through a blend of spirituality, magic, observation, and herbal remedies. In India, **Ayurveda**, dating back over 5,000 years, focused on holistic healing with herbal treatments, diet, and lifestyle practices aimed at balancing the body's energies, or doshas.

Dhanvantari, revered as the Hindu god of medicine, is considered the divine source of Ayurveda. Associated with healing and health, he is worshiped for blessings in medical knowledge and wellness. Early Indian surgeons like **Sushruta** contributed significantly, performing surgeries and categorizing herbs. Sushruta was an ancient Indian surgeon, authored the *Sushruta Samhita*, detailing surgical techniques and procedures, including rhinoplasty. He's often regarded as the "father of

surgery" in Ayurvedic medicine. **Charaka** was an ancient Indian physician and author of the *Charaka Samhita*, one of Ayurveda's foundational texts. Living around the 2nd century BCE, he emphasized holistic health, preventive care, and the balance of bodily energies (doshas). His contributions to medicine, diagnostics, and therapeutics are central to Ayurvedic practice today (Porter, 1999).

In China, Traditional Chinese Medicine (TCM) developed around similar principles, emphasizing balance and energy (Qi) through acupuncture, herbal medicine, and diet. Concurrently, ancient Egypt and Mesopotamia had their healing systems that used plant-based remedies, surgery, and spiritual healing, often under the care of priest-physicians. Greek medicine, particularly through

Hippocrates and Galen, introduced systematic approaches to diagnosis and the idea of bodily humors. These ancient systems laid the foundation for holistic health practices that persist today, influencing modern alternative medicine and integrative health systems worldwide.

The history of medicine can be described into three parts:

Part – I: Ancient medicine including Ayurvedic system,

Part – II: Medieval period including Islamic or Arabic medicine,

Part – III: Modern medicine or Allopathy system
In this article **Part – I** is described.

Objectives of the study

- Explores the historical development of ancient medicinal practices, focusing on Ayurveda and its global influence.
- Highlights the need for integrating traditional wisdom into modern healthcare for a holistic approach to well-being.
- Documents the contributions of key historical figures and significant medical texts, contributing to the preservation and dissemination of historical medical knowledge.
- Explores the interconnectedness of ancient medical traditions across different cultures and civilizations, emphasizing the global relevance of these practices.
- Promotes the holistic approach to healing embedded in ancient medicinal practices, particularly Ayurveda.

Prehistoric Medicines - Stone Age

Illness and injury are as old as humankind. Human remains of Stone Age show evidence of different diseases such as arthritis, tuberculosis, inflammations and various congenital abnormalities and injuries. The curing and

prevention of disease often involves an explanation of the cause of the disease. In the absence of knowledge of germs, bacteria and viruses and of human anatomy and physiology stone age humans ascribed disease, injuries and death to supernatural forces, just as other inexplicable events such as storms, earthquakes and volcanic eruptions were considered to be caused by supernatural forces. Priests, shamans, witch doctors and medicine men were often responsible for protecting the health of Stone Age humans by means of appropriate rituals and spells.

Stone Age medicine man dating from around 15,000 BCE is on the cave walls which would most likely have supplemented their spells and rituals with the use of various herbs, roots, leaves and animal parts and other medicines. Given the body's natural tendency to heal itself and placebo effects, it would have been difficult for pre-historic healers to work out whether their spells and herbs were actually working. Only in recent times with modern written records, statistical techniques and pharmaceutical quality control tests, can it be reasonably clear if a particular medicine is working (Coleman, 1985).

In **Neolithic times**, when nomadic hunter-gatherers first began to settle in permanent villages, which grew into towns and then cities, new health problems arose. Large numbers of people concentrated in small areas meant disease would quickly spread through populations. The domestication of animals resulted in many diseases spreading from animals to humans such as measles, smallpox and tuberculosis from cattle and flu from pigs and dogs. However a further result from living in cities was the development of writing which allowed a more organized medical profession and the possibility of accurate recording of symptoms and remedies.

Writing began in **Mesopotamia** before 3,000 BCE when it was invented by the ancient Sumerians.

The Sumerians wrote on clay tablets and one such tablet contains lists of drugs, chemical substances and plants used for medical purposes. Magic and religion however played a major role in Mesopotamian medicine as injury and disease were considered to be caused by Gods, demons, evil spirits and witchcraft.

Our knowledge of ancient Egyptian medicine comes from certain medical papyri and from the embalming of Egyptian dead. The papyri contain various descriptions of magic spells designed to drive out the demon causing a particular disease and of various prescriptions, including the dosage for particular diseases. Drugs used included castor oil, hartshorn, bile and fat from animals and copper sulphate. Treatment was prescribed for wounds and bruises and surgical instruments appear to have been used and broken bones were treated with splints.

The Egyptian practice of embalming and the favourable conditions of Egypt for the natural preservation of bodies shows us some of the diseases the Egyptians suffered from. Arthritis and inflammation of the periosteum and osteomyelitis were common. Spinal deformations and spinal tuberculosis, gout and virulent osteomas have been found in Egyptian mummies. Tooth decay was as common as in modern times and there is good evidence of kidney stones and gall stones, appendicitis and stomach and intestinal troubles. The lower classes in particular suffered from infectious diseases such as plague, smallpox, typhus, leprosy, malaria, amoebic dysentery and cholera and various parasitic diseases (Coleman, 1985).

Indian Medicine

Medical Science was one area where surprising advances had been made in ancient times in India, even in the Stone Age. About 5000 BC, Vedic age started and the *Atharva veda*, a medical textbook

explaining how to treat diseases, was composed during 3000 500 BC. Like Egyptian medical texts a little earlier, the *Atharva veda* says that diseases are caused by bad spirits, and you treat the disease by killing the spirits with poisons or spells. One example is the treatment of leprosy with a kind of lichen, which might have worked as an antibiotic (Gordon, 1993). Another example is the treatment of snakebite by reciting charms. Possibly Yamnaya people brought marijuana with them when they came to India, about this time. (Yamnaya people are Ukrainian for "People who lived in pits" seem to have been speaking an early version of the Indo-European language at least as early as 5000 BC in the area between the Black Sea and the Caspian Sea, in what is now Armenia and Georgia. The Yamnaya were nomadic).

Ayurveda

This is the indigenous system of medicine in India. Ayurveda literally means 'the science of living' (longevity). *Ayu* means life and *Veda* means knowledge. Ayurveda, is believed to be about 5000 years old, predating all other medical systems. The two classic Ayurveda textbooks are more than 2000 years old. Charaka-samhita named after Charaka who was the ayurvedic counterpart of Hippocrates, outlines the principles of health maintenance and treatment of disease. Another book named Sushruta-samhita describes elaborate surgical procedures, including reconstructive plastic surgery, gallbladder removal, and other operations that most people consider modern.

According to Charaka, a noted practitioner of Ayurveda in ancient India: ***"A physician who fails to enter the body of a patient with the lamp of knowledge and understanding can never treat diseases. He should first study all the factors, including environment, which influence a patient's disease, and then prescribe treatment. It is more important to prevent the occurrence of disease than to seek a cure"*** (Jain, 2022).

These statements may seem simplistic in the modern era, but they were made by Charaka in his well-known Ayurvedic treatise Charaka Samahita some 200 years ago. There are numerous other such statements in the treatise that are still revered today. Physiology, etiology, and embryology are among the disciplines where some of them work. Charaka was the first doctor to introduce the ideas of immunity, metabolism, and digestion.

According to him a body functions because it contains three dosha or humours, namely, bile, phlegm and wind. When dhatus—blood, flesh, and marrow—act on the food consumed, these doshas are created. However, different bodies produce different amounts of dosha for the same amount of food consumed. **One body differs from another because of this.** For example, it has greater strength, weight, and energy. Furthermore, when the three doshas in a human body are out of balance, illness results. Charaka prescribed medications to bring the body back into balance. **Sushruta**, the author of Sushrutasamhita, is believed to have lived around 6th century B.C. and is said to have imbibed his knowledge from Dhanwantri. It is believed that Sushruta's work was also revised and supplemented by Nagarjuna between the 3rd and 4th centuries A.D.

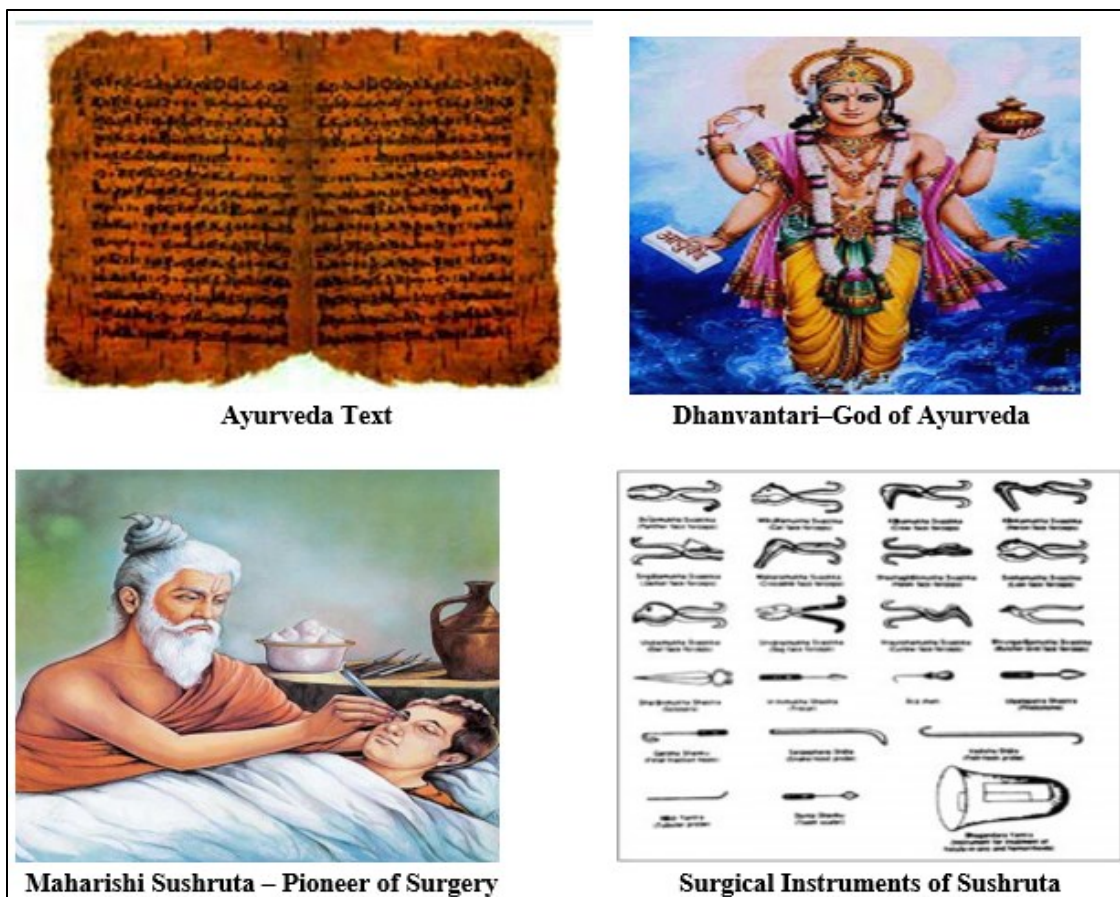
A traditional story about the origin of Ayurveda, elucidates that Brahma imparted this knowledge to Prajapati Daksha, who in turn passed it on to the two *Ashwini kumaras*. From Ashwini kumaras, this knowledge passed on to Indra and then to Sage

Bhardwaja. Bhardwaja shared it with other sages, one of them was Punarvasu Atreya. Atreya passed it on to his disciples. Based on the knowledge thus imparted, Agnivesha, one of Atreya's disciple authored a treatise, which came to be known as Agnivesha-tantra. This work of Agnivesha was revised and enlarged by Charaka around the 5th century A.D. in the form of Charaka-samhita.

Dhanvantari

We offer prayers to Sudarshana Vasudev Dhanvantari, the god. He holds the Kalasha full of nectar of immortality. All illnesses and fears are eliminated by Lord Dhanvantri. He is the one who wishes the three worlds well and protects them. Like Lord Vishnu, Dhanvantari has the ability to heal Jiva souls. We give thanks to the Ayurvedic Lord. Ayurvedic practitioners invoke and worship the deity Dhanvantri.

Dhanvantri is believed to have appeared during the Churning of Ocean or Samudra Mantham by Devas (demi gods) and Asuras (demons). Amidst the numerous auspicious items that appeared during the Churning of Ocean or Samudra Manthan by Devas and Asuras, Dhanvanthari also appeared with elixir or *Amruta*. Dhanvantari is depicted as Vishnu with four hands, holding medical herbs in one hand and a pot containing rejuvenating nectar called *amrita* in another. He is believed to have appeared to eradicate diseases threatening living beings.



Objectives of Ayurveda

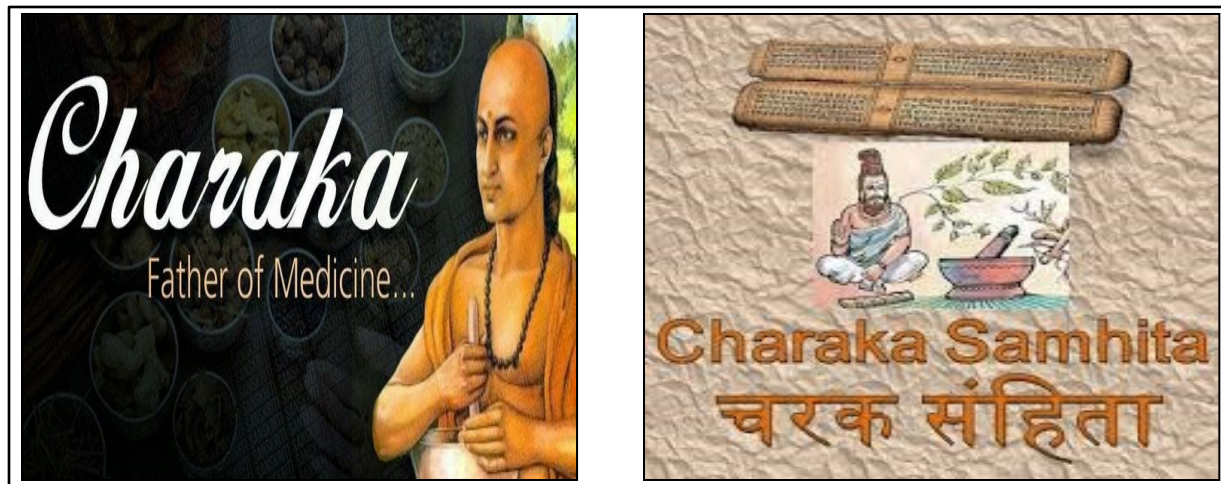
The two main objectives of Ayurveda are: 1) Preservation and promotion of health of the body as well as the mind 2) Prevention and treatment of diseases. Ayurveda has a holistic approach and treats the person as a complete whole and not just as a body.

Ayurveda is incorporated into a person's lifestyle. It governs all aspects of life, such as diet, exercise and sexual practices. An ayurvedic practitioner is consulted only to identify and correct an imbalance among the three life forces (1. VATA: The Wind Energy 2. PITTA: The Fire Energy 3. KAPHA: The Water Energy).

Ayurvedic philosophy holds that each person is born with a particular ratio of Doshas, with one

dominating. This dominant Dosha determines personality type and also influences one's susceptibility to certain illnesses

Sushruta, was an ancient Indian physician, known as the main author of the treatise *The Compendium of Suśruta* (Sanskrit: *Suśruta-saṃhitā*) (ca. 600 BCE). The *Suśruta-saṃhitā* is one of the most important surviving ancient treatises on medicine and is considered a foundational text of Ayurveda. The treatise addresses all aspects of general medicine, but the translator G. D. Singhal dubbed Suśruta "the father of surgery" on account of the extraordinarily accurate and detailed accounts of surgery to be found in the work. He has also been called "the first plastic surgeon". He is regarded to have been lived in the coastal region of the present state of Andhra and also regarded to have imparted knowledge to Tamil, Kannada and Malayalam physicians who later claim to have expertise.



The *Compendium of Suśruta* locates its author in Varanasi, and recounts that Suśruta learned medicine and surgery from the king of that city, Divodāsa, who was an incarnation of the god of medicine Dhanvantari. He did operations on people's eyes to remove cataracts. He didn't have any anesthesia other than wine, though he recommended *bhang* (probably marijuana) to treat coughs and dysentery. Sushruta also described tuberculosis. About the same time, Indian people were using sand and charcoal filters to get clean water, which probably saved many lives.

Similar to Chinese and Greek physicians, Indian physicians had given up on the concept of evil spirits by the year 200 AD in favor of the somewhat less incorrect concept of dosha or humors. It's possible that the doctor Charaka wrote about this period. Charaka advised maintaining equilibrium in your humors to maintain your health because he understood that prevention was the best treatment for many illnesses. Bile, phlegm (snot), and air are the three humors that Charaka identified. You should take medication to bring your humors back into balance if they have become out of balance. But he also knew some medicines that worked: doctors recommended citrons to cure scurvy (Vitamin C deficiency). Indian doctors were so much respected that Indian traders got rich selling

Indian medicines to people in the Roman Empire, Iran, Sogdiana, East Africa, and China.

Charaka was one of the principal contributors to the ancient art and science of Ayurveda. He is well-known for writing the *Charaka Samhita*, a medical treatise. It has been determined that Charaka is a Kashmiri native. His reputation as the "father of medicine" is well-established. The followers of the sage Punarvasu Ātreya established six schools of medicine, according to the Charaka tradition. A *Samhitā* was written by each of his disciples: Agnivesha, Bhela, Jatūkarna, Parāshara, Hārīta, and Kshārāpāni. Agnivesha's composition was regarded as the best of these. Later, Charaka made revisions to the Agnivesha *Samhitā*, which is now known as the *Charaka Samhitā*.

Charaka also made the earliest Indian reference to smallpox, and this is just around the time that smallpox first devastated the Roman Empire, coming from the East. Under the Guptan kings, in the 300s AD, Chinese visitors praised India's hospitals.

The concepts of immunity, metabolism, and digestion were first introduced by Charaka, a physician. According to his Vedic translations, three doshas, or principles, are responsible for a body's operation: movement (*vata*), transformation

(pitta), and lubrication and stability (kapha). Occasionally, the doshas—wind, phlegm, and bile—are also called humors. When dhatus (blood, flesh, and bone marrow) react with the food consumed, these doshas are created. However, different bodies produce different amounts of dosha for the same amount of food consumed. One body differs from another because of this. It is heavier, stronger, and more energizing, for example.

Furthermore, when the three doshas in a human body are out of balance, illness results. He prescribed medications to bring the balance back. He knew there were germs in the body, but he didn't think much of them.

Charaka understood the basics of genetics. He was aware of the factors that determine a child's sex, for example. He claimed that a genetic defect in a child, such as blindness or lameness, was caused by the parents' ovum or sperm rather than any flaw in the mother or father (a fact that is now widely acknowledged).

Charaka researched the human body's organs and anatomy. He listed 360 as the total number of bones in the body, including teeth. He was correct to think of the heart as a controlling center, but he was mistaken to think it had only one cavity. According to him, there are thirteen major channels that connect the heart to the rest of the body. In addition to these channels, there were innumerable others of various sizes that allowed waste products to pass through while also supplying nutrients to different tissues. Additionally, he asserted that any blockage in the primary channels caused a disease or physical abnormality.

Under the guidance of the ancient physician Atreya, Agnivesha had written an encyclopedic treatise in the eighth century B.C. However, it was only when Charaka revised this treatise that it gained popularity and came to be known as

Charakasamhita. For two millennia it remained a standard work on the subject and was translated into many foreign languages, including Arabic and Latin.

Acharya Nagarjuna (c. 150 - 250 CE) known as '**the Medicine Buddha**', was a great ancient philosopher, who is considered to be the founder of the Madhyamaka (Middle Path) school of Mahayana Buddhism, and was the most influential Buddhist thinker after Gautama Buddha himself.

He was born into a Brahmin family in the Andhra area of South India, and was later converted to Buddhism. Before the age of eight he was brought to the great teacher Saraha at the renowned Nalanda monastery, which was one of the first among the very few known University-modelled education centres in the world history. He was ordained as a monk in the name Shrimantha. Later in his life he became a fully-accomplished scholar and teacher, and also the Abbot of Nalanda, which is also considered to be the educational capital of ancient India. **Nagarjuna** is considered to be one of the ancient scholars and teachers of Ayurveda.

When Muslims conquered northern India about 1000 AD, many Iranian doctors came to India from West Asia to work for Muslim kings there. These doctors realized that the Indian list of humors didn't match the Islamic list of humors, and tried to find out what was right. For example, some Muslim doctors began to include air as one of the humors, and to combine black bile and yellow bile as one humor.

These Muslim doctors also brought opium and henbane (another anesthetic) with them to northern India, and by the 1200s AD, Indian doctors as far south as the Chola kingdom (as we know from the *Sarangdhara Samhita*) had learned to use opium both as an anesthetic and for diarrhea. The doctor Lakshmana Pandita wrote in the early 1400s AD in the Vijayanagara Empire, under Imadi

Bukka, the son of Hari II. Lakshmana Pandita wrote about the different types of fevers, dysentery, miscarriages and fistulas, cancer, epilepsy, and kidney stones, among other things. Like doctors everywhere in Afro-Eurasia at this time, he thought you could tell what was wrong with patients by taking their pulse.

India is a land of many diseases and Indian doctors were familiar with 1,120 different diseases. They guessed the connection between malaria and mosquitoes, noticed that the plague was foreshadowed by the death of large numbers of rats and that flies could infect food causing intestinal disease. They were also aware that cleanliness could help in the prevention of disease (Friedman & Friedland, 1998).

Yoga - Health of The Body And Mind

Yoga is an exercise regimen for mental and physical well-being. The ancient practice of yoga has been preserved by hermits and ascetics. For hermits who wandered around meditating, the healing benefits of yoga were especially pertinent. In a Yogic pose, we typically see an ascetic (Sadhu) meditating. Numerous Yogic postures are also seen in Indian classical dance forms. Self-discipline is a key component of yoga in addition to its exercise regimen (Glasser, 1997).

The term Yoga is itself derived from the Sanskrit word "yoktra" meaning a yoke. The etymological closeness of the Sanskrit and English words is striking. They have exactly the same meaning. The self-discipline aspect of Yoga is evident in the qualities of holding the breath (in Pranayama), absolute stillness (in Shavasana), celibacy (Bramhacharya). There are innumerable asanas (poses) in Yoga.

Most of them derive their names from the semblance of the body in those poses to different animals and objects. For instance, there is a

Matsyasana (fish pose), Mayurasana (peacock pose), Simhasana (lion pose), Halasana (plough pose), etc. But Yoga is a multifarious system, there are various forms of discipline touching different aspects of human life, which are brought under the heading Yoga. We have Hathayoga (bodily exercise), Gyanyoga or Dnyanyoga (exercise for the mind and intellect), Karmayoga (discipline in our actions in daily life).

It was as early as the 2nd century B.C. i.e. 2500 years ago that the fundamentals of Yoga were systematically presented. Patanjali is credited with accomplishing this, and his book is called Yogasutra, or Yoga Aphorisms. Patanjali asserts that the human body contains centers known as Chakra and channels known as Nadi. The body's hidden energy can be released if these are tapped. We refer to this energy as Kundalini. The body can gain many abilities that are typically beyond its capabilities when Kundalini is released.

Patanjali gives eight stages of Yoga viz., Yama (universal moral commandments), Niyama (self-purification through discipline), Asana (posture), Pranayama (breath-control), Pratyahara (withdrawal of mind from external objects), Dharana (concentration), Dhyana (meditation) and Samadhi (state of super-consciousness).

A Timeline of The History of Medicine

3000 BC – Ayurveda The origins of Ayurveda have been traced back to around 4,000 BCE

c.2600 BC – Imhotep the priest-physician who was later deified as the Egyptian god of medicine

1900 BC – 1600 BC Akkadian clay tablets on medicine survive primarily as copies from Ashurbanipal's library at Nineveh

1,500 BC The Ebers Papyrus is the first known medical book

600 BC – the Sushruta Samhita is published, laying the framework for Ayurvedic medicine

500 BC Alcamaeon of Croton in Italy says that a body is healthy as long as it has the right balance of hot and cold, wet and dry. If the balance is upset the body falls ill.

460-377 BC Hippocrates lives. He stresses careful observation.

384-322 BC Aristotle lives. He says the body is made up of 4 humours or liquids, phlegm, blood, yellow bile and black bile.

200 BC – the *Charaka Samhita* uses a rational approach to the causes and cure of disease and uses objective methods of clinical examination (Gutherie, 1958).

Conclusion

In conclusion, the rich historical tapestry of ancient medicinal practices is prevalent, particularly Ayurveda and its profound global influence. The contributions of pivotal figures such as Charaka, Sushruta, and Dhanvantari, has immense importance of preserving traditional medical knowledge that has stood the test of time. Interconnectedness among diverse ancient medical traditions illuminates the universal relevance of holistic healing practices. Emphasizing the integration of herbal treatments, balanced diets, and lifestyle modifications, the paper advocates for a synergistic approach to health that honors both ancient wisdom and contemporary medical advancements. Ultimately, time-honored practices can enrich modern healthcare, paving the way for a more comprehensive and culturally inclusive approach to well-being.

Bibliography

Coleman, Vernon (1985) *The Story of Medicine*, Robert Hale, London

Friedman, Meyer & Friedland, Gerald (1998) *Medicine's 10 Greatest Discoveries*, Yale University Press, New Haven & London

Glasser, Ronald (1997) *The Light in the Skull*, Faber & Faber, Boston

Gordon, Richard (1993) *The Alarming History of Medicine*, Sinclair-Stevenson Ltd, London

Gutherie, Douglas (1958) *A History of Medicine*, Thomas Nelson & Sons Ltd, London

Jain, S. K. (2022). Charaka Shapath: A way of life. *Santosh University Journal of Health Sciences*, 8(2), 80-81.

Porter, Roy (1999) *The Greatest Benefit of Mankind*, Fontana.

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