

# МЕДИЦИНА, ПЕДАГОГИКА И ТЕХНОЛОГИЯ: ТЕОРИЯ И ПРАКТИКА

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## THE EVOLUTION OF MEDICINE FROM ANCIENT CIVILIZATIONS TO MODERN CLINICAL PRACTICE

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### **Abstract**

The history of medicine reflects the development of human civilization and scientific thought. From primitive healing rituals to evidence-based clinical practice, medicine has evolved through centuries of observation, experimentation, and innovation. Ancient civilizations such as Mesopotamia, Egypt, Greece, and the Islamic Golden Age made significant contributions to medical knowledge that continue to influence modern healthcare systems. This article explores the historical progression of medicine, emphasizing major milestones, influential figures, and the transition from traditional to scientific medicine. Using the IMRAD (Introduction, Methods, Results, and Discussion) structure, this study reviews historical and medical literature to analyze how past medical practices shaped contemporary medicine. Understanding the historical foundations of medicine is essential for appreciating current medical ethics, diagnostic methods, and therapeutic approaches.

**Keywords:** History of medicine, ancient medicine, medical evolution, Hippocrates, Islamic medicine, modern healthcare

### **1. Introduction**

Medicine is one of the oldest scientific disciplines, deeply rooted in human history and culture. Since the earliest stages of civilization, humans have sought ways to treat illness, relieve pain, and prolong life. Early medical practices were often intertwined with religion, magic, and superstition. Over time, these practices gradually evolved into systematic observation and scientific inquiry.

The history of medicine provides valuable insight into how medical knowledge developed and how cultural, social, and technological factors influenced healthcare practices. Ancient civilizations laid the foundation for anatomy, surgery, pharmacology, and medical ethics. The transition from mystical healing to rational and evidence-based medicine marked a critical turning point in medical history.

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This article aims to examine the evolution of medicine from ancient times to the modern era, highlighting key historical periods and their contributions to medical science. By adopting an IMRAD structure, the paper presents a structured and scholarly analysis suitable for medical and history students.

## 2. Methods

This study is based on a qualitative review of historical and medical literature. Sources were collected from academic books, peer-reviewed journals, and reputable historical archives focusing on the history of medicine. Databases such as PubMed, Google Scholar, and university digital libraries were utilized.

Keywords used for literature search included “history of medicine,” “ancient medical practices,” “Hippocrates,” “Islamic medicine,” “Renaissance medicine,” and “modern medical science.” Sources were selected based on their academic credibility, relevance, and contribution to understanding medical evolution.

The collected data were chronologically analyzed and categorized into major historical periods: ancient medicine, classical medicine, medieval and Islamic medicine, Renaissance medicine, and modern medicine. Each period was examined in terms of diagnostic methods, treatment approaches, and ethical principles.

## 3. Results

### 3.1 Medicine in Ancient Civilizations

Ancient medical practices emerged independently in various civilizations. In Mesopotamia, medicine was closely linked to religion, and diseases were believed to be caused by supernatural forces. Clay tablets documented early diagnostic methods and herbal treatments.

Ancient Egyptian medicine demonstrated advanced knowledge of anatomy and surgery. The *Edwin Smith Papyrus* described surgical procedures, wound treatment, and trauma management. Egyptian physicians specialized in specific fields, indicating an early form of medical specialization.

### 3.2 Classical Greek and Roman Medicine

Greek medicine marked a significant shift toward rational thinking. Hippocrates, known as the “Father of Medicine,” introduced the concept that diseases had natural

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causes rather than supernatural origins. The Hippocratic Oath established ethical principles that continue to guide medical practice today.

Roman medicine built upon Greek knowledge and emphasized public health, sanitation, and military medicine. The construction of aqueducts, sewage systems, and public baths significantly improved population health.

### **3.3 Islamic Golden Age and Medical Advancements**

During the Islamic Golden Age (8th–13th centuries), medicine flourished through translation, innovation, and experimentation. Scholars such as Avicenna (Ibn Sina) and Al-Razi made groundbreaking contributions to medical science.

Avicenna's *Canon of Medicine* became a standard medical textbook in Europe for several centuries. Islamic physicians established hospitals, introduced clinical trials, and emphasized hygiene and patient care. Their systematic approach laid the groundwork for modern clinical medicine.

### **3.4 Renaissance and the Birth of Modern Medicine**

The Renaissance period marked a revival of scientific inquiry and anatomical studies. Andreas Vesalius revolutionized anatomy through detailed human dissections, correcting many earlier misconceptions.

Advances in surgery, pathology, and pharmacology emerged during this era. The invention of the printing press allowed medical knowledge to spread widely, accelerating scientific progress.

### **3.5 Modern Medicine and Technological Progress**

Modern medicine developed rapidly during the 19th and 20th centuries with the discovery of microorganisms, anesthesia, antibiotics, and vaccines. Figures such as Louis Pasteur and Robert Koch established germ theory, transforming disease prevention and treatment.

Technological innovations such as medical imaging, laboratory diagnostics, and minimally invasive surgery have further enhanced patient care. Evidence-based medicine now serves as the foundation of clinical decision-making.

## **4. Discussion**

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The historical evolution of medicine demonstrates a continuous progression from empirical observation to scientific validation. Each historical period contributed essential knowledge that shaped contemporary medical practice.

Ancient and medieval medicine emphasized holistic care, ethics, and observation, while modern medicine focuses on technology and specialization. Understanding historical medical practices helps contextualize current ethical standards, doctor-patient relationships, and healthcare systems.

The integration of historical knowledge into medical education fosters critical thinking and respect for the profession's legacy. Moreover, many traditional practices continue to influence complementary and alternative medicine today.

## 5. Conclusion

The history of medicine is a testament to humanity's pursuit of knowledge and healing. From ancient civilizations to modern clinical practice, medical science has evolved through innovation, cultural exchange, and scientific discovery. Recognizing the historical roots of medicine enhances our appreciation of modern healthcare and encourages a more ethical and humanistic approach to patient care. Continued study of medical history remains essential for shaping the future of medicine.

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