

**E X P L O R I N G**

# THE HISTORY OF MEDICINE

*From the Ancient Physicians of Pharaoh  
to Genetic Engineering*



JOHN HUDSON TINER

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# EXPLORING THE HISTORY OF MEDICINE

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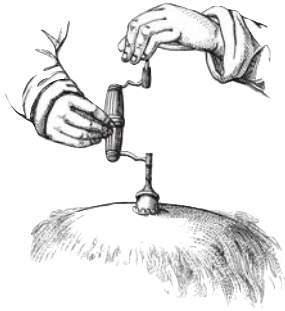
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## Dedication

*This book is dedicated to  
Samuel Conner Stephens*

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# The First Physicians

**D**o you know the name of the most ancient doctor known? The physician Imhotep (pronounced im-HOH-tep) lived 55 centuries ago, in 3500 B.C., in Egypt. He earned fame in many fields — as a politician, astronomer, architect, and physician. He designed the first pyramid — an elaborate tomb for one of the Egyptian pharaohs.

Ancient Egyptian physicians worked harder at keeping the body free of decay after death than at keeping it free of disease during life. They believed the road to eternal life lay in preserving the body. They developed an effective way to embalm bodies. Some Egyptian mummies are still around today.

In addition to preparing bodies for burial, Imhotep may have performed simple surgical operations. But any break-

## S Y M P T O M S

1. **Doctors relied on myths and magical powers.**
2. **Some doctors were mistreating their patients.**
3. **Doctors did not understand how the body worked.**

*Can You Diagnose the Discoveries?*





*The first physicians known to western medicine were located in Egypt, Greece, and Rome.*

*Imhotep is considered the first known physician. He is shown below in a re-creation of an Egyptian wall painting. The primary duty of an Egyptian doctor was to prepare bodies for the afterlife.*

throughs in medicine that he may have made are buried in the mists of time. We know his name and little else.

A more famous ancient physician is Hippocrates (pronounced hi-POK-ruh-teez). We not only know his name, but also know other facts about his life and his medical discoveries. Plato, one of the best-known Greek philosophers, mentioned Hippocrates by name, as did Aristotle, another Greek scientist. They thought well of him and considered him the greatest doctor of their day.

Hippocrates, a Greek, was born in 460 B.C., almost 2,500 years ago, on the island of Kos. This rocky little island is north of Rhodes off the coast of Asia Minor.

Although he lived so long ago, we do have a good idea of what he looked like. In 1933, workers uncovered on Kos a statue of Hippocrates. The statue shows him as a short man, rather stately in his robe, with a bold, courageous look to his face.

He needed all the boldness he could muster to change how doctors practiced medicine.



Other doctors based their healing art upon the belief that evil spirits, hateful demons, and vengeful gods struck people with diseases. Invisible arrows shot by the Greek god Apollo caused pain. One treatment for disease called for the victim to

travel to one of the many pagan temples in Greece. The sick person made a sacrifice and then spent the night in the temple. As he slept, he was supposed to dream away the sickness.

Hippocrates visited Egypt early in life and studied medicine there. He taught at various places, including Athens.

Eventually he returned home and began a school of medicine on Kos.

Hippocrates taught methods that must have seemed strange to doctors who expected to treat their patients with chanting and magic potions.

Hippocrates changed all of that. He believed every disease had a natural cause. "Find the cause," he said, "then you can cure the disease."

He perfected what today would be called a good bedside manner. He gained the confidence of patients and put their minds at ease. Hippocrates instructed his students to find out as much as possible about the patient. "Ask the patient about the symptoms. How did he feel when the

illness began? Question him about what he usually eats and drinks. Did he change his diet?"

"Allow the patient to rest," he advised. "See that he is kept clean, has fresh air and simple wholesome food." This was

good advice because doctors knew so little about medicine. God has given the body the ability to heal itself if given time to work.

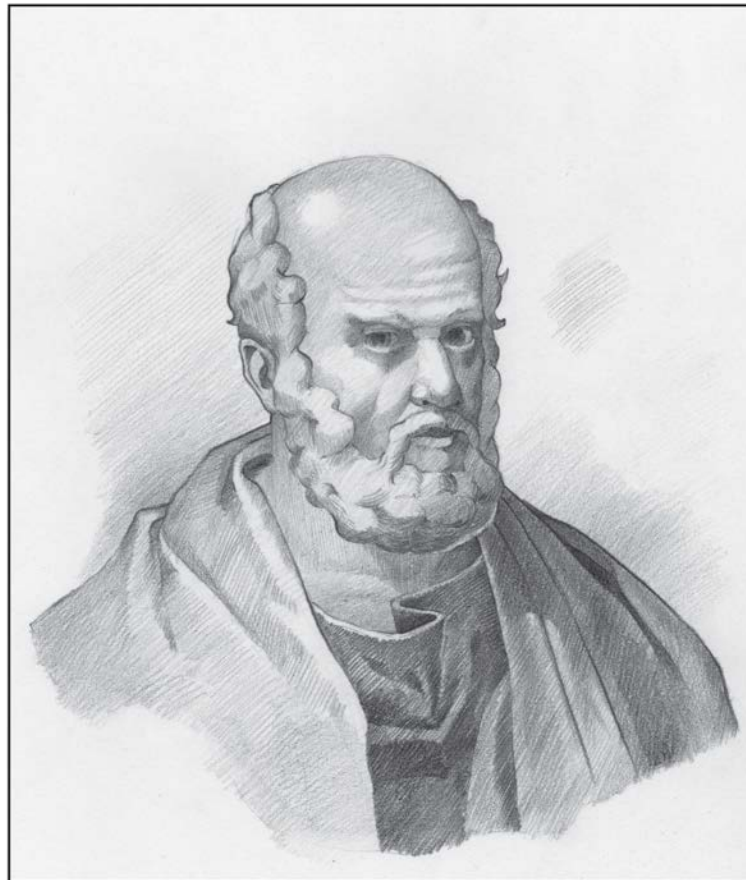
Older doctors couldn't abide by the new ways. They expected patients to make sacrifices to Greek gods and goddesses at the many pagan

temples. "The gods will be angry," these doctors warned. "They will punish doctors and

patients who dare to defy them."

We know in detail what Hippocrates taught because his students made careful notes of his lectures. They collected the notes and published books in his name. More than 50 books carrying his name have come down to us.

For instance, Hippocrates said,



*Hippocrates is known as the "Father of Medicine." He is considered one of the greatest physicians the world has ever known.*





“Desperate diseases require desperate remedies,” and, “Illness is sometimes stronger when a mind is troubled.”

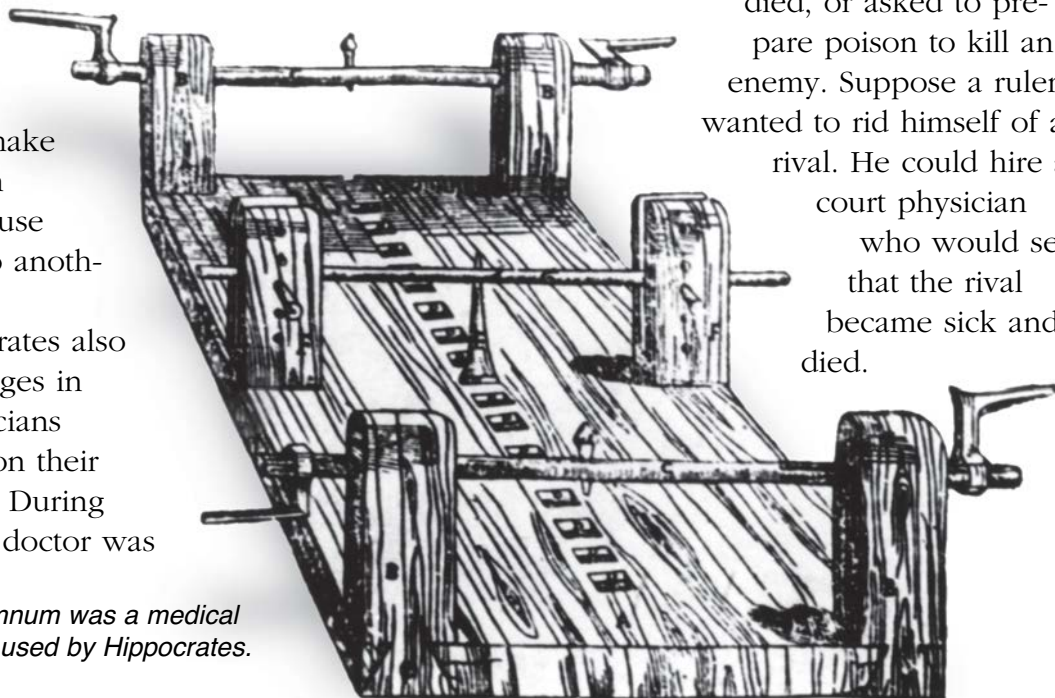
His study of diet also convinced him that “one man’s meat is another man’s poison.”

In other words, the same food can make one person sick but cause no harm to another person.

Hippocrates also made changes in how physicians looked upon their profession. During his time, a doctor was

*Hippocrates is refusing the bribes of a rich man who wants him to make a person sick on purpose. This is one of the reasons that he developed the Hippocratic Oath. His oath is still taken by doctors today.*

sometimes bribed to see that a patient died, or asked to prepare poison to kill an enemy. Suppose a ruler wanted to rid himself of a rival. He could hire a court physician who would see that the rival became sick and died.



*This Scamnum was a medical instrument used by Hippocrates.*

Hippocrates taught against such improper conduct. He told his students to treat everyone the same — both friends and foes, rich and poor. “Sometimes give your services for nothing,” he urged his students. “For where there is love of man, there is also love of medicine.”

He drew up a statement describing proper conduct. The pledge, called the Hippocratic Oath, is a guideline for honorable standards of action. Medical students still take it upon completion of their course of training.

The statement says in part, “I will use treatment to help the sick according to my ability and judgment, but never with the view to injury and wrong doing . . . Into whatsoever houses I enter, I will enter to help the sick.”

Hippocrates, the remarkable physician of Kos, is still, even today, considered one of the greatest physicians the world has ever known. His advice to doctors is still being taught in medical schools. He is rightly called the “Father of Medicine.”



*Galen's ideas about medicine were held in such high regard that his books were used by doctors for hundreds of years.*

The Golden Age of Greece ended when the Romans conquered most of the civilized world.

Roman medicine aimed at helping

society as a whole, rather than individuals. They built aqueducts to carry fresh water, arranged for sewers to carry away waste, and built public baths for personal cleanliness.

The most important physician during the Roman Empire was Galen, a

Greek. A thorough knowledge of the body is essential to good medical practice. Galen believed

that “a physician needs to study the body, as an architect needs to follow a plan.”

The Romans had passed harsh laws against dissecting human bodies. A doctor who dared open a body merely to satisfy his curiosity risked severe punishment. Galen dared not break the laws.

Galen traveled to Alexandria to study medicine. Alexandria was a Greek city established in Egypt by Alexander the Great. It was a Roman city in Galen’s time. Alexandria boasted a teaching



museum and huge library, the best in the world. It was the nearest thing to a modern university.

At Alexandria, Galen could study two complete human skeletons. Later, he dissected animals — pigs, goats, and even apes. He described what he saw in careful detail. He learned a lot from his study of animals, but not everything he learned about animals could be used to treat humans.

Galen returned to his hometown, Pergamum. There he served as physician at a school for gladiators. Although the Romans forbade dissection of dead bodies, they encouraged professional warriors to hack themselves apart for the amusement of coliseum crowds. Once the warrior died, his body could not be touched except to prepare it for burial.

Galen repaired the injured fighters and

learned firsthand about the human body.

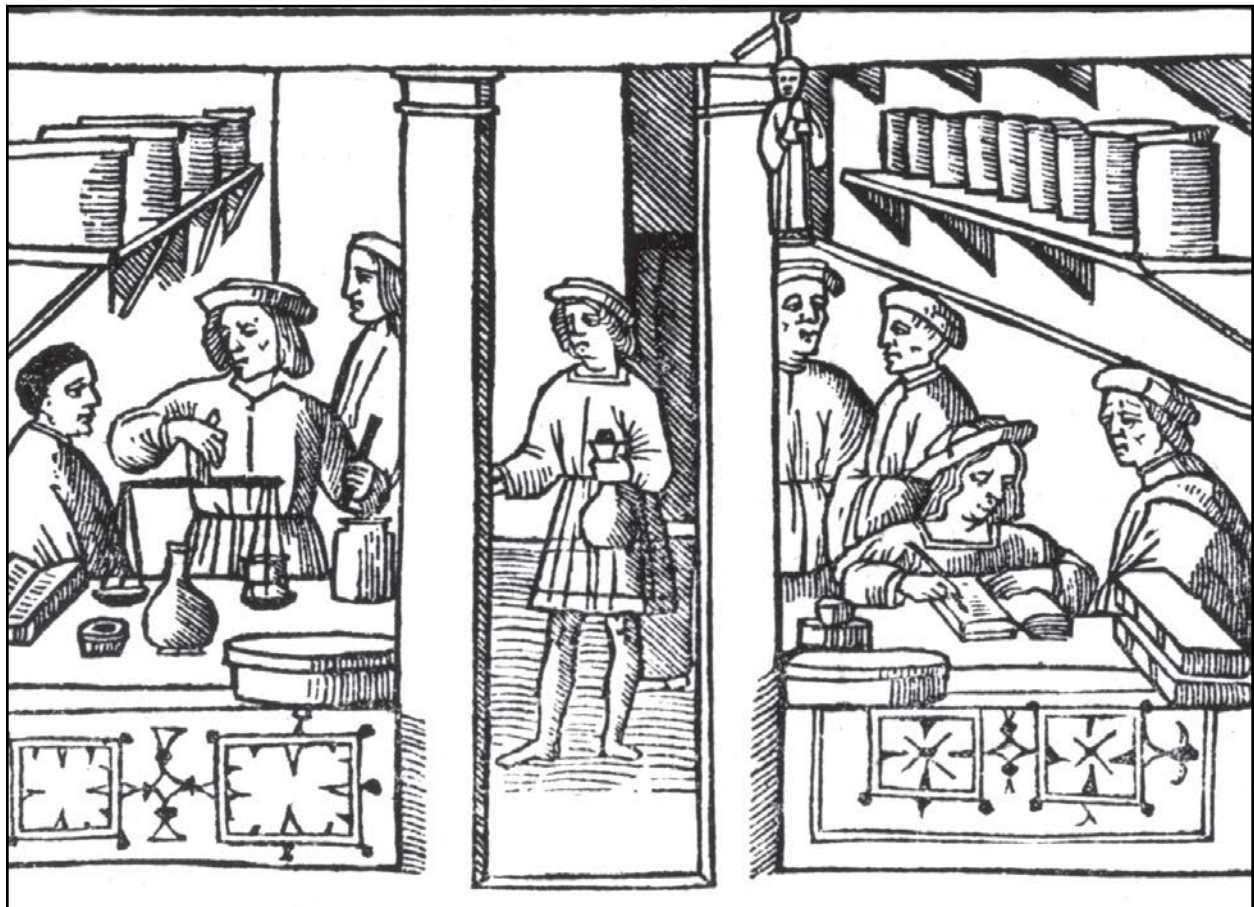
After three years, Galen traveled to Rome. He studied some more and wrote the first of his many books. He also took on his first important case. Eudemus, a well-known physician, suffered a mild paralysis in his right hand. He could not move his third and fourth fingers. The best physicians in the city examined him. All of them failed to restore feeling to his fingers.

As a last resort, Eudemus sent for Galen, the new doctor in town.

Galen examined the fingers. Then he asked, “Did you injure your back or neck or strike your head recently?”

Puzzled, Eudemus answered, “Yes. I

*Galen became one of the most famous doctors in Rome. He is shown on the left in this picture experimenting in the mixing of medicine.*



was thrown from a chariot. I struck my neck against a stone. I recovered from the fall.”

“Not entirely,” Galen said. “Nerves from the fingers connect to the spinal column in the neck. Your neck injury caused the numbness in your hand.”

Galen treated the nerve in Eudemus’ neck and not his fingers. Feeling came back. Before long, Eudemus could move his fingers again. He recovered completely.

Galen’s fame soared. So did the jealousy of the other doctors. He didn’t endear himself to them by being very sure of himself. He was the best doctor in the empire. He knew it and made sure everyone else knew it, too.

Marcus Aurelius, the emperor, hired Galen as his personal physician. The emperor summed up his opinion of his personal physician by saying, “Rome has but one physician — Galen.”

Christians lived in Rome and in Pergamum, too. Pergamum was home to one of the “seven churches of Asia” mentioned in Revelation (Rev. 1:11). Although Galen himself never became a Christian, he believed in one God, the creator of all things. He believed the Creator designed every part of the human body for a particular purpose.

According to Galen, the existence of God the Creator could not be dismissed once a person saw the marvelous complexity of the human body. He said, “Every man who looks at things with an open mind, seeing a spirit living in this mass of flesh and humors, and examining the structure of any animal whatever . . . will comprehend the excellence of the Spirit which is in heaven.”

As the end of his life drew to a close,

Galen visited his home town, Pergamum, once again. He died there in A.D. 200. His fame continued to grow.

His ideas didn’t die with him. He had written a huge number of books — about 125 — of which 80 still exist. His books contain a curious mixture of fact, opinion, and outright errors. With his usual cheerful self-confidence, Galen stated it all as fact. He did not keep apart what he knew as fact from what he merely believed to be true.

Galen’s effect upon medicine grew, rather than became less, with time. His views came to be regarded as the final authority in medicine. During the Middle Ages in Europe, scholars avoided experimentation and direct experience. Instead, they simply looked for answers in Galen’s books. His dead hand held medicine in its grip with a firmness never matched before or since.



## DIAGNOSES

1. Imhotep began using simple surgery instead of just magic.
2. Hippocrates developed his pledge of proper conduct for doctors.
3. Galen began the study of human anatomy.



## Questions

### The First Physicians

*Answer T or F for true or false, or  
Select A or B for the phrase that best completes the sentence.*

- T F** 1. The medical discoveries of the Egyptian doctor Imhotep are well-known today.
- A B** 2. The most famous ancient Greek doctor was (A. Plato; B. Hippocrates).
- T F** 3. One of the Greek treatments for disease was to have the sick person dream away the sickness in a pagan temple.
- A B** 4. Older doctors predicted that doctors who followed Hippocrates' teaching would be (A. punished; B. rewarded) by the gods and goddesses.
- A B** 5. The Hippocratic Oath for doctors is (A. a pledge of proper conduct; B. a schedule of prices a doctor should charge).
- A B** 6. The title given to Hippocrates is  
(A. Father of Greek Philosophy; B. Father of Medicine).
- A B** 7. The most important physician during Roman times was  
(A. Galen; B. Socrates).
- A B** 8. The city of Alexandria was noted for its huge  
(A. aqueduct; B. library).
- A B** 9. Galen learned firsthand about the human body from  
(A. dissecting the bodies of criminals; B. treating injured gladiators).
- T F** 10. When Galen went to Rome he was put in prison.
- T F** 11. Galen believed that the marvelous complexity of the human body pointed to a Creator.

