

Classical pathways to western medicine

Modern medicine bears traces of the early influences of the healing traditions of classical Greece and Rome as found in the mystical traditions of the ancient cult of Asklepios and the scientific, observational practices of the Hippocratic school.

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According to both the fifth-century BC poet Pindar and the first-century BC Roman poet Ovid, Asklepios, the god of healing, was born as a result of a union between the god Apollo and the beautiful mortal Coronis. Pregnant and ashamed, Coronis was slain by Apollo, who then removed the unborn baby from her lifeless womb and named him Asklepios, which means *gentle dryness* and gave the child to Chiron, the centaur, to raise. The centaur taught him the secrets of herbal medicine and Asklepios became a wise physician.

Later the goddess Athena taught Asklepios to raise the dead to life, incurring the rage of Zeus, who slew Asklepios with a thunderbolt. Apollo grieved and interceded with Zeus, who then granted Asklepios life as a hero god. Unlike the Olympian gods,

hero gods were mortal and lived on Earth but had special powers and supernatural longevity.

There is some epigraphic reference to the myth of Asklepios as a healing god in the works of both Homer in the eighth century BC, and dedication to him continued to flourish from the fifth century BC through to the fourth century AD. An Asklepiian cult developed and large temples dedicated to him flourished throughout the Greek and later the Roman world.

After the Hippocratic school developed in the fifth century BC, there was some combining of the scientific-observational techniques of this healing tradition with the mystical curative methods practised by Asklepiian priests.

The healing temples of Asklepios attracted a higher class of patients than

did the early itinerant Hippocratic physicians. No midwifery or dying patients were allowed within the temple precincts. Pausanias says, "Neither do people die in the enclosure nor do they give birth." Only patients who could achieve a degree of purity were admitted.

A healing temple of Asklepios included an area called the *abaton* where patients (*incubi*) would sleep and, it was believed, be cured by a nighttime visit from the god, who would remove their diseased parts. This process was called *incubation*. Asklepiian priests were usually accompanied by serpents and dogs. The serpents, which were often wound around a staff, were an integral part of the healing process.

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Statue of Asklepios in the Pergamon Museum, Berlin.

This is the source of the *caduceus*—two serpents wound around a staff—that today remains as an emblem of physicians and the practice of medicine.

When patients were cured of illnesses, they often provided thank-offerings of clay models of the anatomical parts that were cured. Male flesh was always in red clay and female in white. There were a number of manufacturing stalls around the Asklepiian temples that sold “off the rack” organs, but the more expensive were custom-made. Votive offerings were often accompanied by testimonials, and both provide a profile of the diseases suffered by Greeks seeking treatment at these temples. For example, the presence of 35 clay models of male genitalia found at an Asklepiian temple in Corinth—a port city known for licentiousness in the Greek world—adjacent to a temple of Aphrodite, goddess of erotic love and beauty (hence *aphrodisiac*) likely suggests a cure of impotence rather than venereal disease since syphilis was unknown in antiquity.

Asklepios shared his healing facility with members of his “divine family,” which consisted of Epione, his wife, who relieved pain; Panacea, his daughter, who gave treatment; and Hygeia, his other daughter, who was the patroness of health (hygiene). Telesphorus, a son, was a patron of rehabilitation, and two other sons, Machaon and Podaleirios, were patrons of surgery and medicine. All of the divine family acted in concert in the temples of Asklepios as multi-specialty healers.

Clean water, clean air, and salubrious ambience were all present in the Asklepiian healing temples. Mental relaxation was provided through activities in the gymnasium, theatre, and various purification rites in cold and hot springs and the ocean. The healing temples were always on a hilltop, in a glade, or near a spring in areas where gods would likely dwell.

Hippocrates and the

Hippocratic school

Known as the father of medicine, Hippocrates is believed to have been born in 460 BC on the Greek island of Kos. Though references to him by his contemporaries are few, Plato does refer to him twice: once in the *Republic* as “one who taught students for fees” and again as “the Asklepiian of Kos” and “the famous Asklepiian.”

The thrust of the Hippocratic method was scientific observation of patients that included an examination, taking a history, and then arriving at a prognosis. He developed some knowledge of anatomy, disease, and pathogenesis. Hippocrates defined the role of the physician as “deliverance of the sick from pain, the reduction of diseases, violence, and the refusal to treat those overpowered by these diseases with the knowledge that medical art is unavailing in these cases.” At its heart was the concept that disease had a physical cause rather than arising as a result of the displeasure of a capricious god.

The *Hippocratic Corpus* is a body of about 60 treatises on anatomy, physiology, timing of treatment, diagnosis, prognosis, surgery, instrument making, and aphorisms. Though it bears his name, this body of knowledge was not all written by Hippocrates as the material has been dated as originating over a period of at least a century. However, it is clear that Hippocrates either began or was deeply involved in a medical school on the island of Kos, and these books likely represent the school’s entire syllabus. The books were later moved to Alexandria, where they were used in the medical school located there and the *Hippocratic Corpus* was finally assembled in its known entirety around the 10th century AD.

The Hippocratic school embraced the teaching of the fifth-century BC philosopher, Empedocles, and built on the existing theory that all matter consisted of the four elements: water, earth, air, and fire. The Hippocratic school expanded this concept to ex-

plain the cause of disease in patients as resulting from a disharmony between the four humors in the body: blood, bile, yellow bile, and phlegm. Human disease was a result of either an excess or shortage of these and treatment consisted of trying to harmonize these four essential ingredients of the human body.

It is unclear who wrote the Hippocratic oath or exactly who took the oath. It is attributed to Hippocrates but references in it to abortion and suicide, among other things, contradict Hippocrates’ own principles and practices as revealed in the *Hippocratic Corpus*; rather they reflect the Pythagorean school of thought that regarded all life as sacred. It is likely that the oath itself has a number of authors.

The earliest known use of the Hippocratic oath was in Wittenburg in 1508 and then in Montpellier in 1804. From time to time in medical schools, the oath has had a renaissance, including an unsuccessful attempt by the British Medical Association to update it. This attempt was generally rejected and no further efforts were made, but medical societies throughout the world have continued to concentrate on the oath’s codes of ethics.

A 1992 study by Peterson and colleagues found that the Hippocratic method of taking a thorough history and doing a physical examination provided a diagnosis 88% of the time. Seventy-six percent of cases in their retrospective analysis were diagnosed by history only, a further 12% by physical examination, and only 12% by all other laboratory tests. The results suggest that in the hands of an experienced physician, the Hippocratic method of history-taking and physical examination is effective.

Building on earlier traditions

Aristotle was born in 384 BC. He was the son of a court physician to Macedonia who studied medicine and later philosophy with Plato. However,

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since he came from nobility, it is unlikely that he practised medicine. His social position would have made it appropriate only to learn the theory of medicine, including the fundamentals of diet, drugs, exercise, bandaging, splints for fractures and dislocations, and poultices of flour, wine, and oil. However, along with Hippocrates, Aristotle did establish the science of observation of facts rather than theory. He says, "The facts have not been sufficiently established. If ever they are, then credit must be given to observation and to theories only insofar as they have been confirmed by observed fact." This statement is self-evident to you and me, but it was a revolutionary idea in Aristotle's time. His teacher, Plato, had promoted the application of reason and logic—a top-down process—to determine the solution to problems rather than the Aristotelian view that experimentation and observation were necessary to develop viable theories.

Galen was a second-century philosopher and physician raised in Pergamum and was initially associated with this kingdom's great temple of Asklepios. He later studied both philosophy and medicine and promoted the four-humors theory of Hippocrates.

He was the chief physician to the high priests' gladiators in Pergamum and had ample opportunity to look after wounds and observe human anatomy. This experience, combined with his extensive dissections of lower primates, allowed him to formulate many facts and theories of anatomy which built on the philosophy of Aristotle that in terms of human anatomy, "nature does nothing in vain."

Galen's work gained recognition when he moved to Rome to further his career as an investigator, scientist, and physician. Eventually, he became the chief physician to the emperor Commodus and by the end of his life, Galen had written 129 treatises on philosophy and medicine. These writings served as

a model for physicians throughout the Dark Ages.

Paganism ended in the Roman Empire shortly after 312 AD in the reign of Constantine the Great. Constantine became a Christian and eventually all of the pagan temples of Asklepios were reduced to rubble and Christian churches were built on the same sites. Though some of the Christian churches appear to have had healing traditions, salvation was their primary interest and rather than being something from which to flee, death was to be embraced.

Traces of the past

Modern medicine may have advanced well beyond what was even imaginable in the days of the Asklepiian priest physicians, students of the Hippocratic School, and the ancient physician philosophers who followed in their footsteps, but the influence of these ancient healing systems is still visible today. Today we acknowledge the Asklepiian trust in the healing benefits of clean air, water, and salubrious circumstances; spiritual renewal, belief as a healing force; and the value of the health care team. And from the traditions of the Hippocratic School, we draw our use of ethical guidelines, clinical methods, sceptical approaches, and philosophical and intuitive appraisals as well as the practices of sourcing of medicines from nature and surgical instrument making.

These early pathways to the art and science of healing still serve to guide us today.

Further reading

Asklepios, the God of Medicine, Gerald D. Hart, Royal Society of Medicine Press.

Cure and Cult in Ancient Corinth, American School of Classical Studies, Athens, Princeton, New Jersey.

The Life of Greece, Will Durrant, Simon & Shuster.

A History of the Ancient World, Volume 2 Rome, Rostovtzeff

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need to continually improve their skills in the recognition, diagnosis, and management of child abuse, and multidisciplinary specialized teams need to be available in each health region. To ensure that all health needs are met, the CYHC is advocating that a BCMA-initiated bill of health care rights for children and youth in British Columbia be used by the government as a template for assessing the safety of our young people and ensuring they are looked after.

The BCMA supports what is best for children and what best supports families and caregivers in their responsibility to provide day-to-day care. Protection of these interests must be the guiding principle of service delivery. Turf protection and jurisdictional concerns must not be allowed to interfere.

—Basil Boulton, MD
Chair, Child and Youth Health Committee

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