Galen

If the work of Hippocrates represents can be taken as representing the foundation of Greek medicine, then the work of Galen, who lived six centuries later, is the apex of that tradition. Galen crystallised all the best work of the Greek medical schools which had preceded his own time. It is essentially in the form of Galenism that Greek medicine was transmitted to the Renaissance scholars.

Galen hailed from Pergamon, an ancient center of civilization, containing among other cultural institutions, a library second in importance only to Alexandria's. Galen's training was eclectic. Although his chief work was in biology and medicine, he was also known as a philosopher and philologist. Training in philosophy was, in Galen's view, an essential part of the training of a doctor, not merely a pleasant addition.

Woodcut illustration from a Venetian edition of Galen's works, 1550

Collection Bertarelli, Milan Medicatrina, *Clinic Scene*. This illustration accompanying Galen's work shows the surgical procedures described by Galen—on the head, eye, leg, mouth, bladder and genitals— still practiced in the 16th century.

His treatise entitled *That the best Doctor is also a Philosopher* gives us a rather surprising ethical reason for the doctor to study philosophy. The profit motive, says Galen, is incompatible with a serious devotion to the art of healing. The doctor must learn to despise money. Galen frequently accused his colleagues of avarice and downplayed the motive of financial gain associated with in becoming a doctor, in order to defend his profession against this charge.

Galen's first professional appointment was as surgeon to the gladiators in Pergamon. In his tenure as surgeon, he undoubtedly gained much experience and practical anatomical knowledge from the combat wounds he treated. After four years, he emigrated to Rome where he attained a brilliant reputation as a practitioner and a public demonstrator of anatomy. Among his patients were the emperors Marcus Aurelius, Lucius Verus, Commodus, and Septimius Severus.

Galenism

Galen for all his mistakes, remained an unchallenged authority for over a thousand years. Everything there was to be said on anatomy at that time had been

said by Galen; it is reported that he kept as many as 20 scribes on staff to write down his every dictum. When he died in 203 CE, serious anatomical and physiological research ground to a halt. because everything there was to be said on the subject had been said by Galen, who, it is reported, kept at least 20 scribes on staff to write down his every dictum.

Although he was not a Christian, Galen's writings reflect a belief in only one god, and he declared that the body was an instrument of the soul. This made him acceptable both to the fathers of the church and to Arab and Hebrew scholars. Galen's mistakes perpetuated fundamental errors for nearly fifteen hundred years until Vesalius, the sixteenth century anatomist, began to dispel Galen's authority, although he regarded his predecessor with esteem.

Galen on the Soul

Postage Stamp, 1977

People's Democratic Republic of Yemen. A testament to Galen's lasting influence.

The fundamental principle of life, in Galenic physiology, was *pneuma* (air, breath). *Pneuma* took three forms and had three types of action: animal spirit (*pneuma physicon*) in the brain, center of sensory perceptions and movement; vital spirit (*pneuma zoticon*) in the heart, center of blood flow regulation and body temperature; and natural spirit (*pneuma physicon*) residing in the liver, center of nutrition and metabolism.

Galen studied the anatomy of the respiratory system, and of the heart, arteries, and veins. But he did not discover the circulation of the blood throughout the body, and believed that blood passed from one side of the heart to the other through invisible pores in the dividing wall. Galen was convinced that the venous and arterial systems were each sealed and separate from each other. William Harvey, discoverer of the circulation of the blood, wondered how Galen, having got so close to the answer, did not himself arrive at the concept of circulation.

Galen's Physiology

Manuscript Illustration from an edition of the works of Galen, Lyons, 1528

National Library of Medicine, Bethesda. *Hippocrates, Galen and Avicenna.* As Galen looked back to Hippocrates as his authority, so Avicenna looked to Galen.

Galen's genius was evident in physiological experiments conducted on animals. The work *On the use of the parts of the human body* comprised seventeen books concerning with this topic. To study the function of the kidneys in producing urine, he tied the ureters and observed the swelling of the kidneys. To study the function of the nerves he cut them, and thereby showed paralysis of the shoulder muscles after division of nerves in the neck and loss of voice after interruption of the recurrent laryngeal nerve.

voice after interruption of the recurrent laryngeal nerve.

Because his knowledge was derived for the most part from animal (principally the Barbary ape), rather than human, dissection, Galen made many mistakes, especially concerning the internal organs. For example, he incorrectly assumed that the *rete mirabile*, a plexus of blood vessels at the base of the brain in ungulate animals, was also present in humans. In spite of Galen's mistakes and misconceptions, the wealth of accurate detail in his writings is astonishing.

---

home 1 2 3 4 5 6 7 8 9 10 11 12 *13* 14 15 16 17 18 credits

Print this Page | Email this Page

Claude Moore
Health Sciences Library
PO Box 800722
Charlottesville, VA 22908
434-924-5591

For comments and suggestions about this page: hsl-web@virginia.edu
Last Modified: June 30 2004

Disclaimer

About This Site