

September 29, 2001

To my Friends and Colleagues:

I subscribe to Practical Reviews in Internal Medicine—a journal review on tape. Each month several articles from the medical literature that are pertinent to medical practice are reviewed. I listen to these reviews while driving about town in my car. Last December there was a different format—a section was included that talked about various topics in the History of Medicine. At the end the moderator asked what the audience thought—should this format be continued each year? Any topics the audience wished to suggest? Please email any comments.

I emailed that 'A', yes, I enjoyed the format, and 'B' why didn't someone give a talk about the difference between the Staff of Aesculapius and the Caduceus—two widely used symbols of medicine. The editor wrote back 'A' thanks for the input and 'B' he thought the suggestion for the topic was a great idea and why didn't I do it?

After his expert cajoling I ended up spending much of my free time this summer reading several books and many articles about medical practice in ancient Greece, Aesculapius, Zeus, Apollo, Aphrodite, Hermes, Hippocrates, and the good ol' days.

I just recorded the talk this week and [enclosed is a copy of the transcript](#). I'd be interested in your opinion.

Timothy Leigh Rodgers, M.D.

January 1, 2002

Abridged version for SB County Medical Society

The Battle of the Snakes



or



As recognizable as the white lab coat, black bag, and stethoscope the staff entwined with serpent are universally understood as the symbol of medicine. From hospitals, ambulances and pharmacies, to medical device manufacturers and physicians' offices—the staff and snake are everywhere.

However, most are unaware that there are two distinct symbols commonly used which have very different origins. The Staff of Aesculapius is a rough-hewn branch entwined by a single snake, while the Caduceus has two snakes about its slender staff and the addition of a pair of wings.

I recently decided to research these symbols more thoroughly—and my studies took me back to the original sources nearly 3000 years ago.

In ancient Greece care was provided in Aesculapian temples. These centers were named after Asklepios, the Greek God of Medicine (Roman Aesculapius).

Who was Aesculapius? Most likely he was a Bronze Age man skilled in the healing arts who lived just before the Trojan War (circa 1200 BC.) The earliest written (and only, really) record about him as a real person comes from Homer's Iliad written in the 8th century BC—four centuries after his death.

At the time of the Trojan War the Greeks had twelve major gods including Apollo, the physician. In his depictions Apollo always appears quite young and usually naked—detriments to fostering a good physician-patient relationship. Apollo had many other tasks, and as centuries passed need for a full time medical god developed. Tales of Aesculapius' skill had grown over the centuries and his reputation was such that he eventually was elevated to the position of God of Medicine.

Aesculapian popularity peaked in the 3rd century AD with over 500 temples scattered throughout the ancient world. As serpents were Aesculapius' symbol, non-poisonous snakes had free run (or perhaps slither) about the temples. All statues of Asklepios depict him as a kindly looking bearded man leaning on a rough-hewn staff entwined by a single serpent.

The most famous Asklepiian healer was Hippocrates who lived in the 5th century BC. Hippocrates transcended his beginnings as an Asklepiian priest and he and his followers observed and recorded descriptions of disease that survive to this day. They removed the concept of illness from superstition and based it upon natural

causes. The Hippocratic Oath still given at many medical school graduation ceremonies today begins:

I swear by Apollo the physician, and Asklepios, and Hygea and Panacea, and all the gods and goddesses...

As you can see there is a long history and tradition of the use of the Staff of Aesculapius to represent physicians—pushing 3000 years.

Now, another important figure in the ancient world was Hermes—one of the twelve Olympian gods. On the day of his birth he became hungry and stole fifty cattle from his half-brother, Apollo, to cook for an afternoon snack. In the Homeric Hymn to Hermes his mother relates:

Your father Zeus begot you to be a great annoyance to humans and the immortal gods

Apollo stated:

Among the immortal gods you will be ever known as the Prince of Thieves. You will wander under the earth where you will be the leader of the tiny ones (the dead.)

Like Apollo, Hermes had many jobs. He escorted the dead to the underworld, the realm of the god Hades. Hermes was also the God of Commerce and Trade. He was the God of Thieves. He used a staff—the Caduceus—in his important role as a herald, the messenger of the gods. He was referred to as "Infernal Hermes" and was considered to be a terrible being!

Today, the Caduceus is often used as a symbol of medicine in place of the Staff of Aesculapius. In ancient times a Greek or Roman would have considered such confusion to be heresy!

Knowing the history of the symbols, it is difficult to see how this confusion occurred.

Well, here's what happened:

In Roman times the caduceus was used as a symbol of peace or neutrality in battle. A messenger would display this sign and could then deliver a message to the enemy without being assaulted, much as a white flag of truce is used today. There was wide use of the caduceus as a symbol of peace or neutrality symbol in the US Civil War.

In 1818 the US Army Medical Corps was organized and developed a Coat of Arms showing a shield with the Stars and Stripes on the right half and the Staff of Aesculapius on the left half.

In 1902 the Surgeon General of the US ignored the Army's own Coat of Arms and adopted the Caduceus (which had been rejected by the prior Surgeon General) as the new symbol of the Army Medical Corps. It is thought the Caduceus was meant to indicate the role of the corps as non-combatants rather than to represent the medical role, but no explanation for this choice was ever given. As they say, "there's the right way, the wrong way, and the army way!"

Military organizations throughout the world including the US Air Force have included the Staff of Aesculapius in their symbol. Many medical organizations as well have incorporated the Staff of Aesculapius into their symbol: The AMA, CMA, World Health Organization, and our own SB County Medical Society to name a few.

A review of 12 medical dictionaries from England, France, and the US prior to 1903 plus two dictionaries dealing with the French language from the 9th through the 16th centuries showed no medical connection with the word caduceus.

Therefore, the current popularity of the caduceus stems from the US Army's usage and the subsequent wide spread adoption of the caduceus as a symbol (in the USA only, I might add) by many physicians and others in any field even loosely related to medicine.

So which symbol should we use to represent Medicine? That of Aesculapius, God of Medicine, or that of Hermes, undertaker, Prince of Thieves, God of Commerce? In these days of malpractice suits, HMO's, avaricious insurance and pharmaceutical companies, and societal values where cosmetic surgery seems to be more important than health care, the cynic might say that the Caduceus is the more representative symbol of modern medicine. But which symbol would the idealist in me choose? Unreservedly, he would feel that no extra snakes are needed in medicine!

Timothy Leigh Rodgers, M.D.
Santa Barbara, CA

Abridged version for SB County Medical Society
[Copy of the complete text](#)

September23, 2001

The Battle of the Snakes

Introduction

As recognizable as the white lab coat, black bag, and stethoscope the staff entwined with serpent are universally understood as the symbol of medicine. From hospitals, ambulances and pharmacies, to medical device manufacturers and physicians' offices—the staff and snake are everywhere.

However, most are unaware that there are two distinct symbols commonly used which have very different origins. The Staff of Asklepios is a rough-hewn branch entwined by a single snake, while the Caduceus has two snakes about its slender staff and the addition of a pair of wings.

My father was an Internist trained at the time when electrolytes consisted of a sodium determined by flame photometry and bacterial organisms that were susceptible to a new antibiotic called penicillin—when you could get it. He had a deep interest in medical history and the history of ancient Greece. I grew up listening to his stories of the medical past and to various mythological tales. I also grew up hearing his emphatic insistence that there was only one true symbol that should be used to represent the field of Medicine.

I recently decided to research these symbols more thoroughly—and my studies took me back to the original sources nearly 3000 years ago.

Medicine in ancient Greece

Medical care in ancient Greece (5th century BCE) came from several different types of providers. One type of provider was the itinerant practitioner who learned his trade in various ways. He learned to treat severe injuries incurred in battle in times of war. He learned to treat minor injuries incurred in sport in times of peace. He learned his trade through apprenticeship and experience.

Other types of providers included charlatans, herbalists, magicians, and other therapists—much as today.

Additionally, care was provided in Asklepiian temples. These centers were named after Asklepios, the Greek God of Medicine (Roman Aesculapius).¹ Asklepiian temples were similar to health spas of today in many ways. A patient would come to stay for a time and partake in a healthy diet, drink pure waters, enjoy a massage, enter into exercise programs, and often be cared for by a physician as well. Testimonials of various cures were posted for patients to read. Patients were attended by Asklepiian priests who included a type of faith healing in their program.

Patients often received many of these different therapies much as patients of today receive treatment from allopathic as well as alternative practitioners. In ancient Greece, however, there was more blending of the types of therapy an individual practitioner would provide and the various categories were not as discrete as they are today. For example, although initially trained as an Asklepiian priest at the temple in his hometown of Cos, Hippocrates became the most renowned physician of all time.

¹ I have used the Greek names in this article. The Roman equivalent is in parentheses.

Asklepios

But who was Asklepios? Most likely he was a Bronze Age man skilled in the healing arts who lived just before the Trojan War (circa 1200 BCE.) The earliest written (and only, really) record about him as a real person comes from Homer's Iliad written in the 8th century BC—four centuries after his death. He is mentioned as the father of warriors Machaon and Podaleiros. His sons "commanded forty curved black boats" from Trikka in Thessaly (Northern Greece) in the Trojan War. Homer refers to these men as "skilled healers."

Contending in battle the Trojan warrior Paris wounded Menaleus--the brother of Agamemnon (leader of the Greek forces). Asklepios' son Machaon was summoned. He removed the arrow and used a healing salve his father had given him to mend the wound.

At the time of the Trojan War the Greeks had twelve major gods including Apollo, the physician. In his depictions Apollo always appears quite young and usually naked—detriments to fostering a good physician-patient relationship. Apollo had many other tasks, and as centuries passed need for a full time medical god developed. Tales of Asklepios' skill had grown over the centuries and his reputation was such that he eventually was elevated to the position of God of Medicine.

The mythology was created that Apollo was in love with Koronis, a mortal woman from Thessaly with whom he had an affair. Apollo returned to Delphi focused upon his various activities. Meanwhile, Koronis ran off with Iskis, a mortal, and Apollo was notified of

her infidelity by a white raven. Apollo was so furious at receiving this information that he turned ravens black for evermore. He rushed back to Koronis and shot her with an arrow. As she lay dying she admitted to Apollo that she deserved her fate—but felt that the death of their unborn child was cruel and unjust. Apollo agreed and performed the world's first Caesarian section delivering Asklepios from Koronis' womb just before flames consumed her as she lay on her funeral pyre.²

A god has no time for rearing a baby, so Asklepios' upbringing was entrusted to Chiron, a wise centaur (half man, half-horse) who also taught Jason, Odysseus, Herakles (Hercules) and Achilles. Like his father, Asklepios became a healer and was the physician who went with Jason on the Voyage of the Golden Fleece. For his efforts Chiron was immortalized in the summer sky as the constellation Sagittarius.

Asklepios was called to heal the sick son of Minos, ruler of Crete. As Asklepios was unable to help the child, Minos locked him in a room with the boy. A snake slithered under the door, and Asklepios killed it. A second snake entered and placed a leaf on his brethren's body. The dead snake was restored to life. Asklepios took that leaf to heal Minos' son -- and the snake has been associated with Asklepios ever since.

Asklepios' skills became so great that Hades (God of the Underworld) eventually complained to his brother Zeus. Hades felt that his realm was being depopulated as Asklepios was saving too many lives. Zeus thereupon struck Asklepios dead with a

² The term caesarian section we use today comes from the Latin verb 'caedere' meaning 'to cut' and describes the manner of delivery. A common misconception is that Julius Caesar was brought into the world in this fashion, but in his era this type of surgery could not be performed on a living woman. Caesar's mother, Julia, is known to have lived for many years after Caesar's birth.)

thunderbolt. Zeus mollified Apollo's anger at this act by granting Asklepios the honor of becoming a new constellation adjacent to Scorpio.³

As the legend of the demi-god grew, Asklepiian temples were built throughout the ancient world. Asklepios' sons and followers were called Asclepiads. The temples became major health centers. As serpents were Asklepios' symbol, non-poisonous snakes⁴ had free run (or perhaps slither) about the temples. All statues of Asklepios depict him as a kindly looking bearded man leaning on a rough-hewn staff entwined by a single serpent. In addition to his two sons Asklepios' other children included Hygieia (hygiene) who cared for the snakes, Panacea whose name means "cure-all", and Iaso whose name means "to heal".

The temples were extremely popular and Asklepios was worshiped by every echelon of society in the Greco-Roman world. A "Who's Who of the Ancient World" would show the rich and famous who believed in Asklepios. At the time of the great plague Sophicles pushed to establish an Asklepiian temple in Athens. As described by Plato the dying words of Socrates (470-399 BCE) were "Make a sacrifice to Asklepios." Alexander the Great received a near fatal penetrating chest wound in the battle against the Malli. He was saved by an Asklepiian physician and in gratitude dedicated his spear and breastplate to Asclepios. Aristotle claimed to be a 16th generation descendent of Asklepios' son Machaon. Galen, the

³ Ophiuchus, the serpent bearer or Asklepios, is just to the left and above Scorpio and to the right of Sagittarius (Chiron—Asklepios teacher). Serpens, the serpent, is another constellation just above and between Ophiuchus and Scorpio.

⁴Elaphe Longissima is the snake associated with Asklepios. It is a non-poisonous snake in the "rat snake" group. It is brownish to black in color with smooth scales that shine like glass. It reaches six feet long. It is found from the Pyrenees to the Caspian Sea. Its current distribution may have arisen from sacred snakes that ranged out into the wild from the Asklepiian temples.

best known physician of the Roman era (129-210CE) considered himself a follower of Asklepios.

Asklepian popularity peaked in the 3rd century AD with over 500 temples scattered throughout the ancient world from Scotland in the north to Egypt in the south and from Spain in the west to Persia (Iran) in the east. After Constantine the Great made Christianity the official religion of the Roman Empire in the 4th century AD, paganism and the cult of Asclepios gradually declined. The final blow was an earthquake that destroyed the center at Cos, Hippocrates birthplace, in 544 CE. Subsequently, many of the Asklepian temples were converted into Christian centers. Although his popularity and following had declined, he had a good run: Asklepios' popularity had lasted longer than that of any of the other ancient Greek gods. Hygieia (or Roman Salus), his daughter, survived the fall of paganism into the Christian era and became synonymous with the concept of health and well-being.

The most famous Asklepian healer was Hippocrates who lived in the 5th century BCE. He claimed to be a 20th generation descendant of Herakles (Hercules) and an 18th generation descendent of Asklepios' son Podaleiros. Hippocrates transcended his beginnings as an Asklepian priest and he and his followers observed and recorded descriptions of disease that survive to this day. They removed the concept of illness from superstition and based it upon natural causes. The Hippocratic Oath still given at many medical school graduation ceremonies today begins:

I swear by Apollo the physician, and Asklepios, and Hygea and Panacea, and all the gods and goddesses...

As you can see there is a long history and tradition of the use of the Staff of Asklepios to represent physicians—pushing 3000 years.

Hermes

Now, another important figure in the ancient world was Hermes (Mercury) -- one of the twelve Olympian gods. He was quite a precocious child. By noon on the day of his birth he was playing a lyre he had fashioned out of a tortoise shell. Later in the day he became hungry and stole fifty cattle from his half-brother, Apollo, to cook for an afternoon snack. In the Homeric Hymn to Hermes his mother Maia relates:

Your father Zeus begot you to be a great annoyance to humans and the immortal gods

Apollo stated:

Among the immortal gods you will be ever known as the Prince of Thieves. You will wander under the earth where you will be the leader of the tiny ones (the dead.)

Like Apollo, Hermes had many jobs. In the *Odyssey* he escorted the slain suitors of Penelope to the underworld, the realm of the god Hades (Pluto.) Hermes was also the God of Commerce and Trade. He was the God of Thieves. Apollo gave him a staff to use in his important role as a herald, the messenger of the gods. According to fable he used the staff to break up two snakes fighting and they entwined themselves about the staff in peace—and thus became a permanent part of his symbol, the Caduceus. The term Caduceus is derived from the word *kerykeion*, or herald's staff. In the 2nd century CE wings representing Hermes' fleetness of foot were occasionally added to the staff, but this

practice did not become popular until the 15th century. Hermes was the god who organized the beauty contest between Helen and Aphrodite (Venus) that set off the Trojan War. Referred to as "Infernal Hermes!" he was considered a terrible being!

Today, the Caduceus is often used as a symbol of medicine in place of the Staff of Asklepios. In ancient times a Greek or Roman would have considered such confusion to be heresy! Knowing the history of the symbols, it is difficult to see how this confusion occurred.

Well, here's what happened:

Confusion of the Staff of Asklepios with the Caduceus

In the 16th century the caduceus was used as a printer's mark in general publishing. Johann Froben in Basel, Switzerland, and his son used it extensively. Other printers did so as well. Perhaps there was a parallel in Hermes being "the messenger to the gods" and a printer being a "messenger to the people!"

In the 19th century John Churchill of London, a medical publisher, also used the caduceus as a printer's mark. Other British medical publishers did not follow suit, but the practice was widely adopted by medical publishers in the United States. The caduceus was thus inadvertently connected in the minds of some physicians with medicine.

In Roman times the Caduceus was used as a symbol of peace or neutrality in battle. A messenger would display this sign and could then deliver a message to the enemy without being assaulted, much as a white flag of truce is used today. In 1851 US Army stewards first used the Caduceus as part of their insignia.

Stretcher-bearers could enter the field of battle with this symbol of non-combatant status, the Caduceus, and not get shot. The use of the Caduceus as a peace or neutrality symbol was widely used in the US Civil War.

The Caduceus also was incorporated in medals commemorating many important peace treaties such as the Treaty of Westphalia that ended the Thirty Years War in 1648.

In 1818 the US Army Medical Corps was organized by Act of Congress. A Coat of Arms was developed showing a shield with the Stars and Stripes on the right half and the Staff of Asklepios on the left half.

In 1902 the Surgeon General of the US ignored the Army's own Coat of Arms and adopted the Caduceus (which had been rejected by the prior Surgeon General) as the new symbol of the Army Medical Corps. It is thought the Caduceus was meant to indicate the role of the corps as non-combatants rather than to represent the medical role, but no explanation for this choice was ever given. As they say, "there's the right way, the wrong way, and the army way!"

Military organizations throughout the world have included the Staff of Asklepios in the symbol to represent their medical corps. The English Army (1889), French Army (1798), German Army (1868), and even the US Air Force use this symbol. Many medical organizations as well have incorporated the Staff of Asklepios into their symbol: The American Medical Association, the New England Journal of Medicine, the American College of Physicians, and the World Health Organization to name a few.

A review of 12 medical dictionaries from England, France, and the US prior to 1903 plus two dictionaries dealing with the French language from the 9th through the 16th centuries showed no medical connection with the word Caduceus.

Therefore, the current popularity of the Caduceus stems from the US Army's usage and the subsequent wide spread adoption of the Caduceus as a symbol (in the USA only, I might add) by many physicians and others in any field even loosely related to medicine.

The Proper Symbol of Medicine

So which symbol should we use to represent Medicine? That of Asklepios, God of Medicine, or that of Hermes, undertaker, Prince of Thieves, God of Commerce? In these days of malpractice suits, HMO's, avaricious insurance and pharmaceutical companies, and societal values where cosmetic surgery seems to be more important than health care, the cynic might say that the Caduceus is the more representative symbol of modern medicine. But which symbol would my father choose? Unreservedly, he would feel that no extra snakes are needed in medicine!

Timothy Leigh Rodgers, M.D.
Santa Barbara, CA

Bibliography

Bremer, J.Lewis, *The Caduceus Again*, NEJM 258:334-336, 1958.

Comfort, Alex, *A Plain Staff and Only One Snake Please*, NEJM 311:1584, 1984.

Edelstein, Emma J., Edelstein, Ludwig. *Asclepius: a collection and interpretation on the testimonies*, Baltimore: Johns Hopkins Press, 1945. (Re printed, New York, Arno Press, 1975.)

Frey, Emil F. *The Caduceus and the Staff of Aesculapius from Antiquity to the Present*, Texas Reports on Biology and Medicine, v.36, 1978.

Friedlander Walter J., *The Golden Wand of Medicine: A History of the Caduceus Symbol in Medicine*. Greenwood Press, New York, 1992

Garrison, F.H. *Notes on the History of Military Medicine*. 206pp. Washington, D.C.: Association of Military Surgeons, 1922.

Gordon, Hymie. *History of Health and Disease, Beginning of Western Civilization, Cult of Asklepios*. Mayo Clinic Lectures (video taped), 1991

Hart, Gerald D. *Asclepius: The God of Medicine*, London, Royal Society of Medicine Press, 2000

Homer: *The Iliad*. Translated by Robert Fagles, Penguin Books, 1990. (First edition circa 725 BC)

Homer: *The Odyssey*. Translated by Robert Fagles, Penguin Books, 1996. (First edition circa 700BC)

McCulloch, C.C., Jr. *Coat of Arms of Medical Corps, Mil. Surgeon*, 41:137,1917.

Plato, "Phaedo," 118A In: *Great Dialogues of Plato*. Translated by W.H.D. Rouse. New York: New American Library. 1956,p. 521.

Shelley, Percy B., 'Homer's Hymn to Mercury,' In: *Selected Poetry of Percy Bysshe Shelley*. Edited by J. Bloom. New York: Signet 1966, p.380.

"4, To Hermes," 65. In: *The Homeric Hymns*. Translated by A. M. Athanassakis. Baltimore: Johns Hopkins University, 1976, p.32.