

THE VETERINARY MEDICINE IN ANCIENT GREECE



SINCE THE CLASSICAL YEARS

Animal Health Practitioners Have Contributed a lot to
Public Health.

HOWEVER,

“Public Health Veterinarian”, is a relatively new speciality!

LINKS to the PAST

VETERINARY RECORDS BEFORE CLASSICAL GREECE

Code of Hammurabi (1.700 B.C)

art. 224. If a Veterinary surgeon(?) performed a major operation on an ass or ox and has saved its life, the owner should pay 1/6th of its price in silver.

But if has caused its death, he shall give to the owner 1/4th of its value!

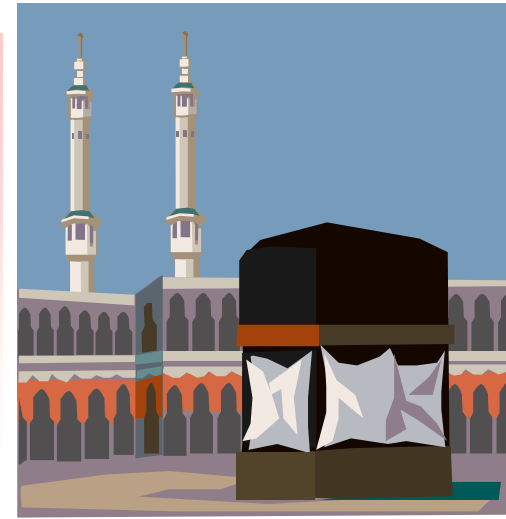
Codes of Moses (Pentateuch)

..eating meat of certain animals may be dangerous for man.



Mosaic laws concerning slaughtering

have been followed by Jews and Muslims until today, as part of their religion!



*The ancient suggestions of the relationships between man and animal diseases have been mostly product of **Folklore, Magic and Religion!***



Nutritional preferences before the Classical Years (1000-500 BC)

Ancient Greeks were eating all animals, but

Cattle meat was supposed to be indigestible and dangerous to health

Swine was light and nourishing, appropriate for athletes.

Ovine meat was considered by *Galinos* a wet and poor nutrition food

Hairs and sausages were considered as a delicacy

Milk and dairy products

Cheese and Yogurt : *Polyphimos*, the Mythical Cyclop who was blinded by *Ulysses*, is the Greek farmer who is taking care of his flock and producing his own cheese and yogurt.

Milk was very important for the ancient physicians and veterinarians.

Butter was used as a medicament rather than food

Later, during 200 BC, large poultry farms had been developed in order to meet the need of the growing population in cheap meat. Therefore, the creation of simple written instructions to the farmers and animal tenders, concerning animal breeding and treatment, became a necessity.

Fragments of Veterinary Medicine before classical Greece (1000-500 BC)

Fragments

- ✚ **Aristophanes** in “*Ornithes*” is asking from God Apollo—who “*is receiving a fee for his healing activities*”, to come and heal the eyes of the animals which were blinded by the crows,
- ✚ The snake of “*Asclepios*” is symbolizing the periodical rejuvenation and immortality (the change of the skin)
- ✚ **Herdsman** are the first practical veterinarians, but the priests were called when no apparent injury was obvious. Some of the priests were accustomed to surgery and pathology, diagnosing the symptoms of certain diseases according to the “looks” of the viscera. Therefore, they were also the first meat inspectors. The first veterinarians like *Aristoteles* and *Hippokrates* perhaps, were seeking for symptoms and practical treatments for domestic animals among herdsman and horse trainers.

FIRST GREEK VETERINARY RECORDS

Records of Veterinary Practice come from 500 BC

Public Employers were taking care of the military horses = **Hyppiatros** (=horse doctors)

ALSO,

**In Ancient Greece, state employees were inspecting the live animals
designated for sacrifice !**

After slaughtering the “inspectors” were examining the offal and deciding whether the carcass
should be consumed by the priests and believers or rejected

(improper meat was sent to hospitals to be consumed by the poor people)



XENOPHON

Was the first author of veterinary records adopted from earlier times or contemporary veterinarians. *Xenophon*, as many other historians, philosophers and doctors, left many descriptions of the veterinary practices during their times.

However, due to the negative attitude of the “clergy” to these practices very little references survived the Middle Age.

ALKMEON (from Croton, 6th-5th BC)

He was the founder of the famous *Medical School* of Croton.

Alkmeon dissected many animals and made a lot of experiments. He was the first ever to ascertain that the brain is the central organ of the body, mastering the mechanism of knowledge and feelings in all animals. He also discovered most of the sensorial nerves, and called them “poros”, meaning channels. Finally, he studied the course of optical nerves, the veins and arteries.



HIPPOCRATES **the Father of Medicine!** (island of Cos 460 BC)



*in one of his 27 books, entitled “**Airs, Waters and Places**”, he makes associations between man’s environment and human health without any correlation to religion, astrology or magic.*

Abstracts from his works...

-**Comparison** between dislocations of joints in humans and Bovines*
- **Comparison** of epilepsy in humans, goats (perhaps because of Coenuriasis, or Cystic Echinococcosis located in the brain)*
- **Hydatid disease** in humans and animals*
-**Comparison** between the brain of humans and different animals*
-**Comparisons** of human and animal food*

DEMOCRITUS

(The Father of atomic theory - Abdera, 460 BC)

He wrote a vast number of documents and books, although very few remained to our days.

He studied Zoology and ...Epidemiology. Therefore, he was the first Epidemiologist in the world.

He dissected large numbers of animals and concluded many experiments.

In his book *Reasons About Animals*, he is trying to explain the role of the internal organs in the physiology of the animal.

He also tried to explain why animals derived out of mutations (like mules), were barren. For *Democritus*, mules are not natural products but creatures created out of human conception.

ARISTOTELS (Halkidiki 384-322 B.C.)

Son of *Nikomachos*, who was Doctor of *Amyndas* the 2nd, king of Macedonia and grandfather of *Alexander* the Great. He was descendant of *Asclepiads*, a family of priests-doctors protected by God *Asklepios*. The members of the family were obliged to become doctors and to intermarry.

Aristotle's was the greatest philosopher of the world and a veterinarian, among other. At his days Anatomy and Physiology are becoming science, as well as veterinary pathology, biology and animal geography.

Many of his original observations and references were supposed to be inaccurate until the development of modern scientific research.

***Aristotle's* left a series of Veterinary books on Animal Health:**

- About animals (10 books) – *Systematization of animal species*
- Organs of animals (4 books) – *Comparative Anatomy of the tissues and animal organs of different animals.*
- Parturition of animals (*organs of the genital system and birth*)
- Evolution of animal life and movement of animal species

Aristotle's was influenced by Hippocratic theories, but he avoided to mention him in his works, perhaps because they belonged to different philosophic schools.

However, he believed that the main organ for humans and animals is the heart instead of the brain for two reasons:

1st *because the root of post mortem examination (necroscopy) was based on sacrificed animals where heart was representing the spirit of the animal, and*

2nd *because he never found a heart affected by any lesion like other organs (tumors, cysts etc)*

therefore, he believed that all organs may be affected by a disease and malfunction except the heart!

Some diseases are recognized in his texts by the symptoms, because the terminology has been changing from generation to generation making it difficult for today's scientist to recognize the disease with certainty.

*For **SWINES**, the term **Βραχος**"(meaning rock in modern Greek) is supposed to represent modern "Anthrax", and "**Κραύρος**" (word unknown today) could represent modern "Rubella" "Contagious Preuropneumonia" or even "Tuberculosis".*

*For **DOGS**, the term "**Λύσσα**" (is still called the same way in modern Greek), means Rabies. It is also called "**Υδροφοβία**" (hydrophobia = water terror).*

*"**Κονάγχη**", a word still in use today which, meaning angina, was used by Aristotles for dogs to indicate, perhaps, Carre disease.*

NICANDROS (a priest from Colophon,
275 B.C.)

Refers in his book to the medically useful animals (leeches) and harmful animals (mostly snakes)

HIEROCLES

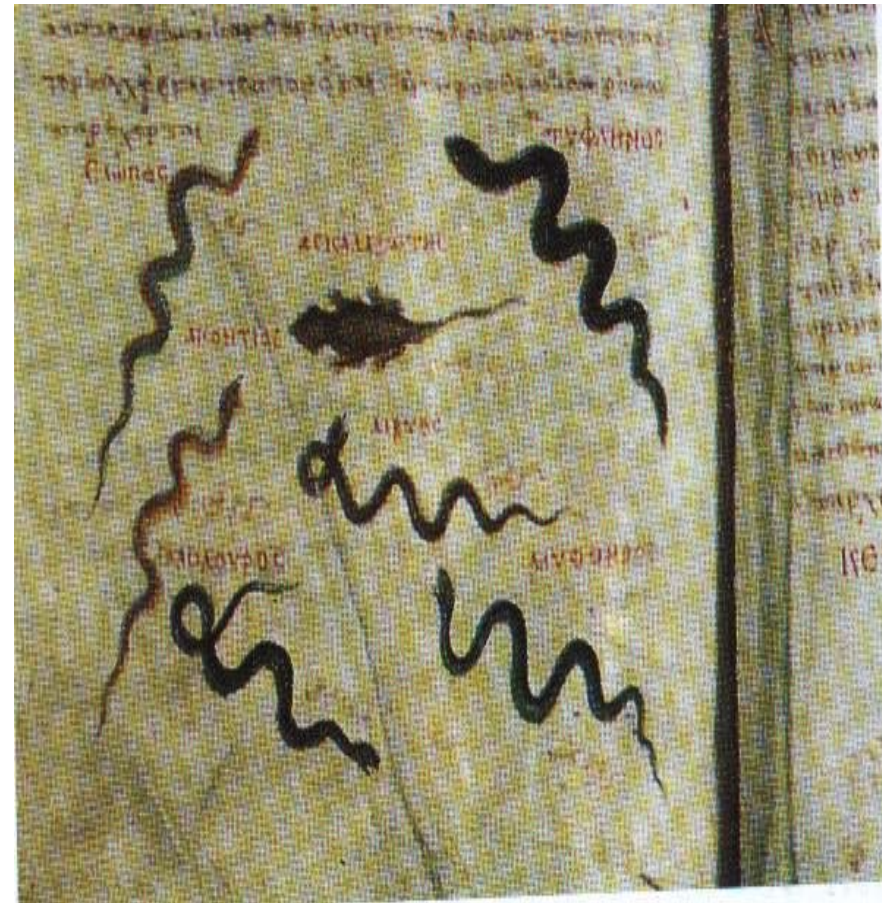
He describes symptoms in different species of animals suffering from snake or insect bites (vipers, scorpions, spiders)

APSIRTOS

..in case that a pregnant donkey is bitten by an adder, it may abort.

..the animal presents swelling in the eyes, crepitating of teeth and bristling of the main and tail.

Venomous animals and insects



ERASISTRATOS (350 B.C.)

Approaches Comparative Anatomy in a better way!

*in his “**about Anatomy**” book, presents the results of animal dissections, including a description of cotyledonous placenta!*

DIOKLES (of Carystos, 300 B.C.)

HERACLIDES (75 B.C.)

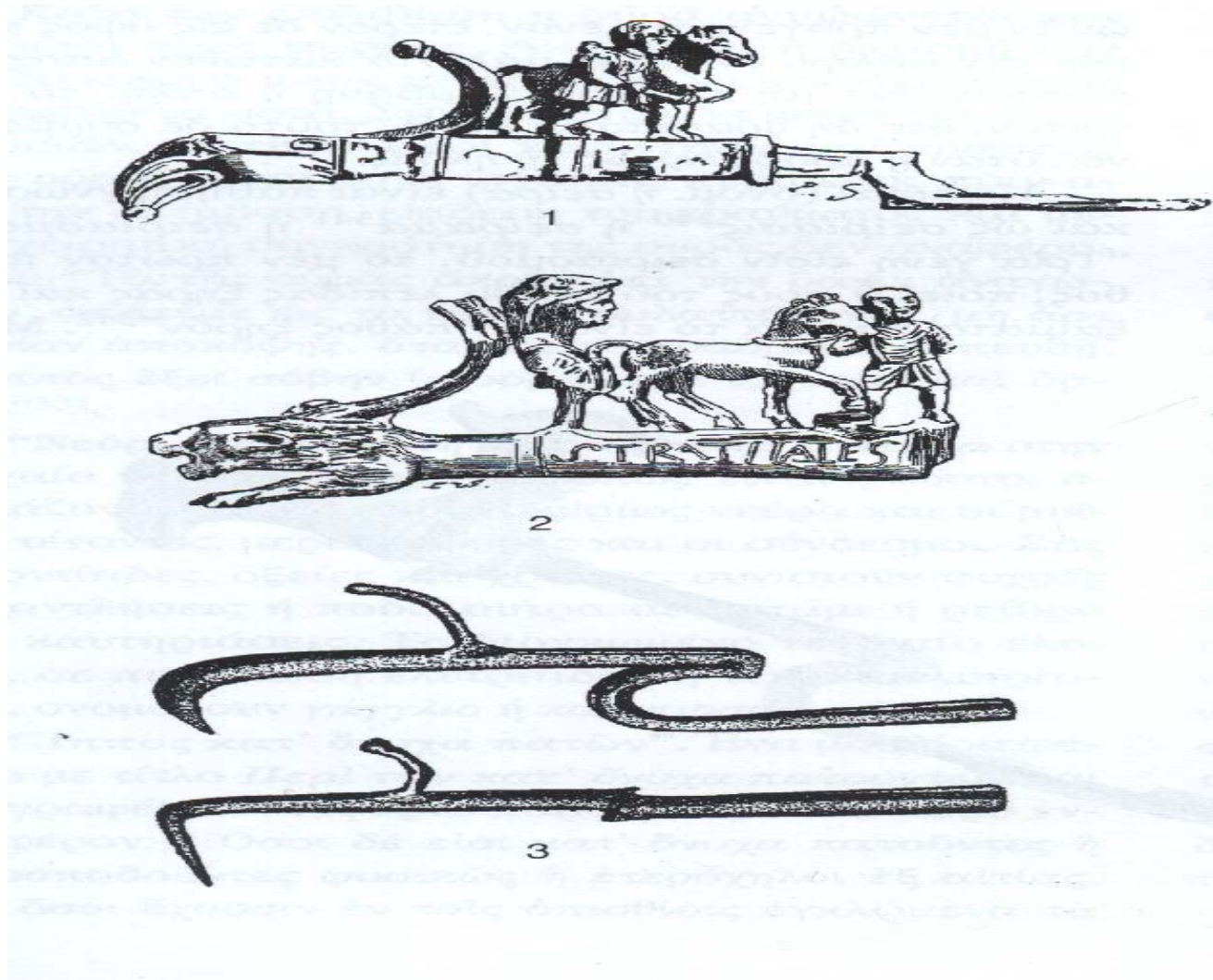
Writes strictly veterinary texts with pharmaceutical experiments.

VEGETIOS

.....Veterinary medicine is official among Greeks, however, is considered a lower science than human medicine!

medicine!

In his book describes 85 diseases of oxen!



by Dr. N. Charisis (WHO/MZCP)
Equipment used for cleaning the hooves in Greco-Roman era

VARRON (116 B.C.)

...there are two kind of veterinarians

- the scientists (*Medical doctors practicing veterinary medicine*) and
- the practical animal breeders

...Only the first category are true Doctors!!

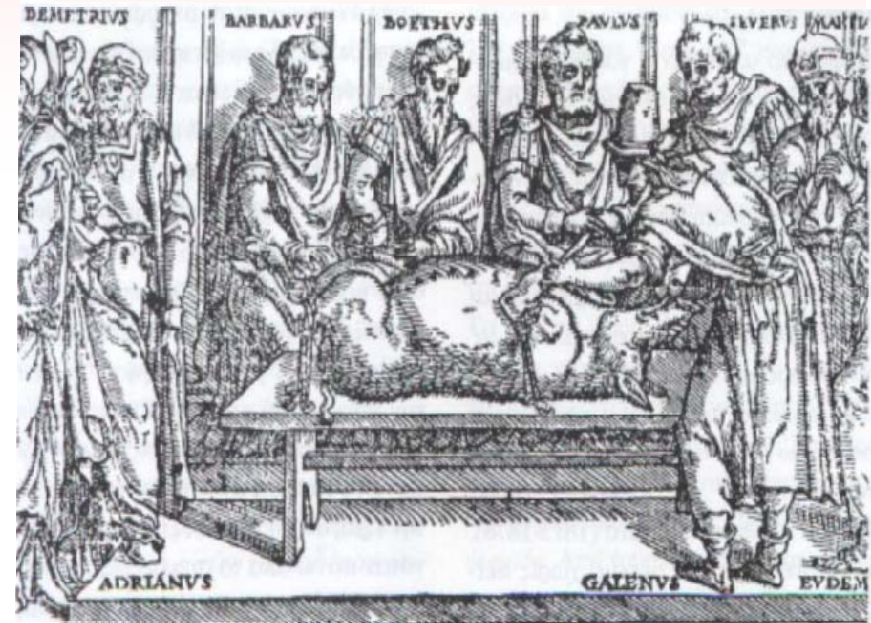
GALINOS (Pergamos, Asia Minor, 129 A.D.)

An expert in Animal Anatomy and Physiology. He dissected many species of animals: pigs, dogs, horses, camels, elephants, even small animals, birds and fish. He left many documents with his observations. Many of them were reinvented in modern medicine! However, the description of the circulation of blood from the heart to the lungs, organs and tissues was incomplete.

He also left instructions and recipes for the treatment of horses, according to the symptoms (normal and abnormal essence and texture of their faeces) .

Galinos is mentioning two contemporary veterinarians, named *Venetos and Prasinus* who were professors of Veterinary Medicine at that time

He prescribes the symptoms of psoriasis in horse as well as indigestion and diarrhoea in donkeys.



Galinos from Pergamos is teaching his students

ABSYRTOS (Klazomenes, Asia Minor, 300 A.D.)

Educated in Alexandria, he served in the army under the emperor *Constantine* the Great during his excursion against the Goths.

He left many letters addressed to fellow veterinarians and horse breeders, concerning the pathology of horses.

He is supposed to be one of the most well known veterinarians in the empire.

bleeding in horses



bleeding in horses

Kassianos Vassos 6th Century A.D)

He left a work of 20 books “*About Agriculture*” which was a simple document destined to help farmers and animal raisers.

Books concerning Veterinary Medicine are the following:

Book 16th

Care and treatment of horses, donkeys, camels

Book 17th

Birth, Breeding and treatment of Cattle.

Book 18th

Birth Breeding and treatment of sheep

Book 19th

Treatment of dogs, Studies about Hair, Deer and Pig

Book 29th

About fish and baits



Restraining of horses



EYTYHIOS from Milos, his wife Rodo and children

In his right hand he holds an instrument for the tightening of horses jaws during the treatment.

HIPPIATRICA

(Treatment of Horses)

(10th Century AD)

Is a synthesis of different Veterinary books existing at that time in one single book, (ordered by the Emperor of Byzantium Constantine Porphyrogenitus).

During Byzantine era, Greek Veterinary Medicine with focus on horse diseases and treatment reaches its highest level.

The veterinarians of that time, called “*ippiatri*” were originated from human medicine and they were using almost the same instruments as in humans.

HIPPIATRICA was translated into European vernaculars and Arabic and reintroduced into Europe during the Moslem conquest of Spain and Sicily!

“....healthy horses should be separated from those who are diseased by bringing them upon good pastures!

