



# A short review of the evolution of Medical Practice on Crete from the pre-Minoan era until today

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## Introduction

- The concepts, the classificatory schemes and the methods involved in diagnosis and treatment are subject to the prevalent at the time theoretical model of disease.
- The historical record corroborates the view that diagnostic processes as well as the concepts of health and disease vary from one medical tradition to another and are influenced by the theoretical assumptions of the practitioners themselves.
- The location of Crete, on the crossroads of literally all important cultural streams, during the last 6000 years, offers a characteristic example for the evolution of the medical practice, from the pre-Minoan era until the present and their influence on the Patient-Physician-Nosos relation.

## Primitive Medicine



Archaeological investigations have brought in light traces of prehistoric medical practice, during the Neolithic stage of development dating from about 6000 BC until 3000 BC.

## Ancient Medical Practice

- Pre-scientific systems of medicine, based primarily on magic, folk remedies, and elementary surgery, before the more advanced Greek medicine about the 6th century BC, such as the Egyptian, Mesopotamian, and Hebrew Medicine and their influence on Crete during 3000 to 1200 BC.
- The diagnostic procedure was based on determining the extra-corporal and non-corporeal cause of the evil, i.e the disease, and the therapy was based on the attempt to appeal to a spirit to intervene and cure the sick.
- During this period, Crete was the center of a flourishing Bronze Age civilization, classified as the Aegean and specifically called the Minoan Culture.

## Medical Mystic



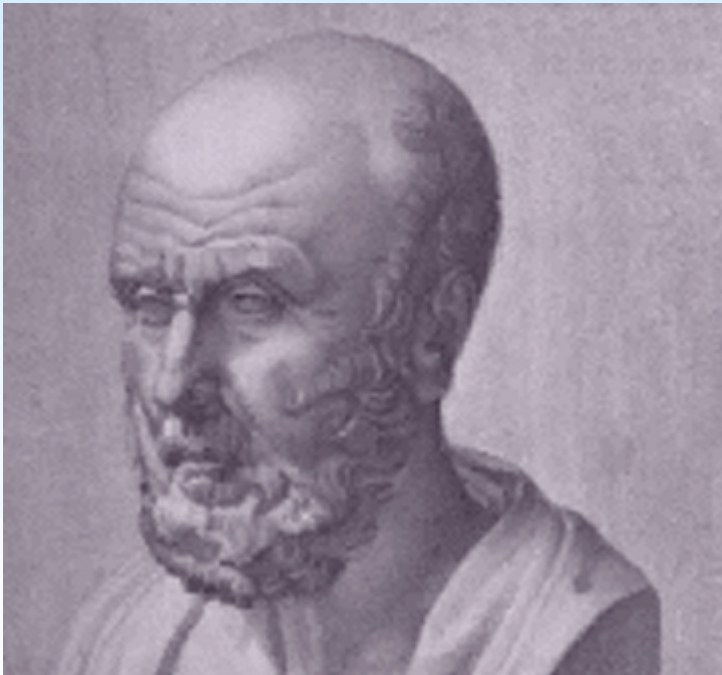
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## The Minoan Culture.



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## Hippocratic medicine



- Hippocratic medicine has changed the approach to illness and treatment by introducing the concept of humours by which diseases were explained in terms of intra-corporeal causes.
- Further, this theory allowed for the first time the individuation of the diagnostic examination and the treatment.

## Archaic and classical Greek era



- The traces of the evolution of medical practice cover the post-Minoan, archaic, and classical era (12th-3rd century BC).
- Important was the influence of the most famous of the Greek medical schools at Kos and Cnidus, located relatively close to Crete, that flourished in the 5th century BC under the Asclepiades.
- Equally important was the effect of the Corpus Hippocraticum.



## Alexandrian Greek Medicine



- By the 3rd century BC, the center of Greek medical science was firmly established again relatively close to Crete, in Alexandria, Egypt, the seat of a famous medical school and library.
- Alexandrian Greek medicine influenced conquering Rome despite initial resistance from the Romans.
- The exact way of influence on the island is under examination.

## Greco-Roman Medicine



- Asclepiades of Bithynea, Aulus Cornelius Celsus, Pedanius Dioscorides, Artaeus of Cappadocia, Rufus of Ephesus, Soranus of Ephesus, and mainly Galen of Pergamum, the most important physicians of this period, have further improved medical theory and practice.
- An undisputed authority over medicine in the Middle Ages has been established during 1<sup>st</sup> century BC and 2<sup>nd</sup> century AD.

## The Roman Public Health System

- This system was combined to the Roman contributions in the fields of public health and hygiene, such as:
  - ◆ *The organization of street sanitation.*
  - ◆ *Water supply.*
  - ◆ *Public hospitals.*
- This facts have essentially changed medical practice in the region around Mediterranean Sea, including Crete, that in 67 BC was conquered by the Romans.

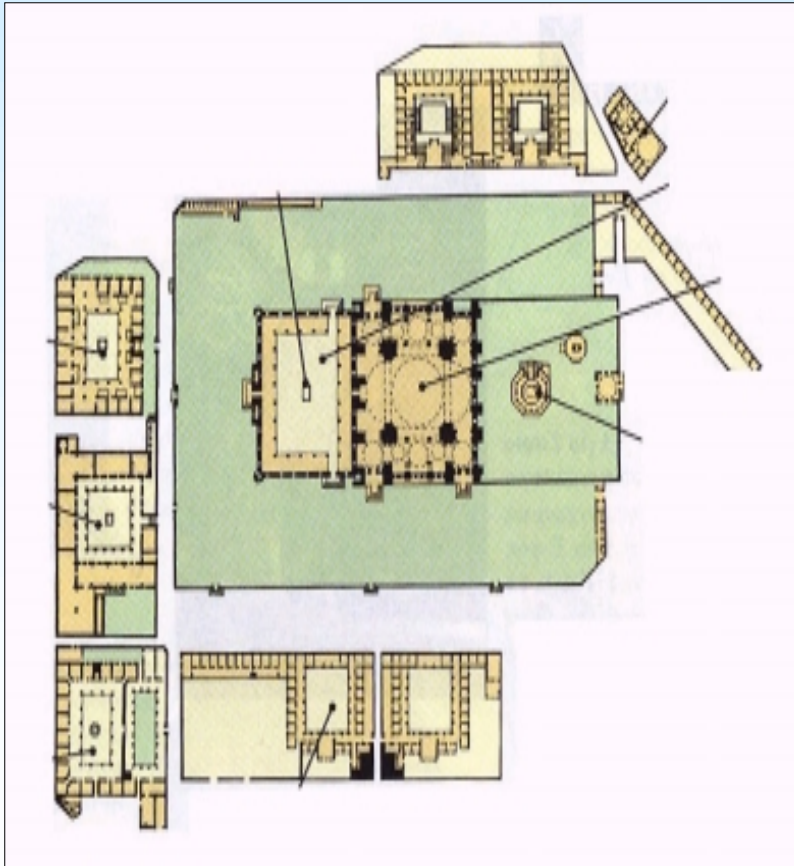


## Byzantine Empire



- In 395 Crete passed to the Byzantine Empire.
  - Only a few outstanding Greek physicians in Constantinople and the rest of the Byzantine Empire, such as:
    - ◆ *Oribasius.*
    - ◆ *Alexander of Tralles.*
    - ◆ *Paul of Aegina.*
- maintained the older tradition.

## Arab Occupation



- The island fell to the Arabs in 826 and remained under their rule until 961.
- The Arabs learned of Greek medicine at the schools of the Nestorian Christians, that had preserved many texts lost in the destruction of the Alexandrian Library.
- Translations from Greek were instrumental in the development of a scientific revival and an Arabic system of medicine.

## The Arabs and the Western medicine



- The Arabs did much to elevate professional standards by insisting on examinations for physicians before licensure, influencing, thus, strongly medical practice.
- Western medicine in the early Middle Ages consisted of tribal folklore, mingled with poorly understood remnants of classical learning and even a series of epidemics served only to initiate a revival of magical practices.

## Venetian Occupation



- Following the Fourth Crusade Crete was sold (1204) to the Venetians and remained a possession of Venice for almost five centuries.
- At the beginning of the 11th century Salerno became the site of the first Western school of medicine.
- Teaching was primarily practical and secular in tone and emphasized diet and personal hygiene.

## The spread of Western Medical Schools



- Latin translations from the Arabic of many Greek medical classics have been prepared, for students at both Salerno and Monte Cassino.
- By the 12th century medical instruction has become increasingly theoretical and scholastic and spread to the medical school at Montpellier and later to the universities of Paris, Oxford, Padua, and Bologna.



## The period of the Ottoman Occupation



- In 1645 the Ottoman Empire began military operations in Crete against the Venetians, completing conquest of most of the island in 1669 and acquiring complete control in 1715.
- The direct connection of the island to Western Europe brakes during the two most important centuries, for the birth of modern Medical Technology.

## The interaction



- The examination of the evolution of Medical Practice in Crete, is representative for this procedure in the boundaries of the Ottoman Empire, beyond Istanbul (Constantinople).
- The consequences of the ideas of Renaissance Medicine from Andreas Vessalius to William Harvey on the medical practice are still under investigation.

## The 20<sup>th</sup> century



- By the terms of the Treaty of London (May 31, 1913), Crete was ceded to Greece.
- Crete follows the development of the modern Greek State.
- The University of Crete becomes, in close cooperation with European and American Institutions, an internationally recognized Medical Research Center, especially in the fields of Molecular Biology, Medical Informatics and LASER.